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Calming the Waters: Environmental Mediation and Water Resources Disputes

By Alexander English

I. Introduction

This article presents an overview of the alternative dispute resolution process (ADR) in the environmental context. Specifically, it focuses on mediation in the context of water resources disputes, with a particular interest in water quality concerns. It examines the promise and pitfalls inherent in mediation, and presents case studies as illustrations. This article is by no means comprehensive, and is intended to serve as a starting point for those interested in incorporating ADR into their environmental practice, or who have become embroiled in a water resources dispute. It does not attempt to seriously address issues of water resource distribution/scarcity, except to note the proportionate interest in maintaining the utility of such diminished supplies.

II. Water Resources and Mediation

It has long been lamented that "[j]ustice in contemporary America is not cheap."[1] This is particularly true in environmental disputes where controversies tend to affect multiple organizations and involve several levels of government.[2] Like other environmental disputes, water quality disagreements "typically involve siting, clean-up, enforcement, legislative lobbying, development of wilderness areas, or promulgation of

1 Joel S. Jacobs, *Compromising NEPA? The Interplay Between Settlement Agreements and the National Environmental Policy Act*, 19 Harv. Envtl. L. Rev. 113, 113 (1995).

2 1 Sarah R. Cole, Craig A. McEwen, Nancy H. Rogers, James R. Coben & Peter N. Thompson, Mediation: Law, Policy and Practice § 15:7 (2015) (citations omitted).

regulations."[3] In theory, at least, mediation may help to reduce the acrimony and contentiousness that percolates throughout water quality jurisprudence.

At its heart, mediation "is a method of nonbinding dispute resolution involving a neutral third party who. . .[helps] the disputing parties reach a mutually agreeable solution."[4] The underlying difference between mediation and the traditional process of negotiation and settlement is the use of a mediator.[5] Mediators have no authority to force the disputing parties to reach an agreement.[6] The "classic" mediator assists parties in resolving their dispute by helping them to reach a new and shared perception of the issues in dispute to reshape their attitudes, not by forcing rules or decisions on the two parties.[7] Thus, "[t]he mediator is, at the most basic level, a facilitator of communication between parties."[8]

Before one may properly analyze the role of mediation in water resources disputes, one must have a baseline understanding of some of the underlying water laws and history related to water quality and water resources distribution. Prior to passage of the Clean Water Act (CWA)[9] and related environmental statutes, those concerned with water quality in the United States were limited almost exclusively to actions in tort if they wanted to compel prevention of water pollution.[10] In essence, the government historically saw the waters of the United States as a resource for exploitation; concerns over water quality were limited.[11] Public policy favored development, and those who were harmed by the march of progress had to rely on common law and tort to obtain relief.[12] These actions were limited to tort claims such as negligence, trespass, unreasonable interference in use of property, and "abnormally dangerous activity."[13]

Addressing water quality can sometimes be done by affecting the amount of supply available. As far as distribution of water supply, this was (and is) handled differently depending on the region of the country. In the East, the doctrine of riparianism applies and can affect water quality.[14] The riparian rule provides that "[t]he reasonableness of [the water] use must determine the right, and this must depend upon the extent of detriment to the riparian proprietors below."[15] Specifically, "[i]f [a given use of water] essentially impairs the use [of water] below, then it is unreasonable and unlawful, unless [the use] is a thing altogether indispensable to any beneficial use at every point of the

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3 *See id.*

4 *Mediation*, BLACK'S LAW DICTIONARY (10th ed. 2014). *See also* Nancy Kubasek & Gary Silverman, *Environmental Mediation*, 26 AM. BUS. L.J. 533, 536 (1988).

5 Kubasek & Silverman, *supra* note 4, at 536.

6 *Id.* at 536–37.

7 Lon L. Fuller, *Mediation—Its Forms and Functions*, 44 S. CALIF. L. REV. 305, 325 (1971).

8 Kubasek & Silverman, *supra* note 4, at 536.

9 33 U.S.C. §§ 1251, *et seq.* (2015).

10 *See, e.g.*, Pennsylvania Coal Co. v. Sanderson, 94 Pa. 302, 302 (Pa. 1880).

11 *See id.* at 305.

12 *See id.* at 305-06.

13 *See generally id.* at 302. *See also* RESTATEMENT (SECOND) OF TORTS §§ 519-520 (1977).

14 *See, e.g.*, Lowe v. Ottaray Mills, 77 S.E. 135, 136 (1913).

15 *Snow v. Parsons*, 28 Vt. 459, 462 (1856) (nuisance suit dealing with effects of water pollution incidental to the operation of a tannery).

stream."[16] Over time, the definition of "reasonable use" was broadened to allow for ever-greater industrialization, effectively precluding most efforts to protect water resources.[17]

West of the Mississippi River, the doctrine of prior appropriation generally controls when it comes to allocation of water supply.[18] Under the system of prior appropriation, a "water right is acquired by perfecting an appropriation, i.e., by an actual diversion followed by an application within a reasonable time of the water to a beneficial use."[19] There are, however, two qualifications for "beneficial use": (1) "the use cannot include any element of 'waste' which, among other things, precludes unreasonable transmission loss and use of cost-ineffective methods;" and (2) "the use cannot be 'unreasonable' considering alternative uses of the water."[20] For the most part, prior appropriation systems disallow instream flows to sustain water quality or aquatic habitat as a beneficial use for purposes of appropriation, absent explicit legislation to the contrary.[21]

There was little public concern about protection of the nation's water resources during the first half of the Twentieth Century; however, following the burning of the Cuyahoga River on the afternoon of June 22, 1969, there was a dramatic shift in the national consensus.[22] The iconic image of "a black, gooey hand coming out of the Cuyahoga like a B-movie swamp monster defined the plight of . . . all industrial American cities—and a culture that for a century had generally viewed natural waterways as a means to an end."[23] Rather than adopt a purely federal approach to water cleanup, however, the CWA encourages public participation in its administration of the law and creates a federal-state-local cooperative effort to resolve water quality issues.[24] Specifically, "[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under [the CWA] shall be provided for, encouraged, and assisted by the Administrator and the States."[25] The CWA was an ambitious and radical reordering of national priorities, at least on paper.

Unfortunately, "[m]easured against the standard of its own ambitions, the Clean Water Act has not been a success."[26] Fundamentally, the advocates of competing interests in water radically disagree over whether activities that create water pollution are a moral wrongdoing or simply a consequence of conducting business.[27] The historical reliance on tort law to abate water quality degradation has framed the issue in an inherently

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16 *Id.*

17 *See, e.g.*, Lawrie v. Silsby, 76 A. 1106, 1107-08 (Vt. 1904).

18 *See, e.g.*, Wells v. Mantes, 99 Cal. 583, 585–86 (Cal. 1893).

19 Nebraska v. Wyoming, 325 U.S. 589, 614 (1945).

20 United States v. Alpine Land & Reservoir Co., 697 F.2d 851, 854 (9th Cir. 1983).

21 *See* Nat'l Audubon Soc'y v. Superior Court, 33 Cal.3d 419, 443 (Cal. 1983); *see, e.g.*, TEX. WATER CODE § 11.0235 (2015).

22 *See generally* Michael Scott, *Cuyahoga River Fire 40 Years Ago Ignited an Ongoing Cleanup Campaign*, CLEVELAND.COM (June 22, 2009, 9:00 AM), http://www.cleveland.com/science/index.ssf/2009/06/cuyahoga_river_fire_40_years_a.html.

23 *Id.*

24 WILLIAM H. RODGERS, JR., ORIGINS OF THE CLEAN WATER ACT—RESULTS, 2 ENVTL. L. § 4:1 (2015) (footnotes omitted). *See also* 33 U.S.C. § 1251(e) (2015).

25 33 U.S.C. § 1251(e).

26 RODGERS, JR., *supra* note 24, § 4:1.

27 *Id.*

adversarial light.[28] This has led to copious litigation, advocacy for both more and less stringent water quality and effluent standards, criminal prosecutions, and a hardening of political attitudes regarding government oversight of water quality.[29]

III. THE ROLE OF ADR IN WATER LAW DISPUTES

At heart, mediation is an effort to bring together various interested parties, i.e., "stakeholders," to establish a collaborative, participatory decision-making framework within mutually agreed-upon parameters. This framework most often takes the form of "structured meetings, almost always led or facilitated by an expert 'third party neutral' with process expertise and often with substantive expertise as well."[30] Faced with mounting litigation, courts and administrative agencies have turned to mediation as an alternative solution to water quality issues with increasing frequency.[31] Today,

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28 *See generally* Mark Latham, Victor E. Schwartz, and Christopher E. Appel, *The Intersection of Tort and Environmental Law: Where the Twains Should Meet and Depart*, 80 FORDHAM L. REV. 737 (2011); *see also* Peter H. Kahn, Jr., *Resolving Environmental Disputes: Litigation, Mediation, and the Courting of the Environmental Community*, 3 ENVT'L VALUES 211, 212-213 (1994) ("Litigation engenders adversarial relationships[,]" the litigation process itself often makes "the losers feel angrier than ever at their opponents[,]" and "on either the business or environmental end, even the winners in litigation often feel exhausted and angry with the whole process."); Jennifer M. Egan and Joshua M. Duke, *Water Quality Conflict Resolution and Agricultural Discharges: Lessons from Waterkeeper v. Hudson*, 39 WM. & MARY ENVTL. L. & POL'Y REV. 533, 561 (2015) ("Environmental conflict originates in an informal (or presumptive) rights regime, where the high-intensity user of the resource acts with privilege and shifts costs via negative externalities at will to others (low intensity users).").

29 *See supra* note 28 and references cited therein. *See also* Catherine Groves, *To Promote Compliance with the Clean Water Act, the EPA Should Pursue a National Enforcement Initiative to Regulate Concentrated Animal Feeding Operations*, 39 ECOLOGY L.Q. 321 (2012) (noting that "the political climate has become increasingly hostile toward" the EPA); Aaron M. McCright & Riley E. Dunlap, *The Politicization of Climate Change and Polarization in the American Public's Views of Global Warming, 2001-2010*, 52 SOC. Q. 155 (2011) (summarizing the efforts, beginning in the 1990s, "to delegitimize global environmental problems, particularly anthropogenic global warming, in order to undermine the call for regulatory action."); David M. Konisky, Jeffrey Milyo, Lilliard E. Richardson. *Environmental Policy Attitudes: Issues, Geographical Scale, and Political Trust*, 89 SOC. SCI. Q. 1066 (2008) (finding distinct ideological attitudes towards government efforts to address the environment, pollution, and global issues).

