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THE “RIGHT TO HEALTH” AND “RIGHT TO LIFE”: POSITIVE OBLIGATIONS FOR CONTROLLING AIR POLLUTION IN HONG KONG IN CLEAN AIR FOUNDATION v. HKSAR

by Heather R. Croshaw*

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INTRODUCTION TO THE RIGHTS BASED APPROACH IN CLEAN AIR FOUNDATION v. HKSAR

The case Clean Air Foundation v Hong Kong Special Administrative Region highlighted the first time an environmental organization used a rights-based approach to compel the Hong Kong Special Administrative Region (“HKSAR”)—Hong Kong’s government—to mitigate air pollution in Hong Kong. While the case ultimately failed on the merits, Clean Air Foundation did set a prima facie standard for the right to life and the right to health in the environmental context. This paper analyzes how this case

* Heather R. Croshaw is a Juris Doctor graduate and a candidate for a LL.M in Environmental Law at Vermont Law School. She would like to sincerely thank Professor Jingjing Liu for her guidance, mentoring, advising, and support on this paper, the Clean Air Foundation legal team who provided me with background information to the litigation, and would like to thank the editorial staff on the Vermont Journal of Environmental Law for their assistance with this article.
builds upon rights-based approaches in Hong Kong litigation, but for the first time in the environmental context. First, the paper discusses the political, social, and environmental issues in Hong Kong. Second, the paper reviews the core human rights instruments and obligations in international law. Third, the paper analyzes the HKSAR’s legal framework and the rights-based approach. Fourth, the paper discusses the Clean Air Foundation case and how it established the prima facie standard for the right to life and right to health. Finally, the paper explores different approaches to rights-based environmental protection in Hong Kong, and discusses other rights-based environmental protection cases from around the world.

I. CONTEXT OF HONG KONG SPECIAL ADMINISTRATIVE REGION (HKSAR)

A. The Political Environment in the HKSAR

Hong Kong’s air pollution has gained significant domestic and international attention. While the Hong Kong Government (“Government”) adopted Air Quality Objectives (“AQOs”) 25 years ago, the Government repeatedly failed to update them in accordance with World Health Organization (“WHO”) standards. Beginning in 1997, Government leaders have made political promises to improve the air quality but have fallen well short of creating targets to meet WHO standards. Currently,


3. Rachel E. Stern, Hong Kong Haze: Air Pollution as a Social Class Issue, 43 ASIAN SURVEY 780, 793, 800 (2003), available at http://scholarship.law.berkeley.edu/cgi/viewcontent.cgi?article=2791&context=facpubs (illuminating on the relationship between air pollution and income inequality in Hong Kong, which was addressed in Chief Executive Tung Chee-Hwa’s 1999 and 2000 annual policy speeches in which the Chief Executive vowed to clean up the air pollution. Later former Chief Donald Tsang announced in May 2011 that his administration planned to have new AQOs in place by the end of 2011. Finally, in March 2013, Chief Executive CY Leung announced his own plan to reduce air pollution and improve air quality in his policy report, “A Clean Air for Hong Kong.”). See also MIKE KILBURN & CHRISTINE LOH, PRINCIPLES AND MEASURES TO IMPROVE AIR QUALITY: POLICY RECOMMENDATIONS FOR A NEW ADMINISTRATION (Civic Exchange Jan. 2012), available at http://dl.dropboxusercontent.com/u/2439304/civicexchange/120112PolicyRecommendations_en.pdf (reporting on the air pollution trends in Hong Kong during the 2005-2012 Donald Tsang Administration). See also HONG KONG ENVTL. PROT. DEPT’T, A CLEAN AIR PLAN FOR HONG KONG,
Chief Executive Leung Chun-ying (“CY Leung”) has made his own political promises to alleviate air pollution and implemented a new Air Quality Health Index (AQHI) in January 2014. With so many political promises and little action, citizens of Hong Kong have become increasingly frustrated with the lack of progress and skeptical that any changes would actually work to curb the severe air pollution.

Frustrated with the lack of political action, the Clean Air Foundation and Mr. Gordon David Oldham filed a lawsuit in the Court of First Instance in Hong Kong. They argued that because of the air pollution, the Government has violated human rights as protected under the Basic Law, the Basic Law’s Bill of Rights, and relevant provisions within international treaties, including the “right to life” and the “right to health.” Other jurisdictions have experienced rights-based environmental cases, but Clean Air Foundation was the first public interest litigation of this kind in Hong Kong. While symbolic, the case established a legal precedent for a rights-based approach to environmental protection through judicial review. This case created the legal space to expand the scope of these rights for protecting the environment.

i. Socio-Economics, Politics and the Colonial Legacy

Today, the HKSAR contains a population of almost 7.2 million people within 1,104 square kilometers and 18 political districts. Hong
Kong has a sophisticated, modern service-based economy and a high quality of living. It has a fairly stable and wealthy free-market economy based primarily on international trade and finance (92% services industry). Additionally, the HKSAR comprises of an administrative government with an executive council, judiciary, and a legislative council. Hong Kong is considered a partial democracy.

After 155 years of rule, the British government and the People’s Republic of China (“China”) formally signed the Joint Sino-British Declaration on December 19, 1984 to return Hong Kong to China on July 1, 1997. Before the handover, the British and the Chinese designed the “one country, two systems” governance structure that would administer the HKSAR. The Basic Law of Hong Kong was negotiated and approved in March 1990 by China’s National Peoples Congress.

ii. The Natural Environment

Simply stated, Hong Kong is a concrete jungle encompassed by numerous protected areas, breath-taking views, towering skyscrapers, and densely populated cities. Comprised of more than 200 islands, the

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9. Id. (noting Hong Kong has a gross domestic product (“GDP”) purchasing power parity (“PPP”) per capita of $50,900 and GDP PPP of $365.6 billion and is ranked thirty-sixth in the world for GDP PPP and fourteenth in the world for GDP PPP per capita).


11. THE BASIC LAW OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE’S REPUBLIC OF CHINA, infra note 14, at Ch. 1, art. 9, available at http://www.basiclaw.gov.hk/en/basiclawtext/images/basiclaw_full_text_en.pdf, (last visited March 10, 2014) [hereinafter BASIC LAW] (proclaiming Cantonese and English are the official languages and all government documents are published in both languages. Article 9 states, “[i]n addition to the Chinese language, English may also be used as an official language by the executive authorities, legislature and judiciary of the Hong Kong Special Administrative Region.”); see also CIA World Factbook: Hong Kong, supra note 8.

12. 1984: Britain Signs Over Hong Kong to China, BBC NEWS (Dec. 19, 2005), http://news.bbc.co.uk/onthisday/hidates/stories/december/19/newsid_2538000/2538857.stm (stating the HKSAR was a former British colony, first occupied in 1841 and formally ceded by China in 1842).

13. Id.

14. BASIC LAW at Ch. 1 art. 5 (indicating the PRC’s socialist governance system will not apply for fifty years, and preserving existing rights and freedoms before the handover, including international human rights. “The socialist system and policies shall not be practised in the Hong Kong Special Administrative Region, and the previous capitalist system and way of life shall remain unchanged for 50 years.”); see also CIA World Factbook: Hong Kong, supra note 8.


16. Hong Kong’s Environment: Conservation, HONG KONG ENVTL. PROT. DEP’T, (July 3, 2012),
geography of Hong Kong contains steep mountainous terrain, hills and slopes, and lowlands. Also, Hong Kong has rich biodiversity living in a sub-tropical monsoon climate with hot and wet springs and summers, warm and dry falls, and cool and humid winters.

iii. Hong Kong’s Air Quality Standards and Sources of Pollution

Worldwide, the number of deaths caused by air pollution reached 3.2 million people in 2010, an increase from 80,000 deaths in 1990. A recent Lancet study demonstrated that air pollution kills more people around the world than cholesterol, particularly in Asia. In Hong Kong, between January 1, 2005 and December 31, 2011, the Hedley Environmental Index recorded 7,240 premature deaths, 528,388 avoidable hospital bed days, and 49.26 million avoidable doctor visits caused by the air pollution. Additionally, the air pollution results in more than 3,000 premature deaths per year.

With the rich, developed economy of Hong Kong, environmental advocates expect better environmental quality in the HKSAR. Since 2007, the air quality has continuously declined. In 2011, a total of 175 days had very high pollution levels, more than two times the number in 2007. The Hedley Environmental Index measured fifty-nine “clear sky” days with air


17. CIA World Factbook: Hong Kong, supra note 8.
18. The Natural Environment, Plants & Animals in Hong Kong, Gov’t H.K., http://www.gov.hk/en/residents/environment/conservation/nature/plantsanimals.htm (last visited Mar. 8, 2014) (noting Hong Kong is home to approximately 3,000 species of flowering plants [including 120 different kind of orchids]; more than 300 types of native trees; around 2,000 types of moth, 110 types of dragonfly, and 230 butterfly species). Managing Mai Po Nature Reserve, WWF-H.K., http://www.wwf.org.hk/en/whatwe/do/conservation/wetlands/managemaiipo/ (last visited Mar. 8, 2014) (describing Hong Kong’s biologically diverse 1,500-hectare Ramsar Wetlands site at Mai Po Nature Reserve, which contains one of the largest bird migrations in the world); see also CIA World Factbook: Hong Kong, supra note 8 (documenting Hong Kong’s rich and diverse biology).
20. Id.
21. KILBURN & LOH, supra note 3, at 1, 3.
22. Yun, supra note 4.
23. Berry Fong Chung Hsu, Constitutional Protection of a Sustainable Environment in the Hong Kong Special Administrative Region, 16 J. ENVT. L. 193, 194 (2004) (“The HKSAR may be considered as a developed country with a third world environment.”).
24. Yun, supra note 4.
25. Id.
quality levels below WHO short-term standards.26 In November 2012, the Government released an audit report (“The Report”) on monitoring and reporting of air quality and the implementation of air-quality improvement measures. The Report gave an unfavorable review of current conditions.27

Local and regional sources cause the air pollution in Hong Kong. Locally, the main air pollutants include PM10, PM2.5, Volatile Organic Compounds (“VOCs”), NOx, SOx, and ozone (O3), primarily caused by roadside pollution and power plants.28 One of the most successful efforts by the Government to curb emissions was to require coal-fired power plants to install flue gas desulphurization (“FGD”) retrofits, which reduced sulfur emissions by 98 percent.29 Other policy initiatives included using cleaner energy via natural gas and renewables, as well as implementing energy conservation efforts.30 Also, the HKSAR has released draft regulations to phase-out older diesel commercial vehicles (“pre-Euro IV”) to improve roadside emissions.31 These trucks account for 17% of the road traffic but contribute 74% of total particulate emissions.32

Regionally, beginning in 2002, the HKSAR and Guangdong Provincial Government’s Department of Environmental Protection collaborated over reducing air pollution in the Pearl River Delta establishing the Pearl River Delta Regional Air Quality Monitoring Network.33 Most of the efforts focus on controlling emissions from vehicles

27. HONG KONG ENVTL. PROT. DEP’T: AUDIT COMM’N, MONITORING AND REPORTING OF AIR QUALITY ¶ 6 (2012), available at http://www.aud.gov.hk/pdf_e/e59ch01.pdf (stating, in 2011, the average concentration level of nitrogen dioxide [NO2] in Hong Kong was 279% higher than Sydney, 47% higher than London, and 36% higher than New York. For PM10, the pollutant levels are 220%, 100%, and 153% higher than those cities, respectively). See also Hong Kong Government Audit Slams Air Quality, WALL ST. J. (Nov. 14, 2012, 9:04 PM), http://blogs.wsj.com/chinarealtime/2012/11/14/hong-kong-government-audit-slags-air-quality/ (noting Hong Kong has consistently failed to meet its air quality goals since 1987).
28. KILBURN & LOH, supra note 3, at 2; HEDLEY ENVTL. INDEX, supra note 25.
29. KILBURN & LOH, supra note 3, at 11.
30. Id. at 11–12.
and power plants, as well as implementing controls on industrial sources of air pollution.\textsuperscript{34} Based on the data, the Pearl River Delta average emissions were reduced for NO\textsubscript{x}, VOCs and respirable suspended particle (“RSP”) (also labeled as PM\textsubscript{10}) pollution decreased while emissions increased for SO\textsubscript{x} (likely caused by coal-burning power plants).\textsuperscript{35} The air quality in Hong Kong, however, had modest decreases in SO\textsubscript{x}, PM\textsubscript{2.5} and increases in NO\textsubscript{x}, most likely caused by roadside pollution.\textsuperscript{36} In addition, the Regional Air Quality Monitoring Network released the 2013 monitoring results from January to June in October 2013.\textsuperscript{37} The Pearl River Delta initiative and the HKSAR make the air quality information publically available.

Furthermore, the HKSAR government understands the severity of the air pollution problem and its impact on health and living standards. On December 30, 2013, the HKSAR’s Environmental Protection Department launched an air quality index, called the Air Quality Health Index (“AQHI”), to replace the existing Air Pollution Index (“API”).\textsuperscript{38} The new AQHI will release information based on short-term health risks related to air pollution levels caused by concentrations of NO\textsubscript{x}, SO\textsubscript{x}, PM\textsubscript{2.5} and PM\textsubscript{10}, and ozone.\textsuperscript{39} The index will be made available publically and on smartphones (“HK AQHI”) to alert and inform the public on the health risks of air pollution on any given day.\textsuperscript{40} The new AQHI changes the way Hong


34. Pearl River Air Data Quality, supra note 33.


39. Id.

40. Id.
Kong has measured air pollution since 1987 by intersecting the concentrations of pollutants and health risks.\(^{41}\)

Local air pollution remains a significant problem in Hong Kong, and reforms to curb emissions still fall short of WHO standards. Despite political declarations to improve Hong Kong’s air quality, the AQOs have not been updated since 1987.\(^{42}\) The WHO has updated their standards twice since then, revising them most recently in 2006.\(^{43}\) Hong Kong’s AQOs remain well under WHO standards—despite decades of political intentions to update them—and contribute to the decreasing quality of life in Hong Kong. The concern over the harmful air pollution, lack of government action, and impact on Hong Kong residents creates an atmosphere to take action on the “right to life” and the “right to health,” as established under Hong Kong’s Basic Law, Bill of Rights, and several international treaties.

II. RIGHT TO LIFE AND RIGHT TO HEALTH: INTERNATIONAL PROVISIONS

A. Overview of International Legal Obligations

The HKSAR is party to several international treaties dealing with human rights: the International Covenant on Civil and Political Rights (“ICCPR”),\(^{44}\) the International Covenant on Economic, Social and Cultural Rights (“ICESCR”),\(^{45}\) and the Convention of the Rights of the Child.\(^{46}\)

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42. KILBURN & LOH, supra note 3, at 7 (stating the Environmental Protection Department understood the AQOs were outdated and began a review of them in 2009, opening the AQOs to public comment, but never adopting them).

43. Id.

44. International Covenant on Civil and Political Rights, opened for signature Dec. 16, 1976, 999 U.N.T.S. 171 (entered into force Mar. 23, 1976), available at http://www.ohchr.org/en/professionalinterest/pages/ccpr.aspx. As a territory of the United Kingdom and Northern Ireland, the ICCPR applied to Hong Kong after the UK’s signature on May 20, 1976. It also applied to HKSAR when they became a part of the PRC. “On 3 December 1999, the Government of China notified the Secretary-General that...[w]ith regard to the application of the Covenant to Hong Kong, the Secretary-General received communications concerning the status of Hong Kong from the United Kingdom and China (see note 2 under “United Kingdom of Great Britain and Northern Ireland” and note 2 under “China” in the “Historical Information” section in the front matter of this volume). Upon resuming the exercise of sovereignty over Hong Kong, China notified the Secretary-General that the Covenant will also apply to the Hong Kong Special Administrative Region.” Id. See also *Ratification of the ICCPR*, UN.ORG, http://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-4&chapter=4&lang=en (last visited Mar. 31, 2014)(providing a comprehensive list of treaty signatories).

Also, the soft law instrument of the International Labour Organization ("ILO") and the customary law of the United Nations Declaration on Human Rights applies. These rights were codified within the Basic Law under Article 39. The Government has to craft subsequent legislations or policies that will abide by these human rights covenants and will be subject to judicial review for possible violations.47

B. International Covenant on Civil and Political Rights ("ICCPR")

Under the ICCPR, State parties have a positive duty to respect and implement the rights of the ICCPR in “good faith.”48 Additionally, the “right to life” stipulates: “Every human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of his life.”49 As clarified by the UNHRC General Comment 6, the decision noted that the “right to life” is often too narrowly interpreted.50 In other words, this right imposes a legal obligation on States to protect life through positive measures that protect the quality of life, not just life itself.

C. International Covenant on Economic, Social and Cultural Rights ("ICESCR")

The ICESCR contains the provision on the ‘Right to Health,’ which has been used in domestic courts globally for environmental protection cases.51 Article 12, known as the ‘Right to Health,’ mandates that State Parties “recognize the right of everyone to the enjoyment of the highest

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49. International Covenant on Civil and Political Rights, supra note 44, at art. 6, ¶ 1.
51. ICESCR, supra note 45.
attainable standard of physical and mental health” and take steps for the “full realization of this right shall include those necessary . . . for the healthy development of the child . . . and [t]he improvement of all aspects of environmental and industrial hygiene . . . .”52 In addition, General Comment 14 further clarified the “right to health,” explaining that this right contains three levels of obligations by States to—respect, protect, and fulfill—with each one containing further obligations.53 This requires State parties to take positive measures to ensure that all persons enjoy the “right to health.”54 Thus, State parties should proactively be promoting the “right to health” in their domestic law and policies, which would include the HKSAR as a State party vis-à-vis China.

D. The ICCPR and ICESCR Implementation by State Parties

The ICCPR55 and the ICESCR56 both mandate that State parties implement the human rights provisions in domestic law and apply them equally to all persons. A State with many resources at its disposal should apply the rights in the ICESCR liberally. However, the rights must be

52. Id. at art. 12.
53. U.N. Comm. on Econ., Social and Cultural Rights, General Comment No. 14, ¶ 33–36, U.N. Doc. HRI/GEN/1/Rev.7 (Aug 11, 2000), http://www.unhchr.ch/tbs/doc.nsf/(symbol)/E.C.12.2000.4.En. Under “fulfill,” States must facilitate, provide, and promote the “right to health.” Therefore, States will “adopt appropriate legislative, administrative, budgetary, judicial, promotional and other measures towards the full realization of the right to health.” Id. The respect obligation requires States to refrain from interfering directly or indirectly with the enjoyment of the right to health. Id. Additionally, the “protect” obligation directs “States to take measures that prevent third parties from interfering with Article 12 guarantees.” Id.
54. Id. ¶ 37.
55. International Covenant on Civil and Political Rights, supra note 44 (stating both negative and positive obligations for State parties). State parties must “respect” and “ensure” that individuals’ rights are honored within their relevant jurisdictions; take “necessary” steps to adopt laws implementing the rights within the ICCPR; and ensure access to a “competent” judiciary and “effective” remedies. Furthermore, the ICCPR requires that States avoid violating the ICCPR human rights and that any restrictions on these rights should be permissible under the treaty. Id. See also Committee on Social, Economic and Cultural Rights, The Nature of the General Legal Obligation Imposed on States Parties to the Covenant Human Rights Committee, General Comment No. 31 [80], 2187th mtg., CCPR/C/21/Rev.1/Add.13 (May 26, 2004) (explaining the legal obligations under the ICCPR). See also DONALD K. ANTON & DINAH L. SHELTON, ENVIRONMENTAL PROTECTION AND HUMAN RIGHTS 236–38 (2011) (discussing Article 2 of the ICCPR and obligations it imposes on state parties).
56. ICESCR, supra note 4551 (placing a more positive obligation on State parties, requiring that parties “take steps” through “progressive realization” to implement the minimum core of rights-based legislations domestically, based on a State’s economic, social, and cultural capacity). For an interpretation of Article 2, see U.N. Comm. on Econ., Social and Cultural Rights, supra note 53, at General Comment No. 3.
applied equally, be justiciable, should be self-executing, and applied in domestic courts.  

E. International Labor Organization (ILO)

Hong Kong ratified the ILO Convention No. 148 on Working Environment (Air Pollution, Noise, and Vibration) on July 1, 1997, making ILO legally binding. Specifically, Article 3(1) defines “air pollution” as “covers all air contaminated by substances, whatever their physical state, which are harmful to health or otherwise dangerous.” However, this Convention lacks strong language for requiring State signatories to proactively combat air pollution through strict air quality controls. Importantly, under Article 13(a) and (b), the HKSAR has a duty to keep workers informed on the potential or existing hazards of air pollution in the work environment.

F. Universal Declaration on Human Rights

The Universal Declaration on Human Rights (Universal Declaration) contains language that supports the rights-based approach for environmental protection cases. Article 25(1) states: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family . . . .” While the Universal Declaration is a non-binding U.N. resolution, the document has gained the status of customary law in many legal circles. In other words, the Universal Declaration can also be used to interpret not only international law, but also domestic law, including in Hong Kong. In sum, the ICCPR, ICESCR, the Universal Declaration and the ILO Convention No. 148 on Air Pollution, Noise and

57. U.N. Comm. on Econ., Social and Cultural Rights, supra note 53, at General Comment No. 9. (articulating that a State can be found to violate the ICESCR when it fails to use all resources at its disposal to implement the minimum core of rights).
59. Id.
60. See id. (articulating that States “shall establish criteria” to determine exposure hazards to air pollution and shall supervise the monitoring of these hazards).
61. Id.
63. See, e.g., Filartiga v. Pena-Irala, 630 F.2d 876 (2d Cir. 1980) (examining the role of non-binding international standards, such as the Universal Declaration of Human Rights as an instrument of customary law).
Vibration all contain rights-based provisions, which apply to the HKSAR legal system.

G. Convention on the Rights of the Child

In 2003, China notified the Secretariat—Hong Kong’s high offices—that Convention of the Rights of the Child would apply to the HKSAR.\(^\text{64}\) Under this treaty, the HKSAR has to consider the best interests of the child.\(^\text{65}\) Article 6 contains the provision on the “right to life,” under which “every child has an inherent right to life” and that “State Parties shall ensure to the maximum extent possible the survival and development of the child.”\(^\text{66}\) In other words, the HKSAR has a positive duty to not deny a child in Hong Kong their right to life and ensure a child’s development occurs in a natural environment that preserves their right to life.

III. HONG KONG LEGAL FRAMEWORK: ENABLING A RIGHTS-BASED APPROACH

A. The Legal Framework of HKSAR

The Basic Law of Hong Kong acts as the “constitution” for the HKSAR.\(^\text{67}\) Under Article 12, the HKSAR is deemed as a local administrative region under China and the Central People’s Government, but enjoys a high degree of autonomy.\(^\text{68}\) The current governance system has many characteristics similar to the U.K. Government,\(^\text{69}\) with separate executive, judiciary, and legislative branches.\(^\text{70}\) The HKSAR executive government can create policies that may or may not need to become

\(^{64}\) Convention on the Rights of the Child, supra note 46.
\(^{65}\) Id. at art. 3 (“In all actions concerning children, whether undertaken by public or private social welfare institutions, courts of law, administrative authorities or legislative bodies, the best interests of the child shall be a primary consideration.”).
\(^{66}\) Id.
\(^{67}\) BASIC LAW, supra note 14, at art. 11 (“[I]n accordance with Article 31 of the Constitution of the People’s Republic of China, the systems and policies practised [sic] in the Hong Kong Special Administrative Region, including the social and economic systems, the system for safeguarding the fundamental rights and freedoms of its residents, the executive, legislative and judicial systems, and the relevant policies, shall be based on the provisions of this Law. No law enacted by the legislature of the Hong Kong Special Administrative Region shall contravene this Law.”).
\(^{68}\) BASIC LAW, supra note 14, at Ch. 2.
\(^{69}\) Tung, supra note 10, at 7.
\(^{70}\) BASIC LAW, supra note 14, at Ch. 2 (“The National People’s Congress authorizes the Hong Kong Special Administrative Region to exercise a high degree of autonomy and enjoy executive, legislative and independent judicial power, including that of final adjudication, in accordance with the provisions of the Law.”).
legislated by the Legislative Council in order to become law. 71 Courts have acknowledged the separation of powers doctrine in the Basic Law. 72 However, the Standing Committee of the National People’s Congress has the ultimate interpretative authority for the Basic Law. 73

While the Basic Law has the power of a constitution for the HKSAR, the Bill of Rights is an ordinary piece of legislation with no over-riding power in mainland China. 74 The 1991 version of the Bill of Rights had two introductory provisions that were not adopted into HKSAR law by the Standing Committee during the handover in 1997—Articles 2(3) and 4. 75 Despite this limitation, courts can still refer to the Bill of Rights, as well as other common law decisions relating to human rights.

The HKSAR legal system operates under the common law framework with customary Chinese law in matters of family and land tenure. 76 Article 8 in the Basic Law stipulates that laws previously in force

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71. Tung, supra note 10, at 8.
74. Hong Kong Bill of Rights Ordinance, supra note 47, § 2. (enacted on June 8, 1991 (Cap. 53) and then amended on June 30, 1997 (Cap. 383), the ordinance is the Hong Kong Bill of Rights); Hsa, supra note 23, at 198; see also Handling of the Laws Previously in Force in Hong Kong in Accordance with Article 160 of the Basic Law of the Hong Kong Special Administrative Region of the People’s Republic of China (promulgated by the Standing Comm. Nat’l People’s Cong., effective Feb. 23, 1997) 1 P.R.C. LAWS 13, available at http://www.asianlii.org/cn/legis/cen/laws/dotscotnpcehotpihkiawa160otblothksatrotproc2160/dotscotn pcehotpihkiawa160otblothksatrotproc2160.html (discussing which previous laws in Hong Kong have maintained their force); see Suspension of Operation of Hong Kong Bill of Rights (Amendment) Ordinance, (1997) Cap. 538, 2 § 1 (H.K.), available at http://www.hklii.hk/eng/hk/legis/ord/538/ (stating that Cap 383 shall not be affected by the Hong Kong Bill of Rights (Amendment) Ordinance 1997).
75. See Hong Kong Bill of Rights Ordinance, supra note 47, § 2 (showing the provisions were not adopted). The Standing Committee did not adopt that “[i]n interpreting and applying this Ordinance, regard shall be had to the fact that the purpose of this Ordinance is to provide for the incorporation into the law of Hong Kong of provisions of the International Covenant on Civil and Political Rights as applied to Hong Kong, and for ancillary and connected matters.” Hong Kong Bill of Rights § 2(3), INT’L HUMAN RIGHTS TREATIES & DOCUMENTS DATABASE, http://www.hkhrm.org.hk/english/law/eng_boro1.html (last visited Feb. 1, 2014); see generally DECISION OF THE STANDING COMMITTEE OF THE NATIONAL PEOPLE’S CONGRESS ON TREATMENT OF THE LAWS PREVIOUSLY IN FORCE IN HONG KONG IN ACCORDANCE WITH ARTICLE 160 OF THE BASIC LAW OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE’S REPUBLIC OF CHINA (1997), available at http://www.legislation.gov.hk/blis_ind.nsf/curallengdoc/8AB4C17B24B1AA96482575EE000E8402?OpenDocument.
76. CIA World Factbook: Hong Kong, supra note 8. “Equality before and equal protection of law,” states “[a]ll persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status [cf. ICCPR Art. 26].” Hong Kong Bill of Rights Ordinance, supra note 47, § 8, art. 22.
before the handover—including the common law, rules of equity, ordinances, subordinate legislation, and customary law—will remain except those that violate the Basic Law. When adjudicating cases, the judiciary remains independent as long as the decisions are within the scope of the HKSAR’s autonomy.

On the other hand, the Basic Law provides that the Standing Committee allows the HKSAR courts to remain mostly independent to issue their own judgments. The HKSAR courts are limited, however. “[C]oncerning affairs which are the responsibility of the Central People's Government, or concerning the relationship between the Central Authorities and the Region,” courts will have to consult the Standing Committee of the National People’s Congress. This provision seems to strike a balance between preserving HKSAR’s autonomy while asserting the authority of the National People’s Congress over the region.

Interestingly, the Basic Law permits the HKSAR courts to consider common law from other common law countries. Specifically, Article 84 of the Basic Law permits the courts of the HKSAR, when adjudicating cases, to include judicial precedent from other common law jurisdictions—including the United States, South Africa and India—in their legal decisions. These jurisdictions all have an extensive legal framework for a rights-based approach to environmental protection as well as the common law public trust principle. Thus, HKSAR courts can integrate these common law decisions within their own adjudications to interpret the rights-based approach and the public trust principles embodied within the Basic Law and the Chinese Constitution.

77. BASIC LAW, supra note 14, at Ch. 1, art. 8 (“The laws previously in force in Hong Kong, that is, the common law, rules of equity, ordinances, subordinate legislation and customary law shall be maintained, except for any that contravene this Law, and subject to any amendment by the legislature of the Hong Kong Special Administrative Region.”).

78. See BASIC LAW, supra note 14, at Ch. 8, art. 158 (outlining the judicial interpretation powers for the interaction between the PRC and the HKSAR and stating “[t]he power of interpretation of this Law shall be vested in the Standing Committee of the National People’s Congress. The Standing Committee of the National People’s Congress shall authorize the courts of the Hong Kong Special Administrative Region to interpret on their own, in adjudicating cases, the provisions of this Law which are within the limits of the autonomy of the Region. . . . The courts of the Hong Kong Special Administrative Region may also interpret other provisions of this Law in adjudicating cases.”).


80. BASIC LAW, supra note 14, at Ch. 8, art. 158.

i. Application of International Rights-Based Agreements

For the legal application of international treaties in domestic law, Article 153 in the Basic Law outlines the scope of authority of the HKSAR and the role of China in international affairs. From 1997 onwards, the Chinese government dictate what international treaties apply to the HKSAR with consultation.\(^82\) Additionally, the HKSAR can still apply international treaties or other “relevant international agreements” to which China is not a State party.\(^83\) Therefore, international law and soft law could significantly impact domestic legal adjudications.

Significantly, Article 39 of the Basic Law expressly discusses the application of the ICCPR and the ICESCR in domestic law. Article 39 states:

\[
\text{The provisions of the International Covenant on Civil and Political Rights, the International Covenant on Economic, Social and Cultural Rights, and international labour conventions as applied to Hong Kong shall remain in force and shall be implemented through the laws of the Hong Kong Special Administrative Region. The rights and freedoms enjoyed by Hong Kong residents shall not be restricted unless as prescribed by law. Such restrictions shall not contravene the provisions of the preceding paragraph of this Article.} \(^84\)
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Combined, the Basic Law’s Article 39 with China’s declaration on HKSAR’s membership to the ICESCR states that the ICESCR will be self-executing in HKSAR’s domestic law, interpretations, and court adjudications.\(^85\)

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82. Basic Law, supra note 14, at Ch. 7, art. 153 (“The application to the [HKSAR] of international agreements to which the [PRC] is or becomes a party shall be decided by the Central People's Government, in accordance with the circumstances and needs of the Region, and after seeking the views of the government of the Region.”).
83. Id. (“International agreements to which the People's Republic of China is or becomes a party shall be decided by the Central People’s Government, in accordance with the circumstances and needs of the Region, and after seeking the views of the government of the Region.”).
84. Basic Law, supra note 14, at Ch. 3, art. 39.
85. Hsu, supra note 23, at 200.
ii. Equal Protection and Access to Adjudication and Remedies

While not expressly related to environmental protection or human rights, both the Basic Law and the Bill of Rights require equal application of the law to all Hong Kong Residents and access rights to courts and judicial remedies. Under Article 25, the Basic Law stipulates that “[a]ll Hong Kong residents shall be equal before the law.” Also, Article 41 extends this legal protection to non-residents of Hong Kong. Moreover, the Bill of Rights also guarantees equal protection under the law for Hong Kong residents. The Bill of Rights declares that these fundamental rights must be applied equally across all parts of Hong Kong society. Finally, under Article 7, the Government and any person acting on behalf of the government is bound by the Bill of Rights. Thus, the Government has to abide by the Bill of Rights within the scope of their official duties.

Procedurally, the Basic Law and Bill of Rights guarantee access to courts and judicial remedies. The Basic Law requires that Hong Kong residents have access to legal representation in courts, including for suits against executive authorities and their personnel. Article 10 provides that Hong Kong residents must have equality before courts and the right to a fair and public hearing. Also, Article 6, titled “Remedies for Contravention of

86. BASIC LAW, supra note 14, at Ch. 3, art. 25.
87. See id. at art. 41 (stipulating “[p]ersons in the Hong Kong Special Administrative Region other than Hong Kong residents shall, in accordance with law, enjoy the rights and freedoms of Hong Kong residents prescribed in this Chapter.”).
88. Hong Kong Bill of Rights Ordinance, supra note 47, § 8, art. 22 (“Equality before and equal protection of law,” states “[a]ll persons are equal before the law and are entitled without any discrimination to the equal protection of the law. In this respect, the law shall prohibit any discrimination and guarantee to all persons equal and effective protection against discrimination on any ground such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status [cf. ICCPR Art. 26].”).
89. Id. § 8, art. 1.
90. Id. § 7. Section 7, entitled Binding effect of Ordinance, states:
   (1) This Ordinance binds only- (a) the Government and all public authorities; and (b) any person acting on behalf of the Government or a public authority. (2) In this section, “person” includes any body of persons, corporate or unincorporate.
91. BASIC LAW, supra note 14, at Ch. 3, art. 35. Article 35 articulates:
   Hong Kong residents shall have the right to confidential legal advice, access to the courts, choice of lawyers for timely protection of their lawful rights and interests or for representation in the courts, and to judicial remedies. . . . Hong Kong residents shall have the right to institute legal proceedings in the courts against the acts of the executive authorities and their personnel.
92. Hong Kong Bill of Rights Ordinance, supra note 47, § 8, art. 10. Section 8 incorporates Article 14.1 of the ICCPR and states:
   [a]ll persons shall be equal before the courts and tribunals. In the determination of any criminal charge against him, or of his rights and obligations in a suit at law, everyone shall be entitled to a fair and public hearing by a competent, independent and impartial tribunal established by law.
Bill of Rights,” stipulates a court may grant relief or if a provision of the Bill of Rights has been breached, violated or there is a threat of violation.93

Particularly in environmental cases, rights-based approaches are crucial to environmental protection. The substantive and procedural rights apply to all Hong Kong residents regardless of social class, ethnicity, origin, gender, etc. Thus, if the Government violates environmental laws or human rights, a Hong Kong resident or a public interest organization has standing to bring a lawsuit in court.

iii. Rights-Based Approach Under HKSAR Law

The Basic Law and the Bill of Rights incorporate two aspects of the ICCPR and ICESCR. First, the Basic Law mandates that the Government has an affirmative duty to protect the rights of its citizens under international law.94 Hong Kong residents “shall enjoy the other rights and freedoms safeguarded by the laws of the Hong Kong Special Administrative Region.”95 Second, Article 11 requires that all Government ordinances and policies be based on the Basic Law, in accordance with “Article 31 of the Constitution of the People’s Republic of China,” in order to “safeguard[ ] the fundamental rights and freedoms of its residents” enshrined in the Basic Law.96 Thus, if a HKSAR law violates these “fundamental rights and freedoms,” judicial review would be a legal option for public interest litigation.

Additionally, the courts of Hong Kong are permitted to consider other common law decisions in their adjudications.97 Therefore, courts and laws of the HKSAR have to be interpreted with these human rights agreements in mind—even if not expressly enacted into domestic law—and use common law decisions to aid in the interpretation of these human

93. Hong Kong Bill of Rights Ordinance, supra note 47, § 6. Under the Bill of Rights, Section 6 states in full: (1) A court or tribunal—(a) in proceedings within its jurisdiction in an action for breach of this Ordinance; and (b) in other proceedings within its jurisdiction in which a violation or threatened violation of the Bill of Rights is relevant, may grant such remedy or relief, or make such order, in respect of such a breach, violation or threatened violation as it has power to grant or make n those proceedings and as it considers appropriate and just in the circumstances. (2) No proceedings shall be held to be outside the jurisdiction of any court or tribunal on the ground that they relate to the Bill of Rights.

94. BASIC LAW, supra note 14 at art. 4 (“[t]he Hong Kong Special Administrative Region shall safeguard the rights and freedoms of the residents of the Hong Kong Special Administrative Region and of other persons in the region in accordance with law.”).

95. Id. at Ch. 3 art. 38.

96. Id. at Ch. 1 art. 11.

rights. In other words, Article 39 and the Chinese declaration on the ICESCR ensures that the rights encompassed within the ICCPR and the ICESCR are self-executing. 98

The Bill of Rights provides that “[t]here shall be no restriction upon or derogation from any of the fundamental human rights recognized or existing in Hong Kong pursuant to law, conventions, regulations or custom on the pretext that the Bill of Rights does not recognize such rights or that it recognizes them to a lesser extent . . .” consistent with Article 5.2 of the ICCPR. 99 As an ordinance, the Bill of Rights itself does not have the elevated status of the Basic Law, but it does incorporate the ICCPR into law. Courts have to refer to these international treaties and basic human rights when interpreting legislation and deciding issues of common law. Thus, the Basic Law and the Bill of Rights embody the fundamental human”right to life” and “right to health” as defined under international law.

First, the “right to life” imposes a positive obligation on the HKSAR to protect life under the law and not arbitrarily deprive a person of this right. 100 Both Article 28 of the Basic Law 101 and the Bill of Rights in Section 8 Article 2(1) 102 guarantee the “right to life” for persons of Hong Kong. On the surface, the Bill of Rights protects HKSAR residents against the unlawful deprivation of life, not the actual right to life. However, international jurisprudence and U.N. comments provide a broader scope of responsibilities under the “right to life,” such as protecting citizens from the inadequate storage of radioactive waste from nuclear power plants. 103

While the “right to life” appears in many legal documents, the “right to health” does not surface in any of the Hong Kong legal documents.

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98. U.N. Comm. on Econ., Social and Cultural Rights, supra note 53, at General Comment No. 9, ¶ 11. Regarding whether the ICESCR is self-executing, General Comment No. 9 explained: “[i]n most States, the determination of whether or not a treaty provision is self-executing will be a matter for the courts, not the executive or the legislature. In order to perform that function effectively, the relevant courts and tribunals must be made aware of the nature and implications of the Covenant and of the important role of judicial remedies in its implementation.

99. Hong Kong Bill of Rights Ordinance, supra note 47, § 2, art. 5.

100. Hsu, supra note 23, at 200.

101. See BASIC LAW, supra note 14, at Ch. 3, art. 28 (stipulating “[t]orture of any resident or arbitrary or unlawful deprivation of the life of any resident shall be prohibited”).

102. In the Bill of Rights (Cap. 383), Section 2, Article 1 states “[e]very human being has the inherent right to life. This right shall be protected by law. No one shall be arbitrarily deprived of this life.” Hong Kong Bill of Rights Ordinance, supra note 47 § 8, art. 2.

However, since China is a party to the ICESCR, the international treaty also applies to Hong Kong.104 Under the ICESCR, Article 12 defines the “right to health,” under which everyone should enjoy the “highest attainable standard of . . . health.”105 The Committee on Economic, Social and Cultural Rights further clarified the “right to health” in General Comment 14, which should also be applied domestically in Hong Kong.106

iv. Rights-Based Cases in Hong Kong Jurisprudence

In Hong Kong, several public interest litigations have used a rights-based approach to find judicial relief. Most public interest litigations use judicial review to initiate a legal case to sue the HKSAR for violating the rights contained in the Basic Law or some other right.107 The landmark case, Ng Ka Ling v. Director of Immigration, provided:

[i]n exercising their judicial power conferred by the Basic Law, the courts of the HKSAR have a duty to enforce and interpret that Law. They undoubtedly have the jurisdiction to examine whether legislation enacted by the legislature of the HKSAR or acts of the executive authorities of the HKSAR are consistent with the Basic Law and, if found to be inconsistent, to hold them to be invalid.108

The case R. v. Sin Yau Ming established the legal review for the constitutionality of Hong Kong legislation.109 Once a plaintiff establishes a

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105. Id. Article 12 states: (1) The States Parties to the present covenant recognize the right of everyone to the enjoyment of physical and mental health. (2) The steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for: (a) . . . the healthy development of the child; (b) The improvement of all aspects of environmental and industrial hygiene . . .
108. R. v. Oakes, [1986] 1 S.C.R. 103, 105–06 (Can), available at http://scc.lexum.com/decisia-scc-en/item/117/index.do (adopting the constitutional review approach articulated in a case from Canada; the legal test includes: (1) the “objective to be served by the measures limiting a . . . right must be sufficiently important to warrant overriding a constitutionally protected right or freedom”; and (2) the government’s “means to be reasonable and demonstrably justified” and proportionate. The latter proportionality test contains three elements: the government “measures must be fair and not arbitrary, carefully designed to achieve the objective in question and rationally connected to that objective. In addition, the means should impair the right in question as little
primafacie showing of a rights violation, then the burden of proof shifts to the government. The HKSAR would have to show a rational connection between the law and the policy goal to justify the infringement on constitutional rights.

For the most part, the courts have ruled favorably, supporting rights-based claims in judicial reviews. Any ordinances that contravene the Basic Law shall be null and void according to judicial precedent. Cases support the rights enshrined in the Basic Law and Bill of Rights, as demonstrated by cases on equal protection for sexual orientation, the right to abode, the freedom of religion, the freedom of speech, and the right to privacy, to name a few examples.

While similar to public interest cases in other jurisdictions, judicial review rules often limit the precedential value of these cases, particularly if politics are involved. However, Non-Governmental Organizations as possible. Lastly, there must be a proportionality between the effects of the limiting measure and the objective—the more severe the delerious effects of a measure, the more important the objective must be.”; see also R. v. Sin Yau-ming, [1991] 1 H.K.P.L.R. 89, 89–90, [1992] H.K.C.L.R. 127, 128 (H.K.).


111. See Keith Bradsher, Hong Kong Court Denies Residency to Domestic, N.Y. TIMES, (Mar. 25, 2013), http://www.nytimes.com/2013/03/26/world/asia/hong-kong-court-denies-permanent-residency.html?pagewanted=all&_r=1 & (describing the exception of the recent ‘right to abode’ case involving a Philippine woman who was employed as a domestic worker in Hong Kong for twenty-seven years. The case involved Article 24(4) in Committee of the National People’s Congress in Beijing to review the issue before the court opinion. Any legal interpretation from the Standing Committee would be binding on the HKSAR. The court ruled in favor of the HKSAR, which was the expected outcome of the Standing Committee opinion.). See Vallejos v. Comm’r of Registration, [2013] 17 H.K.C.F.A. ¶ 4 (C.F.A.) (H.K.), http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkcfa/2013/17.html?stem=&synonyms=&query=vallejos (debating the constitutionality of legislation prohibiting persons of non-Chinese nationality who entered Hong Kong for employment as domestic helpers from gaining permanent resident status in Hong Kong).


113. See Leung Kwok Hung v. HKSAR [2005] H.K.C.F.A.R. 41, ¶¶ 54–56 (C.F.A.) (H.K.), available at http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkcfa/2005/41.html?stem=&synonyms=&query=leung%20kwok%20Hung%20and%20HKSAR%20%29 (referencing the court’s restrictive “necessity test” that allows a government measure to constrict the rights of free speech and peaceful assembly only if two narrow exceptions apply, such as for national security or public health. This “necessity test” stems from the ICCPR Article 21).


115. Id. ¶ 3.
(NGOs) and other public-interest organizations use judicial review to enforce a rights-based approach in Hong Kong jurisprudence. Judicial review provides an additional forum to advance political bargaining.\footnote{116}

v. Application of Chinese Constitution & Common Pool Natural Resources

While China is a civil law country, the Chinese Constitution does apply to Hong Kong.\footnote{117} The Chinese Constitution contains a provision on environmental governance, specifically dealing with the management and use of common pool resources for the public interest.\footnote{118}

Furthermore, Chapter I, Article 26 of the Chinese Constitution provides that “[t]he state protects and improves the living environment and the ecological environment, and prevents and remedies pollution and other public hazards.”\footnote{119} Thus, the State has a legal responsibility to protect the public trust as part of environmental protection, as well as prevent and mitigate pollution, which would include air pollution.

The Basic Law contains a similar public trust provision in Article 7, which states:

\[
\text{[t]he land and natural resources within the Hong Kong Special Administrative Region shall be State property. The Government of the Hong Kong Special Administrative Region shall be responsible for their management, use and development and for their lease or grant to individuals, legal persons or organizations for use or development. The revenues derived therefrom shall be exclusively at the disposal of the government of the Region.}\footnote{120}
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\footnote{116. Id., ¶ 1.
117. XIANFA, at art. 5, § 2 and art. 62 § 13 (1982) (China) (“No laws or administrative or local regulations may contravene the Constitution.”); see also Barry Fong Chung Hsu, \textit{Environmental Protection under Common Law}, H.K. LAWYER (Nov. 10, 2011), http://law.lexisnexis.com/webcenters/hk/Hong-Kong-Lawyer/-/Environmental-protection-under-common-law/ (examining the public trust doctrine in Hong Kong and its importance in the legal system to protect the environment where other provisions have not).
118. See id. at art. 9, § 1–2 (“(1) All mineral resources, waters, forests, mountains, grasslands, unreclaimed land, beaches and other natural resources are owned by the State, that is, by the whole people, with the exception of the forests, mountains, grasslands, unreclaimed land and beaches that are owned by collectives as prescribed by law. (2) The State ensures the rational use of natural resources and protects rare animals and plants. Appropriation or damaging of natural resources by any organization or individual by whatever means is prohibited.”).
119. Id. at art. 26, § 1–2.
120. BASIC LAW, \textit{supra} note 14, at Ch. 1, art. 7.}
In other words, the Chinese Constitution contains a “public trust” provision that requires the HKSAR to manage the environment for the benefit of Hong Kong residents.\textsuperscript{121} This provision in the Basic Law harmonizes Hong Kong’s property law—and management over natural resources—with Chinese law. Thus, the combination of the Chinese Constitution and the Basic Law Article 7 imposes a legal duty on the executive branch of the Government to protect common pool resources held in public trust, such as clean air.\textsuperscript{122} Ultimately, the Standing Committee of China has final say on the Chinese Constitution and Basic Law interpretations.

vi. Air Quality and Environmental Protection Legal Framework

The Basic Law does not expressly mandate that the HKSAR enact laws and policies to protect the environment. However, Article 119 in the Basic Law requires that “the [HKSAR] shall formulate appropriate policies to promote and co-ordinate the development of various trades such as manufacturing, commerce, tourism, real estate, transport, public utilities, services, agriculture and fisheries, and pay regard to the protection of the environment.”\textsuperscript{123} The HKSAR enacted two main ordinances for protecting air quality: the Air Pollution Control Ordinance (“APCO”) (Cap. 311) and the Environmental Impact Assessment Ordinance (“EIAO”) (Cap. 499).

Designed after Britain’s Clean Air Act,\textsuperscript{124} the APCO governs the management of air quality in Hong Kong.\textsuperscript{125} The APCO requires that the Secretary of the Environmental Protection Department within the Government establish AQOs.\textsuperscript{126} The AQOs consist of targets for the

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\item 121. Additionally, the provision requires a “rational use” standard for the HKSAR to manage common pool resources. Hsu, \textit{supra} note 23, at 196–97.
\item 122. \textit{Basic Law, supra} note 14, at Ch. 1, art. 7. (expressing the public trust doctrine and its corresponding assumption that air resources are held in trust by the HKG as opposed to being privately owned by a corporation or individual).
\item 123. \textit{Basic Law, supra} note 14, at Ch. 5, § 1, art. 158.
\item 124. \textit{Kilburn & Loi, supra} note 3, at 4.
\item 125. Air Pollution Control Ordinance, (1993) Cap. 311, § 2 (H.K.), \textit{available at} http://www.hklii.hk/eng/hk/legis/ord/311/s2.html (articulating the purpose of the APCO is to curb air pollution. “‘[A]ir pollution’ means an emission of air pollutant which either alone or with another emission of air pollutant: (a) is prejudicial to health; [or] (b) is a nuisance . . . .”
\item 126. \textit{Id.} § 7 (repealed by the 2013 Air Pollution Control Ordinance). For establishing AQOs, § 7 of the APCO states:
\begin{enumerate}[(1)]
\item The Secretary shall, after consultation with the Advisory Council on the Environment, establish for each air control zone air quality objectives or different objectives for different parts of a zone. (1A) The Secretary may publish air quality objectives for an air control zone by issuing a technical memorandum, which may specify different objectives for different parts of the zone. (2) The air quality objectives for any particular air control zone or part thereof shall be the quality, which, in the
maximum acceptable level of air pollutants, but lack legally binding standards as they are basically suggested guidelines without an enforcement mechanism for violations.\textsuperscript{127} Thus, the Government’s failure to meet the AQO targets lacks legal teeth.