30 Carrie Menkel-Meadow, *The Lawyer's Role(s) in Deliberative Democracy*, 5 NEV. L. J. 347, 359 (2005).

31 Mediation has become favored as a means to address environmental issues in general; water quality and water resource issues are subsets of this proposition. *See* Kenneth R. Feinberg, *Mediation - A Preferred Method of Dispute Resolution*, 16 PEPP. L. REV. 5 (1989) ("Burgeoning court dockets, spiraling litigation costs, and dissatisfaction with the traditional adversarial process have caused increased interest in and use of alternative dispute resolution mechanisms."); Jennifer Harder, *Environmental Mediation: The Promise and the Challenge*, 19 ENVIRONS: ENVTL. L. & POL'Y J. 29, 30 (1995-1996) ("Mediation is the form of ADR most frequently used to resolve environmental controversies"); *see also* Karen L. Liepmann, *Con-*

"[m]ediation has been used not only under [CERCLA][32] but also under most of the other principal environmental statutes that [the Environmental Protection Agency (EPA)] administers, such as the Clean Water Act . . . and the Safe Drinking Water Act."[33] Robert Zeinemann, in his 2001 article, *The Characterization of Public Sector Mediation*, laid out the progression of ADR into the environmental sphere: "[t]he modern popularization of ADR approaches started in the late 1960s as an effort to expand ADR from the labor-management arena to communities."[34] He further observed that the initial expansion of ADR stemmed partially from deliberate efforts by certain interest groups, such as the Ford Foundation, to increase use of the practice.[35] Notably, a dam proposal on the Snoqualmie River in Washington State became the subject of what was likely the first application of the mediation process to a water-related dispute.[36] In this context, mediation is sometimes alternately referred to as a "consensus-building process," "public dispute resolution," "policy dialogues," "public conversations," "negotiated rulemaking," or "facilitated problem-solving conflict resolution."[37]

Since the initial extension of mediation into the environmental arena, public sector officials have used mediation to resolve complex disputes over the allocation of scarce resources.[38] For example, "[b]y the end of 1977, nine environmental disputes had been mediated."[39] Nine more were mediated during 1978, eighteen during 1979, and by mid-1984, over 160 environmental disputes had gone through the mediation process.[40] Finally, "[a]fter years of discussion and pilot efforts using mediation in the federal rulemaking and administrative processes . . . the Administrative Dispute Resolution Act (ADRA) and the Negotiated Rulemaking Act (reg-neg) established ADR procedures [including mediation] as a central focus for dispute resolution in federal agencies."[41] However, at the same time, agencies were instructed to avoid ADR when: (1) precedent was needed; (2) significant government policy needed to be developed through traditional administrative proceedings; (3) consistency was important; (4) nonparties would have been significantly affected; (5) public access was needed; or (6) settlement would

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fidentiality in Environmental Mediation: Should Third Parties Have Access to the Process?, 14 B.C. ENVTL. AFF. L. REV. 93 (1986); Stephen Higgs, *The Potential for Mediation to Resolve Environmental and Natural Resources Disputes*, 1 AM. J. MEDIATION 101 (2007). *See generally* Tanya Heikkila & Edella C. Schlanger, *Addressing the Issues: The Choice of Environmental Conflict-Resolution Venues in the United States*, 56 AM. J. POL. SCI. 774 (2012).

32 Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), also known also as "Superfund." 42 U.S.C. §§ 103 *et seq*. (2015).

33 Leslie M. Lawson & Daniel C. Himelspach, *Effective Dispute Resolution in Natural Resource and Environmental Cases*, 42 ROCKY MTN. MIN. L. INST. 1, 9 (1996).

34 Robert Zeinemann, *The Characterization of Public Sector Mediation*, 24 ENVIRONS ENVTL. L. & POL'Y J. 49, 49 (2001).

35 *Id*. at 49–50.

36 *Id*. at 50.

37 Menkel-Meadow, *supra* note 30.

38 Zeinemann, *supra* note 34, at 50.

39 Kubasek & Silverman, *supra* note 4, at 535 n.9 (*citing* Bingham & Haygood, *Environmental Dispute Resolution: The First Ten Years*, ARB. J., Dec. 1986, at 4.).

40 Kubasek & Silverman, *supra* note 4, at 535 n. 9.

41 COLE ET AL., *supra* note 2, § 15:11 (footnotes omitted).

not have provided an adequate basis for necessary continuing jurisdiction of the agency.[42]

As a result of its integration with the whole of American government, public sector mediation has and continues to supplement and even replace legislative and judicial processes.[43] For example, pursuant to CWA section 518(e),[44] the EPA promulgated a "Dispute Resolution Mechanism."[45] The regulation specifically stated that, "[w]here the State and Tribe agree to participate in the dispute resolution process, mediation with the intent to establish Tribal–State agreements, consistent with Clean Water Act section 518(d), shall normally be pursued as a first effort."[46] The Tenth Circuit upheld that regulation as "a reasonable interpretation of [33 U.S.C.] § 1377(e) [, which was] entitled to deference."[47]

Water quality disputes are further complicated by the fact that "water is a limited natural resource and a public good fundamental for life and health."[48] The international community has long recognized that "the human right to water is indispensable for leading a life in human dignity."[49] Moreover, access to clean water "is a prerequisite for the realization of other human rights."[50]

Perhaps the vital nature of water is one of the factors that prompted Professor Lawrence Susskind to call for greater accountability of environmental mediators. In his seminal article, *Environmental Mediation and the Accountability Problem*, Professor Susskind advocates for mediators who are "more attentive to the interests of all segments of society."[51] Specifically, he argues that

> mediators ought to accept responsibility for ensuring (1) that the interests of parties who are not directly involved in negotiation, but with a stake in the outcome, are adequately represented and protected; (2) that agreements are as fair and stable as possible; and (3) that agreements reached are interpreted as intended by the community-at-large and set constructive precedents.[52]

Moreover, he describes several factors for mediators to bear in mind:

> (1) the impacts of negotiated agreements on underrepresented or unrepresentable groups in the community;
> (2) the possibility that joint net gains have not been maximized;
> (3) the long-term or spill-over effects of the settlements they help to reach; and

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42 *Id.*
43 Zeinemann, *supra* note 34, at 50.
44 33 U.S.C. § 1377(e) (2015).
45 *See* 40 C.F.R. § 131.7 (2016).
46 *Id.* § 131.7(f)(1)(i).
47 City of Albuquerque v. Browner, 97 F.3d 415, 427-28 (10th Cir. 1996).
48 Committee on Economic, Social and Cultural Rights, *Substantive Issues Arising in the Implementation of the International Covenant on Economic, Social and Cultural Rights* "General Comment No. 15," U.N. DOC. E/C.12/2002/11 (Jan. 20, 2003), *available at* http://www1.umn.edu/humanrts/gencomm/escgencom15.htm.
49 *Id.*
50 *Id.*
51 Lawrence Susskind, *Environmental Mediation and the Accountability Problem*, 6 VT. L. REV. 1, 7 (1981).
52 *Id.* at 18.

(4) the precedents that they set and the precedents upon which agreements are based.[53]

Likewise, he insists that "environmental [mediators] should be committed to procedural fairness."[54] In essence, Susskind argues that environmental mediators should be advocates for the community-at-large rather than third-party neutrals.[55] To that effect, he states that mediators involved in water quality disputes should "intervene more often and more forcefully than their counterparts in the labor-management field."[56]

IV. Pros and Cons of Using ADR to Address Water Resources Disputes

At the outset, it is worth reiterating three basic axioms of alternative dispute resolution theory: First, parties will only negotiate if they earnestly believe that they cannot achieve a complete victory through litigation, popular pressure, the legislative process, etc.[57] Second, parties will not negotiate over matters of principle.[58] Third, there must be a rough equivalence between the parties' respective informational and presentational resources.[59]

Regardless of whether or not one accepts Susskind's methodological thesis,[60] the simple fact is that water quality disputes present thorny issues for any potential mediator.[61] As Zeinemann so eloquently puts it: "[a]greement is probably unattainable, but more to the point, mediation would be inappropriate in these cases."[62] Likewise, mediation may be ineffective in determining whether certain parties may use or exploit a natural resource in a specific manner.[63] This limitation exists because "[d]isputes that revolve around constitutional questions, definitions of basic rights, and fundamental and moral values, generally cannot and should not be mediated."[64] Likewise, if the conflicting parties reach an agreement that ignores the interests of future generations, this short-term agreement could create environmental issues with far-reaching effects that cannot be remedied.[65] Considering the importance of water to human life, modern society and

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53 *Id.* at 46.
54 *Id.* at 47.
55 *Id.*
56 *Id.*
57 William Goldfarb, *Watershed Management: Slogan or Solution?*, 21 B.C. Envtl. Aff. L. Rev. 483, 501–02 (1994).
58 *Id.* at 502.
59 *Id.*
60 *See, e.g.*, Joseph B. Stuhlberg, *The Theory and Practice of Mediation: A Reply to Professor Susskind*, 6 Vt. L. Rev. 85 (1981).
61 Aimee M. Wilson, *Complexity and the Role of Values in Mediated Water Disputes: Exploring Resolution* (April 25, 2011) (unpublished M.A. thesis, Georgetown University) (on file with Georgetown Library).
62 Zeinemann, *supra* note 34, at 59.
63 *Id.*
64 *Id.*
65 Susskind, *supra* note 51, at 8.

its attendant industrial processes, *everyone* has a vested interest in the outcome of any potential dispute over water quality.[66]

When comparing "successful collaborative approaches to large complex natural resources disputes, [one finds] that a key element is to use a framework based on a natural system."[67] That is, if a problem presents itself, or if it becomes apparent that planning is required, one should identify those who will be most affected by the issue.[68] Lawson and Himelspach describe the basic requirements of successful mediation collaboration quite succinctly:

> One fundamental of a successful collaborative decision making process is to involve *all* parties that the decision may influence. For any solution or action to be successful, there must be buy-in from all parties influenced by that solution or action. The only way to ensure buy-in is to involve those parties in the process. Forcing affected parties to accept solutions or actions that impact that party, either a perceived impact or an actual impact, will not work long term for anyone–not even the government.[69]

In other words, good-faith, proactive engagement by all stakeholders is a necessary prerequisite for any successful water quality mediation.[70]

One of the fundamental problems with the mediation process is that any disputes involving federal agencies may create tension between the public interest and the need to maintain confidentiality during a mediation.[71] To wit, "[o]ne of the hallmarks of mediation is confidentiality, but this same aspect of mediation that makes it an attractive alternative to costly litigation may clash with the idea of public participation found in most environmental statutes and regulations."[72] The ADRA does, however, allow for disclosure of mediation discussions if

> a court determines that such testimony or disclosure is necessary to prevent a manifest injustice; help establish a violation of law; or prevent harm to the public health or safety, of sufficient magnitude in the particular case to outweigh the integrity of dispute resolution proceedings in general by reducing the confidence of parties in future cases that their communications will remain confidential.[73]

Another barrier to effective mediation in these circumstances is that parties who oppose certain water quality regulations may seek settlement that avoids direct consequences of these regulations altogether.[74] More importantly, the danger always exists

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66 Zeinemann, *supra* note 34, at 49–50.
67 Lawson & Himelspach, *supra* note 33, at 11.
68 *Id*.
69 *Id*.
70 Or, indeed, any mediation involving conservation of natural resources or preservation of the environment.
71 COLE ET AL., *supra* note 2, at §15:11.
72 Raymond E. Tompkins, *Mediation, the Mediator, and the Environment*, 11 NAT. RESOURCES & ENV'T 27, 68 (Summer, 1996).
73 5 U.S.C. § 574(a)(4) (2015).
74 Brett A. Williams, *Consensual Approaches to Resolving Public Policy Disputes*, 2000 J. DISP. RESOL. 135, 146 (2000).

that mediation will disrupt the administrative process and infringe upon the public interest.[75] From a conservationist standpoint,

> potential disadvantages of environmental mediation include[:] (1) the possibility that the congenial atmosphere created by mediators serves to disarm and co-opt environmentalists; (2) the possibility that superior political and economic resources create imbalances of power that allow pro-development interests to extract unfair concessions from environmentalists at the bargaining table; and (3) the possibility that the mediation process itself tends to redefine environmental issues in a way that favors pro-development interests.[76]

The truth of the matter is that once a violation of an environmental statute has occurred (or is perceived to have occurred), mediation faces an uphill battle.[77] As a general rule, disputes that involve groups with a hardline moral stance should not be mediated, as these disputes will rarely be resolved by compromise or tradeoff.[78] After one party or another perceives their lawful rights or activities as being impaired, tort mentality often sets in: a recent study of environmental dispute procedures pursuant to a theoretical CWA violation scenario found that "respondents generally view lawsuits as the key mechanism they would use to respond to wrongdoing in single violation situations [but] are more likely to pursue a shaming opportunity and less likely to file a lawsuit in the widespread violation context."[79] In other words, the parties are aggrieved, and looking for a conflict by which they may validate themselves and protect their interests.[80] Both environmental and traditional business interests want to set precedent for resolving future disputes, making mediated settlements less appealing.[81]

On a related note, the confidentiality that is so vital to mediation can become a liability when water quality is at stake.[82] Over ten years ago, the Ninth Circuit noted that "[b]y entering into confidential settlement discussions the government does not give notice that it may not be adequately representing the interests of any group of citizens."[83]

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75 *Id*.

76 Rosemary O'Leary, *Environmental Mediation: What Do We Know and How Do We Know It*, MEDIATING ENVIRONMENTAL CONFLICTS: THEORY AND PRACTICE, 17, 23–24 (J. Walton Blackburn & Willa Marie Bruce eds., 1995).

77 Lisa A. Kloppenberg, *Implementation of Court-Annexed Environmental Mediation: The District of Oregon Pilot Project*, 17 OHIO ST. J. DISP. RESOL. 559, 562 (2002) (noting that the factual complexity of environmental cases, coupled with the "presence of scientific experts with adamant viewpoints" tends "to harden adversarial positions"); Harder, *supra* note 31, at 33 ("Many environmental conflicts, for example, arise directly out of conflicting values or principles"); Higgs, *supra* note 31, at 109 ("Once parties are in litigation they are also less likely to trust one another and the science they bring to any pretrial settlement discussions.").

78 Zeinemann, *supra* note 34, at 59 n.36.

79 David L. Markell, Tom R. Tyler, *Using Empirical Research to Design Government Citizen Participation Processes: A Case Study of Citizens' Roles in Environmental Compliance and Enforcement*, 57 U. KAN. L. REV. 1, 17 (2008).

80 Zeinemann, *supra* note 34, at 51.

81 *See id*. at 60.

82 *See generally U.S. v. Carpenter*, 298 F.3d 1122 (9th Cir. 2002).

83 *Id*. at 1125.

At the same time, it also noted that, "until parties have notice that the government may not be representing their interests, parties are entitled to rely on the presumption that the government is representing their interests."[84]

Another factor contributing to potential failure of mediation over water quality disputes is that many alleged violations involve substances with deleterious health effects.[85] Until relatively recently, "[e]nvironmentalism has had a strong attachment to a unitary paradigm of industrial pollution."[86] The "chief paradigm for environmental law" has historically been "one in which sources of industrial pollution foul the local air or river in a manner that is of great nuisance value, but only mildly harmful to human health."[87] Thus, the relatively recent shift in attention from conventional pollutants to toxic substances ("toxics") is a noticeable and sharp shift in water pollution policy.[88] However, toxics pose a particular challenge because their long-term effects are not well understood.[89] Although scientists regularly expand our knowledge about the effects of toxics, our current understanding of the dangers of toxics remains limited.[90] In the context of water pollution, "every new collection of empirical data reinforces the primacy of the toxics and keeps the subject at the top of the regulatory agendas."[91]

Simply put, contamination of the water supply by toxic chemicals is a horrifying prospect.[92] The saga of the Love Canal[93] and the development of CERCLA/Superfund[94] is a now-classic example of why civil and criminal liability for pollution must exist. The public at large is willing to tolerate some industrial pollution in the name of progress and modernity.[95] Once the situation crosses over from a "mere" CWA violation to a CERCLA-type issue, however, demands for accountability are likely to prevent any mediated settlement.[96]

The general rule seems to be that the more egregious the alleged violation or polluting incident, the less likely that those adversely affected by the incident will forego litigation.[97] Moreover, the citizen-suit provision of the CWA provides an exception to the so-called "American Rule" of litigation, under which both parties pay for their own attorneys.[98] This provision "shifts the responsibility of paying attorney's fees to the unsuccessful party. . . these fees include reasonable expenses, including reasonable attor-

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84 *Id.*
85 *See* Troyen A. Brennan, *Environmental Torts*, 46 VAND. L. REV. 1, 1-2 (1993).
86 *Id.* at 8.
87 *Id.*
88 RODGERS, JR., *supra* note 24, § 4:33.
89 *Envtl. Def. Fund v. Envtl. Prot. Agency*, 598 F.2d 62, 72-73 (D.C. Cir. 1978).
90 *Id.* at 73.
91 RODGERS, JR., *supra* note 24, § 4:33.
92 *See generally* A. Theodore Steegmann, Jr., *History of Love Canal and SUNY at Buffalo's Response: History, The University Role, and Health Research*, 8 BUFF. ENVTL. L.J. 173 (2001).
93 *See generally id.*
94 *See generally* Martha L. Judy & Katherine N. Probst, *Superfund* at 30, 11 VT. J. ENVTL. L. 191 (2009); Eric R. Pogue, *The Catastrophe Model of Risk Regulation and the Regulatory Legacy of Three Mile Island and Love Canal*, 15 PENN ST. ENVTL. L. REV. 463 (2007).
95 *See generally* Pogue, *supra* note 94, at 469.
96 *See generally* COLE ET AL., *supra* note 2, § 5.2.
97 *Id.*
98 33 U.S.C. § 1365(d) (2015). *See also* COLE ET AL., *supra* note 2, § 9.19.

ney's fees incurred during mediation."[99] One could characterize this provision as a "violator-pays" rule for attorneys' fees.[100] "Under this rule, defendants who violate environmental laws . . . must pay for their opponents' lawyers."[101] The basic rationale is that it gives stakeholders whose participation is crucial in the environmental decision making process access to the justice system, thereby reinforcing the legitimacy of the administrative process.[102] As a cautionary note, however, the Supreme Court, in *Buckhannon Board and Care Home, Inc. v. West Virginia Department of Health and Human Resources*, held that to be a prevailing party under a fee-shifting statute, there must be a "judicially sanctioned change in the parties' legal relationship," rather than merely a voluntary change in defendant's conduct.[103]

In addition, there are often fundamental disconnects between business interests and environmentalists regarding the perceived value of water quality.[104] "[T]here are two fallacious assumptions in theories equating price with value: first, that the value of anything is measured by what price the consumer is willing to pay for it, and second, that 'the consequences of all transactions are reflected fully in market-determined prices.'"[105] Thus, the cost-benefit analyses of many industrial interests are inherently flawed from a conservationist perspective.[106] Without some philosophical common ground, mediation is unlikely to prove fruitful.[107]

Despite these pitfalls, mediation has definite appeal from the perspective of a water advocate.[108] Mediation is generally nonbinding, for one.[109] This allows litigation to serve as leverage throughout the process. If successful, mediation can be cheaper and more efficient than traditional litigation.[110] Should the eventual solution sufficiently address all parties' concerns, mediation may provide a longer-lasting solution than litigation or even legislative action.

Therefore, there is a growing consensus that, while not a complete solution, mediation plays an important role in resolving environmental disputes.[111] Mediation can help avoid future litigation, provided all parties adhere to the mediated agreement.[112] Further,

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99 COLE ET AL., *supra* note 2, § 9.19.

100 Adam Babich, *The Wages of Sin: The Violator-Pays Rule for Environmental Citizen Suits*, 10 WIDENER L. REV. 219, 221 (2003).

101 *Id.*

102 *Id.*

103 Buckhannon Bd. & Care Home, Inc. v. W. Va. Dep't of Heath & Human Res., 532 U.S. 598, 600 (2001).

104 *See* Melanie J. Rowland, *Bargaining for Life: Protecting Biodiversity Through Mediated Agreements*, 22 ENVTL. L. 503, 516-17 (1992).

105 *Id.* at 518.

106 *See generally* Rowland, *supra* note 104.

107 *Id.* at 516.

108 *See* RICHARD A. GIVENS, Manual of Federal Practice 5th § 6.13 (5th ed. 2015) (suggesting that "[m]ediation is often the most effective means of dispute resolution").

109 *See, e.g.*, 3 WAYNE D. BRAZIL, MOORE'S FEDERAL PRACTICE § 16.53 (3d ed. 2014) (noting that "mediation" generally "refers to a relatively informal non-binding process in which a neutral third person tries to help opposing parties reconcile their positions consensually").

110 Douglas H. Yarn, Ga. ADR PRAC. & PROC. § 7:16 (database updated May 2015).

111 Kubasek & Silverman, *supra* note 4, at 552.

112 *See id.*

mediated permit agreements allow all parties to avoid the uncertainty created by an atmosphere of reactive litigation for certain disputes and situations.[113] For example, once water has become fouled, it is difficult to restore to the *status quo ante*. Groundwater contamination is nearly impossible to undo *in situ*.[114] Rather than wait for such harms to occur, triggering litigation, mediation can better serve all parties by creating proactive preventative measures.

V. WHEN ADR HAS WORKED WELL AND WHEN IT HAS WORKED POORLY

As noted above, ADR in the context of water quality is most often successful when it averts prospective or conjectural harms, rather than when reacting to actual, imminent, or concrete harms.[115] In terms of water quality, much of the focus on water pollution is on addressing nonpoint sources, making strategies such as Total Maximum Daily Loads (TMDLs) for impaired waterbodies[116] ripe for implementation via mediation.[117]

A. COLUMBIA RIVER SALMON MEDIATION

A prime example of the pitfalls of ADR in water resources disputes is the "Salmon Summit" conducted in the fall of 1990. Senator Mark Hatfield of Oregon called the Salmon Summit in reaction to petitions to list five species of Columbia River salmon

113 *Id*.