Furthermore, Under Section 7 of the APCO, Cap. 311 contains a “direct provision for the Secretary for the Environment, in consultation with a statutory body, not only to introduce air quality objectives, but to update them \textit{whenever necessary} (emphasis added).”\textsuperscript{128} The “\textit{whenever necessary}” language leaves much open to interpretation and discretion by the Secretary.\textsuperscript{129} At the very minimum, “\textit{whenever necessary}” should mean to preserve the “right to life” and the “right to health” for Hong Kong residents, as well as preserving the air quality as part of the public interest in the public trust. Moreover, Section 7(2) offers more insight into the powers of the APCO: “[t]he air quality objectives for any particular air control zone or part thereof shall be the quality which, in the opinion of the Secretary, should be achieved and maintained in order to promote the conservation and best use of air in the zone in the public interest.”\textsuperscript{130} Public interest is not defined. Furthermore, the HKSAR has the power to grant or deny a license to pollute.\textsuperscript{131} The HKSAR has to ensure that the permittee would have the capacity to provide and maintain the “best practicable means” to prevent air pollutants emitting from his premises; that the permittee deliberately work towards complying with the relevant AQOs; and that the permittee “have regard to whether the emission of noxious or offensive emissions would be, or be likely to be, prejudicial to health.”\textsuperscript{132} In turn, “prejudicial to health” means pollutants that are injurious, or likely to cause injury, to health.\textsuperscript{133} So, when the HKSAR issues licenses to pollute, it has to consider the right to health and ensuring that the project will not be prejudicial to health when making these decisions.

The new APCO Amendment repeals Section 7 and adds Section 7A and Section 5, which deal with “air quality objectives.”\textsuperscript{134} The objectives

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\textsuperscript{127} Kilburn & Lo, supra note 3, at 5.
\textsuperscript{128} Anton & Shelton, supra note 55, at 459.
\textsuperscript{129} Id.
\textsuperscript{130} Id. § 15(3).
\textsuperscript{131} Id. § 15(3)(a)–(c).
\textsuperscript{132} Id. § 2.
\textsuperscript{133} Id. § 7A and Sched. 5.
\end{flushleft}
are reviewable every five years. The Secretary can review the air quality objectives at her discretion, but the objectives “should be achieved and maintained” in order to “promote the conservation of the air in the zone in the public interest;” and “promote the conservation and the air in the zone in the public interest.” This provision creates tension over the use of the term “public interest.” The term could be used to justify tightening air quality standards for public health reasons, but could also justify an exemption for air pollution that advances the public interest, as a “best use” of the atmosphere, such as building an additional power plant for generating more electricity.

The other main ordinance for protecting air quality is the EIAO (Cap. 499). In a rights-based approach, the EIAO requires that large development projects write an Environmental Impact Assessment report. The reports must be available for public inspection and comments. However, the Executive may exempt a public works project, “in the name of the public interest.” The EIAO ensures that the public has access to information on public works projects (the access right of “Right to Information”). Furthermore, the EIAO permits citizens to sue the government either as individuals or as a civil society group to protest grants of environmental permits or faulty Environmental Impact Assessments (“EIAs”). As currently written, the EIAs do not require analysis of how development projects will impact the “right to life” and the “right to health,” if the Government has exempted the project from air quality standards. Finally, the EIAO will refer to the APCO technical memorandum to set air quality standards in EIAs, not the APCO Amendment, for projects with “special licenses” approved before January 1, 2014.

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135. Id.
136. Id. § 7A(2).
138. Air Pollution Control Ordinance, supra note 125, § 7.
139. Id. § 30(1)–(3).
141. AIRPORT AUTH. HONG KONG, EXPANSION OF HONG KONG INTERNATIONAL AIRPORT INTO A THREE-RUNWAY SYSTEM: PROJECT PROFILE 8 (May 2012), available at http://www.hongkongairport.com/eng/pdf/future/project-profile.pdf. Under the EIAO, the HKSAR can exempt certain classes of infrastructure projects (called designated projects) from EIA reporting, including impacts on air quality emissions. Controversially, the HKG has exempted the Hong Kong International Airport’s proposal for a third runway from an EIS calculating the increased carbon dioxide emissions and other air pollutants. Id.
142. Air Pollution Control Ordinance, supra note 125, § 26G.
143. Id. See also H.K. ENVT. PROT. DEP’T, SECOND TECHNICAL MEMORANDUM FOR ALLOCATION OF EMISSIONS ALLOWANCES IN RESPECT OF SPECIFIED LICENSES (Oct. 2010),
HKSAR can still make exceptions for projects (e.g. power plants) and adjust the air quality standards and allowances for emissions accordingly. Of note, the technical memorandum refers to the Basic Law and human rights implications in the emission allowances for these “special licenses,” but does not specifically review the Basic Law and human rights provisions implicated by the “special license.”

IV. CASE DISCUSSION—CLEAN AIR FOUNDATION v. HKSAR

A. The Facts of the Case

In March 2007, the Clean Air Foundation, an environmental NGO, sued the HKSAR to protect the “environmental rights” of the Hong Kong people. The second claimant was Mr. Gordon David Oldham, an environmental advocate and Hong Kong lawyer who created the Clean Air Foundation to protect Hong Kong’s children who have no choice but to live in a polluted and unhealthy environment. He gathered approximately 900 signatures in 24 hours in support of his organization, thereby creating the necessary plaintiff to bring a judicial review case. Clean Air Foundation and Mr. Oldham filed the lawsuit claiming that the polluted air was slowly killing the citizens of Hong Kong. At the time of the suit, air pollution was Hong Kong’s number one health crisis, and 52 percent of the air pollution was locally generated. The petitioners applied for judicial review under Cap. 4A, Order 53, Rule 3 of the Rules of the High Court seeking relief. Judicial review has been used in public interest cases to

144. Air Pollution Control Ordinance, supra note 125, § 37B.
145. Clean Air Found. v. HKSAR, 35 H.K.C.F.I. 757, ¶ 2–3. The Clean Air Foundation was established by concerned citizens who were disturbed by the air pollution in Hong Kong. The purpose of CAF was also to generate public awareness on the failure of the HKSAR to mitigate the unhealthy air pollution. Air pollution caused Hong Kong’s number one health problem. E-mail from Lisa Genasci, CEO, The ADM Capital Found. (Apr. 22, 2013, 06:26 EST) (on file with author). See also Hong Kong May Face Legal Challenge Over Dirty Skies, REUTERS (Mar. 29, 2007), http://www.reuters.com/article/2007/03/30/environment-hongkong-pollution-dc-idUSHKG16054820070330 (describing Clean Air Foundation’s decision to bring suit regarding HKSAR’s failure to improve air quality).
146. E-mail from Gordon Oldham, Senior Partner at Oldham, Li & Nie Solicitors (June 5, 2013, 12:05 AM EST) (on file with author).
147. Id.
149. E-mail from Lisa Genasci, supra note 144.
150. An application for judicial review “must be made if the applicant is seeking- (a) an order for mandamus, prohibition or certiorari; or (b) an injunction under section 21J of the Ordinance restraining a person from acting in any office in which he is not entitled to act.” Clean Air Found. v. HKSAR, 35 H.K.C.F.I. 757, ¶ 1. See also The Laws of Hong Kong; Applications For Judicial Review
hold the government accountable for failing to execute their obligations under law. According to Mr. Oldham, Clean Air Foundation used the rights-based approach and other approaches, including tort-based claims, but he felt that they would not have the same traction in Hong Kong.\(^{151}\)

Basically, the petitioners spurred the HKSAR into air pollution mitigation, claiming that the HKSAR failed in their legal duty to guarantee the “right to life” and “right to health” for Hong Kong residents.\(^ {152}\) They also claimed that the HKSAR failed to pass adequate legislation and policies to control and mitigate air pollution with short-term, medium-term, and long-term measures.\(^ {153}\) Finally, the petitioners claimed that the HKSAR Government breached the Basic Law and the Bill of Rights, as well as international covenants executed into Hong Kong law.\(^ {154}\)

The case, *Clean Air Foundation*, addressed both a procedural issue and a substantive issue. Procedurally, the court had to determine whether judicial review procedure could be applied to the claim that the HKSAR failed to protect Hong Kong citizens from harmful air pollution.\(^ {155}\) Substantively, the secondary question dealt with the “right to life” and the “right to health,” thus “whether, on a purposive interpretation, the constitutional protection can be extended to matters of air pollution control.”\(^ {156}\) The case oscillated between discussions whether the petitioners claimed the violation of Hong Kong citizens’ legal rights to health and life or whether they solely disagreed with government policy.

### B. Case Analysis

First, in order to progress the case to a full hearing, the petitioners had to satisfy a legal test for judicial review to prove that their case qualified for the grant of the relief sought.\(^ {157}\) This legal test ensures that cases are “at least prima facie are permitted to go to a full hearing.”\(^ {158}\) Thus, they argued two main points. First, the petitioners put forth a “foundation

\(^ {151}\) E-mail from Gordon Oldham, supra note 143.

\(^ {152}\) *Clean Air Found. v. HKSAR*, 35 H.K.C.F.I. 757, ¶ 1. The presiding judge, the Honorable Judge Hartmann, characterized the filing as a “broad frontal attack on what is asserted to be a failure of the Government to tackle the problems presented by air pollution.” *Id.* ¶ 6.

\(^ {153}\) *See id.* (laying out the short-term, medium-term, and long-term measures the government could take to reduce the air pollution and improve air quality under the Air Pollution Control Ordinance).

\(^ {154}\) *Id.* ¶ 11.

\(^ {155}\) *Id.* ¶ 17.

\(^ {157}\) *Id.* ¶ 12–13.

\(^ {158}\) *Id.* ¶ 14.
declaration” of the HKSAR’s obligations under the Basic Law, Bill of Rights and international conventions to protect the “right to life” and the “right to health.” Moreover, the petitioners argued that the HKSAR has a positive legal duty to mitigate air pollution to preserve the “right to health” and the “right to life.”

i. The “Right to Life” and the “Right to Health”

The case noted that emerging international jurisprudence expands on the “right to life” outside the context of crime and punishment. Furthermore, the decision recognized that the HKSAR has an affirmative duty to protect people’s rights to life and health within the environmental context. Under the “right to life,” this substantive right means more than just within the context of crime and punishment. The “right to life” applied in an environmental context has become accepted as part of the international norm and appears in domestic cases around the world.

Judge Hartmann held that it is “at least prima facie arguable that the constitutional right to life may apply to the circumstances advocated by the applicants; that is, imposing some sort of duty on the Government to combat air pollution.” Thus, the case accepted the claim that the HKSAR has a positive duty to protect the “right to life” through mitigating the air pollution.

Under the second substantive issue, the “right to health,” the case cited Article 12 from the ICESCR. The court accepted “that it must be prima facie arguable that it imposes some sort of duty on state authorities to prevent environmental harm and protecting the natural resource base supported the right to health and the right to a quality life.

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159. The petitioners argued that, “Article 28 of the Basic Law and/or Article 2 of the Hong Kong Bill of Rights Ordinance, in providing for protection of a “right to life” and the “right to health,” as provided by Article 12 of the International Covenant on Economic, Social and Cultural Rights, imposes upon the Government an affirmative duty to protect the residents and the economy of Hong Kong from the known harmful effects of air pollution…” Id. ¶ 16.

160. ANTON & SHELETON, supra note 55, at 462–63 (citing the following cases from India: Bandhua Mukti Morcha v. Union of India, 3 S.C.C. 161 (184); Charan Lal Sahu v. India, AIR 1990 SC 1480; Subhash Kumar v. Bihar, AIR 1991 SC 420; and also citing one case from Costa Rica: Presidente de la Sociedad Marlene S.A. v. Municipalidad de Tibas, Sala Constitucional de la Corte Suprema de Justicia (Constitutional Chamber of the Supreme Court) Decision No. 6918/94 of 25 Nov. 1944); See also Dr. Mohiuddin Farooque v. Bangladesh and Dr. Mohiuddin Farooque v. Ministry of Communication, Bangladesh, 48 D.L.R. 1996. These cases decided in some varying degree that preventing environmental harm and protecting the natural resource base supported the right to health and the right to a quality life.

161. Id.


163. ICESCR, supra note 45, art. 12 (“the States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health…”) the steps to be taken by the States Parties to the present Covenant to achieve the full realization of this right shall include those necessary for:…(b) The improvement of all aspects of environmental and industrial hygiene…”.
combat air pollution even if it cannot be an absolute duty to ensure with immediate effect the end of all pollution.”\textsuperscript{164} In other words, Article 12 of the ICESCR is self-executing. The HKSAR has the duty towards combating air pollution but not completely eradicating it. The court concedes that the HKSAR has a positive duty to mitigate air pollution but has to determine the scope of this duty.

C. Legal Outcomes

The case went ahead with the judicial review process. At one stage of the case, the petitioners decided to amend their complaint.\textsuperscript{165} The amendments included the claims that the APCO (Cap. 311) and its subsidiary legislation was inconsistent with the HKSAR’s commitments under the Article 28 of the Basic Law; Article 2 of the Hong Kong Bill of Rights; Article 6 of the ICCPR; Article 12 of the ICESCR; and the International Labour Convention (ILO) No. 148 Working Environment (Air Pollution, Noise and Vibration).\textsuperscript{166} The wording of the first declaration simply stated that the Government failed to meet its affirmative duties under the Basic Law, Bill of Rights, and international covenants through the inadequate APCO and subsidiary legislation and regulations.\textsuperscript{167} Thus, according to the petitioners, the APCO was inconsistent with these legal instruments and therefore invalid.

In the amended claim, the petitioners argued that Section 7 of the Air Pollution Control Ordinance, which is broad in its scope, did not comply with HKSAR’s legal obligations to protect the “right to life” and the “right to health” for Hong Kong residents.\textsuperscript{168} The Government countered by highlighting the steps it took to improve air quality.\textsuperscript{169}

\begin{footnotesize}
\begin{enumerate}
\item 165.  Rules of the High Court, (2008) Cap. 4A, Order 53 (H.K.), available at http://www.hklaw.hk/cgi-bin/sinodisp/eng/hk/legis/reg/4A/s53.html?stem=&syonyms=&query=judicial%20review. (“Without prejudice to its powers conferred by Order 20, rule 8, the Court hearing an application for leave may allow the applicant’s statement to be amended, whether by specifying different or additional grounds or relief or otherwise, on such terms, if any, as the Court thinks fit.” This rule demonstrates that petitioners may amend their complaint during the application for judicial review.).
\item 166.  Id. ¶ 21.
\item 167.  Id. ¶ 23.
\item 168.  Id. ¶ 33–35.
\end{enumerate}
\end{footnotesize}
D. Holding

While the amendments sought to make the claim more specific, the court held that the petitioners’ focus on Section 7 of the Air Pollution Control Ordinance was misguided, for fault was with HKSAR’s methods to curb the air pollution, rather than with the actual law.\(^\text{170}\) By focusing on Section 7 of APCO rather than the rights-based approach, the amended petition undermined the legal foundation and turned the case into one about policy.\(^\text{171}\) Basically, the petitioners and HKSAR disagreed on the “necessary” steps taken to combat air pollution.\(^\text{172}\) As a result, the petitioners lost their lawsuit, as they sought declaratory judgment but did not ask for specific relief.\(^\text{173}\)

Ultimately, Judge Hartmann held that the case failed judicial review because curbing air pollution constituted a matter of policy to be decided by the HKSAR.\(^\text{174}\) In other words, implementing mechanisms to improve air quality would be issues for the “political process” and not the judiciary.\(^\text{175}\) The court decided that it could only apply matters of law and not manage the environment.\(^\text{176}\)

However, Judge Hartmann did establish a legal precedent for Hong Kong and the rights-based approach to environmental protection. He decided that it is at least prima facie\(^\text{177}\) arguing (for the purposes of leave for judicial review) that the “right to life” and the “right to health” imposes a positive duty on the HKSAR to combat air pollution to achieve the highest standard of health.\(^\text{178}\) *Clean Air Foundation* set a precedent for future rights-based environmental cases as it was the first of its kind.\(^\text{179}\) Legally, the case has not yet been over-turned and the concepts of the ‘right...
to life’ and ‘right to health’ in the environmental context have not been further reviewed by the Court of First Instance or subject to review in Hong Kong the appellate courts. Furthermore, the case has been referenced in at least one other lawsuit against the HKSAR, the Chu Yee Wah case. The legacy of Clean Air Foundation established the prima facie rights to life and health, but it also highlighted the struggle between the legal system to enforce these rights and not tipping the balance of power between the judicial and executive branches. While Clean Air Foundation failed to win in court, the case helped in the struggle to improve air quality in Hong Kong. If the case was brought again today, the legal issues might have stronger foundations as a result of the legal precedent and a more environmentally-engaged HKSAR.

Since Clean Air Foundation in 2007, the new HKSAR regime announced in January 2012 that the government would be updating the AQOs in 2013, which would take effect in 2014. Under-Secretary for the Environment, Dr. Christine Loh Kung-wai—a long-time environmental advocate and former CEO of Civic Exchange—brings environmental experience to her position. Environmental advocates are more hopeful that the new HKSAR regime will implement programs to improve the air quality, from requiring stricter bus emissions to improving AQOs. In fact, the Legislative Council passed an amendment on July 18, 2013 that updates the AQOs in line with WHO standards, called the Air Pollution (Amendment) Ordinance 2013, effective January 1, 2014. The Amendment establishes a five year review period, incorporates

180. Id.
181. See Chu Yee Wah v. Envtl. Prot., [2011] 9 HKSAR 1, ¶ 172 (C.F.I.) (H.K.), available at http://www.hklii.hk/cgi-bin/sinodisp/eng/hk/cases/hkcfi/2011/259.html?stem=&synonyms=&query=Chu%20Yee%20Wah (“Thus, although suggestions were made at the ACE and public consultation stage in respect of the EIA Reports in the present case that the proposed AQOs or WHO guidelines should be applied instead of the existing AQOs, it is not for the court to impose a new policy in his regard. To do so would be to trespass on the balancing process which is the exclusive domain of the Executive.”). Id. ¶ 171–72. The Chu Yee Wah case additionally discussed how the HKSAR, under Section 7 of the APCO, has the power to make more stringent AQOs, but that they will do so based on social and economic factors, including public health. The court determined that the HKSAR may apply its chosen AQOs rather than WHO standards in EIA reports. For a court to suggest that the HKSAR should use a more stringent air quality standard would trespass on the HKSAR’s executive powers. The court deferred to the HKSAR’s policy reasons for using the lower air quality standards. Id.
182. E-mail from Lisa Genasci, CEO, ADM Capital Found. (Apr. 22, 2013, 07:37 EST) (on file with author).
considerations of the “public interest” when reviewing air control zones, and added Section 5 with updated air quality impact assessment standards. The new AQOs would comply with the WHO’s widely-implemented air quality standards and upgrade the bus emissions standards to match those in Europe.

If the revised AQOs fail to incorporate improved air quality standards, petitioners would have a cause of action under judicial review to protest their inadequacy. However, the pleadings would have to be very specific and supported by evidence, such as public health data. The evidence would link the harm caused by the air pollution, the violation of the fundamental rights, and the responsibility of the HKSAR to protect the health and environment for Hong Kong citizens.

V. DIFFERENT APPROACHES TO A RIGHTS-BASED PROTECTION OF THE ENVIRONMENT

A. Prima Facie Case for “Right to Life” and “Right to Health”

Under Clean Air Foundation, the court established the prima facie claim to the “right to life” and “right to health.” Focusing on the HKSAR’s activities that currently violate the fundamental rights of Hong Kong residents presents a stronger case than attacking the HKSAR for their policies under the APCO.

Essentially, a case would need to prove how the air pollution is arbitrarily depriving people of life and negatively impacting their quality of health. The Government clearly knows and understands the damaging extent of the air pollution. Yet, the Government lacks the political will to implement stricter standards to the APCO. Despite the data on the worsening air pollution and impact on human health, the Government has not revised the AQOs in twenty-five years and are well outdated according to WHO standards. The impact of the air pollution on the Hong Kong community has been well documented. Yet, the causation element proved and continues to prove difficult and costly to satisfy. The HKSAR,

187. Id.
190. Id. at v, 68 (stating the Hong Kong Government plans to implement new, stricter standards in 2014 despite not implementing the 2009 standards).
191. E-mail from John Scott, supra note 178. If another public interest case was brought, evidence to prove the causation of worsening air quality and increasing public health problems would
through omission or failure to act, has enabled the air quality to deteriorate, thus violating these environmental rights.

Moreover, a recent government audit observed:

[t]here is growing public concern over the worsening air pollution in Hong Kong and its adverse impacts on public health. According to the Environmental Protection Department’s Consultant, upon attainment of the 2014 AQOs, about 4,200 unnecessary hospital admissions and 7,400 statistical life years would be saved each year, or an improved average life expectancy of around one month for the entire population.\footnote{AUDIT COMM’N HONG KONG, supra note 189, at ch. 1, at v.}

Despite the evidence, the Government has not devoted any government department to specifically monitor the connections between public health and air pollution.\footnote{KILBURN & LOH, supra note 3, at 8.} The government’s failure to accurately track the impacts of air pollution on Hong Kong residents negatively affects their rights to life and health.

B. Review Other Common Law Interpretations of Human Rights and Environment

Another strategy would be to turn to the persuasive evidence—common law cases on “right to life” and “right to health” for environmental protection. Under Article 84 of the Basic Law, the courts of the HKSAR can refer to other common law decisions when adjudicating.\footnote{BASIC LAW, supra note 14, at Ch. 4, § 4, art. 84, available at http://www.basiclaw.gov.hk/en/basiclawtext/chapter_4.html.} This ability to review foreign rights-based cases on the “right to life” and “right to health” in the environmental context aids in enriching these rights in Hong Kong.

Several common law countries have developed legal precedent for the rights-based approach to environmental protection.\footnote{ANTON & SHELTON, supra note 55, at 462–63.} In India, the courts have developed jurisprudence on the “right to life” in the environmental context. One of the leading cases on the “right to life” was...
Subhash Kumar v. State Of Bihar, which decided: the “right to life guaranteed by article 21 [of the Constitution] includes the right of enjoyment of pollution-free water and air for full enjoyment.” In the Bangladesh cases of Dr. Mohiuddin Farooque v. Bangladesh and Dr. Mohiuddin Farooque v. Ministry of Communication, the Supreme Court decided that the “right to life” included the protection of the environment and “ecological balance” free from air and water pollution. All of these cases would help Hong Kong build their legal portfolio on the rights-based approach to environmental protection, including expanding to other “fundamental rights” under the Basic Law.

C. Expanding the Role of the Public Trust for Protecting Rights Life and Health

Clean Air Foundation v. HKSAR contained no mention of the Basic Law’s Article 7, which states that natural resources are the property of the Government, establishing a legal avenue for the public trust doctrine. The petitioners could have accused the Government of not acting on behalf of the public interest by allowing the air quality to deteriorate despite knowledge that the AQOs were woefully inadequate.

The Hong Kong Harbour cases illustrate the concept of the public trust doctrine, even if the Ordinance or the case language do not specifically refer to it. Section 3 of the Hong Kong Harbour Ordinance provides:

(1) The harbour is to be protected and preserved as a special public asset and a natural heritage of Hong Kong people, and for that purpose there shall be a presumption against reclamation in the harbor; and (2) All public officers and public bodies shall have regard to the principle stated in

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197. Id. 198. Clean Air Found. v. HKSAR, 35 H.K.C.F.I. 757, ¶ 33–34. Mr. Tse Chin Wan, the Assistant Director of the Environmental Protection Department at the time of the lawsuit, referred to the fact that air pollution control must be balanced with competing economic, social, and policy considerations. He also discussed the regional cooperation to combat air pollution in the PRD that must be done in conjunction with efforts under the APCO. Finally, he mentioned that “[c]ertain air pollution control measures are extremely costly” and must be take into account the “wider social, economic and policy context.” Id.
subsection (1) for guidance in the exercise of any powers vested in them. 199

Administrative actions should still be subject to review. Courts would have to apply a balancing test to determine whether the administrative action for the public interest outweighs the presumption against reclamation.

The ordinance itself creates a presumption against degrading the harbor, with the HKSAR acting as managers for people of Hong Kong. In this case, Judge Hartmann decided that “[t]he greater the degree of interference with a fundamental right, the more the court will require by way of justification before it is satisfied that the decision is reasonable in the public law sense.” 200 Although the preservation of Victoria Harbour did not constitute a fundamental right, it did concern the public interest of maintaining a natural resource, national treasure, and healthy environment for all citizens and future residents of Hong Kong to enjoy. 201 Furthermore, the preservation of the Victoria Harbour raises further concerns over water pollution and air quality degradation.

Judges may consult international and comparative jurisprudence with regards to the public trust doctrine, even though it did not in the Hong Kong Harbour cases. 202 Previous cases have only applied a literal interpretation of statutes, rather than giving a more liberal interpretation to include the public trust doctrine and the rights-based approach to broaden the scope of the law.

With help from a petitioner’s brief advocating for the public trust, Hong Kong courts can refer to the United States case Illinois Central Railroad Co. v. Illinois and other public trust case law to develop their own public trust jurisprudence. 203 As a common law country, the U.S. has an expansive legal precedent on the role of government and the public trust. Additionally, in two Sri Lankan cases, Gunaratne v. Ceylon Petroleum

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200. Id. ¶ 77.
201. Id. at 333, 338.
202. Id. at 340.
203. Ill. Cent. R.R. Co. v. Ill., 146 U.S. 387, 435 (1892). (“It is the settled law of this country that the ownership of and dominion and sovereignty over lands covered by tide waters, within the limits of the several states, belong to the respective states within which they are found, with the consequent right to use or dispose of any portion thereof, when that can be done without substantial impairment of the interest of the public in the waters, and subject always to the paramount right of congress to control their navigation so far as may be necessary for the regulation of commerce with foreign nations and among the states.”).
Corporation and Premachandra and Dodangoda v. Jayawickreme and Bakeer Markar, the court decided that “[w]hen applicable as a legal principle, [the] public trust contemplates that certain things, such as natural resources and the exercise of public power, are held by governments in trust for the citizenry and must be used for the public benefit.” These cases expand the public trust doctrine to include the principle of intergenerational equity, in which the present generation holds natural resources in trust for future generations to enjoy.

While the Philippines practice some common law, as part of East Asia, their legal decisions hold persuasive merit, especially if and when Asia forms a human rights commission. Specifically, the Filipino court established the principle of “inter-generational equity” as part of the government’s legal obligation to protect and preserve natural resources for the public interest in the groundbreaking Minors Oposa case. Courts

204. DINAH SHELTON & ALEXANDRE KISS, JUDICIAL HANDBOOK ON ENVIRONMENTAL LAW 23 (2005).


applied this precedent in later legal decisions. In the Manilla Bay case, the court decided that “[t]he Government [of the Philippines] cannot escape their obligation to future generations of Filipinos to keep the waters of the Manila Bay clean and clear as humanly as possible. Anything less would be a betrayal of the trust reposed in them.”209 As common law decisions, these cases can be applied to adjudications decided in Hong Kong, as permissible under Article 84 of the Basic Law, which would only strengthen a public interest cause of action.210

D. The Right to Equal Protection & Fundamental Rights

Furthermore, a judicial review of the “Right to Equal Protection” and the Basic Law’s guarantee to protect “fundamental rights” in Article 11 would help further develop the relation between the Government’s failure to mitigate the air pollution and preserve fundamental rights through law. This legal theory would help clarify whether the unequal application of the APCO would give rise to an environmental justice case.

For instance, the APCO has varying degrees of success in certain parts of Hong Kong, which often corresponds to income levels.211 The APCO manages air quality in “zones,” so certain zones may be cleaner than others. Areas in Hong Kong with lower economic status tend to have worse air quality.212 Moreover, hospitals located in lower-income areas, such as United Christian Hospital in Kwun Tong, have higher admittance rates for respiratory illnesses linked to air pollution.213 All Hong Kong citizens should have equal protection under the law—regardless of economic class—therefore, the unequal implementation of the APCO in different air control zones violates this right of equal protection.

Philippine Constitution, and the principle of “intergenerational equity” to preserve the natural resources for future Filipino generations to enjoy. The environmental advocate Tony Oposa brought the case.).


210. BASIC LAW, supra note 14, at Ch. 4, § 4, art. 84.


212. Id.

213. Id. at 790.
E. Sustainable Development & the Rights-Based Approach

Finally, the principle of sustainable development has been gaining traction in the international legal community and in Hong Kong. The HKSAR is party to international treaties containing sustainable development principles within them: the United Nations Framework Convention in Climate Change; the soft law instruments of the Rio Declaration and Agenda 21; and the sustainable development legal guidelines called The Principles: New Delhi Declaration of Principles of International Law relating to Sustainable Development, 2002 (“The New Delhi Declaration”). In particular, the New Delhi Declaration outlines the seven principles of sustainable development, which include:

1. The duty of states to ensure sustainable use of natural resources;
2. Inter-generational equity and the eradication of poverty;
3. Common but differentiated responsibilities;
4. Precaution;
5. Public participation, engagement and access to information;
6. Good governance;
7. Integration and inter-relationship, in particular with relation to human rights and social economic and environmental objectives.


The New Delhi Declaration is not a legally binding treaty. However, the principles could be used to help interpret the concept of sustainable development under binding treaty obligations and domestic law, as well as in the absence of binding treaties and enabling domestic law, particularly in local adjudications.

The HKSAR first grappled with concept of ‘sustainable development’ in the Second Review of Progress on the 1989 White Paper, “The Sustainable Development for the 21st Century in Hong Kong” (“SUSDEV”), on pollution in Hong Kong.\(^{217}\) More recently, the SUSDEV study determined that “[s]ustainable development in Hong Kong balances social, economic, environmental and resource needs, both for present and future generations, simultaneously achieving a vibrant economy, social progress and a high quality environment, locally, nationally and internationally, through the efforts of the community and the Government.”\(^{218}\) The SUSDEV study is not a legal document per say, but it does call for a more holistic approach to development, which would include passing sustainable development laws.\(^{219}\) The lack of implementation of sustainable development principles have contributed to HKSAR’s disregard of the “right to health” and “right to life” for Hong Kong residents. Thus, sustainable development norms could be used to impact local adjudications on the rights-based approach to environmental protection in Hong Kong.

**CONCLUSION**

After Clean Air Foundation, the legal precedent established that the Government has a legal duty to safeguard fundamental rights in the context of environmental protection. Other environmental cases have cited this precedent in their petitions and adjudications, even under different Hong Kong laws.\(^{220}\) So far, this precedent has not been overturned. A future judicial review would have to avoid attacking the Government based on policy choices.

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219. Tung, *supra* note 10, at 27. Moreover, a key finding of the report concluded, “Hong Kong’s approach to sustainable development must take into account the particular conditions and characteristics of Hong Kong (and the wider region) and consideration could be given to enshrining sustainable development principles into law.” *Id.*
Legal precedent has established the "right to life" and "right to health" in the environmental context, but future claims will have to connect the violation of that right with a specific causation, such as the HKSAR’s inability to update the AQOs in line with international standards before establishing the AQHI in December 2013. For instance, the latest WHO report listed outdoor air pollution as a carcinogen for the first time. As a result, lawsuits could arise linking the HKSAR’s inadequate AQOs and adverse health impacts (e.g., lung cancer) over the past twenty-five years. If the evidence can provide the causal link, particularly in work-related cases, then litigants will have more success in court to prove that the HKSAR’s failure to prevent the air pollution caused their cancer.

If the evidence of a prima facie violation shifts the burden of proof to the HKSAR, then it would have to show why the Ordinance as written or implemented continues to fail to mitigate environmental degradation. The trick will be proving that preserving the rights-based approach to a clean environment outweighs the government’s failure to act, particularly for economic or political purposes. On the other hand, the burden of proof should be on the HKSAR to show how their actions did not violate these rights, rather than requiring public interest groups to gather expensive expert evidence to prove causation, that an environmental harm caused human health issues.

For many decades, the Government has set aside environmental considerations in favor of economic development, which has not taken into account the economics of environmental and human externalities. As the recognition of human rights for environmental protection gains more traction, Hong Kong will have to review its current development priorities to ensure they remain in line with this emerging jurisprudence. The role of judicial review will continue to provide an avenue to spur the HKSAR into action on air pollution and other environmental problems in order to protect human health issues.


223. Id. (outlining a study conducted by the International Agency for Research on Cancer that reports lung cancer killed 223,000 people worldwide in 2010, with the sectors generating the most emissions including transportation, stationary power generation, industrial and agricultural emissions, and residential heating and cooking).

the rights enshrined in the Basic Law, Bill of Rights, international treaties, and international customary law.

AUTHOR’S NOTE

The Clean Air Foundation case occurred during the Government’s former API regime. The Government has since updated with the AQHI along WHO standards that took effect on January 1, 2014. The Government has finally taken action to improve air quality, but many advocates still feel that these updates fall short, as the AQHI is a public awareness tool rather than a measure to curb the problem. At the very least, this Government is committed to air quality transparency by publishing the AQOs online, which increases public awareness.225

By Tracy Bach*

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INTRODUCTION

“Better Things for Better Living . . . Through Chemistry.”
—DuPont advertising slogan, 1935–82

The Chemical Safety Improvement Act of 2013 (“CSIA”) was introduced at the end of May, 2013 as a bipartisan effort to remedy the well-documented deficiencies in regulating chemicals used in U.S. commerce. The current law in force, the Toxic Substances Control Act of 1976 (“TSCA”), barely scratches the surface of researching and setting limits on the thousands of synthetic chemicals available to manufacturers: among the approximately 85,000 commercial chemicals registered for use in the United States, only 200 have been tested by the Environmental Protection Agency (“EPA”), and fewer than a dozen have been restricted. Notably, TSCA is the sole statute dating from the recognized heyday of federal environmental law making that has escaped significant updating in the last four decades.

Starting in 2005, Senator Frank Lautenberg, a Democrat from New Jersey, regularly offered bills to address TSCA’s anemic regulatory reach. In 2013, after gaining little traction with his solo effort, he teamed up with Senator David Vitter, a Republican from Louisiana, girded by an almost

* Professor of Law, Vermont Law School. I am indebted to Caitlin Stanton, VLS’14, whose background in public health and passion for environmental health law provided both needed research assistance and welcomed companionship. I also thank Matthew Bach-Lombardo, my last writing student, who kept me company on the final lap of this article’s journey to print, and Brian Lombardo, who nourished us both en route.

equal number of Republican and Democratic co-sponsors. Fundamentally, their bipartisan bill seeks to remedy TSCA’s weaknesses and bolster public confidence in federal safety regulation while recognizing the important place of synthetic chemicals in our everyday lives.

The chemicals industry’s reaction to the bill was swift and uniform, hailing it as a breakthrough. Manufacturers and processors understood well that paying for increased testing and regulatory requirements at the federal level was cost-effective. During the last two decades, states have acted to fill TSCA’s regulatory vacuum, with California leading the way. National exposés about the flame retardant chemicals used on crib mattresses and bisphenol A (“BPA”) in baby bottles have galvanized a focused cohort of consumers and voters. Between 2003 and 2011 alone, eighteen states passed seventy-one chemical safety bills. This bottom-up regulatory approach within the United States has occurred at the same time that our major trading partners, Canada and the European Union (“EU”), have more actively regulated commercial chemicals and thus indirectly put a top-down crimp on U.S. manufacturers seeking to sell their products in those


10. Id. § 2b.

11. Rebecca Coons, Lautenberg, Vitter Announce Bipartisan Bill for TSCA Modernization, IHS CHEMICAL WEEK (May 23, 2013), http://www.chemweek.com/lab/lautenberg-vitter-announce-bipartisan-bill-for-tscas-modernization_52239.html. (pointing out, Ernie Rosenberg, President and CEO of the American Cleaning Institute, observed, it “was a better alternative to 50 state bills.”)


markets. Together they combine to make federal regulation more attractive to industry.

But while industry has responded to the CSIA in unison, environmental and public health groups have reacted in discordant tones. Richard Denison of the Environmental Defense Fund (“EDF”) sums up the position of those who support the CSIA: “This bill embodies a hard-fought compromise, [and] . . . opens a bipartisan path forward to fix our badly outmoded system to ensure the safety of chemicals in everyday use.” Two former officials in EPA’s Office of Chemical Safety and Pollution Prevention (“OCSPP”), Steve Owens and Charlie Auer, support this view.

In contrast, environmental health groups like the Environmental Working Group (“EWG”) see the compromise bill as giving up too much ground to the chemical industry while gaining only small improvements to the status quo. Ken Cook, EWG’s president, compares the CSIA to previous Lautenberg bills and concludes, “I don’t know if this is a retreat or a rout, but it’s somewhere in that range.” In other words, the Chemical Safety Improvement Act cannot be as good as the Chemical Safety Act when bringing the Toxic Substances Control Act into the twenty-first century. “What’s in a name? That which we call a rose by any other name would smell as sweet.”

This Article asks whether the CSIA represents the best way forward for U.S. commercial chemicals regulation and environmental public health law practice overall. Environmental public health law sits at the confluence of environmental and public health laws. Public health law traditionally collected data, conducted research, investigated sources of human illness, and educated the public by disseminating best practices. The signature U.S. environmental laws of the 1970s and 80s defined pollution limits in terms of baseline public health impacts and sought to enforce them via EPA administrative actions and private enforcement suits in the courts. Now, almost forty years after the first wave of these laws, we see a growing body of research on environmental public health out of the National Institute for

17. See Sachs, supra note 6, at 1819 (explaining the transnational effects of EU chemical regulation).
21. WILLIAM SHAKESPEARE, ROMEO AND JULIET act 2, sc. 2 (Burton Raffel, ed. 2004).
Environmental Health Sciences ("NIEHS") and the National Center for Environmental Health ("NCEH"), and awareness of it via non-governmental organizations like EWG and EDF.  

As the environmental health research agenda has matured, the gaps between federal environmental laws, public health laws, and the environmental pollution increasingly associated with adverse human health outcomes have become more apparent. These spaces in the environmental public health regulatory joints regularly center on the 1) scope of agency authority, 2) precision of risk assessment methodologies, safety standards, and risk management measures, 3) existence of legislatively imposed deadlines for agency action, 4) public transparency via reporting and disclosure requirements, and 5) the states’ role in national regulation. Hovering in the background is the identification of, and approach to, scientific uncertainty and the role of social and economic analysis when facing it.

The CSIA gives us the opportunity to review these critical environmental public health regulatory pivot points and analyze how new norms of environmental public health can be translated into law on point. To do so, this Article first examines the weak points in TSCA that have led to the current anemic approach. Second, it draws on commercial chemicals law made during the last forty years at the state and international levels, which has nudged Congress to structure the bipartisan bill as drafted. Third, it scrutinizes the CSIA as introduced in May, 2013 and debated throughout the remainder of the year, to assess how it addresses TSCA’s weaknesses in a manner that promotes environmental public health law norms. In this way, we can determine whether better chemicals regulation

22 Other NGOs play an important role in the dissemination of environmental health research, including the Natural Resources Defense Council ("NRDC"), Center for Environmental Health, Safer Chemicals Healthy Families, Pew Charitable Trust, and EarthJustice. Their work has been essential to the current, popular understanding of phthalates and bisphenol A ("BPA") in children’s products, atrazine from pesticide runoff in groundwater, and a family of flame retardant chemicals applied to crib mattresses, and their associations with specific illnesses ranging from endocrine disruption to cancer.

23. See Tracy Bach, Protecting Human Health and Stewarding the Environment: An Essay Exploring Values in U.S. Environmental Protection Law, 3 MICH. J. ENVTL. & ADMIN. L 19–30 (2014) (providing a brief explanation of this progression). See also, e.g., Linda Birnbaum and Paul Jung, From Endocrine Disruptors To Nanomaterials: Advancing Our Understanding Of Environmental Health To Protect Public Health, 30 HEALTH AFFAIRS 814 (May 2011) (providing a good array of this increasingly sophisticated body of research); Philip Landrigan and Lynn Goldman, Children’s Vulnerability To Toxic Chemicals: A Challenge And Opportunity To Strengthen Health And Environmental Policy, 30 HEALTH AFFAIRS 842 (May 2011); Rachel Morello-Frosch et al., Understanding The Cumulative Impacts Of Inequalities In Environmental Health: Implications For Policy, 30 HEALTH AFFAIRS 879 (May 2011).

leads to better living and how environmental laws are evolving to improve public health.

This Article concludes that the CSIA, as written, represents measured progress toward recalibrating the balance between protecting health and the environment and promoting the U.S. chemicals industry. It suggests that this major overhaul of U.S. commercial chemicals policy be viewed through a public health law lens, as TSCA’s original language tells us was Congress’s intent. Through it, we can see out over the long latency periods between chemical exposure and health impact, and over the evolution and separation of risk assessment and risk management standards and methods. Through this lens, we can also see the regulatory paradigm shift from acute, large, and single chemical exposure to managing risk in an era of chronic, small, and multiple exposures from gestation till death. Ultimately, it provides us a close view of how to handle uncertainty when legislating for preventive medicine. By creating a regulatory framework that prioritizes chemical regulation based on scientific understanding of these substances’ impacts on human health, then managing the risks posed by the high priority chemicals through policy tools that reflect our tolerance for taking precaution, the CSIA offers better living through chemistry and chemistry regulation. It’s not perfect. But it’s better. And it sets us on the path of making wiser environmental public health law in the twenty-first century.

I. TSCA’S ENACTMENT, POOR TRACK RECORD, AND REGULAR ATTEMPTS TO AMEND

History of TSCA’s Promise

In 1971, President Nixon’s Council on Environmental Quality (“CEQ”) proposed a federal law to control toxic substances. Since World War II, growth in high-volume chemicals manufacturing exploded: from 1930 to 2001, annual production increased from one million to four hundred million tons. Many of these synthetic chemicals had been developed for war-time purposes and little was known about their health impacts; nonetheless, use of them in the post-war manufacturing boom proceeded without further research or regulation. Senator Tunney pointed


27. SANDRA STEINGRABER, LIVING DOWNSTREAM 88–89 (1998) (noting that Rachel Carson originally made these observations in her seminal work, Silent Spring).
to the National Cancer Institute’s estimate that sixty to ninety percent of U.S. cancer cases result from environmental contaminants, and to a 60-Minute television special and Newsweek cover story on the “impact of environmental cancer on society.”

The CEQ’s report, Toxic Substances, declared the need for a comprehensive statute that would identify and control chemicals that were 1) manufactured, processed, used, and distributed commercially; 2) potentially dangerous; and 3) inadequately regulated under other federal environmental statutes.

Four years later, Deputy EPA Administrator John Quarles testified before a House committee that preventing the proliferation of dangerous chemicals throughout the environment “is one of our most urgently needed environmental laws.” He highlighted vinyl chloride as a chemical compound that should have been tested for its effects on human health and the environment before entering commercial production: by 1975, it was prevalent in the plastics industry, yet had been found to cause a rare form of liver cancer that had already killed fifteen workers.

Quarles also cited the fluorocarbons used in refrigeration and aerosols, which had recently been linked to ozone depletion in the atmosphere, and the polychlorinated biphenyls (“PCBs”) used as electrical coolants and considered a likely carcinogen, as other examples of toxic chemicals present in the environment that made TSCA’s passage a priority.

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28. Markell, supra note 5, at 342 (noting that the fear of cancer in the early 1970s—a virtually untreatable disease at the time—was high, and arguably led to President Nixon’s declaration of a “war on cancer” with the enactment of the National Cancer Act in 1971).

29. Id. at 338–39 (citing U.S. COUNCIL ON ENVTL. QUALITY, TOXIC SUBSTANCES 759–60 (1971) (noting that this last point on coordination with other federal statutes is important, for all policymakers intended this new law to complement how existing law regulated commercials, namely those used in pharmaceuticals and food governed by Federal Food, Drug, and Cosmetics Act (“FDCA”), and those used in pesticides governed by the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”). These two federal statutes also took a primary prevention route, as compared to the secondary approach of most extant environmental statutes, like the Clean Air Act (42 U.S.C. § 7401) and Clean Water Act (33 U.S.C. §§ 1251–1387)).


31. Id.


33. Quarles, supra note 30. Notably, PCBs played an important role keeping congressional debate of TSCA on track. While the House and Senate had passed separate bills by 1973, debate over chemical screening and its potential to impede commercial production stalled passage. The well-documented PCB contamination of the Hudson River is credited with helping to push Congress to enactment in 1976. SCHIEROW, supra note 25.
Importantly, TSCA’s proponents wanted Congress to understand that primary prevention was needed. While two federal laws regulated toxic substances used in pesticides, drugs, and food additives before those products reached consumers, most environmental laws, like the Clean Air Act, Water Pollution Control Act, and Safe Drinking Water Act, merely set safety standards for emissions and effluents already in the environment. As Quarles underscored, this post hoc approach “deals with the problem at a point where the contaminants are very difficult to control.” In addition, these media-focused laws fail to protect humans from their aggregate exposures to substances in the air and water that surround them:

The multiplicity of ways by which man can be exposed to these substances makes it difficult...to consider the total exposure of an individual to any given substance, a consideration necessary for the establishment of adequate environmental standards.

The EPA envisioned TSCA getting ahead of the pollution curve by requiring premarketing notification for all chemicals to be used in commerce and then testing some of them to determine the risks posed to human health and the environment. This was no small task, for by the early 1970s, about 600 new chemical compounds were being introduced into U.S. commerce each year.

This preventive approach would not only benefit human health and the environment, but also industry’s profits, Quarles asserted in his House testimony. “By examining the potential dangers associated with the production and use of a product before investing considerable capital, the chemical industry can avoid the serious disruption and losses attendant to remedial action after the fact.” A preliminary EPA estimate showed that compliance costs would be $80 to $140 million annually, a “relatively modest” sum when compared to the commercial chemical industry’s 1974

34. Quarles, supra note 30. Consequently, TSCA’s jurisdiction does not include chemicals already regulated under the FDCA and FIFRA.
35. Robert Glicksman & Christopher H. Schroeder, EPA and the Courts: Twenty Years of Law and Politics, 54 LAW & CONTEMP. PROBS. 249, 252 (1991). In these environmental laws, Congress focused on “end-of- pipe” controls rather than trying to regulate the inputs into industrial processes, in part because they presented the most obvious and expedient approaches to the pollution problems of the time. Id.
36. Quarles, supra note 30.
37. Markell, supra note 5, at 346 (quoting U.S. COUNCIL ON ENVTL. QUALITY, TOXIC SUBSTANCES 760 (1971)).
38. Quarles, supra note 30.
39. Id.
40. Id.
sales of $72 billion, research and development costs of about $2 billion, and profits after taxes of more than $5.5 billion.\footnote{41}

In his first public comment about TSCA after President Ford signed the bill into law on October 11, 1976, EPA Administrator Russell Train called the statute “preventive medicine legislation” because it gives public health “far more of the weight that it deserves in the decisions by which chemicals are commercially made and marketed, by which they enter and spread throughout the human environment.”\footnote{42} In a speech to the American Public Health Association, he continued the analogy to good public health practice:

> Preventive medicine, of the kind the new law entails, brings together a broad and diverse mixture of actors and actions in a concerted and coordinated effort to reduce the health risks that individuals and society are exposed to. The legislation represents a major step toward an increasingly effective preventive approach toward the ‘environmental disease’ that has been called the ‘disease of the century.’\footnote{43}

Train envisioned TSCA working for both the consumer and the producer by creating an “orderly, open and inclusive process” that fostered collaboration, not litigation, and considered “all important views and values” from “all affected and interested parties,” along with “relevant evidence and expertise.”\footnote{44}

In a hauntingly contemporaneous refrain, Administrator Train worried out loud to his public health colleagues on this last point, given how “abysmally little” regulators knew about the commercial chemicals currently in use. “We know little about their health effects, especially over the long term at low levels of exposure. We know little about how many humans are exposed, and how and to what degree. We do not even know precisely how many—much less precisely which—new chemical compounds are made and marketed every year.\footnote{45} That is why TSCA’s

\footnote{41. \textit{Id.}}
\footnote{43. \textit{Id.} Given the contemporaneous concern about PCBs and HFCs, Administrator Train specifically pointed out EPA’s authority to tackle both: “The first is one of the most frustrating and long-standing chemical problems we have faced—the problem of PCBs. The second is what I have called the first truly global environmental problem—the destruction of fluorocarbons of the ozone which screens the surface of the earth from harmful ultraviolet radiation.” \textit{Id.}}
\footnote{44. \textit{Id.}}
\footnote{45. \textit{Id.}}
preventive approach, via premarketing notification to EPA, independent scientific analysis of the substances, and long term study of their impacts, was fundamental to remedying the situation. The first step in solving the problem is gathering the data.

**TSCA as Written**

As enacted, TSCA differed from other contemporaneous federal environmental statutes by regulating all phases of chemical manufacturing, not just controlling pollution via emissions and effluent limits or after-the-fact cleanup. To do this, Congress tasked the EPA with first identifying, then regulating all toxic substances used in U.S. commerce. To identify them, TSCA laid out EPA’s authority to screen commercial chemicals by requiring manufacturers and processors to provide information on the ones they use. Based on this data, EPA would then apply a range of regulatory tools—from an outright ban to warning labels and record keeping requirements.

Given the magnitude of the task of gathering data on chemicals used in commerce, the identification process was congressionally divided into two, distinct tracks: one for chemicals used in commerce at the time of the 1976 enactment and another for new ones. For existing chemicals, TSCA mandates that EPA require testing if it “finds” that a substance falls into one of two categories—it “may present an unreasonable risk of injury to health or the environment” or be “produced in substantial quantities” that have the potential to enter the environment or cause “significant or

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46. *Id.* He went on to connect this paucity of data with why a robust stakeholder process was so important: “It is precisely because we know so little about all these things, because we must balance risks against benefits as well as costs against benefits, and because we must draw upon as much outside expertise and advice as we can, that the [sic] kind of ‘political’ process I have described is essential in any successful effort to reduce chemical risks while preserving their benefits.” *Id.*

47. Since 1976, several new titles have been added to TSCA, with the original law redesignated as Title I. Title II was added in 1986 to regulate asbestos; Title III, in 1988, to address radon; Title IV, in 1992, concerning lead, and Title V, in 2007, about environmental and energy issues in schools. *See generally Schierow, supra note 25* (providing a straight-forward description of TSCA’s provisions).


51. *Id. § 2603(a).*

52. *Id. § 2603(a)(1)(A)(i).*

53. *Id. § 2603(a)(1)(B)(i).*

54. *Id. § 2603(a)(1)(B)(i)(I).*
substantial” human exposure— and lack sufficient data to “reasonably determine” these effects; thus testing “is necessary to develop such data.”

Because there was such a backlog of untested chemicals in 1976, Congress created the Interagency Testing Committee (“ITC”) to help EPA set priorities and coordinate with other government agencies. Taking into account such factors as the quantity manufactured and found in the environment, number of people exposed in and outside of their workplaces, and the existence of toxicological data and potential for developing more, the ITC recommends chemicals to the EPA for designation on a priority list, in rolling batches of fifty, paying specific attention to those substances suspected to play a role in cancer, gene mutations, or birth defects.

TSCA’s separate track for gathering data prospectively requires manufacturers to notify EPA at least ninety days before they intend to introduce a new chemical or use an existing chemical in a significantly new way. These notices should contain any testing data that the company has at the time. EPA must then evaluate and act on these pre-manufacture notices (“PMNs”) using the same standards as for existing chemicals, determining whether or not it has a “reasonable basis” for concluding that a substance may present an unreasonable risk. If it finds such risk, then the EPA must promulgate requirements to protect humans and the environment from it. If it doesn’t find a risk, then EPA may permit the chemical to be used commercially. If unsure because of insufficient data and an unreasonable risk appears possible or the chemical is a high volume one, then EPA may issue a proposed order prohibiting use until more data is provided.

Once having made these determinations for existing and new chemicals, and a finding that no other federal law can reduce a commercial

55. Id. § 2603(a)(1)(B)(i)(II).
56. Id. § 2603(a)(1)(A)(ii).
57. Id. § 2603(a)(1)(A)(iii).
58. Id. § 2603(e)(2)(A).
59. Id. § 2603(e)(1)(A)(i).
60. Id. § 2603(e)(1)(A)(ii).
61. Id. § 2603(e)(1)(A)(iii).
62. Id. § 2603(e)(1)(A)(iv).
63. Id. § 2603(e)(1)(A)(vi).
64. Id. § 2603(e)(1)(A)(vii).
65. Id. § 2603(e)(1)(A).
66. Id. § 2604(a)(1)(B).
67. Id. § 2604(a)(2).
68. Id. § 2604(b).
69. Id.
70. Id. § 2604(g).
71. Id. § 2604(c).
chemical’s risk, TSCA puts a broad range of specific control measures at EPA’s disposal. These include bans or limits on the amount, use, and concentration of specific chemicals; “clear and adequate” warnings; record-keeping requirements; disposal bans or limits; and required post hoc public notification of a product’s “unreasonable risk” due to its chemical composition and the offer to replace or repurchase it. But Congress also limited the agency’s discretion when exercising these options, for TSCA requires that EPA have “a reasonable basis to conclude that the manufacture . . . of a chemical substance . . . presents or will present an unreasonable risk of injury to health or the environment” and act only to “the extent necessary to protect adequately against such risk using the least burdensome requirements.”

TSCA requires EPA to publish a statement, when issuing a rule, about the chemical’s effects on health and the environment, and the magnitude of exposure to both; its benefits and the availability of substitutes to achieve those same benefits; and the “reasonably ascertainable economic consequences of the rule, after considering the effect on the national economy, small business, technological innovation, the environment, and public health.” It also charges EPA with considering all other federal environmental laws when determining how to regulate a manufacturer of a risky chemical substance. The agency can only issue a section 6(a) regulation if it considers “all relevant aspects of the risk,” compares the estimated costs of complying with TSCA versus other federal laws, and determines the “relative efficiency” of taking action under TSCA versus another law. When these requirements are added to the public hearing requirements, a full picture emerges of the difficulty of regulating commercial chemicals against the backdrop of how “so abysmally little” EPA knows about these chemicals.

Two other provisions in TSCA are worth noting, in light of Congress’s “preventive approach” toward this “environmental disease” and the importance of information gathering to succeeding at it. First, TSCA

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72. Id. § 2604(a)(2)(A).
73. Id. § 2604(a)(2)(B).
74. Id. § 2605(b)(2)(A).
75. Id. § 2605(a)(3).
76. Id. § 2605(b)(2)(B).
77. Id. § 2605(a)(1)(B).
78. Id. § 2605(a)(7)(C).
79. Id. § 2605(a)(emphasis added).
80. Id. § 2605(c)(1)(A),(B).
81. Id. § 2605(c)(1)(C).
82. Id. § 2605(c)(1)(D).
requires EPA to create and maintain an inventory of all commercial chemicals used in the United States, beginning with those in use at the time of enactment and updated to include all new ones approved under Section 5. To that end, EPA was granted authority to collect a wide array of information from industry, including chemical identity and molecular structure, quantities, environmental and health studies, number of human exposures, and disposal methods. Industry, in turn, must maintain and share records of adverse effects. But simultaneously, TSCA protects confidential business information (“CBI”) that limits the federal government’s use of it and permits companies complying with the information requirements to designate data as entitled to confidential treatment and to submit it separately.

Finally, in terms of how state and federal governments work with one another under TSCA, it bears mentioning that Section 18 contains unequivocal language of state law preemption. While the provision begins by stating that “nothing in this Act shall affect the authority of any State . . . to establish or continue in effect regulation of any chemical substance,” it goes on to define more specifically that where state law is similar to federal rules or orders on testing and restrictions, it will be preempted unless it is identical, made under other federal law authority, or applies only to in-state use. Section 18 then “saves” preempted state law by exempting that which does not engender conflicting compliance requirements for industry and does not “unduly burden interstate commerce.” Arguing this TSCA preemption clause would permit states to exceed federal regulation “floors,” as in the case of many federal environmental statutes of the period. But given the dearth of EPA regulation of specific chemicals under TSCA, the Agency has not applied the preemption provision nor have the courts interpreted it.

86. Id. § 2607(a)(2)(A).
87. Id. § 2607(a)(3)(A)(ii)(II).
88. Id. § 2613(a)–(c).
89. Id. § 2613(c).
90. Id. § 2617(a)(1).
91. Id. § 2617(a)(2)(B).
92. Id. § 2617(b)(2).
93. See, e.g., Clean Air Act, 42 U.S.C. § 7416 (2006); Clean Water Act, 13 U.S.C. § 1370 (2006). For one state official’s interpretation, see Jim Florio, Federalism Issues Related to the Probable Emergence of the Toxic Substances Control Act, 54 Md. L. Rev. 1354, 1371–72 (1995) (noting that, while Congress has generally preempted states in all phases of TSCA except disposal, state are allowed to enact additional testing requirements if they don’t unduly burden commerce and may ban chemical uses within state borders).
From High Hopes to Low Sights

TSCA showed its inherent flaws from the start. As the CEQ frankly observed two years after its passage, “bringing toxic substances under control is more easily said than done.” The tens of thousands of chemicals already in commerce, as well as the thousands of companies that produced and distributed them, combined to show the “astonishing dependence of modern life on chemicals” and the “staggering task that faces industry and government” to regulate them. As Charles Auer, former OCSPP director, put it, despite “high hopes . . . that TSCA would establish an effective program to identify and regulate potentially dangerous chemicals, the nearly four decades since have shown that the current law is not up to the task.” The law provided broad authority but vague priorities to guide the EPA’s work.

This powerful combination of large task and unclear strategy to attack it manifested itself when creating the inventory, an important first step in achieving TSCA’s goal of identifying substances. As a group of former EPA administrators recently wrote, one of TSCA’s signature accomplishments in 1976 was the very creation of this federal list, given that up until then, no information had been publicly gathered on the kinds, numbers, and quantities of chemicals used commercially in the United States. But TSCA initially populated the inventory with some 62,000 “grandfathered” chemicals. By directly placing on the Section 8 inventory all chemicals manufactured in or imported to the United States before December 1976, EPA presumed them not to present an unreasonable risk—simply because they were in use.

When adding new chemicals to the inventory via Section 5’s PMN, the glass is again both full and empty in terms of prospective identification and regulation, the very foundation for TSCA’s “preventive medicine.”

94. Markell, supra note 5, at 350.
95. Id.
97. Id.
98. Id.
While all companies must notify the EPA of their intent to manufacture a new chemical by submitting a PMN that includes basic data like chemical identity, volumes, and uses, in fact the data collected was “nominal.” Seventy percent of all PMNs do not include chemical testing data and eighty-five percent lack health study data. EPA instead uses computer modeling to determine whether the new chemical "may present an unreasonable risk;" if the Agency does not take further action on the new chemical within ninety days, it enters the inventory. EPA estimates that approximately ninety percent of PMNs are not “restricted or regulated in any way” as a result of the 90-day review. It is in this way that the Section 8 inventory has grown to include some 86,000 chemical substances today.

Furthermore, testing of old chemicals grandfathered into the inventory requires EPA to first make a finding that testing is needed per Section 4’s multi-part criteria and then promulgate a “test” rule to compel it. Because little was known about these chemicals when they entered the inventory, EPA faces an uphill battle gathering the data to make the findings for rulemaking. The General Accounting Office (“GAO”) testified to Congress in 2005 that a test rule could take between two to ten years to finalize and cost EPA as much as $234,000. Consequently, EPA has issued rules or entered into consent agreements with manufacturers to require testing for only 200 or so chemicals and reviewed only two percent of chemicals on the inventory. The GAO concluded that TSCA “places the burden on EPA to demonstrate a need for data on a chemical’s toxicity rather than on a company to demonstrate that a chemical is safe.” When the old and new screening programs are taken together, it is readily apparent why TSCA’s critics have concluded that “limited regulatory oversight has permitted production of health and safety data to stagnate.”

Finally, TSCA imposes significant procedural barriers on EPA’s broad authority to regulate a chemical under Section 6 once the Agency has, under its information-gathering requirements under Sections 4 and 5,

100. Adelman, supra note 26, at 388–89 (noting pre-market testing was dropped by the Senate as part of the political compromise to get TSCA passed in 1976).
102. Markell, supra note 5, at 361–62; Adelman, supra note 26, at 389 (characterizing EPA’s review as “perfunctory” because of the short timeframe and the “nominal data” provided in the notices).
104. Markell, supra note 5, at 354; Adelman, supra note 26, at 390.
105. Markell, supra note 5 at 355.
106. Id.
found a new or old chemical to pose a risk. First, it must show a “reasonable basis” for its conclusion that a chemical “presents or will present an unreasonable risk of injury to health or the environment.” To do so, EPA must show in its Section 6 rulemaking the health effects or environmental impact and the magnitude of exposure, the chemical’s uses and benefits, availability of alternative substances, and the “reasonably ascertainable economic consequences of the rule, after consideration of the effect on the national economy, small business, technological innovation, the environment, and public health.” Finally, when EPA chooses its regulatory action, TSCA requires that the “least burdensome” option be used.

Judicial interpretation of TSCA’s Section 6 language has further limited EPA’s discretion. Asbestos, which is well proven to cause the fatal illness, asbestosis, provides the case in point. Despite the fact that the U.S. Surgeon General, EPA, and the World Health Organization had all declared asbestos to be unsafe at any exposure level, EPA’s ban of it was judicially invalidated. In *Corrosion Proof Fittings v. E.P.A.*, the Fifth Circuit held that EPA had failed to sufficiently consider other, less burdensome alternatives when choosing to ban asbestos. The court of appeals concluded that TSCA’s “substantial evidence” standard required a reasoned explanation supported by substantial evidence in the rulemaking record for why EPA chose a ban over other kinds of regulation. A total ban therefore required EPA to demonstrate not only that the ban adequately reduces risk, but also that a less burdensome action would either fail to reduce risk or would be ineffective in reducing risk. It was not sufficient for EPA to show that a ban might reduce harm; it must also show that there is not some immediate state of regulation that would be superior to both the current regulation and a complete ban. Since this decision, EPA has not completed any rules to ban or limit a chemical.

In a 2010 report, EPA’s Office of the Inspector General (“OIG”) used strong language to characterize where TSCA stands today—“inconsistent

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109. Id. § 2605(c)(1)(A)–(D).
110. Id. § 2605(a).
111. *Corrosion Proof Fittings v. Envtl. Prot. Agency*, 947 F.2d 1201, 1229 (5th Cir. 1991)(using a standard of review that is more rigorous than the APA’s arbitrary and capricious test, and generally begins with the court questioning whether EPA considered each regulatory option and ends with the court questioning whether EPA provided a reasonable basis for the rulemaking).
112. Id. at 1217 (citing 15 U.S.C. §§ 2605(a), 2618(c)(1)(B)(i)).
113. Id. at 1217 (noting the court thus required the agency to review all options in a hierarchical fashion, from least burdensome to most burdensome).
114. Id.
and presents a minimal presence.”\textsuperscript{116} The OIG specifically criticized how EPA handles new chemicals regulation and confidential business information claims, stating that it is “predisposed to protect industry information rather than to provide public access to health and safety studies.”\textsuperscript{117} It specifically acknowledged that trade secrets prevent effective testing, for sometimes EPA does not even know what chemical the TSCA application refers to, and cannot report any problems because “health and safety data are of limited value if the chemical the data pertain to is unknown.”\textsuperscript{118}

While some of this poor performance is due to the structure and language of TSCA, chronic underfunding of screening research and PMN review activities has also undermined the EPA’s ability to keep up with the workload. Both private and public reviews have come to the same conclusion: “OPPT [now called OCSPP], the implementer of the TSCA program, is one of the most underfunded programs in all of EPA.”\textsuperscript{119} In doing the “numbers game” to first determine labor costs before estimating a reasonable TSCA review budget, several experienced former EPA officials compared staffing under the Agency’s pesticides program to provide a sense of scale and context: EPA employs a staff of 900 to evaluate around 500–600 pesticide chemicals.\textsuperscript{120} At the time of this number crunching, EPA employed only 350 people in its toxic chemicals program.\textsuperscript{121}

**Lautenberg’s Attempted Updates**

Senator Lautenberg introduced bills in 2007,\textsuperscript{122} 2008,\textsuperscript{123} 2010,\textsuperscript{124} 2011,\textsuperscript{125} and 2013\textsuperscript{126} to remedy TSCA’s documented failures.\textsuperscript{127}

\textsuperscript{116} U.S. ENVTL. PROT. AGENCY, OFFICE OF INSPECTOR GEN., EVALUATION REPORT, EPA NEEDS A COORDINATED PLAN TO OVERSEE ITS TOXIC SUBSTANCES CONTROL ACT RESPONSIBILITIES 7 (2010), http://www.epa.gov/oig/reports/2010/20100217-10-P-0066.pdf.
\textsuperscript{117} Id. at 6.
\textsuperscript{118} Id. at 11.
\textsuperscript{119} Mark A. Greenwood, TSCA Reform: Building a Program That Can Work, 39 ENVTL. L. REP. 10034, 10036 (2009).
\textsuperscript{120} See Aidala, supra note 99, at 6 (describing staff shortages on the TSCA task force).
\textsuperscript{121} See id. (noting that while the evaluation of pesticides is “more intense,” the review under TSCA is arguably “far more challenging” because of the wider variety of chemical types and possible exposure pathways).
\textsuperscript{122} Kid Safe Chemicals Act, S. 1391, 109th Cong. (2007).
\textsuperscript{123} Kid Safe Chemicals Act, S. 3040, 110th Cong. (2008).
as he revised per his political experience and the evolving body of scientific studies, the bills grew more specific and longer. But over the eight years of rolling this Sisyphean rock back up Capitol Hill, his bills maintained a consistent focus: requiring industry to create “safe chemicals,” not safer ones; paying particular attention to aggregate exposures from multiple chemicals; protecting vulnerable populations, like the young and old; and getting it all done under legislated deadlines for chemical categorization, prioritization, and safety determinations.

Fundamentally, all the of Lautenberg bills sought to eliminate exposure by identifying the highest priority chemical substances for review, making safety determinations for them, and restricting use if they did not meet safety standards. The safety standard was a “reasonable certainty that no harm will be caused by aggregate exposure,” “Reasonable certainty,” as defined in the 2008 bill, limited aggregate exposure to a no more than 1 in 1,000,000 risk of adverse effects in the population of concern. The later bills articulated a risk-based safety standard to protect vulnerable populations, requiring that aggregate and cumulative exposures present a “negligible risk of any adverse effect on the general population or a vulnerable population.” The 2007 and 2008 bills’ name, “Kid Safe Chemicals Act,” clearly showed the population at the center of these safeguards, while the subsequent bills focused more generally on the health of “children, workers, consumers, and the public,” as well as the environment.

To prioritize the work of assessing so many chemicals, earlier Lautenberg bills required EPA first to divide its active inventory into “batches” for categorization, based on review of available use, hazard, and exposure data, and then determine whether the chemical required further

(focusing exclusively on activity in the Senate, although the House of Representatives has also made attempts to “modernize” TSCA. For example, the Endocrine Disrupting Chemicals Exposure Elimination Act (H.R. 2521) would ban chemicals that NIEHS considers to be of “highest concern,” and the Cleaning Product Right to Know Act (H.R. 3457) would require labels on U.S. cleaning products that list all ingredients).

128. See S. 1391; S. 3040; S. 3209; S. 847; S. 696; S. 1009 (noting the 2007 bill numbered thirty-five pages and the 2013 more than doubled in size, to eighty-nine pages).
129. See, S. 1391 § 2(c); S. 3040 § 2(c); S. 3209 § 2(c); S. 847 § 3; S. 696 § 3; S. 1009 §§ 4(e), 4(b)(2)(A), 5(c)(4)(B), 2(b)(2)(A), 5(c)(4)(B).
130. See S. 1391 § 3; S. 3040 § 3(5)(A).
131. See S. 3209 § 4; S. 847 § 4; S. 696 § 4; S. 1009 § 6 (noting differences in metabolism and physiology at certain stages of development can make infants and children more vulnerable than adults to the effects of chemical exposure, especially exposure that occurs in utero, during infancy, and during other critical periods of development).
132. See S. 3209 § 4 (ensuring a reasonable certainty of no harm to specific populations).
risk management to protect health and the environment. The 2013 Safe Chemicals Act created the following categories: substance of very high concern (“SVHC”), substance of very low concern, substance to undergo safety standard determination, and substance for which there is insufficient information to make an informed categorization. SVHCs are chemicals that are toxic, persistent in the environment, and bioaccumulative, or chemicals that are highly hazardous. The bills prohibit manufacturers from using these substances until they submit additional information necessary to conduct an expedited assessment of the known uses of, and exposures to, the chemical. The Chemical Safety Act relies on a health-based standard and does not allow for cost-benefit analysis. It also directs EPA to use “the best available science” as recommended by the National Academy of Sciences.

All of Lautenberg’s bills sought to minimize exposure to toxic substances by promoting the use of safer alternatives, and by requiring manufacturers to provide health and environmental data. The 2011 and 2013 bills required EPA to establish a network of no less than four green chemistry and engineering centers to support the development and adoption of safer alternatives; provide grants to promote and support the research, development, and adoption of alternatives; create market incentives for the development of safer alternatives; and develop a common protocol or electronic database relating to safer alternatives. Interestingly, recent studies have suggested that U.S. consumers have flocked to “green products,” many of which are produced outside the U.S., because they no longer trust the chemicals used in “regular” products nor the government’s ability to regulate them for their safety. The 2011 and 2013 bills also created the Children’s Environmental Health Research Program, which would provide grants to increase understanding of children’s vulnerability

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135. See S. 696 § 7.
136. S. 696 § 5.
137. See S. 3209 § 26 (mandating that expedient action be taken on those chemicals with the highest risk to human and environmental health); S. 847 § 6; S. 696 § 6; S. 1009 § 4.
138. S. 1391 § 3; see also S. 3040 § 3; S. 3209 § 5; S. 847 § 26; S. 696 § 6; S. 1009 § 6.
139. See S. 696 § 7 (assigning human health as the “sole” consideration).
140. Id.
141. S. 847 §§ 31, 32; S. 696 §§ 31, 32. EPA defines “green chemistry” as the design of chemical products and processes that reduce or eliminate the use or generation of hazardous substances. See Green Chemistry, U.S. ENVTL. PROT. AGENCY, http://www2.epa.gov/green-chemistry (last updated Dec. 12, 2013).
to chemical substances, and an interagency Science Advisory Board on Children's Health and Toxic Substances.

Lautenberg’s proposed bills contained other provisions that show attentiveness to concerns beyond just amending TSCA. For example, several bills sought to establish alternatives to animal testing, cooperation with international efforts to monitor chemicals, and a public database to share information on the toxicity and use of chemicals. The 2008 bill made provisions for a biomonitoring study to determine the presence of chemicals in human cord blood and included a user fee to finance it. The 2010 bill required EPA to publish a list categorizing all chemicals distributed in commerce, and to develop and publish action plans to reduce disproportionate exposure to toxic chemicals. It also provided for a general fee to help implement the Act.

Lautenberg’s bills, while intended to enhance EPA’s authority, did not displace state regulation and instead envisioned a working relationship between both levels of government. Early bills contained the same state preemption language, that “nothing in this Act affects the authority of a State or political subdivision of a State to establish or continue in effect any regulation of a chemical substance, mixture, or article containing a chemical substance or mixture.” The 2010 bill was more specific, clarifying that nothing in the statute or any rule, regulation, or order promulgated pursuant to it “shall be construed, interpreted, or applied to preempt, displace, or supplant any provision of any law, including common

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143. S. 3209 § 26; S. 847 § 26; S. 696 § 29.
144. S. 3040 § 3; S. 1391 § 3.
145. S. 1391 § 3; S. 3040 § 3; S. 3209 § 3; S. 847 § 9; S. 696 § 9.
146. S. 3040 § 2 (a)(5). Biomonitoring is the process of measuring levels of chemicals, chemical metabolites, or elements of a biological substance in an individual’s blood or urine. See, e.g., Pollution in Minority Newborns: Executive Summary, ENVT. WORKING GRP. (Nov. 23, 2009), available at http://www.ewg.org/research/minority-cord-blood-report/executive-summary. In 2005, in response to TSCA’s failure to mandate safety studies, the Environmental Working Group (“EWG”) conducted a study of umbilical cord blood from ten babies born in August and September of 2004 in U.S. hospitals, finding an average of 200 industrial chemicals and pollutants in the samples, including pesticides, consumer product ingredients, and eight perfluorochemicals—including the Teflon chemical PFOA, recently characterized as a likely human carcinogen by the EPA’s Science Advisory Board—dozens of widely used brominated flame retardants and their toxic by-products. Body Burden: The Pollution in Newborns, ENVT. WORKING GRP. (July 14, 2005), available at http://www.ewg.org/research/body-burden-pollution-newborns. Of the 287 chemicals detected in the cord blood, 180 are known carcinogens, 217 are neurotoxins, and 208 cause birth or developmental defects. Id.
147. S. 3040 § 3.
149. S. 3209 § 23; S. 847 § 23; S. 696 § 23.
150. S. 1391 § 18; S. 3040 § 18.
law, of any state,” if that law is more stringent than the act itself. The 2011 and 2013 bills contained revised preemption language:

[n]othing in this Act affects the right of a State . . . to adopt or enforce any regulation . . . that is different from, or in addition to, a regulation . . . established pursuant to this Act unless compliance with both . . . is impossible, in which case the applicable provisions of this Act shall control.

This language continues a trend begun in the 2010 bill’s preemption language of encouraging cooperative federalism by setting a federal regulatory floor that states may exceed but not fall below.

Given TSCA’s clear problem with confidential business information exemptions, Lautenberg’s bills addressed them head on. While the earlier bills provided a general exemption for confidential business information, the later bills more specifically limited it to precise information describing the manufacture, processing, or distribution of a chemical substance or mixture; marketing and sales information; information identifying specific customers; details of the full composition of a specific mixture; precise information about the use, function, or application of a chemical substance; and precise production or import volumes of a particular manufacturer, processor, or distributor.

II. REGULATING IN THE FEDERAL VOID

As a result of TSCA’s anemic regulatory reach, individual states stepped into the void. Beginning with California in 1986 and ending most recently with Maine, almost all states of various sizes and political stripes now use a range of regulatory tools to protect their respective citizens from commercial chemicals used in products sold to them. Unsurprisingly, this
“patchwork” of state regulations has troubled national manufacturers. Through their lobby, the American Chemistry Council, they have worked to limit the impact of them. But U.S. manufacturers and sellers doing business internationally have simultaneously felt the extraterritorial impact of the EU’s regulation of chemicals in commerce through REACH. Consequently, combined pressure from the states below and international trade partners above have led the U.S. commercial chemicals industry to accept a federal overhaul of TSCA.

State-by-State

California was the first state to step into the regulatory void, enacting a criteria-based commercial chemicals disclosure system whose influence continues today, with recent, similar legislative attempts by Connecticut and Maine in 2013. California’s law, Proposition 65 or the Safe Drinking Water and Toxic Enforcement Act, was enacted by ballot initiative in November, 1986. It focuses on protecting Californians from chemicals known to cause cancer, birth defects, or other reproductive harm by requiring the governor to publish a list of chemicals known to have these impacts and businesses to notify the public about significant amounts of these listed chemicals in the products they purchase. By providing this information, Prop 65 seeks to enable Californians to make informed decisions about protecting themselves from unhealthy exposures.

The Office of Environmental Health Hazard Assessment (“OEHHAA”), a division of the California EPA, administers Prop 65 and determines which substances are listed through one of four main ways. One pathway is via a determination by members of OEHHAA’s Science Advisory Board that the chemical has been clearly shown to cause cancer or birth defects or other reproductive harm. A second is when an “authoritative

156. Id. at 27 (referring to these as the “twin levers”).
157. Sachs, supra note 6, at 1819.
161. CAL. HEALTH & SAFETY CODE § 25249.6.
163. Id. The Science Advisory Board is comprised of two committees called the Carcinogen Identification Committee (“CIC”) and the Developmental and Reproductive Toxicant (“DART”)
body,” like the EPA, FDA, National Institute for Occupational Safety and Health, National Toxicology Program, and International Agency for Research on Cancer, identifies a chemical as causing cancer or birth defects or other reproductive harm. A third occurs when a state or federal agency requires that it be labeled or identified as causing cancer or birth defects or other reproductive harm. Finally, if a chemical meets certain scientific criteria identified in the California Labor Code as causing cancer or birth defects or other reproductive harm, it may be listed by OEHHA. The Prop 65 list, which must be updated at least once a year, has grown to include approximately 800 chemicals since it was first published in 1987.

Once chemicals are listed, Prop 65 then requires all companies doing business in California to provide a “clear and reasonable” warning before knowingly exposing anyone to them. Notably, businesses have the burden of proving that a warning is not required. This warning requirement can be met by labeling a consumer product, posting signs at workplaces, distributing notices at housing complexes, or publishing notices in newspapers. Businesses have twelve months to comply with warning requirements and twenty months to comply with the prohibition on knowingly discharging them into drinking water sources. However, businesses do not have to report the warnings they have issued to OEHHA.

Identification Committee. Committee members are appointed by the Governor and are designated as the “State's Qualified Experts” for evaluating chemicals under Proposition 65. When determining whether a chemical should be placed on the list, the committees base their decisions on the most current scientific information available. OEHHA staff scientists compile all relevant scientific evidence on various chemicals for the committees to review. The committees also consider comments from the public before making their decisions. Id.

164. Id.
165. Id. Most chemicals listed in this manner are prescription drugs required by the FDA to contain such warnings. Id.
166. Id. This method established the initial chemical list following adoption of Proposition 65 in 1986 and continues to be used today. Id.
167. Id.
168. CAL. HEALTH & SAFETY CODE § 25249.6 (1986); see also 27 CAL. CODE REG. § 25601 (discussing “clear and reasonable” warnings).
169. CAL. HEALTH & SAFETY CODE § 25249.10(c) (1986).
170. OFFICE OF ENVTL. HEALTH HAZARD ASSESSMENT, supra note 160.
171. Id. Also, “[b]usinesses with less than 10 employees and government agencies are exempt from Proposition 65’s warning requirements and prohibition on discharges into drinking water sources. Businesses are also exempt from the warning requirement and discharge prohibition if the exposures they cause are so low as to create no significant risk of cancer or birth defects or other reproductive harm.” For a cancer warning, “the ‘no significant risk level’ is defined as the level of exposure that would result in not more than one excess case of cancer in 100,000 individuals exposed to the chemical over a 70-year lifetime.” “For birth defects or reproductive harm warning, the ‘no observable effect level’ is determined by identifying the level of exposure that has been shown to not pose any harm to humans or laboratory animals. Proposition 65 then requires this ‘no observable effect level’ to be divided by 1,000 in order to provide an ample margin of safety. Businesses subject to Proposition 65 are required to provide a warning if they cause exposures to chemicals listed as causing birth defects or reproductive harm that exceed 1/1000th of the ‘no observable effect level.’ “ Id.
and so the agency does not collect specific information about any particular warning, such as what chemicals are present, at what levels, and how exposure to them may occur. The law is enforced by a combination of the California Attorney General’s Office, district attorneys and city attorneys, and citizen suits by individuals acting in the public interest filed against a business alleged to have violated the law. Penalties for failing to provide notices can be as high as $2,500 per violation per day.

As a result of Prop 65’s warning requirement, California has seen manufacturers remove listed chemicals from their products. For example, the known carcinogens trichloroethylene and methylene chloride “are no longer used in most correction fluids and reformulated paint strippers, respectively, and toluene, which causes birth defects or other reproductive harm, has been removed from many nail care products.” In addition, a Prop 65 enforcement action prompted manufacturers to decrease the lead content in ceramic tableware and wineries to eliminate the use of lead-containing foil caps on wine bottles. Given that California is regularly ranked as the ninth largest economy in the world and the largest one within the United States, its approach to regulating commercial chemicals influences industry practice outside, as well as inside, its boundaries. California effectively shut down the national market for certain bromated flame retardants (“BFRs”) when it unilaterally chose to ban them, given that it is the largest U.S consumer of products containing BFRs.

Looking beyond California’s trend-setting start to the majority of other states that have passed some form of chemicals regulation, one can readily appreciate the chemical industry’s view that a patchwork of laws currently exists. Nonetheless patterns appear when looking at the specific state regulatory tools used, including an early tendency toward single chemical restrictions; creation of state government purchasing programs;
mandated assessments of alternatives to “chemicals of concern” and application of “green chemistry;” initiation of biomonitoring programs; required prioritization in chemical assessment and restriction; use of life cycles analysis; and increased transparency through right-to-know and other public information laws. Single chemical laws have been frequently used, and range from outright bans to restrictions on use; more states impose restrictions on chemicals that have been most studied and thus present the least uncertainty about their toxicity, like mercury (thirty-one states), lead (seventeen states), and polybrominated diphenyl ethers (“PBDEs”) and phthalates (twelve states). Twenty-five states use government purchasing power to reduce chemical exposures, like Connecticut, New Jersey, and New York’s executive orders that require state agencies to use “green” cleaning products. The same number of states has enacted various forms of data-gathering laws, like Washington requiring that all children’s products manufacturers report their use of chemicals of high concern and Maine mandating facilities to report use of more than 1,000 pounds of a priority toxic chemical per year.

Interestingly, one can see states making progress in a “stepwise” fashion toward more comprehensive chemicals regulation, adding successive tools from initial data reporting and collection, to prioritizing chemicals of concern based on human health harms, then promoting safer alternatives via research on substitutes, and finally restricting these prioritized chemicals via single chemical or product-specific restrictions or incentives to use preferred items. In this manner, some states are making the transition from single chemical to comprehensive chemicals regulation, and a push toward life cycle regulation. In 2013, California’s new Safer Consumer Product regulations took effect. They signaled a move beyond

180. See generally ROSS STRATEGIC, NAT’L POLLUTION PREVENTION ROUNDTABLE, STATE CHEMICALS POLICY: TRENDS AND PROFILES 6–9 (Apr. 2013) [hereinafter NPPR].

181. Cary G. Coburn, Margarita C. Currás-Collazo & Prasada Rao S. Kodavanti, Polybrominated Diphenyl Ethers and Ortho-Substituted Polychlorinated Biphenyls as Neuroendocrine Disruptors of Vasopressin Release: Effects during Physiological Activation In Vitro and Structure-Activity Relationships, 98 TOXICOL. SCI. 178 (Apr. 13, 2007) (showing PBDE’s use as flame retardants in an array of consumer products, including building materials, furnishings, and textiles, have been shown to disrupt hormones).

182. NPPR, supra note 181, at 8–9. In contrast, a smaller number of states restrict the use of other kinds of flame retardants (6) and BPA (3). Id.

183. Id.

184. Id. at 12.

185. Id. at 9.

186. Id. at 14.

187. Id. at 10.

Prop 65’s notification requirements to mandated identification and prioritization of consumer products containing chemicals of greatest concern; performance of “alternative analyses” by the manufacturers of those high priority product-chemical combinations; and a range of legal tools ranging from outright bans and use restrictions to information disclosure and end-of-life management programs. Both Maine and Washington regulate in a similar, comprehensive manner, but only for children’s products. With the life cycle approach, states seek to reduce chemicals of concern in all phases of manufacturing, distributing, use, and disposal. For example, Michigan’s state agencies and departments promote green chemistry solutions that reduce the use of hazardous chemicals throughout a product’s life cycle from development to disposal, while Minnesota requires manufacturers to collect mercury-containing products and New York and Wisconsin laws require manufacturers to collect and recycle their electronics products.

In sum, activity at the state level since 1986 shows a steady progression toward wider and deeper regulation of commercial chemicals. A variety of techniques have been tried. Some have been adopted by several states, as jurisdictions share their experiences and national advocacy associations seek to extend best practices. Although national companies observe that this plethora of state laws impedes their operations, in fact the states have succeeded in their time-honored role as “laboratories” of social change.

REACHing Across the Pond

The EU’s Registration, Evaluation, Authorization and Restriction of Chemicals (“REACH”) regulation was adopted in December 2006 and entered into force six months later on June 1, 2007. Its goal is to facilitate assessment of the risks of using both new and existing chemicals in industry

189. NPPR, supra note 181, at 19.
190. Id. at 11.
191. Id. at 13.
192. Id. at 14.
193. Id. at 6. But interestingly, no systematic and comprehensive studies have yet analyzed how states have implemented these laws nor assessed whether they have been effective at decreasing exposures and health impacts.
194. See New State Ice Co. v. Liebmann, 285 U.S. 262, 311 (1932) (Brandeis J., dissenting) (stating that a state “may, if its citizens choose, serve as a laboratory; and try novel social and economic experiments without risk to the rest of the country”).
and commerce.\textsuperscript{196} REACH replaced over forty different directives and regulations\textsuperscript{197} in place throughout the EU’s member countries, with over 140 articles, 17 annexes, and hundreds of pages of guidance.\textsuperscript{198} All of these regulations sought to “ensure a high level of protection” of health, safety, and the environment.\textsuperscript{199}

REACH’s main mechanism of regulation is registration and evaluation of individual chemicals by the European Chemicals Agency (“ECHA”).\textsuperscript{200} an independent agency established to evaluate manufacturer-provided data and determine whether chemicals are safe for market.\textsuperscript{201} ECHA prioritizes all substances, categorizing substances as approved for use or requiring evaluation. Chemical manufacturers that produce or import more than one ton of existing or new chemicals\textsuperscript{202} in a year\textsuperscript{203} must first register the substance with ECHA. They must also provide a technical dossier describing the characteristics of each substance posing human health and/or environmental hazards through “literature search, data sharing, and testing” if necessary.\textsuperscript{204} The dossier information required depends on the volume of each substance\textsuperscript{205} and whether the substance is characterized as “dangerous” or as “persistent, bio-accumulative and toxic.”\textsuperscript{206} ECHA then uses these dossiers to establish exposure

\begin{itemize}
  \item[196] See Comm. on Technical Barriers to Trade, \textit{Note by the Secretariat: Minutes of the Meeting of 4 November 2004}, G/TBT/M/34, ¶¶ 14–16 (Jan. 5, 2005).
  \item[199] Commission Regulation 1907/2006, art. 1(1), 2006 O.J. (L 396) (EC) [hereinafter \textit{REACH}].
  \item[200] \textit{Id.} at arts. 15, 20; \textit{EUROPEAN CHEMS. AGENCY, GUIDANCE ON REGISTRATION 3}, 112 (2011), http://www.safetihitech.com/coddocumento/14/Registration%2520EN%25202520pdf.
  \item[201] \textit{About Us, EUROPEAN CHEMS. AGENCY,} http://echa.europa.eu/about-us (last visited Feb. 27, 2014).
  \item[202] See \textit{REACH}, supra note 199, at arts. 3(20), 12(1)(a), 23, 26–28 (discussing the reporting requirements for phase-in chemicals in quantities of more than one tonne).
  \item[203] \textit{Id.}
  \item[204] \textit{See id.} at arts. 6(1), 6(3)(b), 17(1), 18(1), 23(1), 23(3), 28(1), 28(6), 41(d)(b) (stating the threshold quantity is produced per year).
  \item[205] \textit{Id.} at arts. 10(a), 12(1)(a)–(b).
  \item[206] \textit{See id.} at arts. 13(1)–(2), 25, Annex VI (discussing preferred information-gathering techniques); see also Committee on Technical Barriers to Trade, \textit{Note by the Secretariat: Minutes of the Meeting of 21 March 2007}, G/TBT/M/41, ¶ 26 (June 11, 2007) (describing the necessary control information to be demonstrated by applicants).
  \item[207] \textit{See REACH}, supra note 200, at 12(1), 14(1), Annex XI (stating that new requirements correspond to each increase in tonnage).
  \item[208] \textit{Id.} at Annex XIII.
\end{itemize}
information, assess the risks from identified uses, and make recommendations to ensure the safe use of each substance. The provided information is maintained in a central chemicals database that is available to manufacturers as part of mandatory Substance Information Exchange Forums (“SIEFs”) intended to minimize duplicative testing.

Since 2008, REACH has approved 4,938 substances for standard registration and 3,547 under limited registration for intermediate uses. ECHA lists substances suspected of posing a risk to human health or the environment in a Community Rolling Action Plan ("CoRAP") and evaluates them according to risk-based criteria to determine the presence and degree of risk posed. Substances that do not pose an unacceptable risk to human health and the environment are approved; otherwise, they are listed as candidates for restriction. As of September 2013, there are 105 categories of restricted substances, covering more than 1,000 substances including lead and phthalates.

EU member states are chosen to evaluate candidate substances, and may request additional information from the manufacturer or importer if needed to make a risk determination. Member states’ evaluations may result in the conclusion that the risks are sufficiently under control with the measures already in place, or that the risks require further management. For

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209. See id. at art. 10(a)(x) (applying to “substances in quantities of 1 to 10 tonnes per year”).

210. See id. at arts. 12(1)(c), 14(1) (applying to substances in quantities of 10 tonnes or more).

211. Id. at arts. 77(2)(i), 123. REACH requires evaluation in the context of other EU directives and ECHA will not grant approval of a substance if doing so would violate other environmental statutes. See generally Council Directive 2000/60, 2000 O.J. (L. 327) (EC) (providing an example of a European Union environmental law, the violation of which would trigger ECHA denial).

212. REACH, supra note 200, at art. 16(1).

213. Id. at arts. 11(1), 13(5). See also Substance Information Exchange Fora, EUROPEAN CHEMS. AGENCY, http://echa.europa.eu/ja/regulations/reach/substance-information-exchange-fora (last visited Feb. 6, 2014) (stating that a purpose of SIEF is to avoid duplication of studies).


217. Id.

the latter, management can include use restrictions, identification as “substances of very high concern” (“SVHC”), harmonized classification, and bans. As of December 2013, there were 151 substances on the SVHC “Candidate List,”\(^{219}\) which includes twenty-two candidates for possible inclusion in the “Authorization List.”\(^{220}\)

Substances placed on the “Authorization List” cannot be produced or used in the EU after the date listed without authorization for a specific use. Authorization is granted “if the applicant [is] able to demonstrate adequate control of risks” or “if there [is] no alternative substance or technology (even if the risks [are] not adequately controlled) and socio-economic benefits outweigh[] the risks.”\(^{221}\) The European Commission (“EC”) may also place restrictions on the manufacture, use, or placement of a substance on the market or in certain products.\(^{222}\) There are over fifty-nine categories of restricted substances, covering 102 substances with restrictions, including asbestos, which is prohibited in all substances, and benzene, which should not exceed 5mg/kg in toys or toy parts.\(^{223}\)

Given that REACH was designed to address the shortcomings of the existing chemical regulation system, ECHA has been overwhelmed with regulatory work. Because REACH requires that ECHA check five percent of all dossiers from each tonnage band for compliance, 1,250 of the 25,000 registration dossiers received by the first registration deadline in November 2010 required review.\(^{224}\) To lessen this burden, REACH established “Joint Submissions,” a legal obligation requiring multiple registrants of the same substance to submit a single dossier. As of September 2013, ECHA had received over 5,706 joint submissions and 2,226 individual submissions.\(^{225}\)

Despite the workload, the REACH approach is widely viewed as successful. The registration and disclosure requirements reflect a shift that moves the burden of proof from the government to the manufacturer on the

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\(^{221}\) Comm. on Technical Barriers to Trade, supra note 207; see also REACH, supra note 200, at art. 60(2)-(4) (providing that authorizations shall not be granted for substances meeting the criteria of article 57(a), (b), (c), or (f) for which a threshold cannot be determined; substances meeting the criteria of article 57(d) or (e); and substances identified in article 57(f) which have “persistent, bioaccumulative and toxic properties or very persistent and very bioaccumulative properties”).

\(^{222}\) See generally REACH, supra note 200, at Annex XVII (describing the process by which such restrictions may be put in place).

\(^{223}\) List of Restrictions Table, supra note 219.


basis of the substance's hazardous properties, separate from the risk the substance poses to human health or the environment. In this way, REACH embodies the precautionary principle.\textsuperscript{226} Importantly, for understanding the landscape of the debate about current US chemicals regulation, REACH casts its precautionary net on this side of the Atlantic, affecting the manufacturing practices of U.S. firms who sell or manufacture their products in the EU.\textsuperscript{227}

III. THE COMPROMISE BILL OF 2013

The CSIA caught many people by surprise.\textsuperscript{228} Although Senator Lautenberg had already introduced his Safe Chemicals Act in April and Senator Vitter was said to be working on his own bill, few appeared to know that they were working together on a compromise bill. Introduced just a few weeks before Senator Lautenberg died, this bipartisan bill was endorsed by an almost equal number of Republicans and Democrats.\textsuperscript{229}


\textsuperscript{229.} LIBRARY OF CONG., supra note 8.
The CSIA now sits in the Senate Environment and Public Works Committee, which Senator Barbara Boxer of California chairs.\(^2^3\)\(^0\) It has received one hearing, in July, 2013, at which an array of representatives from NGOs, state and federal governments, academia, and industry testified.\(^2^3\)\(^1\) Four months later, the House Energy and Commerce Committee, which has been holding regular meetings to review ways in which TSCA should be updated, held a hearing to consider the CSIA’s provisions.\(^2^3\)\(^2\) Witnesses at both hearings remarked on ways in which the CSIA improved TSCA’s demonstrated weaknesses, including mandating safety reviews of all existing chemicals, requiring new chemicals to be found likely to meet the safety standard before market approval, clarifying that the “unreasonable risk” standard is based solely on health and environmental risks, and permitting EPA to require more testing without going through a rulemaking process.\(^2^3\)\(^3\) They also sounded several concerns about the bill as drafted, including state law preemption, insufficient limits on the CBI exceptions to information gathering, insufficient attention to vulnerable populations and aggregate exposures when setting safety standards, absence of legislated timelines, lack of explicit support for a green chemistry program and international coordination, and inattention to funding.\(^2^3\)\(^4\) Although the CSIA builds on the awareness created by Senator Lautenberg’s tenacity, it includes many clear compromises and thus differs in both tone and substance from his Safe Chemicals Act of 2013.

\textit{Envisioning the Change Needed}

The CSIA styles its purpose modestly: to improve consumer safety and to ensure that risks from chemicals are adequately understood and managed.\(^2^3\)\(^5\) Throughout its 23 sections, the bipartisan bill seeks to strike a compromise between absolute consumer safety and equally unbridled


\(^{233}\) Id. (showing Mr. Tonko of New York speaking about the unreasonable risk standard).

\(^{234}\) Id.

\(^{235}\) S. 1009 § 2(a).
manufacturing freedom. Among its findings are that chemicals should be safe for their intended uses, that they are used in a variety of ways and have benefitted society, and that “unmanaged risks of chemical substances” may endanger human health. These findings also acknowledge that confidence in federal chemical regulation has diminished, that TSCA must be updated to create a “robust Federal system for assessing and managing chemical risks” that preempts state requirements, and that development of safer chemicals should be encouraged to “reduce risk, provide improved products, stimulate the economy, create jobs, and protect interstate commerce.”

The CSIA’s policy section builds on these findings, stating that the EPA Administrator should have “the appropriate hazard, use and exposure information” needed to make chemical safety determinations, the authority to share confidential business information with other government officials, and “the resources and tools necessary to implement this Act.” It also advises EPA to encourage the use of best laboratory methods, minimize animal testing, and implement the act in a way that “promotes transparency of information and decisionmaking, protects substantiated confidential business information, and promotes innovation.” Finally, CSIA policy declares that development of adequate data on a chemical’s effects and exposures “should be the primary responsibility” of manufacturers, and explains that the states’ “important role” in an updated TSCA lies in recommending priorities and providing safety assessment data to the EPA, along with general consumer protection. As with the findings, the CSIA’s policies are more numerous than TSCA’s, but are also written in a more specific and less tepid manner.

Fundamentally, Congress encapsulated EPA’s balancing act when regulating chemicals in commerce by laying out the CSIA’s two goals: maintain human health and foster economic health. The CSIA declares that the Administrator shall “rely on robust scientific evidence to implement this

236. Id. § 2(a)(1).
237. Id. § 2(a)(6).
238. Id. § 2(a)(5).
239. Id. § (2)(a)(8). The CSIA’s eight new findings replace the three findings currently codified in TSCA.
240. Id. § 2(b)(b) (2)(E).
241. Id. §§ 2(b)(b)(2)(B–F).
242. Id. § 2(b)(b)(3).
243. For example, TSCA’s policies seek only “adequate” data collection and EPA authority. See 15 U.S.C. § 2601(b)(1)–(2) (2006) (requiring adequate data and authority); see id. § 2601(b)(3) (“authority over chemical substances and mixtures should be exercised in such a manner as not to impede unduly or create unnecessary economic barriers to technological innovation while fulfilling the primary purpose of this chapter to assure that such innovation and commerce in such chemical substances and mixtures do not present an unreasonable risk of injury to health or the environment.”).
Act in a way that balances . . . promoting the safety of American consumers and preventing harm to American innovation, manufacturing, and the economy” and “implement this Act to protect the health of the people . . . and the environment in such a manner as not to unduly impede commerce or create unnecessary economic barriers to technological innovation, including safer chemistry.”

Screening and Setting Priorities

The CSIA’s biggest change to risk assessment practice under TSCA lies in creating a framework that establishes a priority system for assessing all chemicals currently used in commerce. In doing so, Congress would eliminate almost all of TSCA’s Section 4 and put in its place a requirement that EPA assess all Section 8 inventory chemicals in use, with an emphasis on those actively being used in manufacturing, using a risk-based screening process. To determine whether substances are high or low priority, the CSIA directs EPA to consider such criteria as hazard and exposure potential, intended conditions of use, production volume and significant changes to it, and recommendations by state agencies charged with protecting health or the environment. High priority chemicals are those that have the potential for high hazard and high exposure. Low priority chemicals are those that the EPA determines are likely to meet the safety standard. The safety standard is defined as ensuring that “no unreasonable risk of harm to human health or the environment will result from exposure to a chemical substance.”

CSIA Section 4 focuses primarily on the process of developing this framework, with EPA mandated to develop all policies and procedures for implementing it, including collecting information, evaluating its quality, analyzing the data, determining the need for additional data (including information on specific subpopulation impacts), and providing transparency.