114 Groundwater pollution is one of the least-controlled and most contentious issues in the environmental regulatory scheme. For a basic, but by no means comprehensive, list of articles addressing the topic, *see generally* James T. B. Tripp & Adam B. Jaffe, *Preventing Groundwater Pollution: Towards a Coordinated Strategy to Protect Critical Recharge Zones*, 3 HARV. ENVTL. L. REV. 1 (1979); Ludwik A. Teclaff, *Principles for Transboundary Groundwater Pollution Control*, 22 NAT. RESOURCES J. 1065 (1982); David H. Getches, *Groundwater Quality Protection: Setting a National Goal for State and Federal Programs*, 65 CHI.-KENT L. REV. 387 (1989); Lawrence Ng, Note, *A DRASTIC Approach to Controlling Groundwater Pollution.*, 98 YALE L.J. 773 (1989); Gary Linn Evans, *Texas Landowners Strike Water—Surface Estate Remediation and Legislatively Enhanced Liability in the Oil Patch—A Proposal for Optimum Protection of Groundwater Resources from Oil and Gas Exploration and Production in Texas*, 37 S. TEX. L. REV. 477 (1996); Jonathan R. Eaton, Note, *The Sieve of Groundwater Pollution Protection: A Public Health Law Analysis*, 6 J. HEALTH & BIOMED. L. 109 (2010).

115 C.*f*. Lujan v. Defenders of Wildlife, 504 U.S. 555, 560 (1992) (requiring that a plaintiff's injury be actual or imminent rather than conjectural or hypothetical to have standing to bring suit).

116 *See* 40 C.F.R. § 130.7; 33 U.S.C. § 1313(d). Generally, CWA 303(d) requires states to identify waters where current pollution control technologies alone cannot meet the water quality standards set for that waterbody and to establish TMDLs for the pollutant(s) in the impaired waters.

117 *See generally* Kevin M. DeBell, The Effectiveness of Environmental Dispute Resolution in Water Quality Negotiations (Summer 2006) (unpublished Ph.D. dissertation, George Mason University) (explaining a comprehensive case study of environmental mediation in the context of Total Maximum Daily Load (TMDL) development).

under the Endangered Species Act.[118] Senator Hatfield gathered "a group of about thirty people, each representing interests in Columbia River resources, to try to negotiate agreement on measures to halt the decline of native salmon stocks."[119] Members of the Salmon Summit "included leaders from utilities, farming groups, aluminum and shipping industries, commercial and sports fishing interests, state governments, Indian tribes, and conservationists."[120] After meeting for six months, exchanging voluminous paperwork and proposals, the Salmon Summit disbanded without reaching agreement.[121] For many conservationists and environmental activists, this was emblematic of attempts by "politicians to get themselves out of the hot seat—a way of bringing the pressures of group dynamics to bear on 'radicals' who challenge powerful economic interests and demand strong resource protection and strict compliance with the law."[122]

B. The Chesapeake Bay TMDL

As a counterexample to the failed Salmon Summit, the collaborative process appeared poised to deliver results for the Chesapeake Bay ("Bay").

> Over 200 miles long and fed by 100,000 streams and tributaries as far away as the Adirondack and Appalachian Mountains, the Chesapeake is iconic for its flocks of ducks and geese that once shadowed the sun; its blue crabs, the 'beautiful swimmers' that made Maryland a dining destination; and its oysters, whose reefs at the time Captain John Smith navigated them were so thick and numerous that wooden ships had to take precaution to avoid tearing themselves apart.[123]

Professor Houck observes that "[t]he decline of the Chesapeake over this past century was precipitous and uninterrupted."[124] Despite recent progress, today, "[v]irtually the entire Bay and its tidal branches remain water quality-limited; over one-half of all its tributaries are in either 'poor' or 'very poor' condition."[125] For the most part, all relevant parties agree that the Bay must be restored and that a collaborative effort is in everyone's best interest. The process has taken decades, but local political pressures tend to favor conservation and restoration of the Bay, cutting across party lines.

The various jurisdictions in the Bay watershed began implementing a system-wide TMDL for the Bay ("Bay TMDL"). The Bay TMDL "consists of 92 total TMDLs, addressing nitrogen, phosphorus and sediment discharges from stormwater and wastewater runoff, one for each of the 92 segments in the bay."[126] While not strictly the result of "mediation," the Bay TMDL was developed following decades of litigation, public pronouncements, scientific studies, and stakeholder input.[127] It was thought that, "[h]aving formally committed to abatement on this scale, energy spent fighting the TMDLs and

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118 Rowland, *supra* note 104, at 503. *See also* 16 U.S.C. §§ 1531–1543 (2015).
119 Rowland, *supra* note 104, at 503.
120 *Id.*
121 *Id.* at 504.
122 *Id.*
123 Oliver A. Houck, *The Clean Water Act Returns (Again): Part I, TMDLs and the Chesapeake Bay*, 41 Envtl. L. Rep. 10,208, 10,213 (2011).
124 *Id.*
125 *Id.*
126 20 No. 4 Stormwater Permit Manual Newsl. 5 (Nov. 2010).
127 *See* Houck, *supra* note 123, at 10,223.

WIPs [Watershed Implementation Plans] designed to achieve it [would] be perceived as a breach, at least of faith."[128]

However, despite the massive process required to design and implement the Bay TMDL, it was almost immediately challenged by various interest groups on grounds that it exceeds the enforcement authority of the EPA.[129] And most recently, the Trump Administration has proposed elimination of funding for the program.[130]

VI. CONCLUSION

State and federal governments appear to have a vested interest in the effective management, protection, and preservation of water supplies.[131] "Although the basic federal statutory background has remained static for the past decade or more, environmental protection and natural resource management as practiced 'on the ground' are now awash in innovation, reform, and reinvention."[132] The current trend is for parties to engage in collaborative decision making and work together on local and regional ecosystem management.[133]

So long as a relevant governmental agency is a party to any mediation, the legal presumption is that the public interest is sufficiently protected. In theory, this would appear to negate the need for Professor Susskind's style of mediation. In practice, however, the efficacy of a given agency is highly dependent upon political concerns. Mediators in water resources disputes thus "will need to be knowledgeable about the substance of [the dispute] and intricacies of the regulatory context within which decisions are embedded. . . [and] should also be concerned that the agreements they help to reach are just and stable."[134]

On the whole, then, mediation holds promise as a preventative measure and has some potential as a remedial measure. That is not to say that it is infallible, or even always appropriate. However, the proactive approach of multiparty mediation prior to permit issuance, rule promulgation, or other administrative action could be a useful step for environmental advocates, business/development interests, and government agencies. If the goal is to reduce litigation and ensure maximum benefit for all parties, at least one party to mediation must have the interests of society as a whole at heart, ideally the governmental entities. Absent that, an otherwise independent mediator must fulfill that

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128 *Id.*

129 *See, e.g.*, Am. Farm Bureau Fed'n v. Envtl. Prot. Agency, 792 F.3d 281, 287 (3rd Cir. 2015), *cert. denied*, 136 S. Ct. 1246 (Feb. 29, 2016).

130 Jenna Portnoy & Darryl Fears, *Trump budget would eliminate funding for Chesapeake Bay cleanup*, WASH. POST (March 16, 2017); https://www.washingtonpost.com/local/md-politics/trump-budget-would-eliminate-funding-for-chesapeake-bay-cleanup/2017/03/15/2d7f26f0-08dc-11e7-b77c-0047d15a24e0_story.html?utm_term=.181fe31f6789.

131 *See* 33 U.S.C. § 1251, *et seq.* (2015).

132 Bradley C. Karkkainen, *Environmental Lawyering in the Age of Collaboration*, 2002 WIS. L. REV. 555, 555 (2002).

133 *Id.*

134 Susskind, *supra* note 51, at 46-47.

role. Ultimately, everyone depends on access to clean water. To succeed, solutions to water pollution must be achieved through a cooperative process.

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Citizens' Environmental Lawsuits

By James T. Lang

I. Introduction

The citizens' environmental lawsuit provisions in the Clean Water Act (CWA),[1] the Clean Air Act (CAA),[2] and the Resource Conservation and Recovery Act (RCRA)[3]—the media statutes—are the primary focus of this article though there are, of course, citizens' environmental lawsuit provisions in several other environmental laws.[4] This article examines the use of citizen suit provisions to force an alleged environmental violator to comply with environmental law,[5] and does not discuss use of a citizens' environmental lawsuit against the United States Environmental Protection Agency (EPA) when the EPA has allegedly failed to perform a nondiscretionary duty.[6]

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1 33 U.S.C. § 1365 (2012).

2 42 U.S.C. § 7604.

3 *Id.* § 6972.

4 There are citizen suit provisions in several other important environmental laws such as the Endangered Species Act (ESA), 16 U.S.C. § 1540(g) (2012), the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9659, the Emergency Planning and Community Right-to-Know Act (EPCRA), *id.* § 11046(a)(1), the Safe Drinking Water Act (SDWA), *id.* § 300j-8, and the Toxic Substances Control Act (TSCA), 15 U.S.C. § 2619 (2012). For those environmental laws that lack a citizen suit provision (such as the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321–70m-12, and the Marine Mammal Protection Act (MMPA), 16 U.S.C. §§ 1361–1423h), judicial review of final agency action is available pursuant to the Administrative Procedure Act, 5 U.S.C. §§ 701–06 (2012), with legal fees recoverable under the Equal Access to Justice Act (EAJA), 28 U.S.C. § 2412 (2012).

5 *See, e.g.*, Sierra Club v. Franklin Cty. Power of Ill., LLC, 546 F.3d 918 (7th Cir. 2008) (Sierra Club obtains permanent injunction that halts construction of coal fired power plant where the defendant attempted to build the plant after its CAA permit had expired).

6 *See*, *e.g.*, Nat. Res. Def. Council v. Costle, 568 F.2d 1369 (D.C. Cir. 1977) (forcing EPA to regulate pollution discharged by stormwater into waters of the United States after EPA attempted to avoid this result by issuing a rule that exempted such discharges from the reach of the NPDES permit program); Nat. Res. Def. Council v. Train, 545 F.2d 320 (2d Cir. 1976) (forcing EPA to list lead as a criteria pollutant under the CAA, which brought about the nationwide elimination of lead from gasoline); Nw. Envtl. Advocates v. U.S.

This article begins by suggesting that the citizens' environmental lawsuit is a highly specialized tool for use by non-governmental actors to respond to "government failure."[7] The cost of the tool is so high that most individuals cannot afford to use it. Non-governmental organizations can afford it and they use the citizens' environmental lawsuit quite frequently.[8] Next, it describes how the court proceedings played out in a recently concluded citizens' environmental lawsuit in the United States District Court for the Western District of Virginia, based on a review of the pleadings in the court docket. The description of those court proceedings is offered for illustrative purposes so the reader may consider the points made about government failure and the further points made about the cost to file, prosecute, and defend a citizens' environmental lawsuit. The article concludes by outlining the law on two key issues in the litigation of a citizens' environmental lawsuit: (i) the notice of intent to sue letter; and (ii) civil penalties.