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244. S. 1009 § 2(c); see also 15 U.S.C. § 2601(c) (putting more weight on protecting commerce than public health by stating, “It is the intent of Congress that the Administrator shall carry out this chapter in a reasonable and prudent manner, and that the Administrator shall consider the environmental, economic, and social impact of any action the Administrator takes or proposes to take under this chapter”).
245. S. 1009 § 8(b)(6)&(7) (defining active and inactive substances).
250. Id. § 3(4)(16) (as critics rightly point out, this standard assumes some level of risk—a reasonable risk—to be tolerated, thereby requiring a reasonableness analysis).
throughout.\textsuperscript{251} This process, which is to be developed within one year of enactment,\textsuperscript{252} requires industry to provide baseline data to the EPA, complete with the funding sources for this data.\textsuperscript{253}

Importantly, the CSIA gives EPA authority to acquire additional data from regulated companies when needed by issuing an order, as well as promulgating a test rule or negotiating a test consent agreement.\textsuperscript{254} To issue an order, EPA must explain why “good cause exists,” including efforts made to obtain testing voluntarily, the availability of data on structurally related chemicals, and safety assessments on other relevant chemicals.\textsuperscript{255} In theory, despite this show cause process, this additional method for gathering information should cut down the screening delay due to multi-year rulemaking. Overall, while the CSIA provides much description of the framework process and sets a timeline for the framework’s completion, it only requires EPA to “make every effort to complete prioritization of all active substances in a timely manner.”\textsuperscript{256}

\textit{Safety Determinations and Risk Management}

Having determined the chemical priority list, EPA must then conduct a risk-based safety assessment, make a safety determination, and establish risk management requirements for all high-priority substances.\textsuperscript{257} In a marked change from TSCA, the CSIA requires that EPA base its risk assessments “solely on considerations of risk to human health and the environment.”\textsuperscript{258} The cost-benefit analysis required under TSCA is no longer included. When doing the exposure assessment, the CSIA instructs EPA to take into account exposure “duration, intensity, frequency, and number, and the vulnerability of exposed subpopulations.”\textsuperscript{259} Just as when setting screening standards under new Section 4, EPA has the additional tool of issuing an order when faced with needing more data to assess chemicals under Section 6.\textsuperscript{260}

In the penultimate step of managing the risks of commercial chemicals under the CSIA, the EPA must make safety determinations, again based “solely on considerations of risk to human health and the

\begin{itemize}
\item \textsuperscript{251} \textit{Id.} § 4(a)(4)(a)(2)(B)(3).
\item \textsuperscript{252} \textit{Id.} § 4(e)(1).
\item \textsuperscript{253} \textit{Id.} § 4(a)(4)(c)(1)(B).
\item \textsuperscript{254} \textit{Id.} § 4(a)(4)(f)(2).
\item \textsuperscript{255} \textit{Id.} § 4(a)(4)(g).
\item \textsuperscript{256} \textit{Id.} § 4(a)(4)(e)(1)(C)(i).
\item \textsuperscript{257} \textit{Id.} § 6(2)(a).
\item \textsuperscript{258} \textit{Id.} § 6(2)(b)(1).
\item \textsuperscript{259} \textit{Id.} § 6(2)(b)(4)(D)(ii)(II), (III).
\item \textsuperscript{260} \textit{Id.} § 6(2)(b)(5).
\end{itemize}
environment.” These determinations require published statements that explain EPA’s decision-making, which are then subject to notice and public comment. When a chemical does not meet the safety standard, the Administrator must promulgate a rule detailing the restrictions placed on it. These restrictions may include warnings, recordkeeping requirements, quantity and use limits, or a ban or phase-out. Notably, in contrast to the current limits placed on the EPA’s discretion when choosing the risk management approach under TSCA, only a ban requires consideration of other, non-health and environment factors under the CSIA. Only when banning does the CSIA require EPA to consider the availability of “technically and economically feasible alternatives” and risks posed by them, the “economic and social costs and benefits” of the ban and other options considered, and the “economic and social benefits” of the banned chemical and its alternatives. Having accepted this level of risk taking, the CSIA goes a little further, by exempting certain substances if the “lack of availability of the chemical substance would cause significant disruption in the national economy,” if the use “provides a net benefit to human health, the environment, or public safety” compared to alternatives, if the use is “critical or essential” and feasible alternatives are lacking, or if needed for national security. Finally, safety determinations are subject to judicial review because they are final agency actions, while safety assessments are not.

**Transparency and Information Gathering**

The CSIA appears to take several steps forward in terms of gathering information and sharing it. Section 8 would require reporting of all information on active substances “necessary to carry out sections 4 and 6,” including data “known by, or reasonably ascertainable by” the person making the report. This would include processors and not just manufacturers. In addition, all manufacturers must notify the EPA of chemicals currently on the TSCA inventory that have been produced or processed during the five years prior to the CSIA’s enactment, as a

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261. *Id.* § 6(2)(c)(2).
262. *Id.* § 6(2)(c)(3), (6).
263. *Id.* § 6(2)(c)(9)(A)(i).
264. *Id.* § 6(2)(c)(9)(B)(ii), (iii), (iv).
265. *Id.* § 6(2)(c)(9)(D)(ii), (iii), (iv).
266. *Id.* § 6(2)(c)(10)(B), (C), (D).
267. *Id.* § 6(2)(c)(11)(A), (B).
268. *Id.* § 4.
269. *Id.*
270. *Id.* § 7.
means of updating the inventory and thereby enabling EPA to determine which chemicals are active and inactive. Finally, the CSIA requires the EPA to make this list available to the public.

But many of Section 8’s mandates are subject to confidential business information (“CBI”) exemptions, which are detailed in Section 14’s almost twenty pages of description. Although these provisions are explicit and developed, and establish a presumption of protection for specific information about chemical manufacture and sales, mixture formulas, production and import volumes, and chemical identity if claimed and verified when submitted, there are several explicit limitations placed on TSCA’s current scope of protection and means of asserting it. First, safety assessments submitted under Section 6 are categorically not subject to the CBI, as well as health and safety data submitted under Sections 4 and 8(e). Second, manufacturing volumes reported as ranges and general descriptions of a chemical’s uses and functions are viewed as not revealing confidential information and thus not exempted. Third, in order to assert CBI protection, the CSIA now requires that submitters justify their claims when making them with supporting written documentation, including showing how disclosure is likely to cause substantial harm to their competitive position and the time period necessary for protection. Finally, the CSIA provides for disclosure of CBI to other federal, state, and local officials, as well as to treating medical personnel, subject to their taking appropriate steps to maintain confidentiality.

Federal Versus State Regulation

Finally, the CSIA unequivocally seeks a uniform federal system for regulating chemicals in commerce. This policy is made explicit from the opening lines of Section 2’s statement of findings, policy, and intent. Hence Section 18 explicitly says that no state may “continue to enforce a requirement for the development of test data or information . . . that is reasonably likely to produce the same data and information required under

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271. Id.
272. Id.
273. Id. § 13 (proposing to amend TSCA § 14 pertaining to confidential information).
274. Id.
275. Id.
276. Id.
277. Id.
278. Id.
279. Again, a note to the reader to avoid confusion: it is Section 15 of the CSIA that amends Section 18 of TSCA, both of which concern preemption.
Likewise, no state may “continue to enforce a prohibition or restriction on the manufacture . . . of a chemical substance after issuance of a completed safety determination . . . under section 6.”

In addition, states may not enact new restrictions on chemicals that have been prioritized as low priority nor on those designated as high priority yet still pending EPA safety assessment and determination. The CSIA provides three limited exceptions to this broad preemptive sweep, but they are narrowly pegged to actions taken under other federal law, needed to implement some federal obligation, or pertaining to other state environmental laws. States may seek waivers from this preemption provision, which will be reviewed by the EPA for compelling local conditions and the impacts of federal delay. While states are invited to participate in the creation of the prioritization framework, to provide health and safety data during safety assessments, and to receive some confidential business information from the EPA, the CSIA’s preemption provision does not delineate a future sovereign lawmaking role for them in commercial chemicals regulation in the United States.

IV. DOES THE CSIA CONTAIN THE ESSENTIAL ELEMENTS FOR REFORM?

As stated at the outset of this Article, there are several key components of a comprehensive commercial chemicals law that illustrate environmental public health’s regulatory pivot points, namely the 1) scope of agency authority, 2) precision of risk assessment methodologies, safety standards, and risk management measures, 3) existence of legislatively imposed deadlines for agency action, 4) public transparency via reporting and disclosure requirements, and 5) the states’ role in national regulation. The CSIA contains provisions addressing these essential elements for reform, notably those attempting to remedy the clear failure of Sections 4 and 6 to permit adequate risk assessment and management. Interpretation of them by various stakeholders questions their advantages. The following analysis assesses the sufficiency of each.

EPA’s New Authority

EPA’s starting point for reform principles is having clear authority to base safety standards on sound science reflected in “risk-based criteria that
protect human health and the environment,” thereby separating the scientific risk assessment phase from policy-based decisions on how to manage risk in the face of uncertainty.\textsuperscript{285} With the deletion of the TSCA Section 4 language of “unreasonable risk” and “reasonably certain,” CSIA would appear to have met that goal.\textsuperscript{286} But testimony at the House committee hearing in November questioned the “good science” rhetoric used throughout the CSIA, most frequently in redrafted Sections 4 and 6. Professor Wendy Wagner testified that the language of “best available science” used to define risk assessment data (what she calls “inputs”) and risk management procedural requirements (“procedures”) provides “attachment” points that could be exploited as ambiguity ripe for legal challenge: “If history is any guide, entities with the most at stake (e.g., manufacturers of the least effective and least safe chemicals) will use these attachment points to delay EPA’s implementation or force EPA into negotiations before, during, or after a rule is published.”\textsuperscript{287} Others have noted that a “sound science” definition would be most easily achieved by simply referencing National Academy of Sciences (“NAS”) recommendations.\textsuperscript{288}

\textit{Risk Assessment and Management Methods}

EPA seeks clear authority to take risk management actions when chemicals do not meet the safety standard, with flexibility to take into account a range of considerations, including children’s health, economic costs, social benefits, and equity concerns. In the CSIA, new Sections 4 and 6 grant the EPA authority to create a framework for prioritizing review of chemicals, establishing a system for tackling the backlog of unstudied


\textsuperscript{287} Testimony on S. 1009: The Chemical Safety Improvement Act Before the House Subcomm. on Envr’t & the Economy of the H. Comm. On Energy & Commerce 2–4, 10 (2013), available at http://docs.house.gov/meetings/IF/IF18/20131113/101468/HHRG-113-IF18-Wstate-WagnerW-20131113.pdf (testimony of Wendy E. Wager, Joe A Worsham Centennial Professor, University of Texas School of Law). She analyzes at least forty pages of the bill and believes that “[t]his level of detailed legislative prescription is unprecedented” and predicts it will “cause significant delays in implementation.” Id. at 5. In particular, she expresses concern that it would make EPA more solicitous of industry during the rulemaking process, to avoid litigation around terms, and thereby place the Agency in the position of compromising too early. Id. at 14.

chemicals on the inventory. In this way, EPA retains some flexibility and ability to exercise its discretion without being overwhelmed as it was when faced with the workload post TSCA.\textsuperscript{289} Using the prioritization process to organize the scale of review permits EPA to focus its data collection and risk assessment efforts. For example, if the emphasis is on settings where there is more direct human exposures, then EPA can prioritize review of chemicals in children's products, consumer products in general, home products, and those likely to result in worker exposure. In contrast, if the emphasis is more on ecosystems, the Agency could prioritize review of chemicals that contribute to greenhouse gas emissions and bioaccumulation.\textsuperscript{290} With this discretion, EPA may also choose not to study certain \textit{de minimis} exposure pathways or study vulnerable subpopulations or aggregate exposures.

Likewise, prioritization in chemical screening—in essence, setting the scale—permits EPA to improve its risk assessment process, as the focused, iterative process leads to results that make a more predictive policymaking tool. As more data is assessed, the stronger its predictive value becomes. And also faster, for the Agency has found that it can perform half as many chemical evaluations in the first years of implementing as it can in subsequent years.\textsuperscript{291}

Even though TSCA did not require this prioritized approach in the past, EPA created voluntary programs that used similar devices and thus has experience for implementing these CSIA provisions as proposed. The High Production Volume ("HPV") Challenge Program for new chemicals under Section 5 and the Chemical Assessment and Management Program ("ChAMP") for inventory chemicals under Section 8 are two examples of EPA's voluntary chemical screening initiatives.\textsuperscript{292} In this way, both industry and regulator have tested these systems and can improve them in their new form under the CSIA, hopefully leading to faster start-up and a less fraught transition. In addition, U.S. manufacturers who sell in the EU will experience more uniform regulation and have decreased compliance

\textsuperscript{289} Former EPA leaders believe that maintaining flexibility is important. Exhorting Congress not to "freeze in time" elements that seem contemporaneously reasonable, they point out that the "least burdensome" language may have seemed logical in 1976 but ended up bogging down the regulatory process for thirty-six years. Aidala, \textit{supra} note 99, at 9. “Requirements that are overly specific about how the regulatory science is conducted or evaluated might be seen as outdated, inefficient, or inappropriate in relatively short order if Congressional appetite for TSCA legislative amendments appears only twice as often as Haley’s Comet.” \textit{Id.} at 10.

\textsuperscript{290} \textit{Id.} at 3.

\textsuperscript{291} \textit{Id.} at 5.

\textsuperscript{292} See Adelman, \textit{supra} note 26, at 391–92 (providing a detailed explanation of these programs). \textit{See also} Markell, \textit{supra} note 5, at 356–59 (discussing these programs).
costs, given the likelihood that the CSIA framework approach will share many similarities with REACH’s system.

**Externally Imposed Deadlines**

The lack of firm deadlines imposed by Congress within the CSIA gives all stakeholders pause. All NGOs have noted them, regardless of whether they support or oppose the bipartisan bill, and seek their addition. In its November House committee testimony, EDF underscored this point by offering a precise timeline of when specific benchmarks could be achieved once Congress passed the CSIA. Per the drafted bill language, EDF calculates that it would take a little over three years for EPA to produce the first prioritized chemicals, a little over seven years to produce the first safety determination, and about eight-and-a-half-years until the first final rule imposing restrictions could be enacted.293

Several former EPA officials also mentioned the time involved in phasing in new legislative mandates and the benefits of external deadlines for achieving them, when offering their advice to Congress on how to improve TSCA. They estimated a typical six-to-eighteen-month lag time between a law’s passage and the EPA administrator’s ability to begin producing results.294 They also singled out the practical benefit of externally imposed deadlines by helping to establish priorities during budget negotiations within the Agency.295

EPA itself notes the importance of deadlines to its work on commercial chemicals regulation. As one of its six essential principles for TSCA reform articulated before the CSIA was proposed, Principle 4 urges manufacturers and the Agency to assess and act on priority chemicals “in a timely manner.”296 It actively encourages Congress to give the EPA authority to set priorities for conducting safety reviews, and then in passive language, states that “[c]lear, enforceable and practicable deadlines applicable to the Agency and industry should be set for completion of

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294. Aidala, *supra* note 99, at 4–5. (“Simply understanding the new requirements organizationally, as well as developing interpretations and policy in line with new legislative mandates, takes time. A transition period of 6–18 months is a minimum amount of time needed to begin to devise new policies and procedures and to engage stakeholders and the scientific community around these efforts. If elements of the new requirements are to be completed through some element of rulemaking, the rule development process takes at least two years minimum and typically longer.”).
295. *See id.* at 4 (observing that “[o]ne unseen advantage of missing a deadline and having a court order for EPA to meet certain milestones comes in the internal budget battles within EPA”).
chemical reviews.” Read in light of past officials’ advice, this could readily be understood to show openness to deadlines imposed legislatively.

Transparency and Confidential Business Information

While there is again general agreement that the CSIA improves on several of TSCA’s information gathering weaknesses, there is nonetheless a sense of wariness about whether EPA’s principles for reform will actually be achieved. Principle 2 places the burden on manufacturers to provide “sufficient hazard, exposure, and use data for a chemical to support a determination by the Agency that the chemical meets the safety standard,” including information addressing sensitive subpopulations. When not met, EPA seeks “the necessary authority and tools” to obtain testing or other information relevant to safety determination and to do follow up assessments on listed chemicals when production volumes increase, new uses are developed, or new information on potential hazards or exposures occurs. The Agency also wants to extend its information gathering mandate to downstream processors and users of chemicals. EPA also seeks stricter requirements for confidential business information (“CBI”) claims by manufacturers, including initial and ongoing substantiation of claims, health and safety data never treated as CBI, and the ability to share appropriately with other governments (local, state, and foreign) subject to protections, when needed to protect public health and safety. Overall, the CSIA as drafted captures all of these principles. Given the impact that REACH registration has had on many U.S. companies, it would appear that the commercial chemicals industry is ready to embrace them in U.S. law. The bigger challenge will be in implementation, where EPA will need the staffing to change reporting habits forged under TSCA.

The States’ Role

One of the biggest topics of debate surrounding the bipartisan attempt to reform TSCA has been whether the CSIA would preempt state law. Senator Barbara Boxer (D-CA), Chair of the Committee on Environment and Public Works (“CEPW”), has expressed her concern that the bill would preempt state laws, including California’s Proposition 65. In late July,

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297. Id.
298. Id. at 1.
299. Id.
300. Id. at 2.
301. Id.
2013, at the hearing she organized, much of the discussion focused on whether the CSIA would preempt existing state laws and prevent states from promulgating additional laws regulating toxic chemicals. Competing testimony and reports were introduced, including reports from the Congressional Research Service (“CRS”) and the Republican and Democratic staffs, as well a letter from the attorneys general of nine states.

The Republican CEPW minority staff paper began by asserting in bold face that the CSIA “will never preempt the traditional state roles of regulating water quality, air quality, waste treatment, or disposal and does not preempt wholesale state regulatory programs,” but follows in regular text that “in some instances” state chemical-specific regulations could be preempted “in a narrowly tailored way.” It specifically claims that the CSIA would not entirely preempt the comprehensive programs in California, Maine, Minnesota, and Washington, but only to the degree that their chemical-specific regulations differ. While agreeing that the CSIA would not entirely preempt existing state laws and that determinations would be made on a chemical-specific basis, the Democratic CEPW majority staff paper drew a clearer line between Section 18’s impact on existing and new state laws; specifically, new state laws prohibiting or restricting chemicals would be preempted by an EPA prioritization decision, while current state law would remain valid until EPA made a final safety determination. In contrast, the CRS report adheres most closely to the structure of the CSIA’s drafted preemption provision, stating that it would preempt existing and new state law that requires information and testing “reasonably likely to produce the same” as the federal act; prohibits or restricts a chemical after a final federal safety determination; and requires a new use notification if also required by TSCA. The CRS interprets new state law preemption by EPA prioritization and the non-

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preemption of other facets of state laws in the same manner as the majority staff paper.\textsuperscript{307} The Attorneys General ("AG") from California, Connecticut, Delaware, Maryland, Massachusetts, New Mexico, Oregon, Vermont, and Washington expressed "deep concerns about [CSIA’s] unduly broad preemption language" that could "seriously jeopardize public health and safety by preventing states from acting to address potential risks of toxic substances and from exercising state enforcement powers."\textsuperscript{308} The AGs highlighted their focus on children’s health and the historic role that states have played in chemical regulation, ranging from California’s ban on certain flame retardants,\textsuperscript{309} limits on VOCs in consumer products,\textsuperscript{310} Proposition 65,\textsuperscript{311} and the Safe Cosmetics Act\textsuperscript{312} to Vermont’s laws banning lead in consumer products,\textsuperscript{313} brominated and chlorinated flame retardants,\textsuperscript{314} phthalates,\textsuperscript{315} and bisphenol A.\textsuperscript{316} Like the CRS and CEPW majority staff, these state AGs read the CSIA’s preemption provision as keeping them from enforcing “existing laws or from adopting new laws regulating chemicals that EPA designates as ‘high priority’ months or even years before any federal regulations protecting health and the environment become effective.”\textsuperscript{317} They argued that displacing state law this way is unwise, because state efforts may complement federal ones, states are in a particularly good position to protect vulnerable populations, and state experience may serve as “templates for national standards,”\textsuperscript{318} invoking Justice Brandeis’s image of states as laboratories for new laws.

Given the different readings of the scope of the CSIA’s preemption provision, the language needs clarification, at a minimum. How broadly existing state law would be displaced has not been clearly interpreted. While only a handful of states have enacted comprehensive chemicals

\textsuperscript{307} Id. It also agrees with the waiver provision reading. See id. at 74 (stating that S. 1009 authorizes states or political subdivisions to apply for exemptions from preemption).


\textsuperscript{309} CAL. HEALTH & SAFETY CODE § 108922 (2005).

\textsuperscript{310} CAL. CODE REGS. tit. 17, § 94509(a) (2007).

\textsuperscript{311} CAL. HEALTH & SAFETY CODE § 25249.5–13 (2003).


\textsuperscript{314} Id. § 2973–2974.

\textsuperscript{315} VT. STAT. ANN. tit. 18, § 1511(b), (c) (2012).

\textsuperscript{316} Id. § 1512(b), (c)(1).

\textsuperscript{317} AG Letters, supra note 309, at 1–2.

\textsuperscript{318} Id. at 2.
legislation, many more have passed statutes that regulate individual chemicals. In light of the well-documented breadth of state law currently in force, this ambiguity would have an impact.

More importantly, as the AG letter underscored and Senator Lautenberg’s past Chemical Safety Acts spelled out, it is possible for the states to harmonize their commercial chemicals laws under a modernized TSCA, with preemption of state law limited to those that fall below a federal minimum or floor, and state laws that exceed federal minimums permitted to stand. This is a common preemption device in federal law and serves to strengthen both legal standards and enforcement. It also contributes to the dynamic development of law, as state regulatory initiatives are tested out for possible inclusion in amended federal laws. To do this would require changing Section 18 as drafted. Given that Senator Boxer is on the record opposing the current language, this change may be needed in order to move the bill out of committee.

Important Errata

Although they fall outside these analytical pivot points, three important aspects of commercial chemicals regulation are not clearly addressed in the CSIA and bear mentioning. First, on the practical side of implementing legislation, is funding. This division of EPA has been chronically underfunded, according to all observers. 319 TSCA currently enables EPA to charge fees to the regulated entity for activities like PMN review. 320 Senator Lautenberg’s bills explicitly updated this authority, yet the CSIA is silent on this point. Arguably fees will be implicitly reauthorized if the CSIA is passed, but being explicit about funding seems the wiser course.

Second, two major substantive oversights leap out from the CSIA: the absence of green chemistry initiatives and coordination with the

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320. Yet EPA asks for “a sustained source of funding for implementation” in future reform efforts. EPA Essential Principles, supra note 286, at Principle 6. (“Implementation of the law should be adequately and consistently funded, in order to meet the goal of assuring the safety of chemicals, and to maintain public confidence that EPA is meeting that goal. To that end, manufacturers of chemicals should support the costs of Agency implementation, including the review of information provided by manufacturers.”).
international law on toxic substances. As EPA affirmed in one of its essential reform principles, “the design of safer and more sustainable chemicals, processes, and products should be encouraged and supported.” \(^{321}\) Currently EPA operates a number of voluntary programs to increase the design, manufacture, and use of lower risk chemical products and processes, notably the Green Chemistry Challenge. \(^{322}\) Senator Lautenberg’s Safe Chemicals Act specifically supported green chemistry. \(^{323}\) More could be done within specific provisions of the CSIA to integrate these voluntary programs into the updated TSCA, including mandating industry’s consideration of green chemistry approaches when providing review data on specific substances.

Finally, while TSCA does not refer to coordination with international toxics law, given the lack of it in the 1970s, today there is not only useful comparative law from the European Union and Canada, \(^{324}\) but also several major international treaties on point. \(^{325}\) Although the United States has not signed these international treaty regimes, and so is not bound to incorporate their provisions into national law, TSCA’s modernization attempts via the CSIA could benefit from the collective and individual experiences of the countries which have, just as it has learned from EU and Canadian domestic toxics law. \(^{326}\)

\(^{321}\). *Id.* at Principle 5.


\(^{323}\). See S. 847 § 26 and text accompanying note 142; see also S. 696 §§ 31–32 and text accompanying note 142.

\(^{324}\). *See supra* pages 26 to 30.


CONCLUSION

Modernizing TSCA is important and timely. First, it is woefully out of date with current scientific knowledge. As Professor Adelman has observed, “[t]he past 30 years have demonstrated that toxics regulation is inextricably tied to scientific understanding. Science informs the architecture of regulatory regimes and supplies the factual ground for agency decisions.” Second, TSCA lags behind the commercial chemicals laws of our major trading partners, and potentially sets up the United States to become the weak receiving state for products that fail to meet the more rigorous registration and testing requirements in REACH. Third, it is increasingly out of step with public sentiment. Even though TSCA’s “unreasonable risk of harm” standard has hamstrung EPA when trying to act on evolving scientific understanding, it has proven largely irrelevant to the growing public debate about the health impacts of commercial chemicals. Fueled by research funded by the NIEHS and NCEH, whose findings are disseminated broadly via NGOs like EWG, an increasingly large segment of the population has been mobilized to change laws at the local level and affect industry practice through consumer preference. Almost forty years after TSCA’s enactment, people in the U.S. are coming to understand that the federal government has been slow to protect them, and that while some state governments are more proactive than others, in the end, they have to choose individually how to exercise precaution in the face of scientific uncertainty. As more people do this for themselves, the precautionary principle becomes less abstract as individual understanding of its trade-offs matures.

How we modernize TSCA is equally important. Can the bipartisan CSIA get us closer to TSCA’s fundamental goal of “preventive medicine”? Now almost forty years on, we have witnessed a new wave of political will to rebalance economic development with protection of health and the environment humans inhabit. Importantly, when it comes to how we recalibrate our approach to the synthetic chemicals that surround us, that political will is supported by a vibrant civil society infrastructure of public health and environmental NGOs. This new wave understands better the

327. Adelman, supra note 26, at 380–81 (arguing that toxicogenomics as a means of solving scientific uncertainty is far off in the future, so sound toxic regulation should instead grant discretion to agencies to manage “unavoidable uncertainty,” using quantity sold annually, environmental persistence, and ability to bioaccumulate as proxies for chemical risk).
328. Some have argued that TSCA’s ineffectiveness has made the U.S. public wary of chemicals overall. See Deborah Blum, A Chemical (Battle) Cry, WIRED (May 15, 2011), http://wired.com/wiredscience/2011/05/a-chemical-battle-cry/.
importance of connecting individual “everyday environmentalism” that seeks to make change from the bottom up with the top-down public health goals of federal legislation like TSCA. In this way, grassroots changes add a layer of awareness to policymaking that not only sharpens the choice and scope of regulatory tools, but potentially makes the resulting lawmaking more durable because it more effectively codifies behavioral norms.

In the early 1970s, the CEQ observed that political support for a cleaner environment (as evidenced in the recently enacted federal environmental statutes) “signaled a fundamental redirecting of our economy and society” and simultaneously opened a Pandora’s Box of questions on how to achieve it. 330 “[H]aving decided that environmental quality is a valuable good, we have to decide more precisely how much we want, how we will pay for it, and who will pay for it. These questions often require complicated analyses involving difficult tradeoffs.” 331 Speaking this way to the U.S. public through its annual report almost forty years ago, the CEQ reminds us well of the complexities of addressing the “environmental disease” that Train called “the disease of the century.” 332

Commercial chemicals are now better understood in terms of chronic, small, and multiple exposures that disproportionately affect some populations, like the young, old, and immunocompromised. In addition, we have greater knowledge of how these chronic exposures to multiple chemicals can have both cumulative and synergistic effects. With advances in genomic science, many believe that the emerging study of epigenetics will reveal individual genetic reactions to varying quantities, concentrations, and combinations of chemical exposures. We are now poised to grapple with the “environmental disease” of the 21st century equipped with more data connecting the chemicals we use in commerce with a greater variety of illnesses.

The CSIA’s proposed changes to TSCA are a solid next step. They create a regulatory framework that prioritizes chemical regulation based solely on scientific understanding of these substances’ impacts on human health and the environment. They then manage the risks posed by high priority chemicals through policy tools that balance economic, social, environmental, and health tradeoffs, thereby reflecting our collective tolerance for taking precaution. They permit more transparency and hence

331. Markell, supra note 5, at 334–35.
public involvement by individuals, civil society, and subnational public bodies (although more changes will be needed here). These components of the CSIA will help us better manage the scientific uncertainty inherent in regulating commercial chemicals. Through them, we sharpen our focus on public health, as TSCA’s language tells us Congress intended, and work to make environmental public health policymaking more preventive. The CSIA offers better living through chemistry and chemistry regulation. It’s not perfect. But it’s better. And it sets us on the path of making wiser environmental public health law for the twenty-first century.
COURTING COLORADO’S WATER COURTS IN CALIFORNIA TO IMPROVE WATER RIGHTS ADJUDICATION? LETTING GO AND IMPROVING EXISTING INSTITUTIONS

By Yichuan Wang*

ABSTRACT

Would California be better off adopting Colorado’s system of special water courts to best remedy the cost, complexity, and delay of water rights

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adjudication? While Colorado’s water courts offer many benefits, including aligning water divisions with watersheds and publishing a useful resume, California is likely better off focusing instead on improving existing institutional tools for several reasons.

First, there is little evidence indicating California has lifted the wariness it showed against special water courts when it kyboshed this very proposal in 2005. This resistance suggests California may make more progress by focusing on making tangible improvements in other ways. Second, Colorado’s water courts do not serve as a panacea against cost and delay. On the contrary, not only is Colorado grappling with similar issues despite operating special water courts, but commentators have also suggested that it should even consider adopting some features of California’s administrative permitting system to improve flexibility. Third, the underlying causes for cost, complexity, and delay in Californian water rights adjudication differ from those in Colorado, and therefore demand different solutions than water courts. Given California’s unique features, the causes of costs, complexity, and delay pertain to civil procedure machinery and underlying substantive water and groundwater doctrines. Fourth, from a cost perspective, California’s existing investment in functionally equivalent or similar tools may support the case to continue this path, although the real test is a cost-benefit analysis between setting up water courts and improving existing institutions.

Therefore, in remedying cost, delay, and complexity of water rights adjudication, California will likely make more progress by focusing on improving the functionality of existing tools rather than courting the idea of water courts any longer. Specifically, California will likely benefit from doing the following: (1) remove the underlying causes of these three problems; (2) reflect on the appropriateness of adopting certain useful features of Colorado’s system and do so; (3) assess and improve the effectiveness of existing institutions like the complex civil litigation pilot project to tackle these three problems; (4) evaluate any inherent biases in designing institutions for water rights adjudications; (5) continue to bolster judicial education; (6) extend education efforts regarding water rights adjudication to the wider citizenry; and (7) tackle root causes that spawn water rights litigation and improve water planning.

In sum, opening the mind to other attractive models is helpful. However, we should not rush to adopt them blindly. Trying to plug them in at home like appliances into outlets will only get us burned. Instead, we can help ourselves by first reflecting critically to understand our own needs and then assessing whether we are better served by adopting other models or declining them in order to cultivate a solution that truly addresses our needs.
INTRODUCTION

At “the heart of twenty-first century water policy” lies “[a]djudication and administration” of the limited resource. Water rights adjudication presents California with the challenges of high costs, complexities, and delays. This article evaluates the appropriateness of adopting special water courts in California to remedy these issues. Specifically, this article examines the appropriateness of adopting Colorado’s water courts system, given a recent California Water Law Symposium’s consideration of this proposal. While a distinguished panel of jurists and an attorney from both California and Colorado offered insightful and interesting views, many questions remain. This article seeks to deepen the debate and explain why California may benefit more by dropping the idea of water courts, and working from within instead.

A. Adjudicating Water Rights in California: Costly, Complex, and Long

If Hobbes found life in a state of war “nasty, brutish, and short,” Californians find adjudicating water rights costly, complex, and long. Professor Sax found that settling fights over water rights in a basin usually involves great “cost, duration, and complexity.” Indeed, Littleworth and Garner consider California’s system for water management so “highly complex” that it “certainly would not have been invented in its present form.” Furthermore, many suits are so complex and costly that they result in stipulated judgments. The panelists in a recent symposium shared these

6. ARTHUR L. LITTLEWORTH & ERIC L. GARNER, CALIFORNIA WATER II 31 (2d ed. 2007).
7. Id. at 62.
concerns over costs and delays. Indeed, dissatisfaction with inefficiency and unpredictability in the current system prompted the Symposium to address this specific debate.

B. California’s System of Water Rights Adjudication

From achieving statehood in 1850 until 1914, California left water use regulation to the courts. In 1914, California established an administrative permitting system to regulate appropriative rights for surface water. The State Water Resources Control Board (“SWRCB”) is responsible for allocating appropriative rights under the permitting system.

All individuals seeking to appropriate surface water or water in “subterranean streams flowing through known and definite channels” must obtain a permit. Statutory adjudications of watercourses begin with water rights claimants petitioning to the SWRCB to start a general adjudication on the stream system. After giving notice to all interested parties, the SWRCB receives claims, conducts an investigation, holds hearings, and issues an order of determination. The order is filed with the court, which issues a final decree. This court decree finalizes adjudication of all rights of existing claimants for the system.

Individuals navigating California’s water law to adjudicate water rights must grapple with three unique features: (1) California recognizes a hybrid system of riparian and prior appropriation rights, (2) California distinguishes percolating groundwater from surface water and subterranean streams, and (3) California exempts “pre-1914” water rights from the state permit system.

8. Wang, supra note 3
10. LITTLEWORTH & GARNER, supra note 6, at 31.
12. Id. § 174.
13. Id. § 1200.
14. Id. § 2500.
15. Id. §§ 2525–2783.
16. Id. §§ 2750–83.
17. Id. § 2768.
20. CAL. WATER CODE, § 1200.
21. LITTLEWORTH & GARNER, supra note 6, at 32.
These unique features pose challenges for water rights administration and adjudication. For example, Professor Tarlock says the hybrid system complicates water rights administration. One reason is that riparian owners need not get permits. In principle, even if many rights holders should file statements of water diversion and use, often they do not do so in practice.

I. CALIFORNIA’S FAILED ATTEMPT TO LAUNCH SPECIAL WATER COURTS

Research into the debate over special water courts in California beyond the recent Symposium reveals a hidden past that points toward improving existing institutions instead. While Symposium attendees might have assumed the debate was new, research reveals the contrary. The proposal was born in 2005 as a bill, but soon suffered a silent death. This failed attempt reveals the state’s wariness against special courts and suggests we may remedy cost, delay, and complexity by focusing on progressing along other pathways.

The literature mentions this California water courts idea only thrice. The first instance occurred at the 2005 Symposium on the 25th Anniversary of the Report of the Governor’s Commission to Review California Water Rights Law. Justice Robie chronicled the second instance, where Eric Garner and Jill Willis recommended creating a water court following the decision of City of Barstow v. Mojave Water Agency. They predicted lengthier and costlier adjudications and worried that the California Supreme Court “took groundwater law back to the beginning” by “unanimously reject[ing] the doctrine of equitable apportionment” in Mojave. The following details the third instance, a Californian attorney’s proposal for water courts in 2005.

A. Attorney Markman’s 2005 Call for Creating Water Courts in California

Symposium attendees might have walked away with the impression that the water courts debate was raging in California for the first time, as time limits did not permit exploration into a deeper historical context.

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23. CAL. WATER CODE, § 5105.
24. TARLOCK ET AL., supra note 22, at 302.
27. Robie, supra note 25, at 3.
Actually, attorney James L. Markman already proposed this very idea in 2005. The “core purpose” was to improve the efficiency of administering groundwater adjudications in California. The proposal sought to improve efficiency by drawing on judges more experienced in water law, which was a “complex and foreign territory for the vast majority of judges” in California. It was also intended that better adjudications would improve groundwater protection.

Markman explained that other states had established water courts, especially Colorado and Montana. He also noted Arizona applying judicial expertise to adjudicating groundwater disputes. Markman reasoned the need for special water courts for groundwater adjudication based on California’s lack of “administrative machinery” and continual groundwater depletion.

He pinned the delays and costs of existing court adjudications to two main causes. First, judges often lacked water law experience. He drew on the complexity of the literature and length of cases (often exceeding fifty pages) as support. Markman showed how an excerpt of the Santa Maria litigation revealed a telling taste of “groundwater law complexities.” Therefore, he argued, it would be unfair to expect judges unfamiliar with water law and also charged with other cases to decide these complex issues promptly and soundly. Second, parties could use California Civil Procedure machinery to shuffle cases between counties and between judges. For example, the then-pending Santa Maria Basin case and related cross-actions highlighted how delays and moves could essentially hijack groundwater adjudications.

Therefore, Markman argued that water courts would expedite decisions. Expert water judges would improve the legal soundness of cases and reduce appeals. He explained that this rationale was already

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29. Id.
30. Id.
31. Id.
32. Id. at 124.
33. Id.
34. Id. at 125.
35. Id. at 125–27.
36. Id. at 127.
37. Id. at 125.
38. Id. at 127.
39. Id. at 125.
40. Id.
41. Id.
used by certain Superior Courts to establish California Environmental Quality Act ("CEQA") panels.\textsuperscript{42}

Markman also argued that judicial water law expertise removed the need for any additional costs associated with independent lawyers and engineers that courts needed to employ to deal with complex arguments from experienced counsel.\textsuperscript{43} For example, in the Chino Basin adjudication,\textsuperscript{44} the judge acknowledged his need for exactly this kind of assistance.\textsuperscript{45} The costs though, were borne by the parties, who also had to pay for their own lawyers and engineers, as well as a Watermaster board and a system of committees.\textsuperscript{46}

In closing, Markman presented a draft legislative bill intended to create water courts in California.\textsuperscript{47} He rejected two other alternatives for the following reasons. First, providing exclusive water court jurisdiction was feared to incite opposition from the SWRCB.\textsuperscript{48} Second, creating water panels like CEQA panels in big counties to raise judicial expertise would still not stave off litigants moving cases between counties, or parties challenging expert water judges without cause.\textsuperscript{49}

\textbf{B. The Quick and Quiet Death of AB 1453}

AB 1453’s quick and quiet death carries cautionary value against reviving the proposal to create water courts in California. Its brief legislative history portrayed below hints at the state’s wariness against special courts. Assembly Member Daucher introduced AB 1453 on February 22, 2005.\textsuperscript{50} Originally, it had three aims: (1) to limit venue in groundwater production actions to certain superior courts, (2) to require such actions to be assigned to only judges with extensive experience in the area, with challenges to assignments forbidden, and (3) to have the Judicial Council promulgate special rules.\textsuperscript{51}

By amendment, on March 30, 2005, AB 1453 became entitled “Superior courts: adjudication of rights to produce groundwater.”\textsuperscript{52} It now

\begin{itemize}
\item \textsuperscript{42} \textit{Id.}
\item \textsuperscript{43} \textit{Id. at} 125–26.
\item \textsuperscript{44} \textit{Id. at} 125.
\item \textsuperscript{45} \textit{Id.}
\item \textsuperscript{46} \textit{Id.}
\item \textsuperscript{47} \textit{Id. at} 127.
\item \textsuperscript{48} \textit{Id. at} 128.
\item \textsuperscript{49} \textit{Id.}
\item \textsuperscript{50} \textit{Assemb. B. 1453 - Introduced, 2005–2006 Reg. Sess. (Cal. 2005), http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_1451-1500/ab_1453_bill_20050222Introduced.html.}
\item \textsuperscript{51} \textit{Id.}
\item \textsuperscript{52} \textit{Id.}
\end{itemize}
clearly aimed to “establish 9 water divisions in the superior courts of specified counties.” Furthermore, it aimed to provide water judges with “exclusive subject matter jurisdiction” over groundwater production adjudications, and extend exclusive venue to water divisions. The next day, AB 1453 was re-referred to committee. The first committee hearing was set for April 26. However, Daucher canceled it. On January 31, 2006, it was pronounced dead pursuant to Art. IV, s. 10(c) of the Constitution.

If, as Professor Sax concluded that in California, “we don’t do groundwater,” AB 1453 may teach the history lesson that “we don’t do special water courts.” This inference is buttressed by the 1996 Business Court Study Task Force recommendation against special business courts and subsequent launch of the Complex Civil Litigation Program in 2000. The value of reviewing history includes gleaning lessons for improving next time. For example, Professor Getches argued that we have been recommitting the same water wrongs for thousands of years and the solution includes deciding to own that lesson and act better. Likewise, if we know strong opposition blocked the same proposal for special water courts, and no evidence suggests a cultural shift, might we not expect other pathways to afford more possibility and tangible improvement in water rights adjudication? Admittedly, we should not buy an argument for giving up a proposal merely based on opposition. Rather, the proposal’s effectiveness for remedying the problem at hand must be ascertained. Therefore, the following section evaluates the potential effectiveness of adopting Colorado’s water courts in California to remedy the latter’s challenges in water rights adjudication.

53. Id.
54. Id.
56. Id.
57. Id.
58. Id.
59. Sax, supra note 5, at 269.
II. COLORADO’S SPECIALIZED WATER COURTS: NO PANACEA

A. Colorado’s System of Water Courts

Among all prior appropriation states, Colorado alone shuns an administrative permitting system.62 Whereas other western states charge state engineers or a state board to handle certain matters, Coloradans take them to court.63

Colorado created seven water divisions of the district court,64 under the Water Rights Determination and Administration Act of 1969 (the “1969 Act”).65 They wield “exclusive jurisdiction of water matters.”66 Each division has a water court with a district court judge chosen to preside as its water court judge.67 A referee, clerk, and division engineer joins each water judge.68

Water rights seekers file applications with the water clerk.69 The water courts publish monthly resumes of the applications in a newspaper and notify potentially impacted parties.70 Objectors may then oppose the applications.71 The referee rules on each application after consulting the engineer either at the state or division level.72 Dissatisfied interested parties may protest.73 The protest prompts a de novo hearing by a water judge.74 Even if the referee’s rulings go un-protested, the water judge reviews them semi-annually for confirmation, modification, or reversal.75 These rulings can be directly appealed to the Colorado Supreme Court.76

B. Good Intent Behind Colorado’s Water Courts

California can appreciate Colorado’s good intentions for promoting its system of water courts. Colorado adopted its special courts to quell the

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62. 2 WATERS AND WATER RIGHTS, § 15.05 (Robert E. Beck & Amy K. Kelley eds., 3 ed. 2009); TARLOCK ET AL., supra note 22, at 303.
63. David M. Getches, Foreword to P. ANDREW JONES & TOM CECH, COLORADO WATER LAW FOR NON-LAWYERS ix, x (Univ. Press of Colo. 2009).
64. COLO. REV. STAT., § 37-92-201 (2000).
69. Id, §§ 37-92-301 to 304 (2000).
71. Id, §§ 37-92-301 to 304 (2000).
72. Id.
73. Id.
74. Id.
75. Id.
76. Id.
“many inflated paper decrees” that had sprung from its previous system.\textsuperscript{77} The inflation resulted from the state engineer providing minimal information in the adjudication process, and the state agencies’ lack of preparation.\textsuperscript{78}

\textbf{C. Effectiveness of Colorado’s Water Courts: No Panacea}

Building on the debate opened by the Symposium shows that major chinks actually exist in the walls of Colorado’s water courts system, despite many laudable aspects. These challenges militate against adopting Colorado’s system. In fact, Colorado might benefit from adopting certain aspects of administrative permitting states like California to improve flexibility. The pros and cons of Colorado’s system follow.

\begin{enumerate}
\item \textit{Pros}
\end{enumerate}

The Water Court Committee struck by the Colorado Supreme Court in 2008 found many positive aspects in Colorado’s water court system. In this “performance reality check” forty years after the 1969 Act, the Committee found the following top three features: (1) knowledgeable water judges, (2) knowledgeable water referees, and (3) fairness of outcomes.\textsuperscript{79} These were ranked by respondents in a general public survey conducted by the Colorado Water Conservation Board.\textsuperscript{80}

These merits are supported by the work of an authoritative figure on Colorado’s water law: the late Professor David Getches. He reported never hearing complaints of unfairness.\textsuperscript{81} He also considered “water judges in the most active water divisions” as “tru[e]xprots.”\textsuperscript{82} This expertise made “well-informed” decisions.\textsuperscript{83} In a counterintuitive way, he also viewed the specter of lengthy and expensive trials as a catalyst for settlement because of “competent and experienced water bar and expert engineers ready to testify.”\textsuperscript{84} These settlements offer benefits and “often produce creative solutions to complex problems.”\textsuperscript{85}

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\textsuperscript{77} TARLOCK ET AL., supra note 22, at 304.
\textsuperscript{78} Id. at 304.
\textsuperscript{79} GREGORY HOBBS, TIMELY, FAIR AND EFFECTIVE WATER COURTS: REPORT OF THE WATER COURT COMMITTEE TO CHIEF JUSTICE MARY J. MULLARKEY 7 (2008).
\textsuperscript{80} Id.
\textsuperscript{81} Getches, supra note 63, at xi.
\textsuperscript{82} Id.
\textsuperscript{83} Id.
\textsuperscript{84} Id.
\textsuperscript{85} Id.
\end{flushleft}
Others found Colorado’s system virtuous in the simplicity it offered over other jurisdictions in obtaining a water right.\textsuperscript{86} It was also considered good in affording “flexibility and evolution” and enabling assessment of “flows and delayed impacts of groundwater” within new water application evaluations.\textsuperscript{87} This allowed Colorado’s conjunctive groundwater management system to account for in-stream and recreational values.\textsuperscript{88}

Colorado’s water court system also received praise for the heightened awareness among water users of competing applications brought about by its resume notice system, as well as the access to water courts brought about by the standing provisions of the 1969 Act.\textsuperscript{89} The system was also commended for enabling consistency in decisions within each basin, by designating one judge for each water court in each division.\textsuperscript{90} Each judge can then develop expertise in technical matters, the specific basin, and water law.\textsuperscript{91}

One commentator, Cosens, found certain features of Colorado’s system so effective that she recommended it as a model for developing “a dispute resolution forum for federal environmental and natural resources cases” for the following reasons.\textsuperscript{92} First, embedding the water court system within the district court system eases administration.\textsuperscript{93} Second, the referees give the water court judges “neutral technical expertise” because of their expertise in both science and law.\textsuperscript{94} Third, referees ease the court’s docket and enable creative solutions.\textsuperscript{95} This “court-organized settlement process” versus ad hoc settlement depending on the parties enables more access to justice.\textsuperscript{96} Finally, Colorado’s water courts hone judges with extensive water law experience, as the one-year appointments often renew repeatedly.\textsuperscript{97} The state’s extensive judicial education programs further facilitate this development of expertise, by allowing all discussions to be confidential.\textsuperscript{98}

\begin{thebibliography}{99}
\item \textsuperscript{86} WATERS AND WATER RIGHTS, supra note 62, at 15–49.
\item \textsuperscript{87} Ramsey L. Kropf, Colorado Groundwater Law: Colorado’s System—Integration (Or Not?) of Groundwater and Surface Water, 49 ROCKY MTN. MIN. L. INST., 7B1–18 (2003).
\item \textsuperscript{88} Id. at 7B.
\item \textsuperscript{89} MARILYN C. O’LEARY, AN ANALYSIS OF THE COLORADO WATER COURT SYSTEM 18 (2003).
\item \textsuperscript{90} Id.
\item \textsuperscript{91} Id.
\item \textsuperscript{92} Barbara Cosens, Resolving Conflict in Non-Ideal, Complex Systems: Solutions for the Law-Science Breakdown in Environmental and Natural Resource Law, 48 NAT. RESOURCES J. 257, 297 (2008).
\item \textsuperscript{93} Id.
\item \textsuperscript{94} Id. at 298.
\item \textsuperscript{95} Id. at 299.
\item \textsuperscript{96} Id.
\item \textsuperscript{97} Id.
\item \textsuperscript{98} Id. at 299–300.
\end{thebibliography}
The value of the above features notwithstanding, Cosens acknowledged that Colorado’s water courts were no paragon for one important reason relevant to the debate in California. Despite all the merits, Colorado’s bifurcation of water rights adjudication and administration into the bailiwicks of the courts and State Engineer attracted criticisms of higher costs to assert water rights. For this reason, she recommended an “administrative permit system” that enabled determination of new water rights without going through the courts, saving costs and increasing accessibility. Also, Kassen lamented Colorado’s failure to modernize its “archaic court-based system” into one based on administrative permitting. Therefore, these research findings beyond the Symposium reveal an otherwise omitted undercurrent in the debate that may benefit Colorado if more consideration is given to it: that Colorado may benefit from adopting California’s administrative permitting system. This question exceeds the scope of this article.

(2) Cons

(i) Colorado Suffers Similarly Elusive Search for Speed and Savings

Deeper analysis shows Colorado’s water courts system is no panacea for resolving issues of cost, complexity, and delay. As Nichols and Kenney put it, “[water court is not simple, fast, painless, or cheap.” For example, a routine unopposed change of water right can involve engineering and legal costs that exceed the value of the water being fought over. Complicated cases can drag on for years. Appeals occur commonly. Another problem is that all water rights disputes are locked into the same process, regardless if it is over “100 cubic feet per second or 100,000 acre-feet.”