II. CITIZENS' ENVIRONMENTAL LAWSUITS—A RESPONSE TO GOVERNMENT FAILURE (FOR THOSE WHO CAN AFFORD TO USE IT)

As the United States Supreme Court wrote in its 1987 decision in the case of *Gwaltney of Smithfield v. Chesapeake Bay Foundation*, "citizen suits are proper only 'if the Federal, State, and local agencies fail to exercise their enforcement responsibility.'"[9] Federal and state authorities have a prominent role in enforcing the media statutes. The EPA has primary authority. In the widespread and common instance where the EPA has

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Envtl. Prot. Agency, No. C 03-05760 SI, 2006 U.S. Dist. LEXIS 69476 (N.D. Cal. 2006) (forcing EPA, via citizen suit, to regulate pollution discharged by vessels into waters of the United States after EPA attempted to avoid this result by issuing a rule that exempted from the reach of the NPDES permit program discharges "incidental to the normal operation of a vessel"); Am. Canoe Ass'n v. U.S. Envtl. Prot. Agency, 54 F. Supp. 2d 621 (E.D. Va. 1999) (forcing EPA, via citizen suit, to ensure that Total Maximum Daily Loads "TMDLs" are issued for impaired waters in Virginia after EPA had failed for over 19 years in its duty to do this).

7 The term "government failure" is an offspring of the "market failure" concept. "Market failure" describes the situation where the free market misallocates goods and services, oftentimes due to externalities but there are other causes as well. The economist Francis Bator introduced the concept of "market failure" in 1958. *See* Francis M. Bator, *The Anatomy of Market Failure*, 72 Q.J. ECON. 351 (1958). (This highly technical article defines market failure and offers several conditions that bring about market failure.) Mainstream economic thought holds that the free market is the preferred mechanism for distributing goods and services. Under this view, government regulation is considered a poor (but necessary) alternative to the free market, but only in situations of market failure. "Government failure," then, describes the situation where the market failed, government regulation was called upon to address the market failure, and the government botched the job. For a thoughtful discussion of "government failure," *see* Barak Orbach, *What is Government Failure?*, 30 YALE J. REG. 44 (2013).

8 Orbach, *supra* note 7.

9 Gwaltney of Smithfield v. Chesapeake Bay Found., 484 U.S. 49, 60 (1987) (quoting S. REP. NO. 92-414, p. 64 (1971), reprinted in 2 A LEGISLATIVE HISTORY OF THE WATER POLLUTION CONTROL ACT AMENDMENTS OF 1972, 1482 (1973)).

delegated its enforcement authority,[10] the state environmental regulatory agencies[11] possess a similar enforcement responsibility.

There are times when both the EPA and a state environmental regulatory agency declines to act on a complaint of environmental violation. The no-action decision in some circumstances is entirely appropriate. At other times, however, the decision to do nothing is a government failure.

It is obviously proper for the EPA and a state environmental regulatory agency to take no action when presented with a frivolous complaint. The failure to act in that instance is a government success, not a government failure. No-action may also be a rational outcome as to complaints with merit. Enforcement budgets are not unlimited. The EPA and the state environmental regulatory agencies must prioritize their enforcement efforts. This means they must decline to act if prosecuting the complained-of violation would preclude these agencies from prosecuting a more consequential violation occurring elsewhere.

There are other times, however, when the decision to take no action against a polluter is an outright government failure. It is government failure when no action is taken because the government mischaracterizes a bona fide environmental violation as one that lacks merit. Additionally, there is research suggesting that government failure occurs more frequently when pollution burdens a community inhabited by people at the lower rungs of the socio-economic ladder, or in a community populated by people of color.[12] These communities may not always receive the same degree of responsiveness

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10 Each of the media statutes provides a mechanism for the EPA to delegate enforcement authority to the states. One example is found in that part of RCRA, 42 U.S.C. §§ 6901–6992k, that allows the EPA to authorize each state to carry out the hazardous waste program within such state "in lieu of the Federal program." *Id.* § 6926(b). The regulations at 40 C.F.R. §§ 271.1–.27 explain the process a particular state must follow to obtain authority from the EPA to run its own hazardous waste program, and the criteria that the EPA will use in determining whether to grant or deny the authorization to the state. A central criteria is that the state program must be "no less stringent" than the federal program. *See* 42 U.S.C. § 6926(b)(1) (state will not receive authority if the EPA finds that the state program "is not equivalent" to the federal program); 40 C.F.R. § 271.1(i) (state may adopt a program that is "more stringent" than the federal program). According to the EPA State Authorization Tracking System (StATS), 50 states and territories have received authorization to implement the "base or initial" RCRA hazardous waste program in lieu of the EPA. *State Authorization under the Resource Conservation and Recovery Act (RCRA)*, U.S. Envtl. Prot. Agency, https://www.epa.gov/rcra/state-authorization-under-resource-conservation-and-recovery-act-rcra (last updated Nov. 14, 2016). Texas, for example, obtained authority from the EPA to implement the "base or initial" program in 1984. *See* Texas: Decision on Final Authorization of State Hazardous Waste Management Program, 49 Fed. Reg. 48,300 (Dec. 12, 1984) (codified at 40 C.F.R. pt. 271).

11 The environmental regulatory agencies in the 50 states have various names. Texas refers to its environmental regulatory agency as the Texas Commission on Environmental Quality, or "TCEQ." In Virginia, it is the Department of Environmental Quality, or "DEQ." North Carolina has its Department of Environment and Natural Resources, or "DENR." For California, it is the California EPA, or "CalEPA." This article will refer to them generically as "the state environmental regulatory agency."

12 Tonya Lewis & Jessica Owley, *Symbolic Politics for Disempowered Communities: State Environmental Justice Policies*, 29 BYU J. PUB. L. 183, 189, n.34 (2014). Note how, in 1987, the

from elected or appointed government officials, as compared to affluent or majority white communities.[13] A further explanation for government failure with respect to environmental violations is that the EPA and the state environmental regulatory agencies, each of which were created to act in the public interest, instead may be advancing the economic concerns of the industry that they are charged to regulate, a phenomenon known as "regulatory capture."[14]

United Church of Christ Commission for Racial Justice released a study finding that people of color are 47 percent more likely to live near a hazardous waste site than white Americans. *Id.* at 189, n.236 (citing COMM'N FOR RACIAL JUSTICE, UNITED CHURCH OF CHRIST, TOXIC WASTES AND RACE IN THE UNITED STATES (1987)). Lewis & Owley credit this 1987 study as "the seminal study" on the issue. *Id.* at 221, n.236. As of 2002, it appeared that lower-income people living in urban areas were exposed to greater amounts of air pollution and other environmental hazards as compared to higher-income populations living in urban areas. Daniel R. Faber & Eric J. Krieg, *Unequal Exposure to Ecological Hazards: Environmental Injustices in the Commonwealth of Massachusetts*, 110 ENVTL. HEALTH PERSPECTIVES 277, 282 (2002). This study also found a similar disparity as between people of color and whites. *Id.* at 279. Finally, the study concluded that race was a stronger indicator of disparate pollution exposure as compared to socio-economic level. *Id.* Lewis & Owley recommend Maureen G. Reed & Colleen George, *Where in the World is Environmental Justice?*, 35 PROGRESS HUM. GEOGRAPHY 835 (2011) for a more recent evaluation of the research concerning disparate impact of pollution on low-income populations and people of color. Lewis & Owley, *supra*, at 189, n.34.

13 Exec. Order No. 12,898 represents an effort to address this particular cause of government failure, at least in part. The Executive Order requires each federal agency to make environmental justice "part of its mission by identifying and addressing . . . disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, Exec. Order No. 12,893, 59 Fed. Reg. 7629, at 7629 (Feb. 16, 1994).

14 The sole judicial mention of "regulatory capture" in a reported environmental law case is Env't Tex. Citizen Lobby, Inc. v. ExxonMobil Corp., 824 F.3d 507, 527 (5th Cir. 2016) ("we think it is possible that the agreement between Exxon and the TCEQ is a sterling example of regulatory capture at its worst."). Government agencies, as well as powerful corporations, can reduce the regulator from watchdog to lapdog. Consider the influence the U.S. Navy wielded to cow the National Marine Fisheries Service after the Navy's use of sonar killed a large number of whales in March 2000. JOSHUA HORWITZ, WAR OF THE WHALES 266–67, 286, 305, 311 (2014). The concept of regulatory capture did not, however, originate in environmental law nor is the use of the concept limited to the environmental field. Credit for the regulatory capture concept goes to economist George Stigler. *See* George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. AND MGMT. SCIENCE 3, at 3 (Spring 1971) ("regulation is acquired by the industry and is designed and operated for its benefit"). The facts in Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., 528 U.S. 167 (2000), suggest that industry may have co-opted the South Carolina Department of Health and Environmental Control (DHEC). There, the owner of a hazardous waste incinerator facility violated the daily average limit for discharge of mercury, this limit being the one specified in the CWA permit that DHEC had issued to the facility. *Id.* The facility violated the mercury limit 489 times between 1987 and 1995. *Id.* at 176. An economic benefit in the amount of $1,092,581 was gained by the facility through its decision to forego implementing control strategies that would have eliminated the mercury ex-

No matter whether the government appropriately declines to act because it lacks enforcement resources, or it declines to act for one of the other reasons constituting government failure, the result is, "among other things, accommodation of externalities."[15] The citizens' environmental lawsuit combats these externalities at least in part and, in so doing, helps to correct a source of market failure.[16] Stated differently, the successful citizens' environmental lawsuit assists the operation of the free market economy.[17] The citizen suit plaintiff who puts a stop to the pollution, forces the polluter to clean up the contamination, pay a monetary fine, and reimburse the citizen suit plaintiff

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ceedances. *Id.* at 178. The DHEC was doing nothing to hold the facility accountable for its failure to comply with the permit limits. Thus, it appears that the regulatory agency may have been complicit in the facility's decision to cheat on its permit, a strategy that enabled the facility to improve its bottom line profitability by more than $1M. An environmental non-governmental organization, Friends of the Earth, decided to use the citizens' environmental lawsuit provision in the CWA to force the facility to come into compliance with its CWA permit. *Id.* at 167. The facts suggest that the DHEC went to great lengths to shield the facility from accountability and compliance:

> [Friends of the Earth] sent a letter to Laidlaw notifying the company of their intention to file a citizen suit against it under § 505(a) of the Act after the expiration of the requisite 60–day notice period, i.e., on or after June 10, 1992. Laidlaw's lawyer then contacted DHEC to ask whether DHEC would consider filing a lawsuit against Laidlaw. The District Court later found that Laidlaw's reason for requesting that DHEC file a lawsuit against it was to bar FOE's proposed citizen suit through the operation of 33 U.S.C. § 1365(b)(1)(B). 890 F. Supp. 470, 478 (SC 1995). DHEC agreed to file a lawsuit against Laidlaw; the company's lawyer then drafted the complaint for DHEC and paid the filing fee. On June 9, 1992, the last day before FOE's 60–day notice period expired, DHEC and Laidlaw reached a settlement requiring Laidlaw to pay $ 100,000 in civil penalties and to make " 'every effort' " to comply with its permit obligations. *Id.* at 479-481.