Costs particularly attract dissatisfaction. Professor Getches found them “troubling.” Nichols and Kenney attribute “[m]any of the most
significant transaction costs” to water court.\footnote{108} While O’Leary suggested that water courts are not the only reason to blame for high costs, as the same criticism existed before the 1969 Act,\footnote{109} they do persist as problems. Indeed, the public in Colorado decried the delays and costs of the water courts following a 2006 enforcement of water rights priorities that forced hundreds of high-capacity wells to shutdown, dried expansive cropland, and hurt many local communities.\footnote{110}

Howe agreed that “[r]educing transaction costs remain a challenge in Colorado.”\footnote{111} He exposed some root causes. First, court requirements in Colorado can exacerbate delay and complexity.\footnote{112} For example, when dealing with appeals from the Water Court, the Colorado Supreme Court frequently requests amicus briefs from third parties.\footnote{113} Second, inadequate basic information on water rights increases transaction costs.\footnote{114} While water rights transactions are recorded at the county level, the water courts lack “centralized databases of the names of water right owners, making it difficult to contact owners.”\footnote{115} This inadequacy slows down resolutions because water rights often have surface and subsurface tributaries that cover many counties.\footnote{116}

These high costs caused additional concerns. Kassen worried that the high costs and the need for lawyers chilled certain transactions.\footnote{117} Furthermore, “the closed-nature of the court system” diminished public participation.\footnote{118} She also worried that water courts block integration of water quantity and quality regulation.\footnote{119} In contrast, in a single administrative agency, integration happens more seamlessly.\footnote{120} For example, the SWRCB does exactly both.\footnote{121} Finally, she feared that fitting water rights adjudications into the forum of courts versus an agency limits room for water planning.\footnote{122}

\begin{footnotesize}
\footnotesize
\begin{enumerate}[108.]
\item Nichols & Kenney, supra note 102, at 420.
\item O’LEARY, supra note 89, at 16.
\item Charles W. Howe, Reconciling Water Law and Economic Efficiency in Colorado Water Administration, 16 U. DENV. WATER L. REV. 37, 40 (2013).
\item Id. at 39.
\item Id. at 39 n. 13.
\item Id. at 39.
\item Id.
\item Id.
\item Id.
\item Id. at 60.
\item Id.
\item Id. at 61.
\item Id.
\item CAL. WATER CODE, § 174.
\item Kassen, supra note 101, at 62.
\end{enumerate}
\end{footnotesize}
Additionally, Colorado’s water courts system does not save its citizens the trouble of hiring private water engineers despite its engagement of state engineers. Rather, they are often necessary from a party’s perspective to command the technical aspects, including quantifying the party’s water needs, evaluating potential water supplies, developing water use plans that do not injure other users, and serving as expert witnesses.

Finally, there is also fear of bias toward special interests. Speakers at the Colorado Agricultural Water Summit in 2011 said the expensive water court process “gives the advantage to better-funded municipal interests.” They also found the process “slow to adapt to new, more creative water uses.” In addition to these concerns supporting the finding that Colorado’s water courts are no panacea against costs, complexity, and delay, the water courts themselves acknowledge these as areas for improvement as discussed below.

(ii) Water Court Committee Acknowledges Delay and Costs

The 2008 Water Court Committee found the public demanded improvement in three priority areas: “timely action by court[s],” process costs, as well as “responsiveness and professionalism of parties.” The Committee itself acknowledged the system was “prone to delay and increased costs [without] . . . (1) active case management . . . (2) adequate staffing of water courts, State and Division Engineer offices, and the Attorney General’s Office, (3) professional competence . . . and (4) informed applicants.”

Complaints that the water court system is “too costly and time consuming” persist, despite reform efforts. For example, new procedural rules were implemented effective July 1, 2009, imposing “stricter deadlines to promote efficiency in the water courts.”

In fact, costs are now so concerning that prominent Coloradan figures have spoken out. In 2012, Colorado’s Governor Hickenlooper expressed his
interest in changing the water court system.\textsuperscript{131} He called the water court costs “insane.”\textsuperscript{132} He admitted they had “let the system run amuck.”\textsuperscript{133} In April 2013, certain Coloradan water experts\textsuperscript{134} also voiced concern over “the immense court costs” implicated by the state’s water law.\textsuperscript{135} They worry that such costs are deterring water use to the extent that the law needs reform toward greater flexibility.\textsuperscript{136}

(iii) Colorado’s Water Courts Also Seek Flexibility

Finally, Colorado’s special response to a severe 2002 drought suggests that the “pure” court-based water rights determination envisioned by the 1969 Act might need more flexibility to meet the needs of Coloradans.\textsuperscript{137} The drought spurred the General Assembly to nudge Colorado’s system toward one where state administrative agencies determine the water rights.\textsuperscript{138} This vesting of power in the State Engineer to make “short-term material injury determinations” calls into question the ability of Colorado’s water courts system to respond flexibly to changing needs.\textsuperscript{139} This suggests that in a debate where Colorado is recommending California adopt the water courts system, Colorado may benefit from understanding the merits of California’s administrative permitting system.

In sum, Colorado’s many challenges with its water courts system suggest that California will likely benefit from examining how to build capacity through permitting tools to tackle the water courts cost, delay, and complexity.


\textsuperscript{132} \textit{Id.}

\textsuperscript{133} \textit{Id.}

\textsuperscript{134} Colorado Agriculture Commissioner John Salazar, Western Resources Advocates Director Bart Miller, and Denver Water CEO and Manager Jim Lochhead.


\textsuperscript{136} \textit{Id.}


\textsuperscript{138} \textit{Id.}

\textsuperscript{139} \textit{Id. at} 66.
III. CALIFORNIA’S CAUSES FOR COST, COMPLEXITY, AND DELAY DIFFER FROM THOSE IN COLORADO

A. Water Courts do not Guarantee Remedy for Delay from Civil Procedure Machinery

Water courts do not necessarily guarantee relief from delay when the delay results from civil procedure. One cause for delay is the availability of procedures like a motion for reference by the SWRCB. Some parties deliberately wield this tactical tool to gain advantage from the resulting delay. It delays to different degrees, depending on whether the motion requests only an investigation of some or all physical facts, or requests the SWRCB to decide the whole case. Post-investigation, the SWRCB reports its findings of law and fact. Parties may seize further opportunities for delay by taking exceptions to this report, which requires the court’s determination in a de novo trial. Therefore, the reference procedure is one culprit for delays in California’s water rights litigation.

The same goes for groundwater adjudications. For example, delay derives partly from a suggested judicial practice to “phas[e] the trial” in order to “most successfully” manage groundwater adjudication. Specifically, the Judicial Council of California suggested the inclusion of four phases: (1) establish basin boundaries to identify water-producing parties, (2) determine basic characteristics to adjudicate water rights or provide for separate management, (3) determine “the nature and proportionate quantity of the parties’ water production rights,” and (4) establish a physical solution. When it is recommended that courts include more phases in adjudicating groundwater rights, the process inevitably lengthens. Therefore, consolidating California’s courts into special water courts, on its own, would not remedy this cause for delay.

Similarly, additional costs and complexities arise when public agencies or environmental groups bring claims. Adopting special water courts offers less potential for improvement when the nature of the parties and their rights and responsibilities determine the costs.

140. CAL. WATER CODE, § 2000.
141. LITTLEWORTH & GARNER, supra note 6, at 64.
143. CAL. WATER CODE, § 2010.
144. JUDICIAL COUNCIL OF CALIFORNIA, DESKBOOK ON THE MANAGEMENT OF COMPLEX CIVIL LITIGATION § 3.92 (2000).
145. Id. at § 3.92.
146. LITTLEWORTH & GARNER, supra note 6, at 62.
B. Hybrid System Limits Adoption of Colorado’s Water Courts

California’s hybrid system limits the appropriateness of adopting Colorado’s model. Colorado’s state water law sits “in sharp contrast to the California doctrine.” In 1882, the “landmark case” of Coffin v. Left Hand Ditch Co. stated Colorado’s choice to depart “radical[ly]” from riparianism. The fact that the 1969 Act aimed to perpetuate prior appropriation, in contrast to California, further challenges the potential effectiveness of California adopting Colorado’s water courts to remedy its challenges.

C. Groundwater Law in California Limits Move to Water Courts

Finally, California’s unique treatment of groundwater limits a move to specialized water courts similar to Colorado, because the primary purpose of the 1969 Act was to integrate groundwater and surface water adjudication. Whereas Colorado forces “almost all hydrologically linked water . . . into the surface water system,” California treats groundwater differently from surface water.

If prior appropriation boils down to “first in time, first in right,” the approach to groundwater seems to stay “out of sight, out of mind.” For example, the SWRCB can only adjudicate surface water rights and subsurface stream water. Individuals seeking to resolve disputes over percolating basin groundwater can rely on the court system. Since Professor Sax predicts “no easy way” to bring groundwater into the fold of the surface water permitting system, creating special courts to incorporate groundwater adjudications would be difficult. AB 1453’s defeat already shows how difficult incorporating groundwater adjudications would be.

151. Id.
152. Abrams, supra note 149, at 77.
153. CAL. WATER CODE, § 1200.
154. Id.
155. See CAL. WATER CODE, § 2500 (noting that underground water supplies are not included in the definition of water sources that are capable of being adjudicated).
156. Sax, supra note 5, at 316.
Groundwater adjudication is inherently complex in California for three reasons. First, it usually involves hundreds of parties. Second, it requires hydrologists, engineers, and geologists to provide opinions for adjudication of facts. Third, not only must it establish priority among the hundreds of rights, but also it must produce a “physical solution” to protect the basin as a water supply. This physical solution is a court supervised management plan intended to protect the resource for the long term. These three factors further challenge the creation of special water courts.

IV. CALIFORNIA MAY GET MORE MILEAGE FROM IMPROVING FUNCTIONALLY-EQUIVALENT TOOLS

A. Focus on Functionality

California would benefit from evaluating the proposal to adopt water courts by evaluating its functionality over form. Professor Tarlock illustrates the benefit of focusing on functionality over form by comparing the elements of Colorado’s and other states’ systems. He writes: “[u]nder the permit statutes adopted in all appropriation states but Colorado, a state administrative agency . . . has quasi-judicial functions. The same matters [of administering surface water rights] in Colorado are left to water courts that have administrative functions.” Indeed, Justice Hobbs acknowledges that western states, save Colorado, use a combination of “administrative and judicial proceedings” in creating their water allocation systems.

This separation of each state’s system into a pairing of both administrative and judicial elements shows that functionality, rather than a name, is what matters. Therefore, California would benefit by loosening its grip on any cachet inherent in the idea of “special” water courts. What matters most is whether an institutional arrangement responds to the state’s unique water needs.

Two existing institutions in California offer the potential to respond to California’s unique water needs. One is the SWRCB, which fulfills many functions performed by the referees in Colorado’s system. Some view the

157. JUDICIAL COUNCIL OF CALIFORNIA, supra note 144 at § 3.90.
158. Id.
159. Id.
160. Id.
161. TARLOCK ET AL., supra note 22, at 295.
163. TARLOCK ET AL., supra note 22, at 3.
SWRCB as a “court master.” The other, warranting more discussion, is the complex civil litigation project.

B. Complex Litigation Project Offers Fertile Opportunities to Tackle Delay and Costs

If California hastens to pursue the use of water courts, it may miss fertile opportunities for nurturing homegrown solutions that are already tackling delay and cost. For example, California has already invested in developing tools for improving the management of groundwater adjudications. Two tools in particular merit attention.

First, as part of the Complex Civil Litigation Pilot Project spearheaded by Judge Jack Komar, Santa Clara County Superior Court offers a website that allows individuals to view and file documents for the Santa Maria groundwater litigation. Since having been declared complex on July 3, 2000, this case has amassed 824 parties, 20,813 documents in repository, and 10,640 documents in discovery. The website seeks to facilitate management of this complex case by enabling individuals to see a calendar, see pleading and discovery documents filed, submit a document, see lists of parties and attorneys, and download sample forms for modification. Of note, the website also displays an up-to-date document service list. It even enables users to retrieve a U.S. mail service list for making mailing labels.

Second, Santa Clara County Superior Court offers a website for the Antelope Valley groundwater cases, also designated complex. While the Santa Maria groundwater litigation website contains all the essential information more neatly, the Antelope Valley website still links to important content. For example, users can access online documents, e-file documents, view lists of parties and calendar events, download a model.

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165. JUDICIAL COUNCIL OF CALIFORNIA, supra note 144, at § 3.93.
167. Id.
168. Id.
169. Id.
170. Id.
answer to complaints and cross-complaints, and access orders relating to the trial phases.172

While Colorado’s resume system may offer even more administrative efficiency from its streamlined and consolidated approach, functional equivalence or at least similarity means California may save more costs by evaluating the potential for scaling up existing tools than to rush to replicate Colorado’s resume system. Precisely how much can be saved is likely better predicted by careful cost-benefit analysis, which extends beyond the scope of this article. The point is, scaling up these features for other groundwater and surface water adjudications bears potential for reducing the delay and cost associated with lawyers having to identify every affected individual. Therefore, in contemplating whether or not to adopt another jurisdiction’s system, California may benefit from at least doing an inventory of its existing worthy contenders.

C. Complex Litigation Offers Certain Advantages over Special Courts that Seem More Amenable for California

Working on California’s complex civil litigation departments to manage complex water adjudications offers certain advantages over developing special water courts that seem more amenable for California. One reason is that a certain rationale identified by a 1996 Business Court Study Task Force against creating specialized courts in the business context also holds true for the current debate over special water courts. Then-Chief Justice Malcolm M. Lucas appointed the task force to conduct an “exhaustive national and statewide review.”173 Drawing on opinions from judges, lawyers, and business leaders, the task force recommended developing complex litigation departments in trial courts instead of creating special business courts for four major reasons.174

First, complex litigation departments offer greater “responsiveness to the public” by handling business matters as well as other claims, whereas business courts only deal with business matters.175 Second, many members of the public perceive business courts as favoring business interests, whereas complex litigation departments touch “all segments of society” through their cases.176 Third, where business courts are confined to a certain type of case, complex litigation departments offer more flexibility by

172. Id.
173. FACT SHEET: COMPLEX CIVIL LITIGATION, supra note 60, at 1.
174. Id.
175. Id.
176. Id.
expanding or contracting in response to caseload fluctuations within a trial court system. This response is also helpful for handling emergencies. Finally, complex litigation departments match business courts in expertise through training, using a complex litigation manual, streamlining procedures by amending statutes and rules, and drawing on human and technological resources.

While the first reason matters less as applied to the water context than in the business context, the second and third reasons do matter. It would be especially prudent for California to consider the perception of some members of the public in Colorado that water courts favor wealthier municipal interests. The ability of complex litigation departments to respond flexibly to overall caseload fluctuations also makes sense for the bigger picture. The process of designing the best judicial institutions to adjudicate water, be it honing departments or carving out special courts, would benefit from taking into account the institutions impact on the overall organization of judicial resources. Since establishing water courts would likely take considerable resources away from other matters that also need justice, on balance, strengthening departments within the judiciary may be more helpful during these tough economic times.

The question of expertise requires more nuanced evaluation. To claim that complex litigation departments match specialized water courts in expertise seems bold, especially if the latter are led by a single judge steeped in water cases, following Colorado’s model. This means more investigation is required into the effectiveness of judicial education in cultivating the depth of desired judicial expertise, which is discussed more extensively below.

Finally, viewing water rights adjudications through a complex litigation lens does not necessarily hold California back when compared with Colorado. Some Coloradan lawyers assert, “a water court case is treated much like any other multi-party civil court case” once it becomes re-referred to the water judge. The court applies Colorado’s Rules of Civil Procedure, “although modified slightly to account for unique aspects of water applications.”

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177. Id. at 1–2.
178. Id. at 2.
179. Id.
180. Woodka, supra note 125, at 1.
Lessons from water courts in Montana and Washington bolster the case for improving existing judicial tools to reduce the costs, delays, and complexities of water rights adjudication. Montana operates a “strongly judicial” adjudication scheme. In 1979, the Montana Legislature created its Water Court to expedite and help adjudicate over 219,000 claims, the largest number in the U.S. The Water Court wields exclusive jurisdiction over water rights claims. Montana’s Water Use Act divides the state into four water divisions, and designates a district judge as its water judge.

Like Colorado, Montana’s water courts system is not immune from complex and lengthy hearings. For example, in 2001, after nineteen years, the water courts had adjudicated only 56% of the 219,413 claims. Montana’s Water Court also continues to grapple with the rising need for flexibility. For example, on March 21, 2008, the Montana Supreme Court approved rule changes that allowed non-lawyers to appear in Water Court. The order explained that allowing for non-lawyer assistance “provides needed flexibility to the system.” This move may serve to alert California to the limitations of adopting water courts.

Washington’s experience with smoothly adopting water courts shows the importance of not only judicial buy-in, but also leadership in championing the idea. Washington created a water court in 1989. Interestingly, it did so fairly straightforwardly by amending § 90.03.160 of the Revised Code of Washington. This contrasts with Colorado and Montana, which “carefully and deliberately debated” the role and process of a water court.

One commentator credits retired Judge Walter A.

182. Thorson et al., supra note 164, at 343.
184. Thorson et al., supra note 164, at 343.
185. MONTANA JUDICIAL BRANCH, supra note 183.
188. TARLOCK ET AL., supra note 22, at 300.
189. Id.
191. Id. at 3.
Stauffacher’s command of the public’s confidence for “[s]uch a swift and relatively unfettered nod” to water courts, at least in part.194 In contrast, California’s history with AB 1453 and the Judicial Council’s resistance to special courts suggest that California may likely make more progress by improving existing tools.

V. RECOMMENDATIONS: SIMPLIFY, SPEED UP, AND SAVE MONEY BY WORKING FROM WITHIN

A. Remove Underlying Causes of Cost, Delay, and Complexity in Water Rights Adjudication

California can benefit from first removing the underlying causes hampering water rights adjudication. Civil procedure machinery spawns delay and Judicial Council recommendations to engage in extensive phasing of trials. This includes simplifying underlying doctrines that cause complexity, notably concerning groundwater. One potential solution is comprehensive basin management, which, according to Professor Sax, offers the “most promising tool to achieve genuine integration of surface water and groundwater administration in California” amidst “serious basin-wide problems.”195

B. Reflect on Appropriateness of Adapting Useful Features from Colorado’s System

At the same time, California can reflect on the appropriateness of adapting useful elements of Colorado’s system. One potential element that could be useful is designing water districts in congruence with watersheds. This has been credited for reducing jurisdictional conflict.196 However, just because aligning water districts with watersheds sounds good on its own does not mean it best suits California. For example, if the nature of disputes is mainly trans-watershed, given California’s history of moving water within the state, redrawing the lines would likely not alleviate conflict as much as if the disputes were contained within watersheds.

194. Id.
195. Sax, supra note 5, at 317.
C. Assess and Improve Effectiveness of Existing Tools to Speed up, Simplify, and Save

Since conflicts and changes are more likely to increase than not, California can proactively prepare by developing metrics for gauging the effectiveness of its Complex Civil Litigation Program in responding to water rights adjudication needs. We cannot best improve something if we do not know how well it works now. These metrics can be modeled from those in the National Center for State Courts’ (“NCSC”) 2003 report entitled Evaluation of the Centers for Complex Litigation Pilot Program. One useful example is the judge’s compliance with “[o]ne of the most heavily emphasized recommendations in the Deskbook on the Management of Complex Civil Litigation.” It is entering a “comprehensive case management order” for “just, speedy, and economical determination of the litigation.” Applying the empirical methods in the NCSC report on water rights adjudication ten years after its publication would help fill the information gaps in the NCSC report and California’s 2012 Court Statistics Report, which also did not specifically mention water.

The Civil and Small Claims Advisory Committee charged with ongoing responsibility for updating the Deskbook on the Management of Complex Civil Litigation can augment the existing material on water adjudications. The authors of the Deskbook may consider drawing from materials published by the Dividing the Waters Program. The Committee would also likely benefit from ensuring that it continually takes its ongoing responsibility to recommend improvements to complex civil litigation programs seriously. Since nothing is constant but change, regular introspection can keep the legal system nimble and ready to respond.

D. Evaluate Biases toward Path Dependency

To cultivate the best solution to expedite, simplify, and render economically reasonable water rights adjudications, it is worth California

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197. Getches, supra note 63, at xi.
199. Id. at 52.
200. Id.
202. FACT SHEET: COMPLEX CIVIL LITIGATION, supra note 60, at 2.
203. Id.
examining if it holds any inherent bias for resisting sweeping changes in restructuring institutions. Two observations suggest this bias exists. First, the 1978 Governor’s Commission to Review California Water Rights Law rejected proposals of a sweeping nature, which included adjudicating all water rights and enfolding groundwater within the permit system. Part of the resistance stemmed from a perception that the proposed system would not improve results. Second, California’s rejection of special business courts in 1996 suggests another instance of this cautionary tendency.

The reason for reflecting on whether California holds any inherent biases is because such unconscious path dependency carries dangers. For example, resisting large institutional changes because of bias rather than analysis may shut out a stream of potential solutions that might actually serve in addressing the state’s mounting water challenges. Admittedly, institutional change is hard, hampered by political angst and strong endowment effects. However, if the water rights adjudication system resulting from this bias is so complicated, it may be worth asking if the approach still works.

Path dependency is also a concern for Colorado. Kassen hinted that a century of court-based decision-making extinguished hopes of changing to a permit system. It was simply “too late.” Do we want to let this stop us from developing the solutions we really need? Perhaps the time has come that we think about this.

E. Continue Bolstering Judicial Education to Build Expertise

Bolstering judicial education matters especially because as Colorado’s water courts show, judicial education helps hone significant judicial expertise. Efforts may continue through the Complex Civil Litigation Program and the Dividing the Waters program affiliated with the National Judicial College (“NJC”). This is particularly valuable given rapid and rising challenges with water: “climate change, water quality, endangered species and growing [thirsty] cities.”

204. LITTLEWORTH & GARNER, supra note 6, at 33.
205. Id.
206. Fact Sheet: Complex Civil Litigation, supra note 60, at 1.
207. Kassen, supra note 101, at 59.
208. Id.
209. Fact Sheet: Complex Civil Litigation, supra note 60, at 2–3.
211. Id.
F. Extend Education to Public

It would also help to extend education beyond the judiciary. While judicial expertise is required to handle a case smoothly and soundly, citizen awareness of water realities is required to minimize conflicts from arising in the first place. Professor Getches also found well-informed non-lawyers helpful for nudging lawyers toward settlement and producing creative solutions.\textsuperscript{212} Despite the mounting water law challenges, Getches argued that a society is more likely to find the solutions if the citizens also grasp “the rules of the game.”\textsuperscript{213} An informed citizenry leads a path toward “find[ing] peaceable resolutions,” be it “at negotiating tables [or] across fences.”\textsuperscript{214} As rising tides lift all boats, so would education lift all Californians into better understanding the true state of this precious resource.

G. Go Beyond Restructuring Judicial Institutions: Integrate with Planning

Reducing costs, delays, and complexities in water rights adjudications by restructuring judicial institutions cannot compete with preventing disputes from ever arising. In addition to mediating and resolving conflict, prevention is a vital part of the law’s job.\textsuperscript{215} Prevention follows planning, because “[a]djuration’s essential purpose, to recognize and enforce water rights, follows from the imperatives of necessity and livability in the land of little rain.”\textsuperscript{216} Since “[n]ot the law, but the land sets the limit,”\textsuperscript{217} we need to know our limit and play within it.\textsuperscript{218}

CONCLUSION

In the debate of whether to adopt Colorado’s special water courts to remedy the cost, complexity, and delay of water rights adjudications, California may benefit from deeper introspection. To serve California well, it would be good for this introspection to include fully understanding its unique needs stemming from the unique causes for its cost, complexity, and

\begin{thebibliography}{99}
\bibitem{212} Getches, supra note 63, at xi.
\bibitem{213} \textit{Id}.
\bibitem{214} \textit{Id. at xi–xii}.
\bibitem{215} TARLOCK ET AL., supra note 22, at 3.
\bibitem{217} MARY AUSTIN, \textit{THE LAND OF LITTLE RAIN} 2 (1950).
\end{thebibliography}
delay. Just like a decision-maker being presented with an interesting proposal is deciding whether or not to adopt it or adapt it to remedy their discomforts, the decision-maker would be able to make a better decision if they understood the causes of their discomforts to ascertain if the proposed solution would be their best remedy. A good introspection also includes understanding both the pros and cons of the proposed solution at a deeper level in order to help the decision-maker make the most informed decision.

In addition to grasping pros and cons of the proposed solution, the decision-maker would benefit from reflecting on their alternative solutions. It is important that evaluating between different alternatives focuses on functionality over form so as to safeguard against attention on allure alone when the key is effectiveness. Finally, it would help the decision-maker to place the proposed solution in historical context to afford additional learning opportunities from hindsight. In sum, it is hoped that California may benefit from approaching this debate of whether to adopt Colorado’s special water courts through the above awareness-generating practices, and realize as a result that it may be best served by focusing on working from within.
STORY OF A DE-DELEGATION PETITION: NUTS, BOLTS, & HAPPY ENDINGS IN VERMONT

By Laura Murphy

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When one imagines Vermont, one likely imagines green pastures, old rolling mountains, and clear rivers and streams flowing happily down the mountains and through the pastures. One may not contemplate waters ridden with toxic algae blooms and nuisance weed growth, or overloads of sediment, E. coli, metals, and other pollutants. However, in 2008, these were just the types of problems that the Conservation Law Foundation (“CLF”) sought to address through a National Pollutant Discharge Elimination System de-delegation petition to the United States Environmental Protection Agency (“EPA”). The sixty-one page Petition, filed by the Environmental and Natural Resources Law Clinic (“ENRLC”) at Vermont Law School on behalf of CLF, asked EPA to either withdraw Vermont’s authority to administer the Clean Water Act’s permitting program or to require the State to implement improvements consistent with the Act. After almost five years of subsequent filings, correspondence, and collaborative discussion, the latter result was achieved through a Corrective Action Plan. On July 18, 2013, EPA Region 1 sent this Plan to the State of

* Associate Director & Assistant Professor, Environmental & Natural Resources Law Clinic (ENRLC), Vermont Law School. The ENRLC represents Conservation Law Foundation (CLF) in the Petition matter, with Anthony Iarrapino of CLF serving as co-counsel. Assorted filings from the matter are on the ENRLC’s website at http://www.vermontlaw.edu/Academics/Clinical_and_Externship_Programs/Clinical_Programs/Cases/Protecting_Vermonts_Water_Quality.htm. All of the ENRLC actions described in this article, including filings, were made on behalf of CLF. Thanks to Anthony Iarrapino for his review of this article.
Vermont. It memorialized Region 1’s findings and the corrective actions required in eight substantive areas of concern.

CLF would not be the first to utilize the petition process in an effort to improve state water quality. According to EPA’s website, approximately forty-one NPDES de-delegation petitions have been filed since 1989.¹ Many of them have been “resolved,” some were withdrawn, and some are still “pending”—including Vermont’s.²

This article tells the story of CLF’s Petition, with particular emphasis on the mechanics of building and then sustaining the Petition through near-resolution. Part I gives some background on water quality in Vermont, the State’s initial approval to administer the CWA, and the federal regulatory provision regarding withdrawal petitions. Part II explains in detail the grounds for the Petition and the process of building it, including a description of the applicable legal standards and supporting factual documents. Part III walks through post-Petition developments that included numerous additional filings and multiple conversations with the agencies. Part IV gives an overview of the most recent set of discussions and explains some preliminary positive results. Part V describes the substance of the Corrective Action Plan, specifically EPA’s findings and the related corrective actions for the State. Part VI provides a brief analysis of potential litigation options that a petitioner might wish to pursue in the event of a negative outcome on a petition. Finally, Part VII closes with a few reflections on the de-delegation process in Vermont and more generally.

I. IDENTIFYING THE PROBLEM & THE REMEDY

The first line of the Introduction to the Petition stated: “There is a water quality problem in Vermont.”³ One hundred seventy-one water bodies were impaired for various pollutants and 147 more were on the verge of being impaired.⁴ In particular, Lake Champlain was suffering from extreme phosphorus pollution that fed toxic algae blooms and nuisance weeds.⁵ Sources of the various pollutant contributors included stormwater, agriculture, development, and wastewater treatment facilities, with

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2. Id. (providing access to information by clicking through petition chart at bottom of page).
4. Id. (citing state documents).
5. Id.
agriculture leading the pack as a cause of impairment for thirty waters.\textsuperscript{6} Why these issues in Vermont? As explained in the Petition, one systemic reason lay with the State’s environmental regulator, the Agency of Natural Resources (“ANR”): “ANR has abdicated its duty to prevent and redress these problems by failing to properly administer the Clean Water Act.”\textsuperscript{7} CLF had decided to pursue a de-delegation petition to help remedy this failure.

“De-delegation” is actually a bit of a misnomer, though it is a term widely used. Technically, the United States Environmental Protection Agency (“EPA”) does not “delegate” Clean Water Act (“CWA” or “Act”) permitting programs to states. Rather, EPA has authority to administer the Act’s National Pollutant Discharge Elimination System (“NPDES”) permitting program, but it may “approve” state programs meeting certain requirements under the Act.\textsuperscript{8} The permitting programs are necessary to help implement the primary mandate of the Act—put simply, that discharges of pollutants into waterways must have permits.\textsuperscript{9} In 1974, EPA approved Vermont’s request for authorization to administer its own NPDES program. The State received a letter from then-Administrator Russell Train.\textsuperscript{10} Attached to this letter was an “Agreement” between the Secretary of Vermont’s Agency of Environmental Conservation (the predecessor to ANR) and the Regional Administrator for EPA Region 1, approved by Administrator Train.\textsuperscript{11} The Agreement contained a series of provisions explaining how the State’s permitting program would function.

Once approved, a state must maintain its program in compliance with the Clean Water Act or risk loss of the program. Under the Act, EPA retains authority to “withdraw” approval of a state program that is not being administered “in accordance with” NPDES requirements.\textsuperscript{12} The regulations offer some detail as to how a withdrawal process would play out. Specifically, they provide that EPA may “order the commencement of withdrawal proceedings” on its own initiative or “in response to a petition

\textsuperscript{7} Id.
\textsuperscript{8} 33 U.S.C. § 1342(a), (b) (2012).
\textsuperscript{9} Id. § 1342; 33 U.S.C. § 1311 (2012).
\textsuperscript{10} Letter from Russell E. Train, Adm’t, USEPA, to Thomas P. Salmon, Governor, Vt. (Mar. 11, 1974).
\textsuperscript{11} Agreement between Martin L. Johnson, Sec’y, Vt. Agency of Envtl. Conservation, and John A.S. McGlennon, Reg’l Adm’t, USEPA Region 1 (Mar. 11, 1974).
\textsuperscript{12} 33 U.S.C. § 1342(c)(3) (2012).
from an interested person alleging failure of the State to comply with the requirements of this part as set forth in § 123.63.\textsuperscript{13}

II. BUILDING THE PETITION

2007–2008

Given this useful and straightforward guidance in the regulations, the next steps were to review the withdrawal criteria laid out in 40 C.F.R. § 123.63 and to compare them against what was happening in Vermont. In order to determine “what was happening in Vermont” with specificity and detail, we did three things: (1) drew upon CLF’s existing knowledge; (2) filed comprehensive public records requests with state and federal agencies; and (3) explored publicly available materials on agency or other relevant websites.

We began filing records requests in late 2007 and the responsive documents included thousands of pages of information from Region 1, ANR and its Department of Environmental Conservation (“DEC”), and Vermont’s Agency of Agriculture, Food, & Markets (“AAFM”). In most cases, the clinic team obtained the documents after spending days or afternoons sifting through boxes of hard copy files in the various agency offices. We then spent the next few months reviewing and analyzing the documents for their de-delegation relevance.

Four substantive areas emerged as serious candidates for withdrawal: enforcement, public participation in enforcement, regulation of concentrated animal feeding operations (“CAFOs”), and anti-degradation. The following sections provide summaries of how the legal criteria were applied to Vermont’s situation in each of these areas in order to make the case for withdrawal.

A. Enforcement

1. Enforcement Withdrawal Criteria

The withdrawal criteria in 40 C.F.R. § 123.63 include:

1) Failure to “act on violations of permits or other program requirements.”\textsuperscript{14}

\textsuperscript{13} 40 C.F.R. § 123.64(b)(1) (2013).

2) Failure to “seek adequate enforcement penalties or to collect administrative fines when imposed.”\(^{15}\)

As explained below, the Petition detailed the ways in which Vermont’s program met these enforcement-related withdrawal criteria.

2. Enforcement in Vermont

At the time of the Petition, ANR’s Compliance & Enforcement Division was responsible for enforcing against violations of the State’s water discharge program—the program that had been approved by EPA. Pursuant to state law, the Compliance & Enforcement Division utilized three primary tools: Notices of Alleged Violation (“NOAVs”), Assurances of Discontinuance (“AODs”), and Administrative Orders (“AOs”).\(^{16}\)

Generally, NOAVs were letters from the agency informing persons that they had committed violations, AODs were settlements between the agency and the violators, and AOs were orders from the agency assessing penalties and/or requiring corrective action.\(^{17}\)

We reviewed all of ANR’s NOAVs, AODs, AOs, and other enforcement-related documents for water discharges from January 1, 1997 to December 31, 2007. We also reviewed EPA’s periodic enforcement reviews of ANR and a major report by the United States Public Interest Research Group (“US PIRG”).\(^{18}\)

After a comparison of NOAVs to subsequent enforcement orders (AODs and AOs), a review of AOs and AODs for the sufficiency of their terms, an assessment of compliance files for major facilities, and a look at Vermont’s enforcement reports on non-major facilities, a compelling picture of failed enforcement almost painted itself.\(^{19}\) This included five key areas that the Petition drafters fleshed out in detail.

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15. Id. § 123.63(a)(3)(ii).
17. Id.
19. A “major” facility under the CWA is: “Any NPDES facility or activity classified as such by the Regional Administrator, or in the case of approved state programs, the Regional Administrator in conjunction with the State Director. Major municipal dischargers include all facilities with design flows of greater than one million gallons per day and facilities with EPA/State approved industrial pretreatment programs. Major industrial facilities are determined based on specific ratings criteria developed by EPA/State.” U.S. EPA, NPDES GLOSSARY, http://cfpub.epa.gov/npdes/glossary.cfm?program_id=0#M (last visited Feb. 7, 2014).
First, ANR was not recouping economic benefit in its penalty calculations. A 2004 EPA review and a 2007 ANR report had each identified economic benefit calculation as a deficiency in ANR’s program; and, ANR’s penalty calculation worksheets provided further evidence that enforcement officers had insufficient guidance on how best to assess economic benefit. This was a problem because, as explained by EPA, penalties should serve as a deterrent by “recover[ing] the economic benefit of noncompliance” and ensuring that “violators do not obtain an economic advantage over their competitors.”

Second, ANR was enforcing only a small percentage of known water discharge violations. For example, a comparison of NOAVs to enforcement actions (AODs and AOs) revealed that only 10% of violations were followed by an enforcement action. At major facilities identified in the US PIRG report, the average permit exceedance in Vermont was 9.5 times the applicable permit limit, and seventeen facilities had violated their permits at least once in 2005. ANR had enforced against only one of these facilities and reduced the facility’s initial penalty by 60%. Additionally, when it did enforce, ANR preferred the more lenient AOD (which is a negotiated settlement) to the AO. Of the 149 enforcement actions for water discharge violations from 1997-2007, only sixteen ended in AOS; 114 ended in AODs. AODs had significantly lower average penalties.

The Petition provided a few anecdotal examples from the files to illustrate this point in concrete terms, including an enforcement action for a wastewater treatment facility that had discharged sodium hypochlorite into a stream causing kills of fish, salamanders, and microinvertebrates. ANR assessed a penalty in an AO, but later converted the AO to an AOD and converted the penalty to a Supplemental Environmental Project (“SEP”), significantly lowering the payment amount in the process.

Third, ANR’s use of SEPs in the first instance was problematic. In one of its reviews, EPA had noted multiple problems with ANR’s SEP program; the Petition raised these concerns as well as other issues. The

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22. Id. note 3, at 11.
23. Id.
24. Id.
25. Id. at 12 n.72. The other seven enforcement orders were Emergency Orders, which the agency may use in emergency-type situations. Id. See also 10 V.S.A. § 8009 (2013). Note that the total number of enforcement actions did not correlate to the total number of NOAVs that were followed by enforcement actions; this is because not all enforcement actions were preceded by NOAVs.
26. Id. at 12 (citation omitted).
27. Id. at 13.
concerns arose from the idea that, though SEPs could have environmental benefits, they could also diminish the deterrent effect of enforcement: “‘[i]nstead of the deterrence and stigma of paying a fine, the violator has the satisfaction and positive publicity of promoting an environmental cause.’” 28 For instance, ANR’s SEP Policy allowed municipalities to pay 100% of their fines as SEPs—instead of penalties—which detracted from the deterrent value that actual penalties could have. 29 And, though ANR’s SEP policy required SEP agreements to have terms explaining that violators must disclose that SEP actions were taken pursuant to enforcement actions when the violators pursued any media surrounding the SEPs, only one of the seven SEP agreements issued pursuant to that Policy had the requisite language. 30 Further, ANR was not enforcing its requirements for timely payments of SEPs. Both ANR’s SEP policy and the SEPs that it issued required any remaining SEP amounts to be converted to civil penalties immediately due and payable upon failure of the violator to abide by any of the SEP terms. Despite this, of twenty representative SEPs surveyed, sixteen were paid late and none converted to civil penalties. 31 Again, the Petition provided some concrete examples to illustrate the point. These included a scenario where a ski resort was 175 days late in its SEP payment; the SEP had been assessed against the resort for multiple violations, including some recurring violations and driving a bulldozer through delineated wetlands. 32

Fourth, ANR was barely enforcing against significant non-compliance (“SNC”) violators. ANR had a “SNC policy” that it used to assess and identify four categories of “significant” discharge violations. Through review of ANR’s internal SNC reports from 1997-2007, and AOs and AODs from the same period, we identified 2,500 SNC violations. Only twelve of these were followed by formal enforcement, for a total of four enforcement actions (one action covering more than one SNC violation). 33 Only three fines were assessed, and two of those were SEP-only fines. 34

Finally, the Petition identified shortcomings in ANR’s stormwater program. According to a recent state audit, more than 3,000 facilities were potentially subject to the state’s Multi-Sector General Permit (MSGP) for industrial stormwater discharges, but only about one-fifth of those had

28. Id. at 14 (citing EPA, FINAL REPORT: REVIEW OF VT.’S ENVTL. ENFORCEMENT PROGRAMS & ASSISTANCE & POLLUTION PREVENTION PROGRAMS 23–25 (Sept. 2004)).
29. Id. at 15.
30. Id. at 16.
31. Id. at 17.
32. Id. at 18.
33. Id. at 20.
34. Id. at 22.
actually received coverage. Additionally, ANR had not taken enforcement actions against the 144 facilities that had either failed to submit Stormwater Pollution Prevention Plans pursuant to the MSGP, or submitted them late. Similarly, ANR had not taken enforcement action against 95 MSGP facilities that had either failed to submit Discharge Monitoring Reports, or submitted them late. Under another stormwater permit, the Construction General Permit (CGP), ANR had taken only two enforcement actions in follow-up to 36 NOAVs issued over the 1997-2007 period. In one of those actions, a ski resort had discharged without permits from more than one construction site, and was more than a year late in installing a stormwater treatment facility, but no penalties were assessed. In the other, an AO was converted to an AOD and the enforcement fine was reduced. A report by a Vermont environmental group also confirmed that there were problems with the CGP program, noting that of twenty-nine facilities visited, only one was in compliance with its permit.

B. Public Participation

1. Public Participation Withdrawal Criteria

The withdrawal criteria in 40 C.F.R. § 123.63 state that EPA may withdraw approval:

1) Where “the State’s legal authority no longer meets the requirements of this part [State Program Requirements in CFR], including action by a State legislature striking or court down or limiting State authorities.”

2) Where “the operation of the State program fails to comply with . . . the public participation requirements of this part [State Program Requirements in CFR].”

35. Id. at 25 (citing GREEN MOUNTAIN INST. FOR ENVT. DEMOCRACY, PERFORMANCE AUDIT OF VT. CLEAN & CLEAR 48 (Jan. 14, 2008)).
36. Id.
37. Id.
38. Id. at 26.
39. Id.
40. Id.
41. Id. at 26–27 (citing VT. NATURAL RES. COUNCIL, UNCHECKED & ILLEGAL: HOW ANR IS FAILING TO PROTECT VERMONT’S LAKES & STREAMS 17, 27 (2008)).
43. Id. § 123.63(a)(2)(iii).
The Petition laid out the reasons Vermont’s program was faulty on paper (insufficient legal authority) as well as in practice (inadequate operation).

2. Public Participation in Vermont

The policy section of the CWA states that “[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program . . . shall be provided for, encouraged, and assisted by the Administrator and the States.” Consistent with this mandate, NPDES regulations require states to provide for public participation in enforcement actions in one of two specific ways. The state could provide for intervention of right in enforcement actions; or, it could provide assurance that the relevant agency will respond in writing to all citizen complaints, not oppose permissive intervention, and allow for notice and comment on all settlements.

The Petition analyzed state law and agency materials to illustrate that neither of these options was met. First, Vermont statutes contained no provision for intervention of right in AO and AOD proceedings. Nonstatutory intervention of right was also impossible because the rules of the Environmental Court—which processed AOs and AODs—excluded what would otherwise be the applicable rule of civil procedure providing for intervention of right.

For the second option, there was no statutory, regulatory, or agency guidance material that provided assurance ANR would respond to citizen complaints in writing. There was also no statutory, regulatory, or agency guidance material that provided for notice or comment on ANR settlements (AODs). Finally, there was also no assurance that ANR would not oppose permissive intervention. In fact, the agency had rejected the only two attempts by a non-party to intervene in AOD proceedings before the Environmental Court. In the first case, CLF and another environmental group had filed a Notice of Intervention with ANR in an effort to take part in an enforcement action against a ski resort. ANR had ignored the request, and the AOD was adopted by the Environmental Court on the same day it was filed by the parties.

45. 40 C.F.R. § 123.27(d) (2013).
47. Id. (citing Vt. R. ENVTL. CT. PROC. 4(a)(2)–(3)).
48. Id. at 31.
49. Id.
50. Id. at 34–35.
In the other case, CLF had filed an official Notice of Intervention with the Court in an action against a dairy facility, and ANR had opposed it. The Court denied CLF’s request on the basis that state law did not provide for intervention in AOD proceedings, despite the “apparent conflict between the specific directives of federal regulations and...Vermont laws.”51 A local newspaper article about the case reported CLF’s position that “[t]he Agency of Natural Resources’ stance—that [public participation] language does not apply to negotiated settlements—violates the spirit as well as the letter of the federal law.”52

The Petition sought to reinforce these points by noting that, even if ANR satisfied the other prongs of the second option (responding in writing to complaints, providing notice and comment on settlements), the very limited permissive intervention allowed for in Vermont would likely not suffice to fulfill the “permissive intervention” prong.53 At that time, the one intervention option under Vermont law was permissive intervention in AOs (not AODs), and the standard for intervening was extremely limited. As such, it ran counter to the spirit and purpose of the CWA as well as case law interpreting the permissive intervention standard under Federal Rule of Civil Procedure 24. There was also case law under the CWA suggesting that a lack of meaningful permissive intervention would disqualify a state from satisfying the public participation requirements of the federal regulations. For further emphasis, the Petition noted that several cases had found a lack of adequate public participation could also mean that a state action was not “diligently prosecuted” for purposes of barring a CWA citizen suit.54

C. CAFO Regulation

1. CAFO Regulation Withdrawal Criteria

The withdrawal criteria in 40 C.F.R. § 123.63 provide that EPA may withdraw approval where a State fails to “exercise control over activities required to be regulated under this part [State Program Requirements in CFR], including failure to issue permits.”55 The Petition explained how

51. Id. at 35 (quoting ANR v. Montagne & Branon, No. 291-12-07, 2008 WL 7242674, at 8 (Vt. Envtl. Ct. Apr. 9, 2008)).
53. See Petition, supra note 3, at 31–33.
54. Id. at 33–34.
ANR was failing to regulate concentrated animal feeding operations in the State.

2. CAFO Regulation in Vermont

Despite the afore-mentioned vision of a Vermont filled with green pastures, and perhaps the occasional dairy cow spotting the fields, Vermont was and is home to CAFOs. These are the industrial-like facilities that confine large numbers of animals in small spaces.\(^\text{56}\) Under CWA regulations, a CAFO is basically an Animal Feeding Operation (AFO) with a certain number of animals.\(^\text{57}\) In turn, an AFO is a lot or facility where animals are confined for at least 45 days/year and vegetative growth is not sustained during the normal growing season.\(^\text{58}\) A “large” CAFO has a specified number of animals—e.g., 700 or more dairy cows.\(^\text{59}\) A “medium” CAFO also has a specified number of animals—e.g., 300-699 dairy cows—plus a discharge; or, a medium CAFO can be designated by an agency.\(^\text{60}\) “Small” CAFOs may also be designated by an agency.\(^\text{61}\)

To document what was happening on the ground with CAFOs and AFOs in the State, we reviewed the Vermont CAFO-related files from the EPA; all CAFO-related files at ANR; the “large farm operation” (“LFO”) and “medium farm operation” (“MFO”) files at AAFM (the state agriculture agency); and all complaints filed with AAFM for the past several years regarding potential violations of AAFM’s water quality regulations for farms. AAFM had (and has) a permitting program for LFOs and MFOs; the definitions of LFO and MFO are similar to the federal definitions.\(^\text{62}\) In addition, AAFM had water quality regulations called

\[\text{See, e.g., PEW COMM’N ON INDUS. FARM ANIMAL PROD., PUTTING MEAT ON THE TABLE: INDUSTRIAL FARM PRODUCTION IN AMERICA (2008), available at http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Industrial_Agriculture/PCIFAP_FINAL.pdf.}\]

\[\text{40 C.F.R. § 123.23(b)(2) (2013).}\]

\[\text{Id. § 122.23(b)(1).}\]

\[\text{Id. § 122.23(b)(4).}\]

\[\text{Id. § 122.23(b)(6), (c).}\]

\[\text{Id. § 122.23(b)(9).}\]

\[\text{Regulatory Programs, VT. AGENCY OF AGRIC., FOOD & MARKETS, http://agriculture.vermont.gov/protecting_lands_waters/agricultural_water_quality/regulatory (last visited Jan. 22, 2014). Also, compare 40 C.F.R. § 122.23(b) (defining a large CAFO as confining 700 or more mature dairy cows and a medium CAFO as confining 200 to 699 mature dairy cows) with VT. STAT. ANN. tit. 6, § 4851 (2011), and VT. STAT. ANN. tit. 6, § 4857 (2011).}\]
“Accepted Agricultural Practices” that sought to limit nonpoint discharges of wastes to waters of the state.63

The Petition first explained how AAFM’s program was not a proper substitute for a NPDES program. It pointed out that ANR was the NPDES authority in Vermont, not AAFM, and stated the “obvious” fact that AAFM permits were not NPDES permits, citing to two key statements by EPA and ANR along those lines.64 It then compared AAFM’s program to NPDES CAFO requirements and identified several important differences, most importantly those regarding information gathering, public participation, and recordkeeping.65 This section closed with a review of state correspondence and a recent state audit showing that AAFM’s dual role as agricultural promoter and regulator was creating difficulties for water quality enforcement, including in collaboration with ANR.66

In the next section, the Petition gave an overview of several years of dialogue between ANR and Region 1, in which Region 1 urged the State to implement a CAFO program and the State delayed.67 Most significantly, the Petition also explained that ANR had not issued a single CAFO permit despite documented discharges and problem areas at multiple facilities in the State. The Petition described the most concerning aspects of the files regarding discharges—e.g., from agency correspondence and inspection reports by EPA, ANR, and AAFM. In sum, the files revealed documented discharges from at least three of Vermont’s eighteen LFOs and from three of the eight MFOs that had been inspected (of approximately 200 MFOs).68 Eleven LFOs had “problem areas” according to ANR’s recent inspections, and many LFOs had histories of discharge concerns pieced together from the files.69 These included one property with a stream running through the production area and another with prior feedbunk runoff whose owner had denied access to inspectors.70 Among other things, MFOs suffered from inadequate waste storage capacity.71 Other files documented problems such as winter spreading, manure overflowing into ditches and streams, and a

64. Petition, supra note 3, at 37.
65. Id. at 37–39.
66. Id. at 39–40.
67. Id. at 40–41.
68. Id. at 46 (citing VT. AGENCY OF AGRIC. FOOD & MKTS., ACT 78 – SECTION 16 ANNUAL REPORT – 2006 3 (Jan. 2007) (report to State Legislature, stating that there were “200 MFOs currently identified by the Agency”)).
69. Id. at 43–46.
70. Id. at 43–44.
71. Id. at 46.
“foamy white discharge” going from a feeding area into a stream.\textsuperscript{72} This section closed with the conviction that “the absence of any CAFO permitting actions by ANR suggests serious institutional denial of, or willful blindness to, the CAFO reality in Vermont.”\textsuperscript{73}

D. Anti-Degradation

1. Anti-Degradation Withdrawal Criteria

As mentioned above, the withdrawal criteria include a provision stating that EPA may withdraw program approval where a State fails to “promulgate or enact new authorities when necessary.”\textsuperscript{74} The Petition asserted that Vermont met this criterion because it had failed to implement an anti-degradation procedure.