Id. at 176–77; *see also* Michael Biesecker, *NC Toxicologist: Water Near Duke's Dumps Not Safe to Drink*, ASSOCIATED PRESS (Aug. 2, 2016), http://bigstory.ap.org/article/d832ac7182f546cb98aa533325259617/nc-toxicologist-water-near-dukes-dumps-not-safe-drink (North Carolina's top public health official, under pressure from the office of the Governor, falsely told residents living near coal ash pits owned by Duke Energy that the water was safe to drink when, in fact, he knew it was contaminated with hexavalent chromium. The Governor previously worked for Duke Energy for nearly three decades.). The regulatory capture concept has seen widespread use in the healthcare field, probably owing to a 1981 article in the Georgetown Law Journal. *See* France Miller, *Antitrust and Certificate of Need: Health System Agencies, the Planning Act, and Regulatory Capture*, 68 GEO. L.J. 873 (1981); *cf.* HORWITZ, *supra*. The concept has also received judicial recognition in the banking field. *See* Wultz v. Bank of China 61 F. Supp. 3d 272, 292 n.102 (S.D.N.Y. 2013) (raising the possibility that the judgment of the Office of the Comptroller of the Currency was compromised by regulatory capture).

15 Orbach, *supra* note 7, at 50.

16 *See* James T. Lang, *Clean Air Act Section 176 General Conformity Program*, 2 ENVTL. LAW. 353, 400–04 (1996).

17 *See id.* The author has argued in other settings about the ability of environmental regulatory programs to aid the operation of the free market through elimination of externalities.

for her litigation expenses, does a service that benefits herself and benefits the community at large. As one Court wrote:

> [C]itizens' suits . . . play [an important role] in the enforcement of [the environmental laws]. The EPA must classify cases in order to maximize its scarce enforcement resources. There are some violations that, by necessity, may not be pursued aggressively. However, [an environmental] violation is only "small" to one who does not live near the offending hazardous waste facility. Indeed, the [citizens' environmental lawsuit] is a testament to Congress' wisdom in recognizing that those who live in close proximity to hazardous waste facilities often are the most diligent enforcers of [environmental law] mandates.[18]

Citizens' environmental lawsuits are litigated in the federal courts, which are generally a costlier forum for litigants, as compared to state court. The legal and scientific complexity inherent in the citizens' environmental lawsuit is another factor that drives up cost in this type of litigation. Each party in a case, plaintiff and defendant, will be at a disadvantage unless their legal team is staffed with specially trained attorneys, preferably those with an advanced legal degree in environmental law,[19] or those who are experienced in prosecuting or defending citizen environmental litigation, plus a team of PhD consulting and testifying experts, and a budget for laboratory testing of environmental samples. A prospective plaintiff contemplating a citizens' environmental lawsuit needs a war chest of at least $100,000.00 to finance the litigation and, yet, even this budget oftentimes is insufficient to cover the entire expense. Several hundred thousand dollars would be better. This high cost serves the useful purpose of deterring those who might otherwise yield to the temptation of filing a frivolous citizens' environmental lawsuit. But it also operates as a financial barrier to entry for private persons who seek to redress provable environmental violations. It is for this reason that the vast majority of citizens' environmental lawsuits are prosecuted by non-governmental organizations. Many of these non-governmental organizations are national in scope: Natural Resources Defense Council,[20] Sierra Club,[21] Greenpeace,[22] Friends of the Earth,[23] Trout Unlimited,[24] De-

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18 Sierra Club v. Chem. Handling Corp., 824 F. Supp. 195, 197–98 (D. Colo. 1993).

19 The Master of Laws degree, or LL.M., is an internationally recognized postgraduate law degree. It is usually obtained by a one-year full time program to gain expertise in a specialized field of the law. The George Washington University School of Law offers what is perhaps the premier program in the world for the LL.M. in environmental law.

20 *See, e.g.*, Nat. Res. Def. Council v. S.W. Marine, Inc., 236 F.3d 985 (9th Cir. 2000) (NRDC brings CWA citizen suit that forces large shipyard on San Diego bay to come into compliance with the act and pay a $799,000.00 civil penalty).

21 *See, e.g.*, Sierra Club v. Hamilton Cty. Bd. of Cty. Comm'rs, 504 F.3d 634 (6th Cir. 2007) (Sierra Club issues notice of intent to sue letter that serves as catalyst for state and EPA enforcement, and then files CWA citizen suit on its own, which together forces reduction and/or elimination of sewer overflow into Mill Creek and the Little Miami River near Cincinnati, Ohio).

22 *See, e.g.*, Cal. *ex rel.* Lockyer v. U.S. Dept. of Agriculture, 575 F.3d 999 (9th Cir. 2009) (Greenpeace files Endangered Species Act citizen suit that blocks the Forest Service from allowing roads and recreational activities in certain roadless areas in National Forests).

fenders of Wildlife,[25] and others. There is another tier of these non-governmental organizations who have a regional footprint, such as Environment Texas.[26] Additionally, local citizens sometimes will coalesce around an issue, pool their resources, and prosecute a citizens' environmental lawsuit to address an issue of local concern.[27]

Defendants in a citizens' environmental lawsuit likewise need significant financial resources. The typical defendant is a governmental entity such as the EPA, or is a corporate industrial entity. These defendants, for the most part, enjoy a financial advantage relative to the typical plaintiff. Owing to their financial advantage, defendants may be inclined to heavily contest the issues, engage in robust motions practice, and, in the event that the defendant loses in the district court, these defendants will actively consider carrying the litigation into the court of appeals.

III. An Illustrative Case

In May 2012, the Sierra Club and two regional non-governmental organizations (Southern Appalachian Mountain Stewards[28] and Appalachian Voices[29]) filed a CWA citizens' environmental lawsuit against the corporate owner of a coal mine.[30] The citizen suit plaintiffs sought to stop pollution of the water in the Kelly Branch and Callahan

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23 *See, e.g.*, Friends of the Earth v. Consol. Rail Corp., 768 F.2d 57 (2d Cir. 1985) (Friends of the Earth brings CWA citizen suit to force Conrail to comply with permit limits for discharge of pollutants into Butternut Creek).

24 *See, e.g.*, Trout Unlimited v. U.S. Dept. of Agriculture, 441 F.3d 1214 (10th Cir. 2006) (Trout Unlimited fails in its effort to force the Forest Service to release reservoir water for the purpose of maintaining downstream fish habitat).

25 *See, e.g.*, Lujan v. Defenders of Wildlife, 504 U.S. 555 (1992) (Defenders of Wildlife fails with Endangered Species Act citizen suit designed to force the United States to apply the Endangered Species Act in foreign nations).

26 *See, e.g.*, Env't Tex. Citizen Lobby v. ExxonMobil Corp., 824 F.3d 507 (5th Cir. 2016) (Environment Texas Citizen Lobby (and Sierra Club) filed CAA citizen suit to force ExxonMobil to comply with limitations in permits and pay civil penalty).

27 *See, e.g.*, Little v. Louisville Gas & Elec., 33 F. Supp. 3d 791 (W.D. Ky. 2014) (Kathy Little, Greg & Debra Walker, Richard Evans, and Phillip & Faye Whittaker join together to prosecute a CAA Citizen suit designed to stop a power plant from discharging dust and coal ash into the air).

28 "Southern Appalachian Mountain Stewards (SAMS) is an organization of concerned community members and their allies who are working to stop the destruction of our communities by surface coal mining, to improve the quality of life in our area, and to help rebuild sustainable communities." *Mission Statement*, SAMS, http://www.samsva.org/?page_id=1528 (last visited Nov. 19, 2016).

29 Appalachian Voices is an environmental non-profit founded in 1997, whose mission is to protect "the land, air and water of the central and southern Appalachian region, focusing on reducing coal's impact on the region." *See About Us*, Appalachian Voices, www.appvoices.org/about/ (last visited Nov. 19, 2016).

30 Compl. for Declaratory and Injunctive Relief and for Civil Penalties, S. Appalachian Mountain Stewards v. A & G Coal Corp., No. 2:12CV000009, 2013 WL 3814340 (W.D. Va. 2013), 2012 WL 5217245 [hereinafter Complaint].

Creek in Wise County, Virginia.[31] They contended that the defendant coal corporation was discharging the toxic pollutant selenium into these waters without a permit from the state environmental regulatory agency.[32] Selenium reduces survival and causes skeletal deformities in fish.[33] This degradation in water quality, and associated harm to the citizen suit plaintiffs, was the externality that was being accommodated through government inaction.[34]

The plaintiffs, prior to filing the legal action in court, made the EPA and the state environmental regulatory agency aware of the selenium violations at the coal mine through a formal written notice provided to both governmental agencies.[35] The service of such formal written notices, and a 60 day waiting period, are required prior to filing a citizens' environmental lawsuit under the CWA.[36] For whatever reason, the EPA and the state environmental regulatory agency received the notice but took no action, after which the plaintiffs filed suit.[37] In the complaint, the plaintiffs asked the court to order the coal mine to apply to the state environmental regulatory agency for a permit,[38] to pay a civil penalty to the United States in an amount up to $37,500.00 per violation per day,[39] and to pay the plaintiffs for their costs of the litigation.[40]

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31 *Id.*

32 The state environmental regulatory agency had received a delegation from the EPA to administer the CWA NPDES permit program through the process described at *supra* note 10.

33 *See Aquatic Life Criterion – Selenium*, U.S. Envtl. Prot. Agency, https://www.epa.gov/wqc/aquatic-life-criterion-selenium (last visited Nov. 20, 2016).

34 Orbach, *supra* note 7.

35 *S. Appalachian Mountain Stewards*, No. 2:12CV000009, 2013 WL 3814340, at *2 (W.D. Va. July 22, 2013).

36 33 U.S.C. § 1365(b) (2012).

37 Complaint, *supra* note 30.

38 *See* 33 U.S.C. § 1311, which is commonly considered the "cornerstone" of the CWA, requires a permit before any person may "discharge . . . any pollutant." *Id.* § 1311. This statutory provision must be read in concert with the definitions section at 33 U.S.C. § 1362. *Compare id.* § 1311, *with id.* § 1362 (defining "discharge of a pollutant").