2. Anti-Degradation in Vermont

The Clean Water Act requires states to develop water quality standards.\textsuperscript{75} Anti-degradation policies are a component of these standards and they aim to maintain existing uses or higher water quality.\textsuperscript{76} When states submit water quality standards to EPA for approval, the submissions should include both the policy and the “methods for implementing such policy.”\textsuperscript{77}

The Petition explained that Vermont had not submitted an anti-degradation implementation procedure despite repeated reminders from EPA.\textsuperscript{78} It raised concerns that, without this procedure, ANR could not conduct proper anti-degradation analyses and issue protective permits—concerns that CLF had previously raised in permit comments and a letter to EPA.\textsuperscript{79} Finally, the Petition critiqued what was ANR’s draft anti-degradation implementation rule at the time. Among other things, the applicability of the draft rule was too narrow, the rule left too much discretion to the agency, and the rule established an impossibly low

\begin{itemize}
\item \textsuperscript{72} Id. at 47–49.
\item \textsuperscript{73} Id. at 48.
\item \textsuperscript{74} 40 C.F.R. § 123.63(a)(1)(i) (2013).
\item \textsuperscript{75} 33 U.S.C. § 1313 (2012).
\item \textsuperscript{76} 40 C.F.R. §§ 131.6, 131.12 (2012).
\item \textsuperscript{77} 40 C.F.R. § 131.12; see also id. § 131.6 (requiring “an antidegradation policy consistent with § 131.12”).
\item \textsuperscript{78} Petition, supra note 3, at 49–50.
\item \textsuperscript{79} Id.
\end{itemize}
burden for dischargers to meet when justifying a lowering of water quality.80

III. SUPPLEMENTAL FILINGS & AGENCY DIALOGUE

2008–2011

On August 14, 2008, we filed the Petition with EPA Headquarters and EPA Region 1, with copies to the Secretary and General Counsel of ANR. On Vermont Public Radio, CLF’s Vermont director explained:

We want the solution to occur. We want effective program implementation, effective enforcement, and clean water. And if that means that EPA comes in and does it on behalf of the state, so be it. If it means that the state can get its act together and correct the problems that are pervasive and that we have identified in the petition, then that would be a good outcome, too.81

The Deputy Secretary of ANR countered:

[i]f EPA were to take back our federal water quality programs, Vermon ters would then have to go to Boston to get their federal permits rather than getting them here at home and Vermont’s environment would be regulated from Boston. And this would not be an improvement in our permitting process.82

The next few years involved a series of supplemental filings and agency discussions that culminated in ANR requesting a formal response from Region 1 by a certain date. The following narrative is offered to provide an example and some insight into how a post-petition process may progress.

80. Id. at 50–55.
82. Id.
The first official reaction to the Petition was a letter from Region 1 on September 15, 2008 stating that the Region would be conducting an “informal investigation.” Under CWA regulations, EPA may conduct an “informal investigation” in order to determine “whether cause exists to commence [withdrawal] proceedings.” To help with that, the Region requested copies of the Petition sources, which a clinic attorney delivered to Boston in the form of nine large binders in mid-October. Also in October, ANR filed a response to the Petition and we filed a response to ANR’s response, as well as a Petition Supplement. The October 2008 Supplement added another basis for withdrawal: Vermont’s failure to regulate stormwater discharges under its Residual Designation Authority (“RDA”). In 2003, CLF had filed a petition with ANR asking the agency to designate stormwater dischargers for NPDES permit coverage in five impaired waterways. After three court decisions and the passage of five years, ANR still had not done so—thus satisfying the withdrawal criterion for failure to “exercise control over activities required to be regulated under this part [State Program Requirements in CFR], including failure to issue permits.”

Then, on October 27th, CLF and the ENRLC team traveled to Boston to meet with Region 1 officials. In the meeting, we presented summaries and highlights from the Petition, Region 1 asked questions, and a general discussion ensued. Following the meeting, we filed a letter with EPA that proposed specific corrective actions, presented additional information on some topics that arose at the meeting, and documented another basis for withdrawal. The additional basis for withdrawal was “failure to ‘develop an adequate regulatory program for developing water quality-based effluent..."
limits [WQBELs] in NPDES permits.”

It relied upon a recent letter from Region 1 that had raised concerns about phosphorus limits for discharges into the Lake Champlain watershed; noted the lack of reasonable potential analysis in ANR’s fact sheets; and advised ANR to ensure that water quality standards for all affected states were met when issuing permits for discharges to the Long Island Sound watershed.

B. 2009

At the beginning of the new year, we filed additional documents that had been recently produced in response to another Freedom of Information Act request to EPA. They strengthened several grounds for the Petition: insufficient penalties in enforcement, failure to regulate CAFOs, and failure to implement anti-degradation methods and policies. Receiving no formal response, we filed another letter on February 26, 2009. This letter detailed our filings to date and urged EPA to take action on the Petition by initiating formal proceedings. Under the CWA and its regulations, “formal proceedings” are those that would arise after EPA had issued an “order” to commence the proceedings and would involve a public hearing.

Another meeting ensued in late March, this time at Vermont Law School, where Region 1 provided CLF and ENRLC with a general sense of its progress in each of the Petition areas. Then, from August to December 2009, CLF/ENRLC, Region 1, and ANR engaged in a series of three-party discussions. During that time, Region 1 sent a letter to ANR explaining that Vermont’s current public participation in enforcement was inadequate under the Clean Water Act. In particular, the letter noted that Vermont’s option for permissive intervention (described above) was problematic because “both the Clean Water Act and case law interpreting the public participation provisions clearly point to authorized states needing to provide more expansive opportunities for public participation in enforcement than is
provided by current Vermont law.” The letter also stated that ANR’s current proposal to address the issue was insufficient.

C. 2010

Following upon the heels of this letter, Region 1 sent another letter to the State in January of 2010. In response to a State request, this letter outlined the “procedural mechanisms and implications of three possible ways...[the Petition] might be resolved.” It also expressed the hope that discussions “among the parties will yield a set of steps that the State intends to take to satisfactorily address the concerns that have been raised.” Those steps not materializing, we sent a short letter to EPA a couple months later asking it to initiate formal withdrawal proceedings. Those proceedings not ensuing, we filed a “mini-petition” during the summer of 2010.

1. The Mini-Petition

The “mini-petition” was a substantial, 32-page supplement to the original petition. It used recent public records to provide an additional two years of evidence in support of some of the primary Petition issues: CAFO regulation, enforcement, and WQBELs. It also noted that Vermont’s public participation in enforcement remained inadequate, and distilled some troubling new information about the Waterbury wastewater treatment facility.

For WQBELs, the mini-petition detailed a fairly extensive back-and-forth between EPA and ANR in which EPA raised multiple concerns with two recently drafted ANR permits for wastewater treatment facilities that discharged into the Long Island Sound watershed. For the enforcement

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94. Id.
95. Id.
97. Id.
99. See Letter from David Mears, Dir., Envlt. & Natural Res. Law Clinic, Laura Murphy, Staff Attorney, Envlt. & Natural Res. Law Clinic, & Anthony Iarrapino, Staff Attorney, Conservation Law Found., to Lisa Jackson, Adm’r, USEPA, Curt Spalding, Reg’l Adm’r, USEPA Region 1, Carl Dierker, Reg’l Counsel, USEPA Region 1, & Stephen Perkins, Dir., USEPA Region 1 (July 21, 2010) (on file with author) [hereinafter Mini-Petition].
100. See generally id.
101. Id. at 2–3, 16–24.
102. Id. at 24–27. We filed an Addendum on July 22, 2010 in order to make the correction that Region 1 had actually formally objected to one of these permits. Letter from David Mears, Dir.,
and CAFO analyses, we utilized the same method we had for the original Petition. That is, we reviewed public records including enforcement documents and CAFO inspection reports to identify continuing problems. On the CAFO front, the mini-petition noted ANR’s failure to issue permits as well as ANR’s failure to act on violations.\textsuperscript{103} Three LFOs and five MFOs had ANR-documented discharges, but none had been enforced against or required to get a permit. The mini-petition provided narrative case studies of each of these facilities, plus observations from other facilities at “high risk” for discharging, which had received little-to-no follow-up by ANR.\textsuperscript{104}

On the enforcement front, the mini-petition reported that ANR’s SEP Policy was still inadequate; that ANR still took too few enforcement actions (only 1 of 54 NOAVs and 2 of 60 SNCs), and; that ANR continued to choose lenient options (AODs over AOs, small average fines).\textsuperscript{105}

Finally, a situation at the Waterbury wastewater treatment facility supported several withdrawal criteria. Waterbury discharged into the Winooski River, which flowed into the Main Lake segment of Lake Champlain, which was listed as impaired due to high phosphorous pollution. The facility’s ANR-issued permit conditioned compliance with the phosphorus WQBEL on adequate funding—a condition that conflicted with the CWA’s mandate that NPDES permits comply with water quality standards regardless of funding.\textsuperscript{106} Additionally, ANR had issued an Order attempting to modify the permit by extending the potential compliance deadline until two years after EPA had given final approval on a revised total maximum daily load (TMDL) for Lake Champlain—which was “a potentiality created by Vermont statute.”\textsuperscript{107} These factors supported withdrawal criteria based on a failure to develop an adequate regulatory program for WQBELs and a failure to issue permits that “conform to [NPDES] requirements.”\textsuperscript{108} Further, ANR’s issuance of the Order was an impermissible attempt to “modify” Waterbury’s permit; under the CWA, all

\textsuperscript{103} Id. at 3.  
\textsuperscript{104} Id. at 5–16.  
\textsuperscript{105} Id. at 29–30.  
\textsuperscript{106} Id. at 18 (citing 33 U.S.C. § 1311 (2012); 40 C.F.R. §§ 122.4(a), (d), 122.44(d) (2011); City of Attleboro, MA Wastewater Treatment Plant, NPDES Appeal No. 08-08, 2009 WL 5326524, at 25 (EAB Sept. 2009)). The Mini-Petition also noted that the limited flexibilities contemplated by the Act were inapplicable. Id. at 18 n.121.
\textsuperscript{107} Id. at 19–20. A TMDL is basically a pollution budget that a state must develop in order to bring a water body into compliance with the water quality standard for a particular pollutant. See 33 U.S.C. § 1313(d)(1)(C) (2012).
\textsuperscript{108} Id. at 16 (citing 40 C.F.R. § 123.63(a)(2)(ii), (5)).
non-minor modifications (which the Order was) must undergo public notice and comment.\textsuperscript{109} ANR’s Order had also noted that, because of a Vermont law, the agency could not require compliance with water quality-based phosphorus limits unless the State provided funding to the facility.\textsuperscript{110} The State law provided that: “To the extent funds are not provided to municipalities...municipal compliance with this section [requiring the Secretary to establish effluent limits to comply with water quality standards] shall not be required.”\textsuperscript{111} In addition to the withdrawal criteria regarding inadequate WQBELs, this legislation supported withdrawal because it qualified as “[a]ction by a State legislature...limiting State authorities.”\textsuperscript{112}

The Waterbury section closed with a series of graphs depicting how Waterbury had actually been “discharging phosphorus at levels far exceeding its TMDL wasteload allocation for more than seven years.”\textsuperscript{113} For the past seven years, Waterbury had exceeded every single phosphorus reporting parameter, and usually by at least 250 percent.\textsuperscript{114}

2. Closing out the Year

A few weeks later, the Secretary of ANR wrote to Region 1 requesting a decision on the Petition. He stated: “While ANR believes it is entirely EPA’s decision how it would like to proceed on resolving this matter, ANR believes that after two years and hundreds of hours of work, EPA should issue a decision forthwith and certainly no later than October 15, 2010.”\textsuperscript{115} EPA replied that it would be unable to do so given that “a number of important issues raised in the original petition remain[ed] unresolved” and EPA was “in the process of evaluating” the July 21st supplement.\textsuperscript{116} The letter expressed appreciation for the efforts that Vermont’s DEC had thus far taken in an effort to resolve the Petition. EPA again related the desire that the parties could “resolve as many issues as possible and...identify, through a corrective action plan, the actions EPA

\textsuperscript{109} Id. at 21–22 (citing 40 C.F.R. §§ 122.62, 122.63, 124.1–124.21).
\textsuperscript{110} Id.
\textsuperscript{111} VT. STAT. ANN. tit. 10, § 1266a(b), (c) (2010).
\textsuperscript{112} 40 C.F.R. § 123.63(a)(1)(ii) (2013); Mini-Petition, supra note 99, at 16.
\textsuperscript{113} Mini-Petition, supra note 99, at 22–24. Both the TMDL wasteload allocation and the “indefinitely delayed” permit limit were 0.8 mg/l monthly average. Id.
\textsuperscript{114} Id.
believes must be taken by the State to satisfactorily address EPA’s concerns."

D. 2011

After EPA’s letter, all appeared quiet. Then, after learning of an enforcement action against a dairy facility about a year later, we filed a letter with DEC expressing Petition-related concerns. The dairy facility had discharged manure from a livestock holding pen into a ditch, which ultimately discharged into Lake Champlain. The Vermont Attorney General was pursuing a civil action on behalf of ANR and AAFM, but had not sought NPDES permit relief. The letter expressed concern that “[t]he action does not seek to require the facility to obtain an NPDES permit despite the fact that the violation at issue is an unpermitted discharge under the Clean Water Act.” The letter explained why the discharge was jurisdictional under the CWA, noted that Vermont’s waters remained impaired for agricultural pollution, and asserted that the agency must “exercise its regulatory authority” in order to “abate agricultural discharges to the fullest extent possible” and fulfill a “required component of Vermont’s NPDES program.” Finally, the letter noted that positive progress on the CAFO issue would be critical to resolution of the Petition. DEC did not respond immediately.

Just a few days after the letter was sent, Tropical Storm Irene hit Vermont, DEC offices were flooded, and the agency was occupied with clean-up and relief efforts.  

117.  Id.
118.  Letter from Laura Murphy, Staff Attorney & Assistant Professor, Envtl. & Natural Res. Law Clinic & Anthony Iarrapino, Staff Attorney, Conservation Law Found., to David Mears, Comm’r, Vt. Dep’t of Envtl. Conservation 1 (Aug. 25, 2011) (on file with author).
119.  Id. at 1–2.
120.  DEC replied in January 2012, stating that it would not be requiring a NPDES permit because the facility had “permanently eliminated the discharge.” Letter from David Mears, Commissioner, Vt. Dep’t of Envtl. Conservation to Laura Murphy, Envtl. & Natural Res. Law Clinic 2 (Jan. 23, 2012) (on file with author). Ultimately, the Attorney General settled the case with the violators. In the settlement, the facility agreed to “manage and control the operation . . . to prevent the runoff of wastes from the barnyard . . . into the water of Lake Champlain.” Stipulation of Settlement & Consent Decree at ¶ 6, Vt. v. David & Cathy Montagne, No. S264-11Fc (Vt. Super. Ct. Sept. 29, 2011). In other words, the defendants agreed to follow the law to which they were already subject. The State did not assess penalties. Id. at ¶ 7 (seeking penalty of $2,000 only if defendants failed to abide by settlement).
IV. WORKING COLLABORATIVELY TOWARD SOLUTIONS

2011-2013

In October 2011, the parties reconnected and resumed three-party discussions. Officials from DEC and Region 1 met with CLF/ENRLC at Vermont Law School to begin discussing the Petition and potential resolutions again. The chess pieces were lined up slightly differently this time, though, because a new Governor had taken office in January and had appointed the former Director of the Clinic as DEC Commissioner. In an earlier interview, the new Commissioner had remarked that he would “defend Vermont’s ability to make the improvements necessary to remain the lead regulator of water pollution in the state.” 122

Following the October meeting, the parties had a series of conference calls to address various substantive areas of the Petition. The calls continued into 2012 and spanned into the next year. In addition to these calls, there were several opportunities for the parties to offer written comments on various sets of proposed actions—e.g., the draft general permit for CAFOs that DEC was developing.

One highlight came in February 2012, when the Vermont Legislature passed a law providing for public participation in administrative environmental law enforcement. 123 The law requires: (1) a 30-day notice and comment period for ANR enforcement actions (AOs, AODs, and “civil citations” commonly known as “tickets”); (2) if any comments were received, a 14-day waiting period after ANR files the enforcement action with the court during which any person who commented on the proposed enforcement action may file a motion for permissive intervention; (3) a prohibition against ANR opposing a motion for permissive intervention, and; (4) a requirement that ANR respond in writing to all citizen complaints filed for violations of a “federally authorized or delegated program.” 124 The law also provides for a 14-day intervention period for emergency administrative orders. 125 DEC relayed this success to Region 1 shortly after the law passed, stating: “Both DEC and CLF have strenuously advocated for the introduction and passage of this legislation to ensure consistency

124. VT. STAT. ANN. tit. 10, § 8020(b)–(c), (j).
125. Id. § 8020(g).
with the public participation requirements related to enforcement under the CWA and the applicable federal regulations.”126

The letter also noted that the Vermont Attorney General’s office had committed to meeting CWA requirements for civil enforcement actions (as opposed to administrative enforcement actions handled by ANR).127 For civil actions, Vermont would meet public participation requirements through “option one” of the federal regulations—providing for intervention as of right.128 The Vermont Rules of Civil Procedure require a court to allow intervention where:

[T]he applicant claims an interest relating to the property or transaction which is the subject of the action and the applicant is so situated that the disposition of the action may as a practical matter impair or impede the applicant's ability to protect that interest, unless the applicant's interest is adequately represented by existing parties.129

Along those lines, Region 1 secured a letter from the Vermont Attorney General’s office in which the office agreed not to “oppose motions for intervention as a matter of right under Vermont Rule of Civil Procedure 24(a)(2) in Clean Water Act enforcement cases brought by this office on the basis that the state adequately represents the interest of the proposed intervenor.”130 This promise was necessary to help ensure that intervention of right under Vermont’s Rules of Civil Procedure would be as broad as that required by CWA regulations—which extended to “any citizen having an interest which is or may be adversely affected.”131 However, the letter specifically stated that its promise did “not affect any other provision of Rule 24(a)(2) or how the office will interpret or apply such provisions in enforcement cases.”132 In other words, the letter left open the possibility that the Attorney General would oppose intervention of right on other grounds.

126. Letter from David Mears, Comm’r, Vt. Dep’t of Env’t Conservation, to Curtis Spalding, Reg’l Adm’r, USEPA Region 1 1 (Feb. 13, 2012).
127. Id.
128. See 40 C.F.R. § 123.27(d)(1) (2013) (providing that a state may meet public participation requirements if it allows intervention as of right in certain situations for “any citizen having an interest which is or may be adversely affected” by agency action).
129. VT. R. CIV. P. 24(a)(2).
130. Letter from Scot L. Kline, Vt. Assistant Attorney General, to Curt Spaulding [sic], Reg’l Adm’r, USEPA Region 1 (Mar. 9, 2012) [hereinafter March 9th Letter].
131. 40 C.F.R. § 123.27(d)(1).
132. March 9th Letter, supra note 130.
V. CORRECTIVE ACTIONS PAST, PRESENT, & FUTURE

Following these series of discussions among the parties, Region 1 was “pleased to transmit” a Corrective Action Plan (“CAP”) to the State in July 2013.\textsuperscript{133} The CAP was an Interim Response that “adequately address[ed] all but one of the issues identified by the Region during its informal investigation.”\textsuperscript{134} One issue—Vermont’s statute regarding phosphorus compliance and funding—would remain open until addressed by the State with a legislative amendment.\textsuperscript{135} Therefore, the Region intended to deny the Petition with respect to all issues save that remaining issue.\textsuperscript{136} In its letter, the Region noted that the CAP “represents the culmination of significant efforts by all the parties to address the issues,” recognized the “collaborative and productive manner in which the parties have engaged,” and shared the belief that “the actions taken as a result of the Plan will improve the Clean Water Act permit and enforcement programs and better protect Vermont’s waters.”\textsuperscript{137}

The CAP addressed eight substantive areas. For each, it summarized the Petition allegations, reported on EPA’s findings, and provided a list of corrective actions. The following sections provide brief summaries of EPA’s findings and the required corrective actions for each issue.

A. Public Participation

EPA agreed that Vermont’s laws for public participation in enforcement were not consistent with federal regulations, which were adopted after EPA approved Vermont’s program.\textsuperscript{138} EPA detailed the corrective actions that the State had already taken to remedy this problem; namely, the public participation legislation of 2012 that ensured consistency with 40 C.F.R. § 123.27(d) for administrative actions, and the Attorney

\begin{footnotesize}
\begin{itemize}
\item[133.] Letter from Kenneth Moraff, Acting Dir., Office of Ecosystem Prot., USEPA Region 1, to Laura Murphy, Staff Attorney & Assistant Professor, Envtl. & Natural Res. Law Clinic & Anthony Iarrapino, Staff Attorney, Conservation Law Found. 1 (Jul. 18, 2013) (on file with author) [hereinafter July 18th Letter].
\item[134.] Id.
\item[136.] Id. at 1. On December 13, 2013, Region 1 sent a letter to CLF formally closing out all aspects of the Petition save §1266a(c)—meaning that it had decided not to initiate withdrawal proceedings for all but the § 1266a(c) issue. Letter from Curt Spalding, Reg’l Adm’r, USEPA, to Laura Murphy, Staff Attorney & Assistant Professor, Envtl. & Natural Res. Law Clinic, & Anthony Iarrapino, Staff Attorney, Conservation Law Found. (Dec. 13, 2013) (on file with author).
\item[137.] July 18th Letter, supra note 133.
\item[138.] CAP, supra note 135, at 2.
\end{itemize}
\end{footnotesize}
General’s assurance that it would not oppose intervention of right based on one of the intervention factors.\textsuperscript{139}

\textbf{B. Supplemental Environmental Projects}

EPA identified “several concerns” with ANR’s SEP Policy as it existed when the Petition was filed.\textsuperscript{140} The Policy allowed municipalities to perform SEPs for activities that were already required by law; it allowed governmental entities to use SEP funds on activities that were already planned or budgeted for; it gave enforcement attorneys complete discretion regarding whether to enforce against late payment of SEPs; and it did not contain a provision stating that SEP contributions are not tax-deductible.\textsuperscript{141} EPA detailed the corrective actions the State had taken to address these concerns—primarily, the adoption of a new SEP Policy.\textsuperscript{142} The new SEP Policy eliminated the exception that allowed governmental entities to perform SEPs that were already required by law, budgeted for, or planned for.\textsuperscript{143} The new Policy also contained a provision regarding tax expenditures and more stringent requirements regarding late payment of SEPs.\textsuperscript{144} Additionally, the Vermont Legislature had passed a law in 2009 requiring violators to place SEP funds into an attorney’s IOLTA (interest on lawyer’s trust account) or escrow account under certain circumstances.\textsuperscript{145}

\textbf{C. Significant Non-Compliance Policy}

EPA explained that many violations that would qualify as significant non-compliance under DEC’s SNC Policy would not qualify as SNC under EPA’s policy.\textsuperscript{146} However, EPA noted that while EPA’s policy requires formal enforcement action or prompt compliance for SNC at NPDES major facilities, Vermont’s response was left to DEC’s discretion.\textsuperscript{147} After a review of enforcement files, the Region found that Vermont’s responses to violations that would be SNC under EPA’s definition were adequate.\textsuperscript{148}

\begin{itemize}
\item \textsuperscript{139} Id.
\item \textsuperscript{140} Id. at 3.
\item \textsuperscript{141} Id. at 3–4.
\item \textsuperscript{142} Id. at 4.
\item \textsuperscript{143} Id.
\item \textsuperscript{144} Id.
\item \textsuperscript{145} Id.
\item \textsuperscript{146} Id. at 5.
\item \textsuperscript{147} Id.
\item \textsuperscript{148} Id.
\end{itemize}
The Region identified several actions that DEC had taken or would take “in order to provide for greater clarity to the public regarding DEC’s enforcement actions and to ensure that both SNC and non-SNC violations are addressed in order to obtain a timely return to compliance, consistent with EPA guidance and policies...” These included utilizing enforcement discretion consistent with EPA policy, assuring that dischargers enter compliance and monitoring data into EPA’s system going forward, and continuing to submit compliance reports for non-major dischargers, which would aid EPA in its assessment of the State’s enforcement program.

D. CAFO Permitting & Enforcement

EPA concluded that ANR had never issued an NPDES permit to a CAFO and had “not adequately regulated a sector of dischargers that are subject to the NPDES program.” EPA also found that CAFO violations had “typically been addressed by AAFM through enforcement of the State’s large and medium farm operation regulations, and permits issued thereunder, rather than by DEC through enforcement of the NPDES CAFO regulations.”

EPA identified steps that DEC had already taken, as well as additional steps that DEC would take, to bring its program into compliance. For permitting, DEC would “require CAFOs that discharge to have NPDES permits.” A CAFO that discharges is any CAFO that has discharged in the past, where the circumstances leading to the discharge have not been remedied. DEC would issue a general permit for medium CAFOs and issue individual permits to small and large CAFOs. For compliance, DEC would conduct at least twelve inspections of large and medium AFOs/CAFOs for fiscal year (“FY”) 2013, with inspection numbers to increase each year. EPA also committed to inspecting twelve operations in FY 2013. Facilities with “discharges or evidence of past discharges” were to be given “high priority.” For enforcement, EPA was clear that DEC was to be the lead enforcement authority:

149. Id.
150. Id. at 5–6.
151. Id. at 6.
152. Id. at 7.
153. Id.
154. Id.
155. Id.
156. Id. at 8.
157. Id.
DEC will be the lead Vermont enforcement agency in any case involving a CAFO violation. DEC will require CAFOs to cease any unlawful discharges to surface waters as soon as possible. DEC may consult with AAFM during inspections and enforcement actions involving CAFOs, but as between the two agencies, DEC shall be the decision-maker regarding the extent of CWA violations, the appropriate form of enforcement response, and the timing and nature of requirements to achieve compliance.158

E. Antidegradation

EPA explained that the lack of an implementation procedure for antidegradation, though relevant under a state’s water quality standards program, does not create a basis for NPDES program withdrawal.159 Rather, states are required to consider antidegradation when writing NPDES permits.160 The Region found that, though the State conducted “appropriate antidegradation analyses” in wastewater treatment facility permits, it did not adequately explain those analyses in permit fact sheets.161

For corrective actions, the Region stated that it would work with DEC to develop an antidegradation implementation rule.162 It also stated that DEC had “begun” and would continue to conduct antidegradation analyses for NPDES stormwater permits, and would take care to adequately describe its analyses in fact sheets for non-stormwater permits.163

F. Adequacy of Water Quality-Based Effluent Limits in Permits

EPA concluded that DEC did not adequately document the reasonable potential analyses it conducted in order to determine whether permits need WQBELs.164 The Region also found that “DEC generally has not conducted reasonable potential analyses and established WQBELs for nutrients (primarily phosphorus).”165 In particular, DEC’s failure to include nitrogen limits for discharges into the Long Island Sound watershed

158. Id.
159. Id.
160. Id. at 8–9.
161. Id. at 9.
162. Id.
163. Id.
164. Id. at 9–10.
165. Id. at 10.
violated the CWA’s requirement that NPDES permits assure compliance with the water quality standards of all affected states.\textsuperscript{166}

For corrective actions, EPA noted that it had been working with DEC to develop better permit fact sheets regarding WQBELs, and that DEC would evaluate in all future permits whether a pollutant has the reasonable potential to cause or contribute to a violation of water quality standards.\textsuperscript{167} Further, DEC had developed a procedure for conducting Reasonable Potential Analyses and agreed to follow the procedure going forward.\textsuperscript{168} Finally, EPA directed the State to develop a plan for distributing the statewide nitrogen allocation amongst NPDES permits in the State, in order to ensure compliance with the TMDL for the Long Island Sound watershed.\textsuperscript{169}

\textit{G. Waterbury Permit}

EPA found that compliance with phosphorus limits at the Waterbury wastewater treatment facility was “long overdue.”\textsuperscript{170} EPA agreed that Waterbury’s permit provision conditioning compliance on funding was inconsistent with the CWA.\textsuperscript{171} EPA also found that ANR’s Order attempting to extend Waterbury’s compliance deadline did not actually modify the permit because the Order did not comply with CWA substantive and procedural requirements.\textsuperscript{172} Therefore, Waterbury’s original phosphorus limit (which it had exceeded during every reporting period for seven years) was “in effect and enforceable.”\textsuperscript{173}

For corrective actions, Region 1 noted that it had been in discussion with DEC about technologies to improve phosphorus treatment in Waterbury. It then explained that, in February 2013, DEC had issued an Assurance of Discontinuance rescinding the previous Order regarding Waterbury, requiring a new ballasted flocculation system at the plant, and ordering compliance with phosphorus limits by September 1, 2014.\textsuperscript{174}

\textsuperscript{166} Id.
\textsuperscript{167} Id.
\textsuperscript{168} Id.
\textsuperscript{169} Id. at 11.
\textsuperscript{170} Id.
\textsuperscript{171} Id. at 11–12.
\textsuperscript{172} Id. at 12.
\textsuperscript{173} Id.
\textsuperscript{174} Id.
H. Legislative Constraint on Regulating Municipal Discharges of Phosphorus

EPA agreed that 10 V.S.A. § 1266a(c), Vermont’s law regarding municipal compliance with phosphorus, “conflicted with the Clean Water Act.” EPA explained:

Although compliance schedules in permits are permissible in some circumstances, nothing in the Clean Water Act or its implementing regulations allows for such limits to be effective and enforceable only if, and to the extent that, state monies are available to fund actions necessary to achieve such limits. The Region is concerned that, by conditioning municipal compliance with phosphorus limits on the availability of state funds, this law either constrains DEC’s authority to issue permits containing enforceable limits that ensure compliance with applicable water quality-based effluent limitations (including those based on TMDLs), or creates a barrier to future enforcement actions to ensure compliance with such permit limits.

To help correct this problem, DEC had issued a memo in March 2012 that directed agency staffers to:

1) take reasonable steps to help municipalities secure funding for phosphorus treatment;
2) not consider costs when setting WQBELs in permits, refrain from mentioning 1266a(c) in permits, and require compliance with WQBELs notwithstanding 1266a(c), and;
3) request a remand from the court if a permittee successfully challenged a permit based on 1266a(c), which remand would allow EPA to object to the permit upon its reissuance.

EPA believed that this memo was a “sound interim step” but that ultimately a legislative solution would be required. Accordingly, EPA concluded:

175. Id. at 13.
176. Id.
177. Id. at 13–14.
178. Id. at 14.
“Until such time as § 1266a(c) is revised to be consistent with the CWA, this portion of the Petition will remain open.”

VI. WHAT IF? LITIGATION OPTIONS FOR UNFAVORABLE RESULTS

When the Corrective Action Plan was released, all of the parties expressed appreciation for the improvements in Vermont’s water quality program and for the collaborative process. As mentioned above, the Region recognized the parties’ efforts and progress toward a better water program in Vermont. In press releases, CLF, ANR, and the ENRLC expressed similar sentiments. CLF’s Vermont director praised Region 1 for “fairly weighing and validating key concerns” that the Petition had raised, and also noted that the CAP represented “a heartening reaffirmation by DEC officials of the state’s commitment” to the Clean Water Act. In turn, ANR noted that the State was “pleased with the outcome” and grateful for “the hard work and good faith demonstrated by EPA and CLF in the resolution of this matter without the need to go to court.” The ENRLC echoed that it had been an “extremely valuable process for Vermont’s water quality.”

All might not have ended so well, and if not, there may have been some litigation options for CLF to pursue. A claim might be based on EPA’s failure to conclude the Petition matter, failure to commence withdrawal proceedings, or failure to withdraw program approval. For instance, under the Administrative Procedure Act (APA), a reviewing court can “compel agency action unlawfully withheld or unreasonably

179. Id.
180. Portions of this section reflect research conducted by student clinicians Craig Sparks, Graham Zorn, and Tracy Wyeth.
delayed.”185 For a court to do so, the agency action must be one that the agency is “required to take.”186 According to another provision of the APA, an agency must “within a reasonable time . . . proceed to conclude a matter presented to it.”187 Therefore, because EPA would be required to “proceed to conclude” a petition, there would be an action that EPA was “required to take” for purposes of an APA unreasonable delay suit.188 Additionally, CWA regulations require EPA to “respond in writing” to de-lelegation petitions—another action that might be challenged as unreasonably delayed.189 Whether the agency’s delay was in fact “unreasonable” would then turn on the particular facts and circumstances of the situation.190

Another potential argument might be that EPA’s failure to commence withdrawal proceedings under 40 C.F.R. § 123.64(b) was in fact a constructive denial of a petition, which denial would be arbitrary and capricious.191 The major Clean Water Act cases on the “constructive” issue suggest that a state’s failure to submit a total maximum daily load ("TMDL") to EPA over a long period of time, with no plans to remedy, can

185. 5 U.S.C. §§ 702 (2012) (granting a right to review for “[a] person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute”), 706(1) (providing scope of review for challenges to agency action).

186. Norton v. Southern Utah Wilderness Alliance, 542 U.S. 55, 64 (2004) (“Thus, a claim under § 706(1) can proceed only where a plaintiff asserts that an agency failed to take a discrete agency action that it is required to take.”); Benzman v. Whitman, 523 F.3d 119, 130–32 (2d Cir. 2008) (upholding dismissal of § 706(1) claim where statute used words like “should,” “whenever possible,” and “as appropriate” rather than “outlining discrete actions that a court may require it to do”).


188. See Pub. Citizen Health Research Grp. v. Comm’r, FDA, 740 F.2d 21, 32 (D.C. Cir. 1984) (involving a claim regarding citizen petition for FDA to promulgate a rule stating the “APA empowers the court to evaluate the pace of the agency decisional process and to order expedition if the pace lags unreasonably . . . [5. U.S.C. §§ 555(b) & 706(1)] give courts authority to review ongoing agency proceedings to ensure that they resolve the questions in issue within a reasonable time”) (citations omitted); see also American Rivers & Idaho Rivers United, 372 F.3d 413, 418 (D.C. Cir. 2004) (“FERC’s insistence that it is not obligated to address a petition filed under one of its own regulations allowing requests for discretionary action, is without merit. Under the APA a federal agency is obligated to ‘conclude a matter’ presented to it ‘within a reasonable time,’” (citation omitted); see also Mashpee Wampanoag Tribal Council, Inc. v. Norton, 336 F.3d 1094, 1099 (D.C. Cir. 2003) (stating that “Mashpee’s claim arose under the Administrative Procedure Act, which imposes a general but nondiscretionary duty upon an administrative agency to pass upon a matter presented to it ‘within a reasonable time,’ 5 U.S.C. § 555(b), and authorizes a reviewing court to ‘compel agency action unlawfully withheld or unreasonably delayed.’ id. § 706(1).”).

189. See 40 C.F.R § 123.64(b)(1) (2013) (stating that “[t]he Administrator will respond in writing to any petition to commence withdrawal proceedings.”).

190. See Mashpee, 336 F.3d at 1100 (stating that the “[r]esolution of a claim of unreasonable delay is ordinarily a complicated and nuanced task requiring consideration of the particular facts and circumstances before the court.”).

191. In addition to unreasonable delay, the APA provides a cause of action for challenging “arbitrary and capricious” agency actions. See 5 U.S.C. §§ 702 (granting a right to review), 706(2)(A) (2012) (stating that a reviewing court shall “hold unlawful and set aside agency action, findings, and conclusions found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.”).
be a constructive submission of no TMDL that triggers EPA’s duty to create the TMDL itself. However, most courts applying this doctrine have found that particular circumstances did not warrant findings of constructive submission – e.g., because the states had taken some actions toward developing TMDLS. The question may come down to whether the actor has “clearly and unambiguously” decided not to do something; if so, there may be a constructive, challengeable action.

If EPA actually did deny a petition, an arbitrary and capricious case would be more straightforward as a challenge to the “denial” of “relief.” Regarding jurisdiction, the Fifth Circuit has held that jurisdiction for review of a petition denial lies in the Courts of Appeal pursuant to CWA section 509, 33 U.S.C. § 1369(b)(1)(D). Section 509 of the CWA provides for judicial review of EPA’s action “in making any determination as to a State permit program submitted under section 1342(b) of this title.” Otherwise, an APA action would lie in the federal district courts. In either case, the court would review EPA’s decision under the APA’s “arbitrary and capricious” standard.

Another potential theory could be that EPA’s failure to withdraw program approval is a failure to perform a non-discretionary duty, for which

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192. See San Francisco Baykeeper v. Whitman, 297 F.3d 877, 881–83 (9th Cir. 2002) (discussing relevant cases).
193. Id.
194. Id. at 883 (holding that the court could not find constructive submission because the state had not “clearly and unambiguously” decided not to submit any TMDLS”) (internal citation omitted).
195. 5 U.S.C. § 702 (2012) (granting right of review of agency action); 5 U.S.C. § 551(13) (2012) (defining agency action as “the whole or a part of an agency rule, order, license, sanction, relief, or the equivalent or denial thereof, or failure to act”).
196. Save the Bay, Inc. v. EPA, 556 F.2d 1282, 1288 (5th Cir. 1977) (stating that review of EPA decision after public hearing to revoke or not revoke state’s authority “would be a determination as to a State permit program” within this court’s purview under § 509(b)(1)(D), 33 U.S.C. § 1369(b)(1)(D)). See also Johnson Cnty. Citizen Comm. for Clean Air & Water v. EPA, No. 3:05-0222, 2005 WL 2204953, at *6 (M.D. Tenn. Sept. 9, 2005) (finding EPA decision whether to withdraw program approval reviewable only in the Courts of Appeals).
197. 33 U.S.C. § 1369(b)(1)(D) (2012). Section 1342(b) applies to EPA’s approval of state programs, whereas § 1342(c) applies to EPA’s withdrawal of approval of programs. Presumably, the courts read § 509 as applying to any future determinations regarding state programs once they had been “submitted” to EPA under § 1342(b).
199. See Save the Bay, 556 F.2d at 1290 (“[W]e must emphasize the limited nature of our ultimate review over a decision not to revoke a state’s NPDES authority, which would encompass the familiar inquiry whether the decision was ‘arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.’”) (citation omitted).
citizens could bring suit under the CWA. Under the citizen suit provision, a few courts have basically found that once EPA has substantial evidence of a state’s noncompliance, the agency has a mandatory duty to make an adverse determination and initiate withdrawal proceedings absent improvements. The reasoning is that, absent such mandatory duty, EPA could “frustrate citizen enforcement of the (Act) . . . merely by refusing to make a finding or determination.” However, other courts have found that EPA has neither a mandatory duty to decide a petition in a certain way, nor a mandatory duty to initiate withdrawal until certain actions have occurred. These cases rely upon the plain language of the statute, which states:

> Whenever the Administrator determines after public hearing that a State is not administering a program approved under this section in accordance with the requirements of this section, he shall so notify the State and, if appropriate corrective action is not taken within a reasonable time, not to exceed ninety days, the Administrator shall withdraw approval of such program.

The Administrator shall not withdraw approval of any such

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200. 33 U.S.C. § 1365(a)(2) (2012) (allowing citizen suits against the Administrator for failure “to perform any act or duty under this chapter which is not discretionary”).

201. These cases dealt with allegations that EPA had mandatory duties under both § 1319(a)(2) (regarding EPA takeover of inadequate state enforcement programs) and § 1342(c)(3) (regarding withdrawal of approval of state programs), and applied similar analyses to both. See, e.g., Rivers Unlimited v. Costle, No. C-2-78-48, 11 Env’t Rep. Cas. (BNA) 1681, 1684 (S.D. Ohio 1978) (EPA has mandatory duty to “make the requisite finding or determination of noncompliance when presented with substantial evidence of such violations”); Save the Valley, Inc. v. EPA, 99 F. Supp.2d 981, 985–86 (S.D. Ind. 2000) [hereinafter Save the Valley I] (denying EPA’s motion to dismiss and stating: “[W]e read the CWA to impose a mandatory duty on the Administrator to make the requisite finding or determination when he becomes aware of such violations as articulated in § 1319(a)(2).”); Save the Valley, Inc. v. EPA, 223 F.Supp.2d 997, 1006, 1013–14 (S.D. Ind. 2002) (Save the Valley II) (ordering EPA to initiate withdrawal proceedings if state did not bring program into compliance, reasoning: “In the previous Entry [Save the Valley I], we specifically held that the Act requires the Administrator to make a finding under § 1319(a)(2) or a determination’ under § 1342(c)(3) . . . when [s]he becomes aware of such violations as articulated in § 1319(a)(2) . . . We agree with Plaintiffs that Indiana’s program is not in compliance, and that the evidence shows EPA has known that to be true for some time.”) (internal quotation marks omitted).


program unless he shall first have notified the State, and made public, in writing, the reasons for such withdrawal.\textsuperscript{204}

They hold that “under the plain terms of the CWA, and considering the legislative history viewed as a whole, the decisions of whether to hold a public hearing and whether to make a subsequent determination that a state is not administering its NPDES program in accordance with the CWA are wholly discretionary exercises of the EPA’s authority.”\textsuperscript{205} Further, “the mandatory duty to withdraw approval arises only after the Administrator has determined that a state is not administering its NPDES program in compliance with federal standards. . . . Without having made such a determination, the EPA has no non-discretionary or mandatory duty to perform.”\textsuperscript{206} Under these cases, a claim that EPA’s failure to withdraw program approval (as opposed to its failure to conclude a petition matter) is unreasonably delayed might face similar obstacles, as the unreasonable delay claim must rest on some action that the agency is “required to take.”\textsuperscript{207} If the agency is not required to hold a public hearing or make an adverse determination, the requisite required action would not exist.

\textbf{VII. CLOSING REFLECTIONS}

All in all, Conservation Law Foundation’s Petition was a significant success. It achieved numerous concrete improvements in Vermont’s water quality program as well as promises for future improvements. It was an

\underline{204} 33 U.S.C. § 1342(c)(3)(2012).

\underline{205} Johnson Cty, 2005 WL 2204953, supra note 203 at *4 (agreeing with “majority view,” where Plaintiffs claimed EPA had duty to hold hearing once it became aware of violations). See also Altman, 2004 WL 3019171, at *3 (“Withdrawal of approval occurs only after a hearing has been held and a determination has been made. The statute does not compel the EPA to either hold a hearing or to make such a determination by any specific time, indicating that the withdrawal provision is discretionary.”) (citation omitted); Delaware Cty. Safe Drinking Water Coal, 304 Fed.Appx. at 964 (“None of the three remaining CWA claims involve a non-discretionary duty, and, thus, they are not subject to suit under the CWA’s citizen-suit provision. . . [M]ost courts have held that the CWA does not create a non-discretionary duty for the EPA to withdraw non-complying state NPDES programs, and contrary decisions have been widely criticized.”) (citations omitted); Weatherby Lake Improvement Co., 1997 WL 687656 at *1 (“The plain language of . . . 402(c) of the Clean Water Act, does not compel the Administrator to investigate complaints or to make findings of violations which would then force EPA to withdraw Missouri’s authority to administer a state NPDES program.”); Sierra Club, 377 F.Supp.2d at 1207–08 (“Under the plain terms of the statute, the mandatory duty to withdraw approval arises only ‘whenever the Administrator determines after public hearing’ that a state is not administering its NPDES program in accordance with federal standards. The statute creates no express requirement that a public hearing be held at any specific time, or indeed ever, nor does the statute expressly require the EPA to make a determination one way or the other on the issue of whether a state is complying with federal law.”).

\underline{206} Johnson Cty, 2005 WL 2204953, supra note 203, at *4–5.

\underline{207} See supra note 182 [Norton & Benzman cases].
instance where persistence, a willingness to collaborate, and a fair amount of patience led to favorable results. From an environmental movement perspective, it is the type of process that can serve as a nice complement to – but not replacement for – important litigation.

A similar concept was explored in a recent article by Emily Hammond and David Markell. The article is a very interesting, thoroughly researched assessment of the petition-to-withdraw process as a means to build “legitimacy from the inside out” in agencies.208 It includes an overview of the purposes of judicial review (e.g., ensuring that agencies follow required procedures and adhere to the mandates of their enabling statutes) and explores how those goals might also be met from the inside-out through an empirical assessment of 58 withdrawal petitions.209 The authors note that the petition process stands “at the crossroads of administrative law, cooperative federalism, and environmental law.”210 Among other things, they conclude that petition processes have produced “measurable substantive changes in critical areas such as state law and state agency permitting, investigations, and enforcement.”211 This was the case in Vermont; ideally, the process here can be useful as a model for other advocates seeking systemic clean water reforms in their states.

209. Id. passim.
210. Id. at 318.
EPA’S AUTHORITY GONE AWRY: THE FLAWED CAFO REPORTING RULE

Emily R. Lyons

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INTRODUCTION

The United Nations has projected that the world population will reach 9.3 billion in 2050 and 10.1 billion in 2100. This growth in population requires an increase in food production of 56%. Large-scale agriculture is one of the answers to this problem. Some livestock producers have shifted the model of their farms away from the small family farm approach and now use large-scale production practices, which lower product prices as well as increase production. The federal government designates these livestock production systems as Animal Feeding Operations (AFOs). AFOs have been under intense scrutiny—due to their size, number of animals, and management practices—from animal rights activism groups, environmental interest groups, and the federal and state governments.

In the Clean Water Act (“CWA”), Congress expressly required the Environmental Protection Agency (“EPA”) to regulate Concentrated Animal Feeding Operations (“CAFOs”) by designating them as point sources. Congress clearly perceived that, due to their size, CAFOs posed a potential threat to the biological integrity of the Nation’s waters. EPA’s regulation of CAFOs has been notably problematic. EPA’s rules,

3. See Jean-Paul Chavas, Structural Change in Agriculture Production: Economics, Technology and Policy, in HANDBOOK OF AGRICULTURAL ECONOMICS: VOLUME 1A AGRICULTURE PRODUCTION 264–85 (Bruce L. Gardner & Gordon C. Rausser eds., 2001) (discussing economies of scale and the trend toward agricultural intensification); FRANK R. SPELMAN & NANCY E. WHITING, ENVIRONMENTAL MANAGEMENT OF CONCENTRATED ANIMAL FEEDING OPERATIONS 1 (2007) (noting the change from small farms to large farms).
7. See id. § 1251(a) (“The objective of this chapter is to restore and maintain the chemical, physical and biological integrity of the Nation’s waters.”).
8. See generally Shauna R. Collins, Striking the Proper Balance between the Carrot and the Stick Approaches to Animal Feeding Operation Regulation, U. ILL. L. REV. 923 (2012) (positing...
especially those requiring National Pollutant Discharge Elimination System (“NPDES”) permits for CAFOs, have encountered challenges from both environmental interest groups and the agricultural community. These groups argue, respectively, that EPA’s regulations are either too lax or go beyond EPA’s statutory authority.

EPA claims that part of the problem with regulating CAFOs is due to its lack of complete information regarding CAFOs. EPA asserts that it lacks facility-specific information for all AFOs in the United States and that obtaining such information is necessary to carry out the NPDES program. In order to obtain this information, in 2011 EPA proposed a CAFO Reporting Rule. This rule would require all AFOs, regardless of size and regulatory status, to report specific information to EPA in order to ensure that CAFOs are complying with the requirements of the CWA. Even though EPA recognized the necessity and importance of obtaining this information, it withdrew the CAFO Reporting Rule in July 2012. EPA’s current method of CAFO regulation is ineffectual.

9. The CWA authorizes the NPDES permit program to regulate point sources that discharge pollutants into the waters of the United States. 33 U.S.C. § 1311(a) (2006). Point sources are required to obtain permits from EPA or an authorized state agency, before they are allowed to discharge pollutants into surface waters. Id. §§ 1311, 1342(a).


11. Nat’l Pork Producers, 635 F.3d at 749; Waterkeeper Alliance, 399 F. 3d at 498.


13. Id.

14. Id.

15. Id.

may have claimed good intentions in proposing this rule; however, events leading up to EPA’s proposal of the rule show ignoble intentions. It was in EPA’s best interest to withdraw the CAFO Reporting Rule due to numerous problems with the rule that this article will address.

Part I describes CAFOs and the history of EPA’s CAFO regulation in the United States. This Part also discusses the events that led up to EPA promulgation of the CAFO Reporting Rule. Part I concludes with a description of the contents of the proposed CAFO Reporting Rule, which the following sections of the note evaluate. Part II analyzes the CAFO Reporting Rule EPA proposed and explains how it is not in accord with the CWA. Part II begins by evaluating the plain language of section 308 of the CWA. It then explains how EPA attempted to exercise authority outside of that delegated under the statute. Finally, Part II discusses how the information EPA sought was not relevant to setting effluent limitations and how EPA could not obtain this information from CAFO operators under section 308.