39 Complaint, *supra* note 30. The CWA allows for penalties of $25,000.00 per violation per day. 33 U.S.C. § 1319(d). Congress enacted a provision that authorizes the EPA to increase the statutory maximum so that civil penalties keep pace with inflation, maintain deterrent effect, and promote compliance with the law. *See* Federal Civil Penalties Inflation Adjustment Act of 1990, Pub. L. No. 101-410, 104 Stat. 890 (codified as amended at 28 U.S.C. § 2461 note (2012)), *amended by* Pub. L. No. 114-74, 129 Stat. 599 (2015) [hereinafter Adjustment Act]. The EPA set CWA penalties at the present level of $37,500.00 per violation per day in 2008. *See* Civil Monetary Penalty Inflation Adjustment Rule, 73 Fed. Reg. 75,340, at 75,345 (Dec. 11, 2008) (codified as amended at 40 C.F.R. § 19.4). Similarly, the statutory caps for civil penalties under the CAA and RCRA have also been raised. *Id.*

40 The CWA allows the Court to award "costs of litigation" to "any prevailing or substantially prevailing party." 33 U.S.C. § 1365(d). This quite obviously means that *either* plaintiff or defendant could recover its costs of litigation from the other party, depending on the identity of the "prevailing or substantially prevailing party." *Id.*

Unlike many defendants in a citizens' environmental lawsuit, the defendant coal mine in this case opted to forego filing a Rule 12(b)[41] motion to dismiss and, instead, filed its answer in July 2012.[42] The court set June 17, 2013, as day one of a five-day bench trial.[43] Once the issues were joined, discovery took place over the next eight months with only light involvement by the Court.[44] The parties filed cross-motions for summary judgment in April 2013.[45] On May 22, 2013, the Court entered an order cancelling the trial dates and setting argument on the pending summary judgment motions for June 17, 2013, the date formerly scheduled as day one of trial.[46]

The court ruled on the summary judgment motions in July 2013,[47] granting summary judgment to plaintiffs and denying the defendant's motion for summary judgment.[48] The court found that the defendant violated the CWA by discharging selenium into the two water bodies, just as the plaintiffs had alleged.[49] The court ordered the defendant to conduct sampling for selenium in the Kelly Branch and in Callahan Creek at locations and on a schedule suggested by the plaintiffs, to provide the results of this sampling to the state environmental regulatory agency and to the plaintiffs, to apply to the state environmental regulatory agency for a permit for its selenium discharges, to provide the Court with periodic written reports as to the defendant's progress in obtaining the required permit (with a copy of the reports served to the plaintiffs), and, as requested by the plaintiffs, the Court deferred consideration of the civil penalty to be imposed on the defendants for its violations until such time as the defendant eventually obtained its permit.[50]

The defendant took a losing appeal[51] to the United States Court of Appeals for the Fourth Circuit (the Fourth Circuit affirmed the decision of the district court in July

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41 Fed R. Civ. P. 12(b) requires that every defense to a claim for relief in any pleading be asserted in the responsive pleading if one is required. A party may assert the following defenses by motion: (1) lack of subject-matter jurisdiction; (2) lack of personal jurisdiction; (3) improper venue; (4) insufficient process; (5) insufficient service of proacess; (6) failure to state a claim upon which relief can be granted; and (7) failure to join a party under Rule 19. A motion asserting any of these defenses must be made before any responsive pleading is filed.

42 Answer, S. Appalachian Mountain Stewards v. A & G Coal Corp., 2013 WL 3814340 (No. 2:12-CV-0009) (W.D. Va. July 2, 2012), ECF No. 15.

43 Scheduling Order, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 23.

44 For an example of the activity by the court during the discovery period, *see, e.g.*, Order, *S. Appalachian Mountain Stewards*, 2013 WL 3814340 ECF No. 50.

45 Def. A & G Coal Corp.'s Mot. for Summ. J., *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 51; Pls.' Mot. for Summ. J., *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 54.

46 Order, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 62.

47 *S. Appalachian Mountain Stewards*, 2013 WL 3814340.

48 *Id.* at *8.

49 *Id.* at *7–*8.

50 *Id.* at *8–*9.

51 Notice of Appeal, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 83.

2014).[52] The defendant asked the district court to stay the action while the appeal was pending,[53] but that motion was summarily denied.[54] Motions practice and other activity in the district court docket accelerated during the eleven–month period while the appeal was pending, which means that the parties were actively litigating simultaneously in two different courts.[55] In October 2014, three months after the Fourth Circuit affirmed the district court's entry of summary judgment, the district court ordered the defendant to pay the plaintiffs $175,623.18 to reimburse them for legal fees and costs incurred through the date when the plaintiffs prevailed in the Fourth Circuit.[56] Not long after, the parties settled the case on terms that required the defendant to pay $252,000 to fund three supplemental environmental projects, pay a $28,000 civil penalty to the United States, transfer title to property that will be converted to recreational use by a nearby town, and to continue daily monitoring of its outfalls for selenium (and report the results of that monitoring) until the date on which the defendant obtains a permit from the state environmental regulatory agency authorizing the discharge of selenium into the receiving water body.[57] The case concluded in January 2016, three-and-one-half years after it started.[58]

IV. NOTICE OF INTENT TO SUE LETTER

The media statutes require the prospective citizen suit plaintiff to give "notice of the alleged violation" to the EPA, the state environmental regulatory agency, and to the

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52 S. Appalachian Mountain Stewards v. A & G Coal Corp., 758 F.3d 560 (4th Cir. 2014); *see also* USCA Mem., *S. Appalachian Mountain Stewards*, 2013 WL 3814340 (No. 2:12-CV-00009), ECF No. 114.

53 Def. A & G Coal Corp.'s Mot. for Stay of Certain Provisions of the Ct.'s July 22, 2013 Op. and Order, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 81.

54 *S. Appalachian Mountain Stewards*, No. 2:12-CV-00009, 2013 WL 5149792 (W.D. Va. Sept. 13, 2013).

55 *See, e.g.*, Def. A & G Coal Corp.'s Mem. in Opp'n to Pls.' Mot. for an Award of Att'ys Fees and Expenses, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 99 (arguing against plaintiffs' motion for attorney fees in the district court on September 30, 2013); Def. A & G Coal Corp.'s Resp. to Pls.' Req. for Interest and Fees Relating to Certain Expenses, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 110 (arguing against plaintiffs' motion in the district court on January 02, 2014); Br. of Appellees, *S. Appalachian Mountain Stewards*, 758 F.3d 560 (No. 13-2050).

56 *S. Appalachian Mountain Stewards*, No. 2:12-CV-00009, 2014 WL 4955702, at *4 (W.D. Va. Oct. 2, 2014).

57 Consent Decree, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 148; *see also* Amendment to Consent Decree, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 153.

58 *See* Complaint *supra* note 30, ECF No. 1 (setting forth the complaint and initiating the case on May 03, 2012); Amendment to Consent Decree, *S. Appalachian Mountain Stewards*, 2013 WL 3814340, ECF No. 153 (setting forth an amendment to the consent decree on October 21, 2016).

alleged violator.[59] The defendant in the illustrative case elected not to contest the adequacy of the notice of intent to sue letter.[60] Citizen suit defendants typically scour the notice of intent to sue letter to search for defects. Those defects, when found, typically give rise to a Rule 12(b)(1) motion to dismiss. These motions, when successful, bring about dismissal of parties, dismissal of individual counts in the complaint and, in some instances, an outright dismissal of the entire action. So long as the court has not entered the final judgment order, a citizen suit defendant may raise a motion to dismiss for lack of subject matter jurisdiction several years into the litigation, basing the motion on defects in the notice of intent to sue letter.[61]

In addition to requiring the prospective citizen suit plaintiff to furnish notice, the media statutes also require the prospective citizen suit plaintiff to delay before filing suit (for most types of claims).[62] Sixty days is the default period of pre-filing delay for most of the claims brought in environmental citizen suits,[63] although ninety days is required in at least one instance,[64] and no delay is required in a few other instances.[65] It is widely held that the two purposes of the notice and delay provisions are to provide the violator an opportunity to cure the violation[66] and to "allow the enforcer of first resort, the EPA or the appropriate state agency, to bring its own enforcement action . . . which would preempt the citizen lawsuit."[67]

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59 CWA, 33 U.S.C. § 1365(b)(1)(A) (2012); RCRA, 42 U.S.C. § 6972(b)(1), (2) (2012); CAA, 42 U.S.C. § 7604(b) (2012).

60 *See generally*, S. Appalachian Mountain Stewards v. A & G Coal Corp., 758 F.3d 560 (4th Cir. 2014) (the case history indicates defendant directly responding to suit).

61 For example, the Fifth Circuit in a CWA decision wrote that "'[o]bjections to subject-matter jurisdiction . . . may be raised at any time,' such as after trial, which can result in the waste of 'many months of work on the part of attorneys and the court.'" La. Envtl. Action Network v. City of Baton Rouge, 677 F.3d 737, 747 (5th Cir. 2012) (quoting Henderson v. Shinseki, 562 U.S. 428, 434-35 (2011)); *accord* Friends of the Earth v. Gaston Copper Recycling, 629 F.3d 387, 400 (4th Cir. 2011) (the defendant "timely raised" objections to the notice of intent to sue letter "two years after the district court had concluded hearing evidence in the case"); *see also* Fed. R. Civ. P. 12(h)(3).

62 *See, e.g.*, 42 U.S.C. § 7604(b)(1)(A).

63 *See, e.g.*, *id.* § 7604(b)(1)(A), (b)(2).

64 *See, e.g.*, *id.* § 6972(b)(2)(A) (citizen suit to address imminent and substantial endangerment associated with the past or present handling, storage, treatment, transportation, or disposal of solid or hazardous waste).

65 *See, e.g.*, *id.* § 7604(b) (pre-filing delay not required for citizen suit addressing certain emissions of hazardous air pollutants).

66 Hallstrom v. Tillamook County, 493 U.S. 20, 29 (1989) ("[N]otice gives the alleged violator 'an opportunity to bring itself into complete compliance with the Act and thus likewise render unnecessary a citizen suit.'") (quoting Gwaltney of Smithfield v. Chesapeake Bay Found., 484 U.S. 49, 60 (1987)).

67 Catskill Mountains Chapter of Trout Unlimited v. City of New York, 273 F.3d 481, 487 (2d Cir. 2001); *see also Hallstrom*, 493 U.S. at 29 (citing G*waltney of Smithfield*, 484 U.S. at 60).