Part III evaluates the due process considerations of the CAFO Reporting Rule. Part III argues that EPA did not fully consider the notice requirement of due process. Part IV describes how the CAFO Reporting Rule violated the concept of cooperative federalism and authority delegated between the EPA and state environmental agencies. Part IV explains EPA’s already strained relationship with state agencies and how this rule added to this strain. Part V discusses the settlement agreement with environmental non-government organizations (“NGOs”) that led to the rule promulgation. Part V will describe the manner in which EPA proposed the CAFO Reporting Rule and problems with settlements forcing rule promulgation. Finally, Part VI posits how EPA could obtain the information it seeks in the CAFO Reporting Rule using means other than EPA’s section 308 authority.

I. BACKGROUND

CAFO regulations are very complex and have a long history. This section will highlight the differences between AFOs and CAFOs, which


will help set the backdrop to EPA’s statutory power under the CWA. It will also describe the evolution of CAFO regulations and the cases that caused EPA to promulgate the CAFO Reporting Rule. Then, the section will conclude with a summary of the CAFO Reporting Rule, which the EPA proposed on October 21, 2011, and describe a pending lawsuit challenging EPA’s withdrawal of the rule.

A. Overview of AFOs and CAFOs

It is important to note the distinction between an AFO and a CAFO. EPA defines an AFO as “a lot or facility . . . where the following conditions are met: (i) Animals . . . have been, are, or will be stabled, or confined and fed or maintained for a total of 45 days or more in any 12-month period, and (ii) crops, vegetation, forage growth, or post-harvest residues are not sustained in the normal growing season over any portion of the lot or facility.” \[19\] A CAFO “means an AFO that is defined as a Large CAFO or Medium CAFO by the terms of this paragraph, or that is designated as a CAFO in accordance with paragraph (c) of this section.” \[20\] Not all AFOs are subject to regulation, while certain sizes of CAFOs are. \[21\]

EPA designates large and medium CAFOs based upon the number and type of animals present on the farm. \[22\] Medium CAFOs are any AFOs that fall within specific ranges, which the EPA defines or designates as a CAFO. \[23\] CAFOs are defined as medium when the farm meets one of the following conditions:

(A) pollutants are discharged through . . . a man-made ditch, flushing system, or other similar man-made device; or
(B) pollutants are discharged directly into waters of the United States that originate outside of and pass over, across,

\[19\] 40 C.F.R. § 122.23(b)(1) (2013).
\[20\] Id. § 122.23(b)(2).
\[21\] See 33 U.S.C. § 1362(14) (2006) (stating CAFOs are point sources under the CWA); 40 C.F.R. § 122.23(a) (2013) (declaring only specifically defined CAFOs are point sources that require NPDES permits).
\[22\] See 40 C.F.R. § 122.23(b)(4), (6) (describing what defines a CAFO regulated under the CWA). The following describes some of the types of animals and number of animals for each of the size designations: mature dairy cows 700 and above for large CAFOs, 200 to 699 for medium CAFOs; cattle other than mature dairy cows or veal 1,000 and above for large CAFOs, 300 to 999 for medium CAFOs; swine weighing 55 pounds or more 2,500 and above for large CAFOs, 300 to 999 for medium CAFOs; swine weighing less than 55 pounds 10,000 for large CAFOs, 3,000 to 9,999 for medium CAFOs; laying hens using a non-liquid manure handling system 82,000 for large CAFOs, 37,000 to 124,999 for medium CAFOs; and chickens other than laying hens using a non-liquid manure handling system 125,000 birds for large CAFOs, and 9,000 to 29,999 for medium CAFOs. Id. § 122.23(b)(6)(i).
\[23\] Id. § 122.23 (b)(6)(ii).
or through the facility or otherwise come into direct contact
with the animals confined in the operation.\textsuperscript{24}

Small CAFOs are any AFOs that do not fit the definition of a medium or
large CAFO.\textsuperscript{25} Nonetheless, EPA will designate a small AFO as a CAFO if
it significantly contributes pollutants to surface waters.\textsuperscript{26}

\textbf{B. CAFO Regulation History}

Under the CWA, Congress specified point sources that are subject to
regulation.\textsuperscript{27} The definition of point sources includes any “concentrated
animal feeding operation . . . from which pollutants are or may be
discharged.”\textsuperscript{28} Despite this inclusion of CAFOs, EPA did not issue national
effluent limitation guidelines ("ELGs")\textsuperscript{29} and standards for feedlots until
1974.\textsuperscript{30} The guidelines allow CAFOs to discharge only if “a chronic or
catastrophic storm causes an overflow from a facility . . . from a 25 year,
and 24 hour storm occurrence. . .”\textsuperscript{31} In 1976, EPA further defined ELGs
through a NPDES regulation, which allowed smaller CAFOs to have an
ELG based on the permitting authority’s best professional judgment.\textsuperscript{32} The
1976 regulations did not require then-designated large CAFOs\textsuperscript{33} to apply
for or obtain a NPDES permit if there was not a discharge of pollutants
from the facility into navigable waters.\textsuperscript{34}

In 1999, EPA and the United States Department of Agriculture
(“USDA”) published the Unified National Strategy for Animal Feeding
Operations.\textsuperscript{35} EPA and USDA published the document in response to

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\begin{footnotesize}
24. \textit{Id}
25. \textit{Id} $\S$ 122.23(b)(9).
26. \textit{ENVT. PROT. AGENCY, PRODUCERS’ COMPLIANCE GUIDE FOR CAFOs 9 (Nov. 2003),
available at http://www.epa.gov/rfa/documents/Compliance-CAFOs.pdf.}
28. \textit{Id.}
29. \textit{ELGs are national technology-based regulations to control industrial wastewater
discharges. \textit{Basic Information, ENVT. PROT. AGENCY,}

http://water.epa.gov/scitech/wastetech/guide/basic.cfm (last visited Dec. 30, 2013). EPA issues ELGs for
categories of dischargers and attempts to work in tandem with other water quality programs to
protect the nation’s waters. Id.}
31. \textit{Id. at 5707 (discussing an exception to the “no discharge” of pollutants rule as a result
of unusual rainfall events).}
32. \textit{State Program Elements Necessary for Participation in the National Pollutant
33. \textit{Id. at 11,461.}
34. \textit{Connor, supra note 8, at 291. CWA defines “navigable waters” as “waters of the
United States, including territorial seas.” 33 U.S.C. $\S1362(7).}$
35. \textit{U.S. DEP’T OF AGRIC. & ENVT. PROT. AGENCY, UNIFIED NATIONAL STRATEGY FOR
\end{footnotesize}
President Clinton’s release of the Clean Water Action Plan, which provided a plan for restoring and protecting water quality across the United States. The Unified Strategy represented USDA and EPA’s joint efforts to implement improved measures to protect the nation’s waters. The document describes the expectation that all AFO owners and operators develop and implement a technically sound and economically comprehensive nutrient management plan to deal with manure produced on the farm.

In 2001, EPA issued a new CAFO regulation due to a timeline established in a lawsuit between EPA, Natural Resources Defense Council, and Public Citizen. In 2003, EPA promulgated, in final form, a large portion of the 2001 proposed rule. The 2003 Rule had extensive revisions and included a new definition for CAFOs, a “duty to apply” for a NPDES permit for all CAFOs, a compliance schedule, a requirement for the CAFO to utilize best management practices for manure handling and to use a nutrient management plan, and a new design standard for certain facilities. In 2003, environmental NGOs and agriculture industry representatives challenged the 2003 CAFO Rule in the Second Circuit Court of Appeals. The court vacated the provisions that allow permitting authorities to issue permits without reviewing the nutrient management plan, that allow permitting authorities to issue permits that do not include the nutrient management plan guidelines, that do not provide adequate public participation, and that require all CAFOs to apply for a NPDES permit.

In response to the 2003 challenge and vacation, EPA issued a Revised NPDES Permit Regulation for CAFOs in 2008. The 2008 Rule revised six...
CAFO regulatory provisions: the “duty to apply” for NPDES permit coverage for all CAFOs that “propose to discharge;” an optional certification program for CAFOs that do not discharge; clarification of the agriculture stormwater exemption\(^{45}\) for unpermitted CAFOs; the nutrient management plan submission and required public participation; New Source Performance Standards for specific facilities; water quality-based effluent limitations applicability; best available technology effluent limitations for pathogens; and compliance dates.\(^{46}\)

Environmental NGOs and agriculture industry representatives challenged this rule following its promulgation.\(^{47}\) In this case, the Fifth Circuit Court of Appeals vacated provisions in the 2008 Rule that required CAFOs that “propose to discharge” to apply for a NPDES permit and that created liability for failing to apply for a NPDES permit.\(^{48}\) However, the court upheld the provisions that imposed a “duty to apply” on CAFOs that are discharging.\(^{49}\) This allowed permitting authorities to regulate a permitted CAFO’s manure land application and include those requirements in the NPDES permit.\(^{50}\)

On July 30, 2012, EPA promulgated the current form of the CAFO rule.\(^{51}\) This direct-to-final rule\(^{52}\) eliminated the requirement that an owner or operator of a CAFO that “proposes to discharge” must apply for a NPDES permit and removed the voluntary certification option for unpermitted CAFOs.\(^{53}\) The action also removed the timing requirements specifying when CAFO owners and operators must apply for a NPDES permit because those dates in the 2008 Rule had passed.\(^{54}\)

\(^{45}\) Agricultural stormwater discharges are “precipitation-related discharge of manure, litter or process wastewater from land areas under the control of a CAFO . . . .” 40 C.F.R. § 122.23(e) (2013). These discharges are exempt when the manure, litter, or process wastewater is applied to land areas under control of a CAFO according to the CAFO’s site-specific nutrient management plan. Id. § 122.23(e).

\(^{46}\) 2008 CAFO Rule, supra note 44, at 70,421–68.


\(^{48}\) Id. at 756.

\(^{49}\) Id.

\(^{50}\) Id.


\(^{52}\) A direct-to-final rule does not require an opportunity for public comment; EPA found good cause that notice and comment procedure was impracticable, unnecessary, or contrary to public interest because the action was “ministerial in nature.” Id. at 44,496; Administrative Procedure Act, 5 U.S.C. § 553(b)(3)(B) (2006).

\(^{53}\) 20 12 CAFO Rule Vacature, supra note 51, at 44,494.

\(^{54}\) Id. at 44,495.
2012, EPA published a review of the CAFO rule in the Federal Register pursuant to section 610 of the Regulatory Flexibility Act. EPA solicited comments on “the continued need for the CAFO rule;” “the nature of complaints or comments received concerning” the CAFO rule; “the complexity of the rule;” “the extent to which the rule overlaps, duplicates or conflicts with other Federal, State or local government rules;” “and the degree to which technology, economic conditions or other factors have changed” regulated CAFOs. Individuals seeking to comment on the CAFO rule had until March 1, 2013 to do so. EPA is currently reviewing these comments, but the review has left the future of CAFO regulation unsettled.

C. Sweetheart Deal that Led to the CAFO Reporting Rule Promulgation

On May 25, 2010, EPA and the environmental NGOs involved in the 2008 CAFO rule challenge reached a settlement prior to the final disposition of the case by the Fifth Circuit. The settlement agreement required EPA to produce a guidance document to assist permitting authorities in implementing the NPDES permit program for CAFOs. This document would specify the types of operations and circumstances requiring a CAFO to apply for permit coverage. The document would also contain guidelines for determining when a CAFO was “proposing to discharge.” In a surprising three-day turnaround, EPA published this guidance document on May 28, 2010. This settlement also required EPA to propose a rulemaking process, under its CWA section 308 authority to force all AFOs—regardless of size and regulatory status—to submit certain information regarding their operations and practices. Then, EPA was
obligated to release this information to the public unless it was confidential business information.  

D. 2011 CAFO Reporting Rule

On October 21, 2011, EPA published the NPDES CAFO Reporting Rule in the Federal Register. The rule was a co-proposition that allowed for two mechanisms under which EPA could “obtain basic information from CAFOs to support EPA in meeting its water quality protection responsibilities under the Clean Water Act.” EPA claimed this information would “improve EPA’s ability to effectively implement the NPDES program and ensure that CAFOs are complying with the requirements of the CWA.” EPA claimed section 308 of the CWA gave it the authority to obtain certain information from all AFOs regardless of the facilities’ regulatory status.

EPA fully admits that the rule proposal was due to a settlement agreement with environmental NGOs, which arose from challenges to the 2008 CAFO rule. The settlement agreement mandated that EPA use section 308 of the CWA as authority for the rule, provided a timeline for the proposed rulemaking, and set forth the specific information EPA was to seek from all CAFO operators. The settlement agreement required EPA to propose the rule by October 14, 2011, and take final action on the rule by July 13, 2012. The settlement agreement required EPA to seek the following information:

- Name and address of the owner and operator; if contract operation, name and address of the integrator; location (longitude and latitude) of the operation; type of facility; number and type(s) of animals; type and capacity of manure storage; quantity of manure, process wastewater and litter generated annually by the CAFO; whether the CAFO land-applies; available acreage for land application; if the CAFO land-applies, whether it implements a nutrient

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64.  Id. at 4.
66.  Id.
67.  Id.
68.  Id. at 65,433.
69.  Id. at 65,435.
70.  Id.
71.  Id.
plan for land application; [i]f the CAFO land-applies, whether it employs nutrient management practices and keeps records on site consistent with 40 C.F.R. § 122.23(e); [i]f the CAFO does not land apply, alternative use of manure, litter, and/or wastewater; [w]hether the CAFO transfers manure off-site, and if so, quantity transferred to recipient(s) of transferred manure; [and w]hether the CAFO has applied for NPDES permit.  

If EPA chose not to request any of this information, it was required to identify the item and explain why it did not seek the information. Notably, the settlement agreement did not “commit EPA to the substance of any final action . . . limit or modify the discretion accorded EPA by the CWA . . . [or] require EPA to collect the information proposed in [the] notice.”

As previously stated, EPA proposed two mechanisms through which to obtain the information required under the settlement agreement. Option 1 of the two mechanisms would apply to all CAFOs. In this option, EPA would require CAFO operators to fill out a survey asking specific questions relating to the facility and its management. EPA would require the following information to be submitted: the legal name of the owner of the CAFO or an authorized representative, including their mailing address, email address, and primary telephone number; location of the CAFO’s production area identified by either the latitude and longitude or the street address; if the owner or operator has NPDES permit coverage, the date the permit was issued, and the permit number; identification of each animal type confined for the previous 12-month period; and where the owner or operator land applies manure, litter and process wastewater, and the number of acres under the control of the owner that is available for land application. This option would require all CAFO owners or operators to submit the above information; however, an exception would exist to allow for states with authorized NPDES programs to provide the information EPA sought.

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72. *Id.* at 65,435–36.
73. *Id.* at 65,435.
74. *Id.*
75. *Id.* at 65,431.
76. *Id.* at 65,437–38.
77. *Id.* at 65,437.
78. *Id.*
79. *Id.* at 65,439.
States choosing to submit information would be required to submit the information within ninety-days of the rule’s effective date. Within sixty days of states submitting the information, EPA would make a list available with the names, permit number, and state of reporting CAFOs. If a CAFO did not appear on the list, then the rule required the CAFO to submit the survey within ninety days of the list publication. The Reporting Rule required CAFOs to submit the information on the official survey form provided by EPA, either electronically or by certified mail. EPA would not mail the surveys to individual CAFOs because EPA claimed that the locations and addresses of many operations are unknown. The survey would be available either on the EPA website or via request from EPA headquarters. EPA would also print the survey in the Federal Register, but in order to notify CAFOs, EPA would “conduct extensive outreach with the regulated community, industry groups, environmental groups and states in [EPA’s] efforts to notify all stakeholders about the [rule] requirements.”

Option 2 would only apply to CAFOs in focus watersheds. Under this option, EPA would first attempt to identify focus watersheds with “water quality problems likely attribute[d] to CAFOs.” EPA would then identify CAFOs in those focus watersheds through existing data from the Federal, state, and local level. After EPA identified focus watersheds and CAFOs in the area, EPA would request CAFOs to submit the same information as in Option 1. In order to notify CAFOs in the focus watersheds of the reporting requirement, EPA would “conduct a variety of information outreach efforts” including: publication of notice in the Federal Register describing the boundaries of the targeted areas; extensive outreach with the regulated community and interested stakeholders; and working with the state and local authorities. If a CAFO failed to report the required information to EPA, the CAFO would be in violation of CWA section 308 and subject to penalties under section 309.

80. *Id.* at 65,440.
81. *Id.*
82. *Id.*
83. *Id.*
84. *Id.*
85. *Id.*
86. *Id.*
87. *Id.* at 65,442.
88. *Id.*
89. *Id.*
90. *Id.* at 65,444.
91. *Id.*
92. *Id.* at 65,444.
administrative, civil and criminal penalties,” which EPA assesses using a national approach as outlined in its general penalty policy.\(^{93}\)

EPA ended the proposed rulemaking by discussing other mechanisms it could use to obtain the information.\(^{94}\) These methods include the use of existing data from the USDA, state permitting programs, state registration or licensing programs, satellite imagery and aerial photography, reporting requirements under other programs, and other sources of data. The EPA also discussed alternative methods of promoting environmental stewardship and compliance, in addition to requiring states to submit CAFO information from their CAFO regulatory programs and only collecting information from CAFOs if a state does not report.\(^{95}\)

Following the notice and comment period, EPA withdrew the CAFO Reporting Rule on July 20, 2012.\(^{96}\) EPA partially decided to withdraw the CAFO Reporting Rule following a search on the internet of state NPDES permitting websites that contained CAFO information accessible online.\(^{97}\) EPA found that thirty-seven state permitting websites have information on 7,473 AFOs; this information includes operations that are not defined or designated as CAFOs and those that the CWA does not regulate.\(^{98}\) Further, EPA executed a Memorandum of Understanding with the Association of the Clean Water Administrators, which will assist in gathering information about CAFOs.\(^{99}\) EPA believes cooperating with the states will allow EPA to obtain the information it seeks about CAFOs.\(^{100}\) This approach is more appropriate because states have expressed interest in working with EPA to exchange the information the states already possess.\(^{101}\) EPA also believes its partnerships with the USDA, United States Geological Survey, and other federal agencies will yield timely and useful information about CAFOs.\(^{102}\) EPA noted that CAFOs have provided information to governmental entities, even though not directly to EPA.\(^{103}\) Therefore, EPA can obtain the information it seeks from other government entities.\(^{104}\)
Environmental and animal welfare groups sued EPA one year after EPA’s withdrawal of the CAFO Reporting Rule. These groups alleged that EPA unlawfully retracted the CAFO Reporting Rule when the agency failed to provide a reasonable basis for the withdrawal decision as required by the Administrative Procedure Act. These groups fail to realize the fatal flaws present in the CAFO Reporting Rule as proposed, which would have prevented EPA from promulgating the rule.

II. EPA’S AUTHORITY UNDER SECTION 308 AND EPA’S FLAWED APPLICATION OF SECTION 308 TO THE CAFO REPORTING RULE

To comprehend how EPA acted in an ultra vires manner, it is essential to understand section 308 of the CWA and how the courts have interpreted EPA’s authority under that section. It is also instructive to observe how EPA has previously used section 308 to obtain information from point sources. Finally, this Part reviews how EPA improperly applied its 308 authority to the CAFO Reporting Rule.

A. EPA’s Section 308 Authority

Section 308 is a CWA enforcement provision. This section states, in pertinent part:

the Administrator [of EPA] shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods . . . (iv) sample such effluents . . . and (v) provide such information as he may reasonably require.

The section then states that EPA or an authorized representative, upon presentation of proper credentials, may conduct an inspection of the facility.

106. Id. at 3–4.
108. Point sources subject to section 308 that do not comply are subject to enforcement proceedings. 33 U.S.C. § 1319 (2006).
109. Id. § 1318(a)(A) (emphasis added).
110. This includes an authorized contractor acting as a representative of EPA. See In Re Alameda Cnty. Assessor’s Parcel Nos. 537-801-2-4 & 537-850-9, 672 F. Supp. 1278, 1287–88 (N.D. 
and have access to and copy the records required above. EPA uses this information to develop—or assist in the development—of effluent limitations, other limitations, prohibitions, or effluent standards, pretreatment standards, or performance standards. EPA also uses the information to determine if there are violations and to help carry out various programs under the CWA. The information obtained under this section is available to the public except “upon a showing . . . that records, reports, or information, or particular part . . . would divulge methods or processes entitled to protection as trade secrets.” This section of the CWA requires point sources to self-monitor which allows for easier monitoring and inspection by EPA or the state agency regulating the point source. If permitted point sources do not maintain the records required in section 308, point sources can face enforcement action under CWA section 309.

Relatively few cases challenge EPA’s authority under section 308 of the CWA. In general, the courts recognize EPA’s authority to collect information to carry out the objectives of the CWA. The Fifth Circuit noted this in Texas Oil and Gas Association v. EPA. This suit involved eighteen petitions seeking review and reversal of final best available technology effluent limitation guidelines for the coastal oil and gas production industry. In the initial stages of setting these limitations, EPA distributed a 99-page questionnaire to known coastal operators under its section 308 authority. The court found this action within EPA’s power to collect information necessary to carry out the CWA’s objectives.


112. Id. at § 1318(a).
113. Id.
116. Id.
117. Id. at § 1319.
119. Tex. Oil & Gas Ass’n, 161 F. 3d at 930.
120. Id. at 927.
121. Id. at 930.
122. Id. at 927–30.
case, EPA Region 6 issued NPDES permits that banned the discharge of produced water from coastal oil and gas facilities.  

Similarly, the First Circuit Court of Appeals stated that EPA can request data and information from an individual or company. However, “the agency’s request for information is not enforceable under the Acts, nor may fines be imposed, until a court order is obtained.” This means that the Act does not permit EPA, without first obtaining judicial leave, to force an individual to produce records. Tivian Laboratories—the entity EPA sought information from—challenged the constitutionality of the CWA and the Clean Air Act provisions that require owners of any point source to provide information that EPA reasonably requires to carry out its responsibilities under the Acts. In October 1975, EPA sent Tivian Laboratories a letter requesting information about the company’s use and disposal of polychlorinated biphenyls and other chemical substances. The letter cited section 308 of the CWA as the source of its authority to request the information. Tivian Laboratories refused to comply with EPA’s request, thus EPA filed suit in federal district court to obtain judicial enforcement of its request and impose a civil fine on Tivian Laboratories for not supplying the data voluntarily.

Tivian Laboratories claimed that EPA violated its Fourth Amendment rights by threatening it with fines if it did not turn over the requested information. The court found that there was no threat of fines in EPA’s letter and the agency can request the information, but similar to a subpoena duces tecum, a court order is necessary in order to obtain the information if it is not voluntarily given. Additionally, the court did not perceive that the questionnaires EPA sent violated the Fourth, Fifth, or Thirteenth

123. Id.
125. Id.
126. Id.
127. Id.
128. Id. at 51.
129. Id.
130. Id. at 51–53.
131. Id. at 53.
132. Agencies commonly use subpoenas duces tecum to obtain records as evidence that is relevant to not only pending charges, but also to assist the agency in determining if it is necessary to bring an enforcement action. Id. at 53–54.
133. Id.
134. “The right of the people to be secure in their person, houses, papers and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.” U.S. CONST. amend. IV.
135. “No person shall . . . be deprived of life, liberty, or property, without due process of law . . .” U.S. CONST. amend. V.
Amendments. 136 The Ninth Circuit Court of Appeals and three district courts have reaffirmed these fundamental principles behind EPA’s section 308 authority.137

When employing the section 308 authority, EPA typically uses Administrative Investigative Commands (“AICs”).138 Agencies use AICs to obtain documents, records, and other tangible items—in this case maintenance records, effluent sample levels, and other site-specific information.139 EPA uses its section 308 authority to command owners and operators of point sources “to give written answers to written questions, to provide originals or true copies of records and documents, and to provide narrative descriptions and explanations of previous events.”140 When EPA determines it needs information from an industry, it prints a notice in the Federal Register.141 Under normal circumstances, EPA sends the questionnaire or survey seeking specific information to the owner or operators of the point sources.142 EPA exerts this authority over sources of
pollution that are clearly point sources, such as chemical production plants, power plants, landfills, mines, and construction sites.\textsuperscript{143}

The information EPA seeks under section 308 must reasonably relate to the purpose of the CWA.\textsuperscript{144} The point source that EPA seeks information from has the burden to prove there is no reasonable relation between the information and the CWA’s purpose.\textsuperscript{145} Generally, courts enforce an administrative agency’s request for information when the investigation is within the agency’s authority, the request is not too indefinite, and the information requested is reasonably relevant.\textsuperscript{146} This requirement applies to EPA’s request for other information as well.\textsuperscript{147} To avoid submitting the information, the responder to the request must establish the agency’s action is improper by making a well-supported allegation of specific facts.\textsuperscript{148}

\textbf{B. EPA’s Flawed Attempt to Use Section 308 in the CAFO Reporting Rule}

There are several problems with EPA’s assertion of authority under section 308 of the CWA to collect information from all AFOs. It is possible that EPA does not have the power to issue questionnaires in order to collect information under its section 308 powers. In order to determine if EPA has the authority to collect information from all AFOs, one must look at the plain language of the statute. This means to determine EPA’s authority, one must look at the “language itself [and] the specific context in which

\begin{itemize}
\item \textsuperscript{143} See generally Trustees for Alaska v. Envtl. Prot. Agency, 749 F.2d 549, 551–52 (9th Cir. 1984) (attempting to obtain information from gold placer miners); United States v. Tivian Labs., Inc., 589 F.2d 49, 51 (1st Cir. 1978) (seeking information from a chemical production plant); AFOs are not point sources in and of themselves; EPA only regulates AFOs as CAFOs if the specific AFO fits the regulatory definition EPA established. \textit{See supra} Part I A; United States v. Xcel Energy Inc., 759 F. Supp. 2d 1106, 1109 (D. Minn. 2010) (attempting to obtain information from power plants); United States v. Hartz Constr. Co., Inc., 2000 WL 1220919, *1 (N.D. Ill. 2000) (attempting to obtain documents from construction site); United States v. Liviola, 605 F. Supp. 96, 97 (N.D. Ohio 1985) (looking to obtain information from a landfill).
\item \textsuperscript{144} 33 U.S.C. § 1318(a)(A)(2006) (“the Administrator shall require the owner or operator of any point source to . . . (v) provide such other information as he may reasonably require”) (emphasis added).
\item \textsuperscript{145} See Endicott Johnson Corp. v. Perkins, 317 U.S. 501, 509 (1943) (stating subpoenaed information must be “plainly incompetent or irrelevant” and not producible).
\item \textsuperscript{148} Hamill, \textit{supra} note 138, at 117–18.
\item \textsuperscript{149} See E.I. du Pont de Nemours & Co. v. Train, 430 U.S. 112, 126 (1977) (using a plain-language interpretation to determine the EPA’s authority to set performance standards for new point sources of water pollution).
\end{itemize}
that language is used”\footnote{150} because it is “presume[d] that [the] legislature says in a statute what it means and means in a statute what it says”\footnote{151} when delegating authority to agencies.

The plain language of the statute allows EPA to enter the premises of a point source and review the reports and records kept by the point source. There is nothing in the CWA that compels a point source of pollution to fill out a questionnaire and return it to EPA for review. No courts have held that EPA has the power to send these questionnaires, nor does it appear that it has been litigated. The case law shows that EPA has sent questionnaires directly to regulated point sources for information, but there is no evidence that EPA has the authority to obtain information from an entire industry—in this case every single AFO in the United States.\footnote{152}

The most significant problem with the rule is EPA’s attempt to assert power over farms beyond its section 308 authority. As shown above, EPA strictly defines what size a livestock farm must be in order for EPA to be considered a CAFO. Further, EPA has only stated that large CAFOs and certain medium sized CAFOs are considered point sources of water pollution.\footnote{153} However, as proposed, EPA planned to demand information from all AFOs. EPA was clearly participating in ultra vires agency action through the CAFO Reporting Rule.

\textbf{C. Relevance of Information}

There were problems with the relevance of the questions EPA was seeking from all AFOs. Whether or not a CAFO has a NPDES permit does not help EPA set effluent limitations for a particular watershed. Because CAFOs are required to be zero-discharge facilities, they do not allow effluents enter waters of the United States and thus should have little impact on effluent levels in a watershed. EPA, as allowed under the CWA,\footnote{154} has

\begin{footnotes}
\item 153. EPA’s ability to designate certain livestock farms as point sources is completely self-serving. Therefore, on a whim, EPA could simply change the definition of point source to include all AFOs no matter what size in order to extend its authority over the farms.
\end{footnotes}
exempted any agricultural stormwater discharges that are precipitation-related from land areas under CAFOs control. Therefore, there is no connection to setting effluent limitations and whether a CAFO land-applies manure, litter, or process wastewater. As long as a CAFO is following its site-specific nutrient management plans, it is a zero-discharge facility, which should not affect effluent levels in nearby watersheds. Any discharges that result would most likely be due to precipitation, which Congress exempted under the agriculture stormwater exemption. Additionally, the type and number of animals on a particular livestock operation is not related to setting and/or establishing effluent limitations. The EPA’s only concern should be if CAFOs are discharge without a permit and not focus on how many and what species of animals are present in a particular location.

Finally, knowledge of the address or latitude and longitudinal location of a CAFO is not reasonably related to setting effluent limitations. The ability to locate and contact CAFOs does not fall within the purview of setting and developing effluent limitations. EPA’s duty under the CWA is to set effluent limitations for waters of the United States. Potential sources of pollution do not affect the setting of effluent limitations in a given area. EPA is required to set effluent limitations based upon the amount of remediation needed for a particular watershed, not to set them in a specific manner depending on what types of pollution sources are in a given area. Furthermore, information collected under section 308 is available to the public. A producer’s overriding interest in keeping the location of their production facilities—and many times their home—private is more important than EPA’s need for this information.

155. 40 C.F.R. § 122.23(e) (2013).
156. Id. at § 122.23(e).
158. Press Releases, NORTH AMERICAN ANIMAL LIBERATION PRESS OFFICE, http://animalliberationpressoffice.org/NAALPO/category/press-releases/ (last visited Feb. 18, 2014). The Animal Liberation Press Office lists numerous animal rights activities and liberations on farms around the United States. This provides information about why farmers may want to keep the location of their farming operations confidential when this information is available by way of a FOIA request. Some of these activities include: release of pheasants from Primrose Pheasant Farm in Canby, OR on September 24, 2012; cattle trailers being burned on a Harris Ranch in Coalinga, CA on January 9, 2012; a turkey and geese “liberation” from a farm in Vermont on November 22, 2012; the fire-bombing of a poultry farm in Mexico on October 16, 2010; the raid of a deer farm in Oregon on October 11, 2010; a “liberation” of 72 hens from a Utah poultry farm on April 2, 2010; and the January 17, 2008 “liberation” of two turkeys from a farm in South Carolina. Id.
159. Livestock farmers’ fears were not unfounded as evidenced by EPA’s recent release of this information to environmental groups in February 2013. Alan Newport, EPA Releases Producer Information to Animal Rights Groups, FARM FUTURES (Feb. 20, 2013), http://farmfutures.com/story-
III. THE CAFO REPORTING RULE AND ITS FAILURE TO FULLY CONSIDER DUE PROCESS

Notice is essential to due process in order to give all interested parties the knowledge of the action and allow them the opportunity to present their objections. Notice by publication is a feasible and customary substitute for unknown parties. Publication in the Federal Register is generally sufficient to give notice to a person affected by what the notice contains. The Supreme Court has held, “[j]ust as everyone is charged with knowledge of the United States Statutes at Large, Congress has provided that the appearance of rules and regulations in the Federal Register gives legal notice of their contents.” Courts recognize publication in the Federal Register as adequate notice for detailing the operations of numerous agencies.

In Federal Crop Insurance Corporation v. Merrill, a wheat farmer applied for crop insurance with the Federal Crop Insurance Corporation ("FCIC"), an agency of the federal government created under the Federal Crop Insurance Act. An agent of the FCIC informed the farmer that his entire crop qualified and a Federal Crop Insurance Policy would provide

epa-releases-producer-information-animal-rights-groups-17-95162; Amanda Peterka, Beef Industry slams EPA for Giving Enviros Access to CAFO Data, GREENWIRE (Feb. 21, 2013), http://www.eenews.net/Greenwire/2013/02/21/7; Amanda Peterka, EPA Probes Release of CAFO Data to Enviro Groups, GREENWIRE (Mar. 6, 2013), http://www.eenews.net/Greenwire/2013/03/06/archive/2?terms=small+CAFO. Admittedly, EPA should have checked to ensure that release of this information was warranted under FOIA prior to its release. In July 2013, the American Farm Bureau Federation and the National Pork Producers Council sued EPA to prevent another release of farmer information to environmental groups. Julie Harker, AFBF/NPPC Sue to Stop EPA Info Release, BROWNFIELD AG NEWS (July 8, 2012), available at http://brownfieldagnews.com/2013/07/08/afbfnppc-sue-to-stop-epa-info-release/; Amanda Peterka, Grassley Measure Targets EPA for Releasing Livestock Data, GREENWIRE (May 22, 2013), http://www.eenews.net/greenwire/stories/1059981630/search?keyword=grassley+measure+targets.

161. Id. at 317 (stating notice by publication to unknown parties is sufficient to fulfill fiduciary duty).
163. Id.
164. Higashi v. United States, 225 F.3d 1343, 1349 (Fed. Cir. 2000) (finding that publication of repeal of executive orders excluding Japanese Americans from the West Coast satisfies due process); Guangzhou Maria Yee Furnishings v. United States, 412 F.Supp.2d 1301, 1309 (Ct. Int’l Trade 2005) (finding the Department of Commerce’s practice of sending questionnaires to the Chinese Ministry of Commerce and seeking forwarding was not reasonable based on the alternative of publishing in the Federal Register); Transcom v. United States, 121 F. Supp. 2d 690, 708 (Ct. Int’l Trade 2000) (holding that publication by the Department of Commerce of notice of initiation in the Federal Register is adequate notice to Hong Kong exporters, even though the exporters were not individually named).
165. Merrill, 332 U.S. at 382.
coverage for his crop. Following this advice, the farmer obtained the insurance policy. Unfortunately, the crop was lost to a severe drought. After being notified, FCIC denied benefits because the regulations did not cover reseeding of winter wheat, even though the FCIC agent had mistakenly represented to the farmer that he was covered. The farmer brought an estoppel claim, seeking payment under the insurance policy for his lost crops. The Supreme Court noted that the requirements for private estoppel were present. Nonetheless, the court held that the farmer was presumed to know FCIC regulations, regardless of the “hardship resulting from innocent ignorance.” Therefore, individuals are charged to know how the regulations printed in the Federal Register affect them.

However, in Mullane v. Central Hanover Bank and Trust Company, a bank established a common fund pursuant to a New York Statute that allowed the creation of common funds for distortion of judicial settlement trusts. Central Hanover Bank and Trust petitioned the court for settlement of its first account as the common trustee for the funds. Central Hanover Bank and Trust published the notice of the settlement for four weeks in a local New York newspaper, even though not all of the beneficiaries under the trust were New York residents. Additionally, Central Hanover Bank and Trust notified individuals by mail that were of full age and sound mind whose names and addresses were known to the bank and were entitled to income from the trust. Mullane was appointed as a special guardian and attorney for all persons known or unknown that had or might have an interest in the trust. Mullane argued that the notice by publication under the statute was inadequate to afford the trust beneficiaries due process under the Fourteenth Amendment. The Supreme Court held that the notice requirements of the New York statute were inadequate to fulfill the notice and right to be heard requirements of due process. The court noted “[a]n elementary and fundamental requirement of due process in any proceeding[,] which is to be accorded finality is notice reasonably

166. Id.
167. Id.
168. Id.
169. Id.
170. Id.
171. Id. at 385.
172. Id.
174. Id. at 309.
175 Id. at 310.
176. Id.
177. Id.
178. Id. at 319.
calculated, under the circumstances, [is] to apprise interested parties of the pendency of the action and afford them an opportunity to present their objections." 179 In this instance the court stated, "[i]t would be idle to pretend that publication alone . . . is a reliable means of acquainting interested parties of the fact that their rights are before the courts." 180

CAFO owners and operators, generally, do not read the Federal Register, 181 however, publication in the Federal Register could be adequate notice for the majority of CAFOs. In the past, EPA and other agencies sent questionnaires directly to facilities to request specific information to set and enforce effluent limitations. 182 There is no evidence that EPA has ever published a questionnaire to an entire industry in the Federal Register seeking general information without directly contacting the group of individuals from which EPA is seeking information. Following the notice requirement in _Mullane_, EPA may be required to send the questionnaire to all known CAFOs. The publication of the CAFO Reporting Rule in the Federal Register would notify the CAFOs not given actual notice. Then, EPA would use the outreach option suggested under the rule to notify the remaining CAFOs of the obligation to report information to EPA under the rule. Therefore, EPA may not have satisfied the principles of due process and would have been vulnerable to suit.

IV. COOPERATIVE FEDERALISM

The CWA authorizes EPA to protect the “chemical, physical, and biological integrity of the Nation’s waters.” 183 In order to do this, Congress established the NPDES program, which authorizes EPA to issue permits to point sources to regulate discharges of pollutants. 184 Under this program,

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179. _Id._ at 314.
180. _Id._ at 315.
181. This is an assumption based on the author’s personal and professional experience living and working with farmers. Some farmers may read the Federal Register; however, there is no statistical data related to the readership of the Federal Register on a daily basis.
184. _Id._ at §1342(b).
EPA attempts to advance the CWA’s objectives—including not only reducing water pollution, but eliminating it.\textsuperscript{185} EPA, or states with a federally-approved permitting system, issues NPDES permits.\textsuperscript{186} Thus, Congress created a system of concurrent state and federal jurisdiction, where it granted EPA primary authority.\textsuperscript{187} With this authority, EPA must establish the parameters of the states’ authority, determine minimum standards of regulation, closely oversee the states’ implementation of the program, and step in when necessary.\textsuperscript{188} Additionally, EPA should use the extensive authority sparingly and only when necessary to promote the efforts to protect and improve the nation’s waters.\textsuperscript{189} Thus, the CWA sets up a “cooperative federalism” system in “which states may choose to be primarily responsible for running federally-approved programs.”\textsuperscript{190}

In accordance with the statute, EPA has regulated CAFOs in this manner.\textsuperscript{191} States that have an approved NPDES permit program are allowed to regulate CAFOs. However, over the last few years, a strain has developed in the relationship between EPA and its state counterparts.\textsuperscript{192} Recently, regional EPA offices have investigated two state NPDES CAFO programs and found the states’ CAFO regulations inadequate.\textsuperscript{193}

\begin{thebibliography}{99}
\bibitem{185} \textit{Id.} at § 1251(a)(1)–(7).
\bibitem{186} \textit{Id.} at § 1342(b).
\bibitem{188} \textit{See Cargill}, 508 F. Supp. at 742 (explaining EPA’s role in water quality regulation through the CWA).
\bibitem{189} \textit{Id.}
\bibitem{190} S. Ohio Coal Co. v. Office of Surface Mining, Reclamation & Enforcement, 20 F.3d 1418, 1427 (6th Cir. 1994); \textit{see also} 33 U.S.C. § § 1311(a), 1314(a), 1342.
\bibitem{191} \textit{See supra} Part I; 33 U.S.C. §§ 1311(a), 1314(a), 1342.
\bibitem{192} \textit{See Amanda Peterka, EPA faults Iowa regulators for slack CAFO enforcement, GREENWIRE (July 13, 2012)}, http://www.eenews.net/Greenwire/2012/07/13/archive/3?terms=EPA+CAFO+Iowa+DNR (discussing an EPA report that blamed the Iowa Department of Natural Resources for lack of CWA enforcement against CAFOs).
\end{thebibliography}
with these findings, the regional EPA offices reviewed the two states’ NPDES permit programs and found them severely lacking.  

Both of the states—Iowa and Illinois—responded in detail to EPA’s request to overhaul their NPDES permit programs. Illinois EPA entered into a memorandum of agreement with federal EPA that requires the two agencies to work together to assure compliance with the federal requirements for CAFOs; cooperate on inspections, information gathering, permitting, and enforcement; share information gathered through state programs; and ensure follow up actions will be taken in a timely and effective manner to implement federal CAFO regulations.

Clearly, there is a fragile relationship between EPA and its state cohorts. In the above situations, EPA was forced to step in and review a state’s NPDES permitting program that it found ineffective. In these cases, EPA only entered into an agreement with the state, which required the state to reevaluate its current program and implement it properly. In the case of Illinois, EPA requested the state gather more information from the CAFOs within its jurisdiction and share the information with EPA.

There have been numerous critiques that EPA needs to step into the role of forcing


states to implement properly their CAFO programs. However, as courts have stated, EPA should only do so sparingly.

Under most state-approved NPDES programs, CAFOs seeking permit coverage must submit the information that EPA is seeking. Option 1 of the CAFO Reporting Rule would have completely bypassed the states as a source of information by demanding that all CAFOs report the required information directly to EPA. Under this option, there was an exception that allowed for states to report the information as well; however, states possibly would not have felt the need to submit this information to EPA. This is because EPA could have theoretically obtained the information from CAFOs, and the state may assert it has more important regulatory functions than information gathering on behalf of the federal government. Thus, many states already have the information EPA was seeking to obtain under the CAFO Reporting Rule and are required to submit it to EPA under the doctrine of cooperative federalism.

V. SETTLEMENT AGREEMENT FORCING PROMULGATION OF THE CAFO REPORTING RULE

The essential tenets of administrative law are transparency, public participation, and equal access to judicial review. These values legitimize the administrative process that Congress established when it delegated authority to administrative agencies. In recent years, there has been a move in administrative law that favors private ordering over state-imposed solutions to regulatory problems. When using settlements, agencies normally limit the scope of their regulatory discretion. An example of EPA limiting its regulatory discretion is during Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”)

198. Christopher R. Brown, Uncooperative Federalism, Misguided Textualism: The Federal Courts’ Mistaken Hostility Toward Pre-Discharge Regulation of Confined Animal Feeding Operations Under the Clean Water Act, 30 TEMP. J. SCI. TECH. & ENVTL. L. 175, 179–80 (2011); Karly Zande, Raising a Stink: Why Michigan CAFO Regulations Fail to Protect the State’s Air and Great Lakes and are in Need of Revision, 16 BUFF. ENVTL. L.J. 1, 16 (2009).
201. Id.
203. Id. at 1018.
settlements. EPA will agree to settle for a particular amount of environmental remediation and cleanup that is much less than the actual cost while stating that EPA will not seek more money from that company if cleanup costs exceed the settled for amount.

There are numerous problems when agencies enter into settlements. First, settlements only occur when traditional rulemaking falls short of establishing an acceptable regulation. Additionally, settlements generally involve only a limited number of participants. When using a settlement, the stakeholders participating in judicial review of a regulation do not necessarily include all of the parties interested in the regulation. Additionally, an agency is not required to settle with every party objecting to the regulation in court. Another problem with settlements is the secretive nature of the process. Unlike rulemaking, settlement proceedings are closed to the public because they result from confidential mediation, which is shielded from public scrutiny. Settlements “offer[] interest groups and the agency an opportunity to do something they were not permitted to do in the notice-and-comment period: negotiate in secret.” This can allow agencies to adopt policies that they would not have contemplated following notice-and-comment rulemaking and can raise opposition from other affected stakeholders. Because of the problems with administrative settlements, the House of Representatives has also taken an interest in this “sue and settle” policy that environmental NGOs and EPA employ.

205. See id. at 166–77 (discussing joint and several liability under CERCLA).
206. Rossi, supra note 202, at 1026.
207. Id. at 1027.
208. Id.
209. Id.
210. Id. at 1029.
211. Id. (quoting Cary Coglianese, Litigating Within Relationships: Disputes and Disturbances in the Regulatory Process, 30 LAW & SOC’Y REV. 735, 757 (1996)).
212. Id.
213. Id.
However, when entering into consent decrees or settlement agreements, administrative agencies are required to follow these guiding principles by not:

1.-commit[ting] the executive branch to expend inappropriate funds or seek appropriations from Congress;
2. commit[ting] the executive branch to promulgate, amend, or revise regulations; or
3. divest[ing] discretionary power granted by Congress or the Constitution to respond to changing circumstances, to make policy or managerial choices or protect the rights of third parties.  

Therefore, an administrative agency cannot enter into any settlement it desires. 

Admittedly, settlements are an important tool for EPA, and other agencies, in the administrative process. Settlements allow EPA to focus its limited resources on enforcement proceedings that are more important to upholding the environmental laws Congress established. Settlements are also valuable tools that assist in upholding the values of judicial economy in an already backlogged federal court system. Additionally, because of the atmosphere and confidential nature of settlements, parties are able to air their concerns openly and honestly, allowing for a more interactive administrative process. 

In this case, the settlement agreement between the environmental NGOs and EPA violates the tenets of administrative law. When EPA enters into closed-door settlements, it is not being transparent in its dealings. These types of settlements place the legitimacy of EPA’s proposed rules into question. Settlements forcing rule promulgations allow one set of interested parties to push its agenda by binding an agency to take an action. Administrative agencies are supposed to act within their statutory power, carry out the duties delegated to them by Congress, and not be influenced by one viewpoint on an issue. Additionally, the settlement with the environmental NGOs forced EPA to propose a rule that attempted to expand impermissibly its statutory power. As important as EPA and the


216. Rossi, supra note 202, at 1029.
environmental NGOs claim this information to be, EPA did not enter into the settlement in a proper manner.

VI. SOLUTIONS ON HOW EPA COULD OBTAIN CAFO INFORMATION

EPA could obtain information about CAFOs in order to regulate properly CAFOs in many different ways. First, EPA could adjust the defects in the Reporting Rule pointed out above. This would be the simplest method to obtain information about only the large and medium CAFOs the CWA regulates. However, this would not allow EPA to gather all the information it seeks. EPA would like to know the location of all livestock operations in the United States no matter what size, even though it currently does not have authority to regulate them.

EPA could also obtain the information from the state environmental agencies. This option is the best option not to upset the delicate dual enforcement system Congress established. Here, EPA could request information about CAFOs from the state agencies where an approved NPDES program exists. In the states that do not have an approved NPDES program, EPA acts as the regulatory body and should already have access to the needed information. This option would require EPA to ensure that states are fulfilling their regulatory duties when it comes to CAFOs. This would mean a review of states’ CAFO programs, as was done in Illinois and Iowa, to ensure that the state CAFO programs align with requirements under the CWA and that the states are gathering the information needed to fulfill those requirements. EPA has already established it can gain information in this manner.

Additionally, EPA could attempt to obtain the information USDA and other federal agencies have on CAFOs. This work would be similar to the Unified Regulatory Agenda that existed between EPA and USDA during the Clinton Administration. USDA also has information about the locations and composition of farms based on the agriculture census that comes out


218. This section simply highlights some of the ways EPA could gather information about CAFOs if this information is as necessary as EPA claims it to be in order to regulate CAFOs. All of these possibilities require more refinements and they are not intended to be exhaustive.

every five years.\textsuperscript{220} EPA could request this information from USDA; however, there is notable difficulty when agencies attempt to share information.\textsuperscript{221}

Finally, EPA could attempt to propose a similar CAFO Reporting Rule, but may consider beginning the process through negotiated rulemaking. Negotiated rulemaking is a process in which a governmental agency and affected interested groups negotiate the terms of a proposed administrative rule.\textsuperscript{222} Then EPA publishes the negotiated the Federal Register to solicit public comments, which the agency then evaluates prior to finalizing the rule.\textsuperscript{223} This type of rulemaking would allow both environmental interest groups and members of the agricultural community to participate. This will allow EPA to operate in an open and transparent manner and make sure all interested and affected parties are present to express their concerns with the rule. This option would take more time because the rule would be subject to a notice and comment period, but could result in EPA being able to obtain more of the information it seeks.

\section*{Conclusion}

EPA’s quest to collect information on CAFOs in order to protect the United States’ water quality was a noble one. However, there were significant problems with the 2011 CAFO Reporting Rule. First, the rule was an unacceptable attempt to extend EPA’s statutory authority over all livestock farms in the nation. Second, EPA did not fully consider the notice requirement of due process to all known CAFOs. In addition, if EPA had finalized this rule, it would have unnecessarily strained EPA’s already tenuous relationship with state environmental protection agencies. Finally, the sweetheart deal with environmental NGOs that forced EPA to promulgate the CAFO Reporting Rule would have opened up the rule to numerous challenges. Overall, EPA’s withdrawal of the CAFO Reporting Rule was in EPA’s best interest, especially when EPA can work with its state counterparts and other federal agencies to gain the information it seeks.

\textsuperscript{220} See 7 U.S.C. §§ 2204(g), 2276 (describing the federal government’s general authority to collect census data); 13 U.S.C. § 221 (discussing the obligation of farmers to respond to the census).


\textsuperscript{222} Lawrence Susskind & Gerard McMahon, The Theory and Practice of Negotiated Rulemaking, 3 YALE J. ON REG. 133, 136–37 (1985) (describing problems encountered when EPA and USDA attempted to share information during pesticide exemptions).

\textsuperscript{223} Id. at 137.
THE NATIONAL OCEAN POLICY: CAN IT REDUCE MARINE POLLUTION AND STREAMLINE OUR OCEAN BUREAUCRACY?

By Emily Migliaccio

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INTRODUCTION

[1]t is an interesting biological fact that all of us have in our veins the exact same percentage of salt in our blood that exists in the ocean, and, therefore, we have salt in our blood, in our sweat, in our tears. We are tied to the ocean. And when we go back to the sea, whether it is to sail or to watch it, we are going back to whence we came.1 —John F. Kennedy

President Kennedy’s words may be poetic, but there is great truth to them. Consider that human existence and habitation would not be possible without the ocean because the oxygen we breathe derives from activities of photosynthetic organisms in the ocean.2 Consider also that the ocean provides 99% of the habitat available for life—a statistic that makes sense

considering the ocean covers more than 71% of the Earth’s surface and can plunge as deep as 6.85 miles.

But humanity’s ties to the ocean do not end there—we depend on the ocean in many other ways. Internationally, over 2.6 billion people rely on the ocean as their primary source of protein, making the ocean the world’s largest source of protein. Marine fisheries directly provide over $3 trillion in annual economic goods and services plus an estimated $20.9 trillion per year in non-market ecosystem services. Finally, 90% of all internationally-traded goods are transported over the ocean via shipping.

The United States is similarly dependent on ocean resources. According to the recent “State of the Coast” report issued by the National Oceanic and Atmospheric Administration (“NOAA”), coastal watershed counties contribute roughly $8.3 trillion to the United States’ gross domestic product (“GDP”), which translates to about 58% of GDP in 2010. In 2010, the coastal watershed counties of the United States supported a total of 66 million jobs through which the employees received collectively about $3.4 trillion in wages. As Sarah Chasis, senior attorney and Director of the Natural Resources Defense Council (“NRDC”) Ocean Initiative, observed: “[p]rotecting our oceans isn’t only about saving fish or whales or dolphins. It’s about keeping our economy strong for decades to come.” Our economic dependence on ocean resources, particularly in America’s capitalistic society, is surely a reason why Americans as a whole can benefit from making ocean conservation a priority.

Unfortunately, however, the ocean is taking an environmental beating. Contributing to this harm is pollution, acidification, proliferation of exotic species, catastrophic oil spills, and overfishing, to name a few. In United States waters alone, approximately 20% of fisheries are over-fished.

6. Id.
7. Id.
9. Id.
11. Id.
United Nations Development Programme highlights some of the staggering statistics as follows:

Around half of global fish stocks are fully exploited, and a quarter are depleted, over-exploited or recovering from depletion. An estimated 20% of global mangroves have been lost since 1980, 19% of coral reefs have disappeared, and 29% of seagrass habitat has vanished since 1879. Less than 0.5 percent of marine habitats are protected—compared with 11.5 per cent of global land area. The number of dead zones, caused by excess nutrient pollution to coastal zones, has been expanding at a geometric pace in recent years, with associated losses to ecosystems and the livelihoods that depend upon them. Invasive marine species, especially those carried in ship ballast water, cause an estimated $100 billion each year in economic damage to infrastructure, ecosystems and livelihoods.\(^{12}\)

Furthermore, “marine systems have been relatively neglected because they are ‘out of sight, out of mind’ to most people, including scientists.”\(^{13}\) If not recognized and regulated appropriately, growing industrial use will surely lead to “ocean sprawl,” further threatening the health of marine resources, jeopardizing food, jobs, and recreation.\(^{14}\)

Until very recently, the United States Federal Government utilized a rather piecemeal and ineffective approach at preserving our ocean’s health and valuable resources. In the past, “human uses and the environmental needs of the sea have been governed haphazardly—overseen by more than 140 laws and twenty agencies, each with different goals and often conflicting mandates.”\(^{15}\) No concrete or stable future plan accounting for humans’ need for the ocean existed. Fortunately, the Obama Administration’s National Ocean Policy (“NOP”) provides an avenue for

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12. UNITED NATIONS DEV. PROGRAMME, supra note 5.
15. NATURAL RES. DEF. COUNCIL, HEALTHY OCEANS NEED SMART PLANNING (2012), available at http://www.nrdc.org/oceans/oceanplanning.asp,
comprehensive and creative ocean planning and management to protect our ocean’s resources and dependents.

This Note focuses on one major contributor to the global environmental problem—marine pollution—and evaluates how the United States’ NOP targets, among other actions, collaborative agency efforts for potential ocean pollution reduction. Part II outlines some of the major reasons why people, Americans in particular, should care about the oceans. Part III describes the current state of the oceans, with an eye towards marine pollution’s impacts. Part IV shifts to the NOP, describing its evolution through four stages and its relative (and perhaps controversial) authority as a presidential directive. Additionally, this section addresses NOP objectives that could address ocean pollution. The heart of this note is Part V, which evaluates the NOP’s implementation progress, specifically on tackling the marine pollution problem, and addresses some potential challenges to implementation in general. Additionally weaved into this section are some recommendations for future implementation. Part VI discusses final considerations. Finally, the paper concludes by highlighting areas of improvement and proposing recommendations for future improvement.

II. REASONS TO PROTECT OUR OCEAN

Ocean and coastal waters issues reach into the lives of many people in the most basic ways. The ocean harbors the fish we eat and provides the water we swim in and sail upon. The ocean is rooted in many cultural beliefs and foundations; it is integral to a healthy economy; it provides food and medicine for human sustenance; it provides potential sources of energy for human consumption; and, it plays a large role in our national security. While coastal dwellers are reminded daily of the importance of the oceans, those living in the landlocked regions of the country have no visual sense of the ocean’s presence. This section underscores a snapshot of our ties and interactions with the ocean, and discusses some reasons why humans should care about the conservation of our ocean, whether they live on the coast or not.

A. We Are Historically and Culturally Tied to the Ocean

Many communities that inhabit the coasts and utilize the accompanying marine resources have significant cultural and historic ties to the ocean. Countries around the world depend on the ocean for food
security. Small Island Developing States, for example, rely on the coastal lands not only for primary settlement, but also for sustenance. Americans depend on the ocean for their daily living needs, as evidenced by the fact that American consumers spend over $55 billion per year on fishery products. Many countries also rely on the aesthetic value of the ocean and coastal regions because it draws tourists, accounting for much of the region’s economic well-being.

B. We Work the Ocean and Work on the Ocean

Our ocean and coastal waters drive the United States economy, providing marine transportation, recreation, and income to businesses tied to the ocean. The ocean also has the potential to produce economic benefits from future energy sources. Cumulatively, across all industry sectors, coastal and marine waters supported over 28 million American jobs as of 2008. As Frances Beinecke, President of NRDC, analogized, “[the] oceans contribute more to our nation’s economic output than the entire U.S. farm sector.”

C. We Play in the Ocean

Ocean-related tourism and recreation account for 72% of employment and 28% of the United States’ GDP. In 2009, the United States ocean tourism and recreation sector provided 1.8 million jobs. However, while the economic benefits stemming from ocean-related recreation are very significant, they are not the only benefits. Time spent on or near the water—whether relaxing on the beach, sailing, surfing, or swimming—is beneficial for one’s mental health and peace of mind. As a

celebrity once articulated, “[t]he ocean makes me feel really small and it makes me put my whole life into perspective . . . I feel born again when I get out of the ocean.”  

D. We Produce Energy from Ocean Resources

The ocean currently provides a means for crude oil production and wind energy, and serve as a promising source of marine energy technologies. In 2009, offshore oil fields accounted for 32% of worldwide crude oil production. Amazingly, there are 14,000 deep-water wells drilled around the world, and over 4,000 wells drilled in the Gulf of Mexico. The onset of new technologies will allow for greater exploitation of oil and gas at greater depths of the ocean.

The future of offshore wind energy also promises energy production. As of October 2010, 3.16 gigawatts of offshore wind power capacity were operational; by 2020, this capacity should reach a total of 75 gigawatts worldwide. Many regions are studying and implementing ways to harvest other forms of renewable energy from ocean tides, waves, and currents, as well as temperature and salinity gradients. Further research on the financial and environmental costs, however, is needed in order to justify continued exploitation.

E. We Travel and Trade on the Ocean

In November 2008, NOAA reported that trans-ocean shipping contributed over $700 billion annually to the United States GDP and employed 13 million Americans. In that same year, United States commercial ports filtered nearly $2 trillion worth of imports, a value likely to increase given that production of goods is projected to increase over 50% by 2020.

25. Id.
26. Id.
27. Id.
III. STATE OF THE OCEANS

The purpose of this Note is to reveal humanity’s ties to the ocean, highlight the ocean’s dire need for better conservation, and discuss areas of improvement in current national policy. This Note now turns to the health of the ocean, specifically in regards to marine pollution.

Sadly, the seas are swarming with all sorts of pollution, including garbage of both visible and microscopic varieties. NOAA has indicated that “marine debris has become one of the most pervasive pollution problems facing the world’s oceans and waterways.” The following section discusses the extent of this “most pervasive pollution problem” by first introducing the vast expanse of the ocean and its role on planet Earth. Then, this section examines the nature of the pollution problem, including the types and quantities of pollution and its effect on all aspects of human and non-human life.

A. How Big is Our Ocean and What Role Does it Play on Earth?

Earth has one ocean, covering over seventy percent of the entire planet’s surface. The ocean is divided into ocean basins, namely the North and South Pacific, North and South Atlantic, the Indian, and the Arctic. Most of the Earth’s water—97%, to be exact—is in the ocean. Having such a presence on our Earth, it should come as no surprise that the ocean shapes many of the physical features of the Earth. For example, new Earth crust is created beneath the ocean, and old, eroded earth is deposited back into the ocean. Also, continental boundaries retreat and expand over time with changing sea levels. The ocean substantially affects weather patterns and Earth’s climate. Moreover, the ocean dominates Earth’s energy, water, and carbon systems. Thus, the conditions of the oceans are a large factor in controlling extreme weather events, precipitation, and carbon dioxide absorption.

The ocean is a vast system with endless uses and functions. Aside from supporting humans, the ocean sustains a great diversity of ecosystems

31. Id.
32. Id.
33. Id.
34. Id. at 8.
35. Id.
36. Id. at 9.
37. Id. at 7, 9.
and other life. Ninety-nine percent of the living space on earth is in the ocean, home to nearly 200,000 identified species. All these known facts that speak to the ocean’s pervasiveness, however, represent only a fraction of what is known about the ocean—the ocean is in fact the last and largest unexplored place on Earth, with more than 95% remaining unexplored.

B. The Marine Pollution Problem

Traditionally, the ocean was thought to be “resilient enough to absorb and recover from multiple and interactive stresses—overfishing, pollution and now climate change—that humans impose on them.” Today, scientists and marine planners know better. In reality “[m]any marine ecosystems have lost their resilience to recurrent natural and man-made disturbances . . . .” When ecosystems are no longer “resilient,” or capable of absorbing and recovering from recurrent shocks, the results are a “regime-shift” and long-term degradation. Unfortunately, according to a 2008 study, “no area of the world’s oceans is completely unaffected by human impacts, and forty-one percent of the oceans are strongly affected by multiple human impacts.”

Among the human-induced drivers of change in marine ecosystems is marine pollution. Though marine pollution can take many forms, the pollution is primarily “a land-based governance problem that cannot be addressed through direct regulation of the marine environment . . . .” In the United States, for example, about 80% of marine pollution comes from land, including: discharge of pollutants from coastal industries; agricultural and urban runoff; and “atmospheric deposition of pollutants” from land-based, fossil-fuel-burning sources. Pollution from these sources is compounded by “[d]eforestation, intensification of agriculture, urban sprawl, industrialization, population growth and migration to the coast.”

Although international treaties have addressed offshore ocean dumping, the effects of past dumping events will remain for an unknown amount of

38. Id. at 10.
39. UNITED NATIONS DEV. PROGRAMME, supra note 5.
40. OCEAN LITERACY, supra note 2, at 12.
41. Craig & Hughes, supra note 13, at 2.
42. Id.
43. Craig & Hughes, supra note 13, at 6.
44. Id. at 2.
45. Id. at 4.
46. Id.
47. ROBIN KUNDIS CRAIG, COMPARATIVE OCEAN GOVERNANCE: PLACE-BASED PROTECTIONS IN AN ERA OF CLIMATE CHANGE 30–31 (Edward Elgar, 2012).
48. Craig & Hughes, supra note 13, at 5.
time. Other concerns that arise from land-based marine pollution are the increase of Harmful Algal Blooms, which can lead to “red tides;” the release of neurotoxins and the contamination of shellfish; and eutrophication and coastal “dead zones.” Again, these compounding environmental offenses work to weaken the ocean-ecosystem’s resilience.

i. Sources of Marine Debris

Marine debris derives from two categories of sources: ocean-based and land-based. Ocean-based sources include materials that are dumped, swept, or blown off vessels and stationary platforms located on the water. The major ocean-based sources of marine debris include merchant shipping, fishing vessels, military fleets, research vessels, pleasure craft, offshore oil and gas platforms, and fish farming installations. Debris can also be blown, swept, or washed out to sea from a source on land—as mentioned above, land-based sources comprise roughly 80 percent of the total marine debris. Examples of major land-based sources include coastal or inland municipal landfills; riverine transport of waste from landfills or other sources along rivers or waterways; discharge of untreated municipal sewage (including storm water); industrial facilities; and tourism-related trash disposal on beaches.

ii. Visible Marine Debris

49. Id.
50. What is a Red Tide? NAT’L OCEANIC AND ATMOSPHERIC ADMIN., http://oceanservice.noaa.gov/facts/redtide.html (last updated Jan. 23, 2014) (“Red tides”—so named because the bloom turns the water red—occur when colonies of algae grow at excessive rates, producing toxins that can kill fish, shellfish, mammals and birds, and may cause illness in humans).
52. Craig & Hughes, supra note 13, at 6; What is a Dead Zone? NAT’L OCEANIC AND ATMOSPHERIC ADMIN, http://oceanservice.noaa.gov/facts/deadzone.html (last updated Jan. 23, 2014) (“’Dead zone’ is a more common term for hypoxia, which refers to a reduced level of oxygen in the water,” and is so named because in such conditions, most marine life either dies or leaves the area).
55. Sources of Marine Litter, supra note 53.
57. PLASTIC DEBRIS RIVERS TO SEA, PLASTICDEBRIS.ORG (2005), http://plastictdebris.org/PRDS_Brochure_DOWNLOAD.pdf.
58. Sources of Marine Litter, supra note 53.
The impacts of everyday trash in the water are fairly well known because this debris is visible. The garbage is unsightly, detracting from the beauty of the beach and water. Additionally, coastal and marine fauna commonly become ensnared in, or ingest, marine debris. While humans are typically able to avoid mistaking plastic for food, other species that inhabit the coasts and ocean are not. Animals frequently confuse plastic garbage for food. 59 For example, turtles mistake plastic bags for jellyfish, and albatrosses feed on pieces of red plastic because they resemble squid. 60 In a study of thirty-eight green turtles, 61% had ingested some form of marine debris including plastic bags, cloth, rope, or string. 61 Not only can marine animals choke on the plastic debris, but they can also suffer from poor nutrition or damage to their gut linings if they consume too much plastic. 62

iii. Invisible Marine Debris: The Plastic Pollution Problem

Trash in our oceans takes many forms, and as touched upon above, most humans are familiar with the larger, more visible forms of garbage that clutter the beaches and waterways and interfere with the natural ecosystem. Unfortunately, trash in our oceans and lakes poses additional problems that are not visible to the naked eye. These are problems stemming largely from plastic production. Inevitably, then, most floating marine debris is plastic, 63 composing roughly 60 to 80% of the total marine debris. 64 Undoubtedly, plastics have many benefits for the environment—as an example, plastic reduces weight in consumer goods such as vehicles, which in turn improves fuel economy. 65 However, plastics are produced in enormous quantities worldwide 66 and are often discarded after a single

60. Id.
63. PLASTIC DEBRIS RIVERS TO SEA BROCHURE, supra note 57 (citing J.G.B. Derraik, The Pollution of the Marine Environment by Plastic Debris: A Review, 44 MARINE POLLUTION BULLETIN 843).
64. Id. (stating the proportion of plastic has reached over 90 to 95% in some areas).
use.\textsuperscript{67} Most of this plastic trash ends up in landfills,\textsuperscript{68} and though some plastic is recycled,\textsuperscript{69} researchers estimate that approximately 4.7 million tons end up in the sea each year.\textsuperscript{70}

Even worse is the fact that plastic is amazingly durable.\textsuperscript{71} Plastic decomposition is both chemical and physical: large plastic objects, when exposed to ultraviolet radiation from the sun, break into smaller and smaller particles by forces such as wave action and wind.\textsuperscript{72} The remnant plastic particles pose a two-fold problem. The first involves the release of toxic additives from the original composition of the plastic.\textsuperscript{73} The second involves the release of “persistent, bio-accumulating and toxic substances (“PBTs”) that have accumulated in plastic particles over time.”\textsuperscript{74}

Regarding the first concern, research lead by Katsuhiko Saido, a chemist working for the College of Pharmacy at Nihon University in Japan, indicates that some plastics break down in the ocean, leaching potentially toxic chemicals such as bisphenol A (“BPA”) and styrene compounds.\textsuperscript{75} At high concentrations, these chemicals can interfere with human endocrine systems involved in regulating hormone balance.\textsuperscript{76} Prior to this research, scientists thought plastics broke down at much higher temperatures and over hundreds of years.\textsuperscript{77} Now, the research indicates that plastic breaks down at cooler temperatures and within a year of the trash hitting the water.\textsuperscript{78}

The study involved collecting water samples from various waters around the world, including the United States, Europe, India, and Japan.\textsuperscript{79} The researchers found that all samples contained derivatives of polystyrene (“PS”), a common plastic used in Stryofoam, plastic cutlery, DVD cases, and many other everyday plastic things.\textsuperscript{80} Upon performing a laboratory simulation of polystyrene decomposition in under ocean conditions, the

\textsuperscript{67}. Wassener, supra note 65.
\textsuperscript{68}. Id.
\textsuperscript{69}. Id.
\textsuperscript{70}. Id.
\textsuperscript{72}. Id.
\textsuperscript{73}. Id.
\textsuperscript{74}. Id.
\textsuperscript{76}. UNITED NATIONS ENV’T PROGRAMME, supra note 71, at 28.
\textsuperscript{77}. Id. at 26.
\textsuperscript{78}. Barry, supra note 75.
\textsuperscript{79}. Id.
\textsuperscript{80}. Id.
researchers found that it degraded at eighty-six degrees Fahrenheit, leaving behind PS oligomer and BPA—the same compounds detected in the ocean samples.\footnote{81} None of these chemicals appear naturally in the ocean.\footnote{82} Rather, these compounds materialize in ocean waters as the plastics decompose, a process enhanced by tidal disturbance and exposure to the sunlight’s heat.\footnote{83} Later studies by the same research group indicate that hard plastics\footnote{84} and hard epoxy resins\footnote{85} also decompose in ocean environments.\footnote{86} Like the softer plastics, such as Styrofoam and plastic bags, hard plastics and epoxy resins release BPA when they break down.\footnote{87} These chemicals contaminate our oceans, threatening not only marine life, such as turtles and corals, but possibly also humans.\footnote{88}

Regarding the second concern, plastic that degrades into small particles has the potential to absorb PBTs\footnote{89} that are already present in seawater and sediments.\footnote{90} Many of these pollutants “cause chronic effects, such as endocrine disruption affecting reproduction, increases in the frequency of genetic mutations (mutagenicity), and a tendency to cause cancer (carcinogenicity).”\footnote{91} There is some concern that these pollutants could end up in the food chain. However, the science is not yet certain on the exact impacts of plastics on humans and ecosystems, therefore, much more research is needed.\footnote{92}

IV. THE NATIONAL OCEAN POLICY (“NOP”)

A. Evolution and Structure

\footnote{81}{Id.}
\footnote{82}{Id.}
\footnote{83}{Emily Sohn, Plastic in the Oceans Leaches Chemicals, DISCOVERY NEWS (Aug. 20, 2009), http://lists.ufl.edu/cgi-bin/wa?A2=CTURTLE;ow1qKQ;20090821022436-0400.}
\footnote{85}{See id. (describing epoxy resins, which are found in epoxy paint that is used to seal the hulls of ships and prevent rust and the accumulation of barnacles and other deposits).}
\footnote{86}{Id.}
\footnote{87}{Id.}
\footnote{88}{Sohn, supra note 83.}
\footnote{89}{UNITED NATIONS ENV’T PROGRAMME, supra note 71.}
\footnote{90}{Id.}
\footnote{91}{Id. at 26–28.}
\footnote{92}{Id. at 28.
The Obama Administration’s call for a national ocean policy was a long time coming. For decades, policymakers have planned and devised various strategies for ocean management and protection, and over time “various ocean law leaders, commissions, and scholars have called for the creation of a NOP.”\(^{93}\) After Congress enacted the Marine Resources and Engineering Development Act in 1966, ocean governance evolved.\(^{94}\) Congress enacted legislation involving ocean resources and development,\(^{95}\) and federal and state ocean-policy committees published reports and recommendations for a national ocean policy.\(^{96}\)

Building upon previous ocean governance efforts, President Barack Obama established the Interagency Ocean Policy Task Force\(^{97}\) on June 12, 2009 and charged it with developing recommendations to “better meet our Nation’s stewardship responsibilities for the ocean, our coasts, and the Great Lakes.”\(^{98}\) President Obama’s initiative paved the way for the present NOP—a policy that evolved through four stages. The first stage was the issuance of the Final Recommendations of the Interagency Ocean Policy Task Force (“Final Recommendations”) on June 19, 2010.\(^{99}\) In the Final Recommendations, the President detailed nine national priority objectives: (1) ecosystem-based management; (2) coastal and marine spatial planning; (3) inform decisions and improve understanding; (4) coordinate and support; (5) resiliency and adaptation to climate change and ocean acidification; (6) regional ecosystems protection and restoration; (7) water quality and sustainable practices on land; (8) changing conditions in the

94. See id. (chronicling the development of ocean governance in the United States since the enactment of the Marine Resources and Engineering Development Act).
96. For a detailed history of United States ocean policy, see Howe, supra note 93, part IV “The Road to a National Ocean Policy.”
99. See id. (“In response to President Obama’s June 12, 2009 memorandum, and after careful consideration of thousands of valuable comments from political leaders, public and private organizations, and citizens, the Task Force is pleased to submit these final recommendations for a comprehensive national ocean policy, an improved governance structure, a targeted implementation strategy, and a framework for effective coastal and marine spatial planning”).
Arctic; and (9) ocean, coastal, and Great Lakes observations, mapping, and infrastructure.\textsuperscript{100}

In the second phase, adopting the Final Recommendations of the Task Force, President Obama issued Executive Order 13,547.\textsuperscript{101} The Order “establishes for the first time a comprehensive, integrated National Policy for the stewardship of the ocean, our coasts, and the Great Lakes.”\textsuperscript{102} Specifically, the Policy aims to develop a more comprehensive management of the ocean with greater coordination across all levels of government in order to reduce duplication of federal agency policies and activities. Additionally, the Policy seeks to engage all stakeholders who use, care about, and depend upon ocean resources.\textsuperscript{103} In the Order, President Obama declares that the United States shall promote the policy by:

\begin{itemize}
  \item (i) ensuring a comprehensive and collaborative framework for the stewardship of the ocean, our coasts, and the Great Lakes that facilitates cohesive actions across the Federal Government, as well as participation of State, tribal, and local authorities, regional governance structures, nongovernmental organizations, the public, and the private sector;
  \item (ii) cooperating and exercising leadership at the international level;
  \item (iii) pursuing the United States’ accession to the Law of the Sea Convention; and
  \item (iv) supporting ocean stewardship in a fiscally responsible manner.\textsuperscript{104}
\end{itemize}

In order to guide federal agencies in implementing the policy, the Order created the National Ocean Council (“NOC”),\textsuperscript{105} which is a committee comprised of officers from a variety of agency and federal departments.\textsuperscript{106} The NOC is also comprised of many sub-committees.
charged with coordinating and providing high-level attention to ocean policy.\footnote{107}

Once the NOC was in place, the NOP launched into the third phase—information gathering. The Committee sought input from national, regional, and local stakeholders and the general public on devising an implementation plan.\footnote{108} As such, the NOC held numerous regional listening sessions throughout the country and sought public comment until July 2011.\footnote{109} During the development of a draft implementation plan, the NOC released outlines for nine Strategic Action Plans (paralleling the nine policy objectives outlined in the Executive Order) in order to focus and guide public and stakeholder input.\footnote{110} On January 12, 2012, the NOC released the draft National Ocean Policy Implementation Plan.\footnote{111} The draft Plan focuses on the nine priority objectives addressed in the NOP, detailing a number of actions and their intended outcomes, outlining key milestones, identifying lead agencies or other responsible entities, and listing timeframes for accomplishing such actions and goals.\footnote{112} The draft Plan had four major themes: "(1) adopt ecosystem-based management ([EBM]); (2) obtain, use, and share the best science and data; (3) promote efficiency and collaboration; and (4) strengthen regional efforts."\footnote{113}

The draft Plan was open for public comment until March 28, 2012;\footnote{114} and on April 16, 2013, the NOC released the Final Plan.\footnote{115} The Final Plan is

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\footnote{107} Id. (The sub-committees include: the Steering Committee, which is the main group to ensure integration and coordination on priority areas within the NOC; the Ocean Resource Management Intergency Policy Committee; the Ocean Science and Technology Intergency Policy Committee; and the Governance Coordinating Committee, which focuses on coordinating inter-jurisdictional ocean policy issues.)

\footnote{108} National Ocean Policy Draft Implementation Plan, supra note 97.


\footnote{110} NAT’L OCEAN COUNCIL, DRAFT NATIONAL OCEAN POLICY IMPLEMENTATION PLAN 95 (2010), available at http://www.whitehouse.gov/sites/default/files/microsites/ceq/national_ocean_policy_draft_implementation_plan_01-12-12.pdf.


\footnote{112} Id.

\footnote{113} Id.

a relatively short document organized into five sections—(1) The Ocean Economy, (2) Safety and Security, (3) Coastal and Ocean Resilience, (4) Local Choices, and (5) Science and Information. The first three sections describe how the NOP will positively impact America’s ocean economy, security, and ocean and coastal resilience. The fourth section describes the need for more localized efforts at addressing ocean and coastal priorities, given that priorities vary across all regions within the United States. The last section addresses the need for partners and stakeholders to make a scientific, technological, and educational commitment to addressing ocean and coastal priorities. In the Plan, the NOC recognizes that completion of the actions is dependent “upon the availability of funds and resources.”

The Plan is meant to be flexible:

[The] Plan is intended to be a living document. It is designed to be adaptive to new information or changing conditions, and will be updated periodically as progress is made, lessons are learned, new activities are planned, and as the Nation continually strives to improve the stewardship of the ocean, coasts, and Great Lakes for the benefit of current and future generations.

Now, with the Implementation Plan complete, the United States is in the final stage—actual implementation of the NOP.

B. Defining NOP Authority

On its face, particularly to the ocean conservationist, the NOP seems like a neutral, common-sense policy. However, the policy has sparked some criticism. Opponents argue, for example, that the NOP is an executive “power grab”—one “that circumvents existing state and local decision-
making bodies... without the consent of Congress, without the consent of the governors, and, most important of all, without the consent of the governed."\(^{122}\) Along these lines is the fear that the Executive Order presents a separation of powers issue, thus violating the Constitution, by "creat[ing] via the [NOP], a new set of requirements with which existing statutes are to be consistent, and then plac[ing] these new standards beyond judicial review. This effectively constitutes the enactment of new legislation that violates the separation of powers set forth in the U.S. Constitution."\(^{123}\) However, these fears may be premature.

Determining the authoritative reach or the constitutionality of the NOP should begin by differentiating an executive order from a plan or policy. First, "[a]n executive order is a directive issued by the President, which has the force of law and requires no action by the legislature or judiciary."\(^{124}\) However, the Constitution limits the reach of a presidential executive order. In the 1952 Steel Seizure case, the United States Supreme Court completely overturned an executive order in part because, as it held, "[t]he President’s power, if any, to issue the order must stem either from an act of Congress or from the Constitution itself."\(^{125}\) The Court emphasized that the Constitution vests Congress with lawmaking authority, not the President, and that "[t]he Constitution limits [the President’s] functions in the lawmaking process to the recommending of laws he thinks wise and the vetoing of laws he thinks bad."\(^{126}\) While this Court’s decision remains primary authority for presidential directives,\(^{127}\) the courts have seen fit to

122. Bonner R. Cohen, Obama’s Ocean Policy Initiative: Washington’s Latest Power Grab, DAILY CALLER (Sept. 9, 2010, 12:08 PM), http://dailycaller.com/2010/09/09/obamas-ocean-policy-initiative-washingtions-latest-power-grab2/ ("The president’s instruction to ‘take such action as necessary’ will inevitably lead to a tidal wave of new regulations under the Clean Water Act, Clean Air Act, or some other federal statute, all of which will have the force of law behind them. What the administration in effect is putting in place is an alternative power structure that circumvents existing state and local decision-making bodies and replaces them with made-in-Washington zoning. All of this is taking place without the consent of Congress, without the consent of the governors, and, most important of all, without the consent of the governed."); see also Audrey Hudson, Zoning the Ocean, HUMAN EVENTS (Apr. 17, 2012 6:43 AM) www.humanevents.com/2012/04/17/zoning-the-ocean-2/ (quoting Rep. Bill Flores, "[the NOP] to me could be the sleeping power grab that Americans will wake up one day and wonder what the heck hit them").


126. Id. at 587.

127. Tara L. Branum, President or King? The Use and Abuse of Executive Orders in Modern Day America, 28 J. Legis. 1, 61, 63 (2002).
strike down only fourteen orders, in whole or in part, out of eighty-six executive order challenges. 128 Notably, federal courts have “upheld presidential directives that were unauthorized when issued but were subsequently validated by Congress via statute.” 129

The Obama Administration issued Executive Order 13,547, intending for Congress to “show support for effective implementation of the NOP, including the establishment of an ocean investment fund”—the hope being that Congress would codify the Order in subsequent legislation. 130 At present, Congress is wrestling with some bills relating to the NOP; however, not all proposals support the policy. For example, the House has adopted an amendment to the Water Resources and Development Act (“WRDA”) 131 that would bar the Obama Administration from implementing marine spatial planning under the WRDA, specifically “preventing the Army Corps of Engineers and other entities that receive money from the bill from implementing such planning as part of the National Ocean Policy.” 132 Then again, also before Congress is a bill that seeks to establish a National Endowment for the Oceans, which would fund programs and activities to “restore, protect, maintain, or understand living marine resources and their habitats and ocean, coastal, and Great Lakes resources...” 133 For this bill to pass, House and Senate members must agree to prioritize ocean conservation and research, and allocate funds to the initiative. Although the NOP is appearing on the Congressional docket, it is hard to find hope for successful ocean reform in the current congressional atmosphere.

In the face of Congressional gridlock, executive orders may be necessary, particularly to advancing pro-environmental policies. As legal scholar Sandra Zellmer argues, “[t]he bitterly partisan nature of

128. Id. at 59.
129. E.g., WILLIAM J. OLSON & ALAN WOLL, EXECUTIVE ORDERS AND NATIONAL EMERGENCIES: HOW PRESIDENTS HAVE COME TO “RUN THE COUNTRY” BY USURPING LEGISLATIVE POWER 10 (1999) (describing how “the Supreme Court upheld President Franklin Roosevelt’s transfer of certain authority from the U.S. Shipping Board to the Secretary of Commerce, pursuant to EO 6166, where Congress had recognized the transfer of authority in subsequent acts”).
130. Howe, supra note 93, at 80 (citing Joint Ocean Comm’n Initiative, America’s Ocean Future: Ensuring Healthy Oceans to Support a Vibrant Economy 2–4 (2011)).
environmental issues in Congress today suggests that comprehensive, thoughtful reforms tailored to the problems faced by modern society are unlikely.” 134 Further, Zellmer points out that even “if today’s Congress were to take up the call to reform existing statutes, it may be more likely to dismantle provisions disliked by powerful, regulated entities than to pass comprehensive, forward-thinking legislation designed to solve contemporary environmental problems.” 135 Thus, with an essentially incompetent Congress, Zellmer proposes that non-legislative action, such as issuing an executive order, may “offer an opportunity to work around the congressional logjam and move the environmental ball forward.” 136

Whether or not Executive Order 13,547 runs afoul of the separation of powers doctrine is a matter of time. Nevertheless, there is a distinction in the language of the Policy that opponents may be overlooking. The Executive Order calls for a national policy. 137 A policy, keep in mind, is no more than guidance to agencies and decision-makers. 138 The language of the Implementation Plan for the Policy dismisses any hint of binding authority; it reads:

The Policy does not create new regulations, supersede current regulations, or modify any agency’s established mission, jurisdiction, or authority. Rather, it helps coordinate the implementation of existing regulations and authorities by all Federal agencies in the interest of more efficient decision-making. The Policy does not redirect congressionally-appropriated funds, or direct agencies to divert funds from existing programs. Instead, it improves interagency collaboration and prioritization to help focus limited resources and use taxpayer dollars more efficiently. 139

135. Id.
136. Id. at 2327.
137. Exec. Order No. 13,547, supra note 101, at § 1 (reading “[t]he] order establishes a national policy to ensure the protection, maintenance, and restoration of the health of the ocean, coastal, and Great Lakes ecosystems and resources, enhance the sustainability of ocean and coastal economies, preserve our maritime heritage, support sustainable uses and access, provide for adaptive management to enhance our understanding of and capacity to respond to climate change and ocean acidification, and coordinate with our national security and foreign policy interests”).
139. NAT’L OCEAN COUNCIL, supra note 116, at 2.
The Final Implementation Plan for the NOP is by no means a binding body of laws; again, it is merely guidance for federal and state agencies, stakeholders, and communities to begin prioritizing ocean and coastal issues. The Plan recommends the types of actions agencies will take to address such priorities, and provides the tools required for taking such action. Ultimately, the NOP is a perfectly appropriate use of presidential authority to bring desirable national priorities to the fore.

C. NOP Objectives Showing Promise for Marine Pollution

As mentioned above in Part III, pollution is principally a land-based problem that requires improved management of land-use practices; protective control of air emissions, water discharges, plastic and other waste disposal; and better management of polluted runoff. Thus, the following section is concerned with whether the NOP addresses the pollution problem, and if so, how it outlines the necessary management practices, such as land-based governance.

It should be noted that the current regime for managing land-based pollution in the United States is rather fragmented. As an example, land-based non-point source pollution is primarily governed by states, whereas ocean ecosystems are generally subject to the federal or commonwealth government’s authority. What is needed instead is coordination across land and sea, and across each level of government. The NOP makes a first pass at addressing this disconnect.

The first objective of the NOP that is relevant in regulating marine pollution directly is to inform policy decisions and improve understanding of the general public. This objective aims to better inform and educate policy makers about the ocean, our coasts, and the Great Lakes in order to increase their ability to respond to change and challenges. This objective also aims to inform the general public about these issues so that they may be more active in the policy process and may make more informed decisions about their lifestyle habits.

The next relevant objective is to “[s]trengthen and integrate federal and non-federal ocean observing systems, sensors, data collection platforms, data management, and mapping capabilities into a national system and integrate that system into international observation efforts.”

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140. Craig & Hughes, supra note 13, at 6.
141. Id. at 9.
142. NAT’L OCEAN COUNCIL, supra note 110, at 18.
143. Id.
144. Id. at 26.
Creating a more integrated system for researching and sharing research will prevent overlapping projects and will ultimately preserve valuable resources on local, regional, and federal levels. The third objective has a similar purpose: to better coordinate and support federal, state, tribal, local, and regional management of the ocean, our coasts, and the Great Lakes. This objective serves to improve coordination and integration across the federal government and, as appropriate, engage with the international community.

The fourth objective is to establish and implement regional ecosystem protection and restoration. The desired integrated strategy will be science-based and will align conservation and restoration goals at the federal, state, tribal, local, and regional levels. Similarly, the fifth relevant objective is to establish sustainable practices on land—that is, establish practices on land throughout the country, not just the coastal states—designed to improve the quality of the nation’s waters. The water cycle is uninterrupted from the coasts to the inlands: rainfall that is absorbed by the soil enters the groundwater, percolates into lakes and rivers, and eventually flows to the ocean. By promoting and implementing sustainable practices on land, the water quality in our ocean, along our coasts, and in our lakes will improve.

Finally, one of the more promising areas for United States ocean policy improvement is in the development of Coastal and Marine Spatial Planning (“CMSP”) in the regions. At base, CMSP is “a process developed from the bottom up to improve collaboration and coordination among all coastal and ocean interests, and to better inform and guide decision-making that affects their economic, environmental, security, and social and cultural interests.” Some misconceive that CMSP will initiate more bureaucracy into an already congested political system. Some associate CMSP with “ocean zoning,” which implies that there will be a top-down federal process involved in dividing up ocean and coastal management regions.

145. Id. at 35.
146. Id.
147. Id. at 43.
148. NAT’L OCEAN COUNCIL, supra note 110, at 43.
149. Id. at 63.
150. Id.
153. Id. at 12.
However, the President’s Executive Order specifically dismisses that concern by stating that CMSP creates no new authority, nor adds any additional layer of review; rather CMSP is a “decision and support tool and planning process that will provide a platform for gathering the best information available and ensuring greater transparency.” 154 Existing federal, state, tribal, and local authorities will work together with stakeholder groups, the scientific community, and the general public to develop each regional framework. 155

The resulting guidance, again, is regional in scope and provides a transparent, science-based roadmap to guide coastal communities to plan for the future of their waters in a direct, objective, and inclusive way. 156 Specifically, the framework establishes a new approach to how we use and protect the ocean, the coasts, and the Great Lakes; how we decrease user conflicts, improve planning and regulatory efficiencies and decrease costs and delays, and preserve critical ecosystem services; how we move away from sector-by-sector and statute-by-statute decision-making; how we bring federal, state, and tribal partners together in an unprecedented manner to jointly plan for the future of the ocean, our coasts, and the Great Lakes; how we place science-based information at the heart of decision-making; and how we emphasize stakeholder and public participation. 157

Overall, the goal of CMSP is to optimize how we use our oceans and make management more effective and efficient. 158 By identifying the areas in the sea that are appropriate for industrial use and areas where ocean habitat and wildlife need protection, we can better allocate our resources, and have more transparency on the issues threatening our oceans.

Some states have already implemented a successful CMSP. A standout example is Rhode Island’s Ocean Special Area Management Plan, or Ocean SAMP, which serves as a federally recognized coastal management and regulatory tool and uses the best available science in order to approach the development and protection of Rhode Island’s ocean-based resources.

V. EVALUATION OF THE POLICY IMPLEMENTATION TODAY, CHALLENGES TO IMPLEMENTATION, AND RECOMMENDATIONS FOR FUTURE IMPLEMENTATION

154. Id.
156. Id.
157. Id.
158. National Ocean Policy, supra note 151.
Prior to the release of the Final Implementation Plan, many local and regional leaders, stakeholders, industries and state and federal agencies initiated action in line with the NOP. The Joint Ocean Commission (“JOC”)\textsuperscript{159} released two “Report Cards,” one published in 2011 and one in 2012, assessing the United States’ progress since the inception of the NOP.\textsuperscript{160} In the most recent Report Card, the JOC grades the progress made on earlier recommendations and on certain areas of implementation, which are divided into five categories: (1) National leadership and support; (2) regional, state, and local leadership and implementation; (3) research, science, and education; (4) funding; and (5) Law of the Sea Convention.\textsuperscript{161} This Note only discusses the information in the first four categories because those are relevant for determining the NOP’s progress in the marine pollution context. Each is discussed in turn below.

\textbf{A. National Support and Leadership}

Garnering robust national support and leadership is critical for the improvement of marine pollution given the interconnectivity between landlocked regions, coastal regions, and the ocean. Unfortunately, the JOC gave this category a “C,” noting that although the NOP laid “good groundwork,” it lacked “communication, stakeholder engagement, and tangible results.”\textsuperscript{162} Although the NOC successfully released strategic action plans and the draft Implementation Plan, and organized the National Coastal and Marine Spatial Planning Workshop in June 2011, the Council’s work is far from complete.\textsuperscript{163}

Comments submitted during various stages of NOP implementation reflect the disconnect between stakeholders, notably industry stakeholders, and the NOC. For example, some raised concerns about the effect of adopting a “precautionary approach” as suggested in one of the NOP’s

\textsuperscript{159} Joint Ocean Commission Initiative, MERIDIAN INST., www.merid.org/en/Content/Projects/Joint_Ocean_Commission_Initiative.aspx?view=news (last visited Jan. 23, 2014) (describing the Joint Ocean Commission “is a bipartisan collaboration of senior leaders representing a diversity of viewpoints and interests in our oceans and includes former members of the U.S. Commission on Ocean Policy and Pew Oceans Commission. A primary goal of the Joint Ocean Commission Initiative is to accelerate the pace of change that results in meaningful ocean policy reform”).


\textsuperscript{161} Id. at 5.

\textsuperscript{162} Id. at 5.

\textsuperscript{163} Id. at 7.
“guiding stewardship principles.” The language of the relevant principle read:

Decisions affecting the ocean, our coasts, and the Great Lakes should be informed by and consistent with the best available science. Decision-making will also be guided by a precautionary approach as reflected in the Rio Declaration of 1992, which states in pertinent part, “[w]here there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”

Many feared that this “precautionary approach” might mandate action or prohibit activities, conceivably to the detriment of certain industries. However, the NOP Task Force clarified the misconception by stating in part, “precaution is a tool or approach . . . it is clear that the precautionary approach does not mandate action or prohibit activities.” In order to garner support from all stakeholders, particularly in the current political environment, it is essential that the NOC regularly involve all stakeholders during the actual implementation and future development of the NOP’s objectives and actions.

Similarly, the Report suggests that the NOC must “work more closely with regions, states, and local communities to identify priority needs and issues that could benefit from the [NOP].” In addition, the NOC must provide more opportunities for stakeholders to get directly involved with Council members. The JOC also recommended that the NOC conduct a comprehensive interagency effort to review ocean-related policies. Such an effort would reduce duplication and inefficiencies, and may help to resolve conflicts in the current management system.

These recommendations are particularly pertinent in the context of marine pollution because an ocean pollution problem is a national problem. Even landlocked regions contribute pollution to the ocean, rivers, streams, and coastal waterways. For example, crop and soil fertilizers deposited in agricultural regions travel through runoff or groundwater into rivers, streams, ponds, and lakes, and ultimately, if not directly, into the ocean. If the NOC can effectively communicate this “land-to-sea” connection across

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164. THE WHITEHOUSE COUNCIL ON ENVTL. QUALITY, supra note 98, at 16.
165. NAT’L OCEAN COUNCIL, supra note 110, at 97.
167. Id. at 8.
all states and the Federal Government, then perhaps local and regional bodies will adjust their existing codes and ordinances to reflect the uniform goal of protecting coastal and ocean ecosystems. In particular, these policies should focus on reducing the water quality impacts of land uses and development—a priority that both interior and coastal regions can afford to improve upon.

B. Regional, State, and Local Leadership and Implementation

One of the NOP’s more notable accomplishments thus far is its effect on the regional, state, and local leadership and implementation efforts. The JOC gave this category an “A-,” noting “regional ocean partnerships continue to make progress but need more support from states and federal agencies.” States and regions across the nation are showing greater understanding and management of ocean resources through a variety of collaborative tools and strategies. Many regions have created regional planning bodies, which are encouraged to implement the NOP in creative and sensible ways. The NOC is supposed to provide flexibility for these regions, allowing each to focus on their own priorities and needs. For instance, some regional planning bodies collect data, develop stakeholders’ involvement initiatives, and develop regional marine protected areas.

C. Research, Science, and Education

Arguably one of the most important areas of the NOP is in the promotion and support for research and education on marine issues. The JOC gave this category a “C” because although some progress had been made, there had been “funding and program cuts, as well as delayed implementation of critical tools, weakened ocean science, research, and education.” One of the greatest improvements in this area was the installation of the data portal, ocean.data.gov, which “serves as a clearinghouse for access to non-confidential federal ocean data and planning tools.” There have also been “strong regional efforts to coordinate on regional ocean and coastal research, observing, mapping, and restoration priorities.”

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168. Id. at 5.
169. Id. at 11–12.
170. Id. at 5.
172. Id.
However, more is needed in terms of funding and support for further education. Investments in research, science, and education on ocean and coastal issues are crucial, particularly in the context of marine pollution, because it will “produce a more informed citizenry; create better stewards of ocean, coastal, and Great Lakes resources; and increase awareness of business opportunities related to these resources.”\textsuperscript{173} With a greater knowledge base, people can participate in activities that address the issues facing our oceans and coasts. Furthermore, an educational system that incorporates ocean and coastal science is crucial to ensuring that the next generation of ocean scientists and engineers are sufficiently trained “to continue to lead an innovation-based global economy.”\textsuperscript{174} Country-wide education would also bring more awareness to the pervasive interconnectivity of land and marine pollution, and hopefully illuminate the need for efforts across the nation, rather than just on the coasts.

\textit{D. Funding}

Unfortunately, the area that received the lowest grade out of the four here listed—and one that is probably most needed for the implementation of the NOP—is funding. The JOC gave this category a “D-” because ocean programs are “chronically underfunded.”\textsuperscript{175} In order to implement the NOP to the fullest extent possible under existing authorities and as directed by the 2010 Executive Order, the government must allocate resources to the NOC. The President’s Fiscal Year 2011 Budget Request contains additional funding to advance priority activities identified in the Final Recommendations of the Interagency Ocean Policy Task Force.\textsuperscript{176} However, some legislators are skeptical about the Obama Administration’s plan to begin implementing the NOP.\textsuperscript{177} Mostly hailing from the Republican party, the opposition fears that the money to support the Policy will be siphoned from other important programs, and argue that the White House fails to garner Congressional authorization.\textsuperscript{178} Also, Republicans are concerned that the Implementation Plan is a plan for the government to
“zone” the ocean, establishing areas for specific uses while precluding other activities (such as oil drilling).\textsuperscript{179}

The JOC suggests a very respectable solution to the lack of funding: establish an “ocean investment trust fund to provide the financial support for national, regional, state, and local programs working to understand and manage our ocean and coastal resources.”\textsuperscript{180} The JOC also recommends that an integrated ocean and coastal budget be established to make it easier to track support for and analyze the progress of programs situated across the federal government that are closely related, and in some cases overlapping and duplicative.\textsuperscript{181} As mentioned above, a bill for a National Endowment for the Oceans is presently before Congress, but the likelihood of that passing is unknown at this point.

\textbf{VI. Final Considerations}

The National Ocean Policy is still in its infancy—indeed, the Final Implementation Plan was released in April of 2013. The assessments conducted and the recommendations proposed thus far depend upon coordination between all facets of government and across all regions of the United States. In the context of marine pollution, the idea of coordination and collaboration is particularly important given the transboundary and inter-connective nature of pollution. However, if after a few more years in motion, the NOP’s attempts to unitize and coordinate all the agencies and regional bodies fails or is moving too slowly, the NOC may consider creating a break-off group whose priority is to coordinate solely marine pollution. Due to the broad and expansive nature of the NOP, and because its goals are so enormous and far-reaching, a single body that works to coordinate marine pollution among the several states could be effective. This body would have experts in the land-use and marine environment science and the ability to identify the greatest contributors to marine pollution. This body could then identify the agencies, stakeholders, and industries that are linked to the pollution, \textit{i.e.} either contribute to the pollution or are involved in some facet of regulating the pollution. The marine pollution body could have a stake in the Joint Initiative’s proposed integrated ocean and coastal budget, in order to allocate money for research in the sources and impacts of marine pollution. Such a solution would help to coordinate regional and local policies on a more targeted scale, making

\begin{itemize}
  \item \textsuperscript{179} \textit{Id.}
  \item \textsuperscript{180} U.S. REPORT CARD 2012, \textit{supra} note 160, at 19.
  \item \textsuperscript{181} \textit{Id.} at 20.
\end{itemize}
the goals more manageable and more specific than the broad and perhaps over-encompassing NOP.

CONCLUSION

In order to achieve the ambitious goals and objectives of the NOP, much more support is needed from our people and our representatives. With a plan already in place, Americans must rally their representatives for funding to support interagency coordination, research, and education on ocean and coastal issues. Having one collective body to organize and report on the ocean and coasts will ensure greater transparency and greater efficiency in allocating responsibilities for ocean protection and conservation.

While it may seem hyperbolic to argue that everyone, even those living in a landlocked state or region, should care about the oceans, the International Programme on the State of the Ocean succinctly articulates one reason that truly ties all humans to the ocean: “It is no exaggeration to say that the Ocean is as critical to human survival as the air we breathe—not least because it provides roughly half of the world’s oxygen…it supplies the oxygen in every second breath we take.”¹⁸² This statement highlights the basic feedback principle so fundamental to understanding the importance of the ocean. Human life depends on the vitality of the ocean—we are tied to the ocean—and thus the American people would be wise to advocate for a robust and sustainable NOP.