Each of the media statutes require the EPA to promulgate regulations directing the manner in which notice shall be given.[68] The typical EPA regulations, such as those used for the media statutes, address two topics: "service of notice"[69] and "content of notice."[70] It is widely held that appellate review of the district court's decision regarding adequacy of the notice of intent to sue letter is conducted on the *de novo* standard.[71]

The United States Supreme Court issued its first, and only, holding with respect to a notice of intent to sue letter in *Hallstrom v. Tillamook County*, decided in 1989.[72] The issue before the Court was the question of whether the citizen suit plaintiff had complied with the EPA's service of notice regulation[73] in a RCRA citizens' environmental lawsuit. The Court confirmed that compliance with the EPA regulations regarding manner of notice is jurisdictional.[74] The regulation required the prospective citizen suit plaintiff to serve the notice letter to the violator, the EPA, and the state in which the alleged violation occurred.[75] The citizen suit plaintiff in that case served the alleged violator but neither the EPA nor the state. The Court dismissed the citizens' environmental lawsuit in its entirety, holding that the failure to serve the notice of intent to sue letter in accordance with the regulation stripped the Court of subject matter jurisdiction over the citizen suit plaintiff's environmental claims.[76]

A variation on the fact pattern in *Hallstrom* occurs when the citizen suit plaintiff serves the notice of intent to sue letter to some, but not all, of the prospective defendants. In such case, the court lacks subject matter jurisdiction as to the claims against the unserved defendant but the case may proceed against the other defendants (upon whom the notice of intent to sue letter was served).[77]

Turning now to the sufficiency of the mandatory pre-suit notice, the EPA regulations obligate the prospective citizen suit plaintiff to identify the violator, and to describe the nature of the environmental violation(s), with a certain degree of specificity.[78] The CWA regulation on "contents of notice" is typical:

> Violation of standard, limitation or order. Notice regarding an alleged violation of an effluent standard or limitation or of an order with respect thereto, shall include sufficient information to permit the recipient to identify the specific

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68 42 U.S.C. § 6972(c) & 40 C.F.R. §§ 254.2, 254.3 (2016) (manner of notice for citizens' environmental lawsuit under RCRA); 33 U.S.C. § 1365(b) (2012) & 40 C.F.R. §§ 135.2, 135.3 (2016) (CWA); 42 U.S.C. § 7604(b) & 40 C.F.R. §§ 54.2, 54.3 (2016) (CAA).

69 *See, e.g.*, 40 C.F.R. § 135.2 (service of notice for CWA citizens' environmental lawsuit).

70 *See, e.g.*, *id.* § 135.3 (content of notice for CWA citizens' environmental lawsuit).

71 *See, e.g.*, Paolino v. JF Realty, 710 F.3d 31, 36 (1st Cir. 2013).

72 *Hallstrom*, 493 U.S. 20.

73 40 C.F.R. § 254.2 is the service of notice regulation that the EPA promulgated for a RCRA citizens' environmental lawsuit.

74 *Id.* § 254.1 (requires actions to be filed according to the rules of the district court where action is instituted).

75 *Id.* § 254.2(a).

76 *Hallstrom*, 493 U.S. at 33 ("Accordingly, we hold that where a party suing under the citizen suit provisions of RCRA fails to meet the notice and 60-day delay requirements of § 6972(b), the district court must dismiss the action as barred by the terms of the statute.").

77 *See, e.g.*, Paolino v. JF Realty, 710 F.3d 31 (1st Cir. 2013); City of Newburgh v. Sarna, 690 F. Supp. 2d 136 (S.D.N.Y. 2010).

78 40 C.F.R. § 135.3(a) (2016).

> standard, limitation, or order alleged to have been violated, the activity alleged to constitute a violation, the person or persons responsible for the alleged violation, the location of the alleged violation, the date or dates of such violation, and the full name, address, and telephone number of the person giving notice.[79]

The courts evaluate content of the notice by referring to this regulation (or the comparable "contents of notice" regulation if the case arises under one of the other environmental statutes). The courts likewise are guided by the purpose that underlies the "notice of contents" regulation, which, as the United States Supreme Court stated in *Gwaltney*, is to give "the alleged violator . . . an opportunity to bring itself into complete compliance with the Act and thus likewise render unnecessary a citizen suit."[80] The First Circuit used its 2013 decision in *Paolino v. JF Realty*[81] to survey and then sum up the prominent decisions of the various courts of appeals, with the exception of a case in the Eleventh Circuit,[82] as follows:

> The key language in § 135.3(a) is that pre-suit notice must permit "the recipient" to identify the listed information, i.e., the specific standard at issue, the dates on which violations of that standard are said to have occurred, and the activities and parties responsible for causing those violations. *See Pub. Interest Research Grp. of N.J., Inc. v. Hercules, Inc.*, 50 F.3d 1239, 1248 (3d Cir. 1995). Our sister circuits are in relative agreement that this language indicates the appropriate measure of sufficiency under § 135.3(a) is whether the notice's contents place the defendant in a position *to remedy* the violations alleged. *See, e.g., S.F. BayKeeper, Inc. v. Tosco Corp.*, 309 F.3d 1153, 1158 (9th Cir. 2002) ("Notice is sufficient if it is specific enough 'to give the accused company the opportunity to correct the problem.'" (quoting *Atl. States Legal Found., Inc. v. Stroh Die Casting Co.*, 116 F.3d 814, 819 (7th Cir. 1997))); *Atl. States*, 116 F.3d at 819–20 (finding that "notice must be sufficiently specific to inform the alleged violator about what it is doing wrong, so that it will know what corrective actions will avert a lawsuit," and that "[t]he key to notice is to give the accused company the opportunity to correct the problem"). We agree.
>
> The adequacy of the information contained in pre-suit notice will depend upon, inter alia, the nature of the purported violations, the prior regulatory history of the site, and the actions or inactions of the particular defendants. For example, where, as here, the alleged violations concern the unlawful discharge of pollu-

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79 *Id.*

80 Gwaltney of Smithfield v. Chesapeake Bay Found., 484 U.S. 49, 60 (1987); *see also* Brod v. Omya, 653 F.3d 156, 166 (2d Cir. 2011) ("the content of an NOI must serve the purpose of giving 'the appropriate governmental agencies an opportunity to act and the alleged violator an opportunity to comply'" (quoting Daque v. City of Burlington, 935 F.2d 1343, 1354 (2d Cir. 1991), *rev'd in part on other ground*, City of Burlington v. Daque, 505 U.S. 557 (1992)).

81 *Paolino*, 710 F.3d 31.

82 Nat'l Parks & Conservation Ass'n v. Tennessee Valley Authority, 502 F.3d 1316, 1329 (11th Cir. 2007) (held in a CAA case that "National Parks' notice letter was inadequate because it failed to provide enough information to permit TVA to identify the allegedly violated standards, dates of violation, and relevant activities with the degree of specificity required by the regulations").

> tants, several courts have found that only those discharges for which the notice identifies a particular pollutant will withstand a sufficiency challenge. *Friends of the Earth, Inc. v. Gaston Copper Recycling Corp.*, 629 F.3d 387, 401 (4th Cir. 2011); *Catskill Mountains Chapter of Trout Unlimited, Inc. v. City of New York*, 273 F.3d 481, 487–88 (2d Cir. 2001); *see also Brod v. Omya, Inc.*, 653 F.3d 156, 169 (2d Cir. 2011) (same under RCRA notice requirements (citing *Catskill*, 273 F.3d at 487)). Since that was done here, we do not decide whether it is always required.
>
> Moreover, in many cases, there must be sufficient facts asserted about the mechanisms and sources involved in these unlawful discharges so that the defendants may take appropriate remedial action. *Cf. Alt. States*, 116 F.3d at 819–20 (finding earlier pre-suit notice sufficient for new violations alleged in amended complaint where the source of violations was adequately disclosed).
>
> The CWA does not require, however, that a citizen plaintiff "list every specific aspect or detail of every alleged violation," or "describe every ramification of a violation." *Hercules*, 50 F.3d at 1248. This is so because, "in investigating one aspect" of an alleged violation, "the other aspects of that violation . . . will of necessity come under scrutiny" by the putative defendant. *Id.* Thus, the Ninth Circuit has twice found that a notice letter alleging continuing unlawful discharges of pollutants need not list every date on which such discharges occurred. *Waterkeepers N. Cal. v. AG Indus. Mfg., Inc.*, 375 F.3d 913 (9th Cir. 2004); *BayKeeper*, 309 F.3d 1153. In both cases, other information in the notice letter concerning the cause and source of the alleged discharges permitted the defendants to identify an adequate number of specific dates on which these discharges occurred and to take remedial action. *Waterkeepers*, 375 F.3d at 917-18 (violations caused on "every rain event over 0.1 inches" (internal quotation marks omitted)); *BayKeeper*, 309 F.3d at 1159 (violations caused "on each day when the wind has been sufficiently strong to blow" pollutants into adjacent slough (internal quotation marks omitted)). Similarly, the Third Circuit in *Hercules* held that a sufficiently alleged discharge violation in pre-suit notice also informed the defendants of "any subsequently discovered monitoring, reporting or recordkeeping violation that is directly related to the discharge violation." 50 F.3d at 1248. "In short, the Clean Water Act's notice provisions and their enforcing regulations require no more than 'reasonable specificity.'" *BayKeeper*, 309 F.3d at 1158 (quoting *Catskill*, 273 F.3d at 488); *Natural Res. Council of Me. v. Int'l Paper Co.*, 424 F. Supp. 2d 235, 249 (D. Me. 2006).[83]

Beyond the authorities cited immediately above in the *Paolino* legal summary for "contents of notice," there are perhaps another half-dozen appellate level decisions in the Ninth Circuit and scores of decisions in the United States District Courts. During the 45 years since the advent of environmental law in the early 1970's, the majority of the Federal Circuits have issued decisions addressing the legal requirements for sufficiency of notice of intent to sue letters. These decisions have created a coherent, well-developed, body of law that likely explains the absence of United States Supreme Court activity addressing the subject subsequent to the *Hallstrom* decision in 1989.

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83 *Paolino*, 710 F.3d at 31, 37–38.

V. Civil Penalties

The United States Supreme Court's first decision on civil penalties imposed for violation of the environmental laws was handed down in 1980, in the case of *United States v. Ward*.[84] This was a civil enforcement proceeding brought by the United States, as opposed to a citizens' environmental lawsuit.

The defendant in *Ward* owned an oil and gas facility in Oklahoma.[85] The facility, in 1975, released oil into Boggie Creek, a tributary of the Arkansas River system.[86] The defendant reported the discharge to the EPA pursuant to the mandatory reporting requirement in the CWA.[87] When requested to do so, the defendant also submitted a written report to the EPA.[88] The EPA forwarded the report to the United States Coast Guard.[89] The Coast Guard imposed a civil penalty in the amount of $500 after which the defendant filed an action in the district court,[90] claiming that the mandatory reporting requirement violated his constitutional right against self-incrimination and that the incriminating information could not be used to support the assessment of a civil penalty.[91] The Court rejected these arguments, holding that the defendant was not entitled to the protections of the Fifth Amendment self-incrimination clause,[92] the Fifth Amendment double jeopardy clause,[93] or any of the clauses in the Sixth Amendment.[94]

The Court next took up the issue of civil penalties imposed for violation of the environmental laws in 1987, in the case of *Tull v. United States*.[95] This case, like *Ward* seven years earlier, was a civil enforcement action brought by the United States.[96]

The defendant in *Tull* had filled wetlands without a CWA permit at three locations on Chincoteague Island, Virginia. He also had illegally deposited fill material in a man-made waterway at the same location. The maximum civil penalty for these violations was $22,890,000.[97] The economic benefit of noncompliance was $75,000.[98] The defendant timely demanded a jury trial but the district court denied the request.[99] Following a 15–day bench trial, the district court found Mr. Tull violated the CWA and imposed a $75,000 civil penalty.[100] Interestingly, the district court imposed a "suspended" additional civil penalty in the amount of $250,000 payable in the event that Mr. Tull failed to restore navigability in the man-made waterway by removing the fill material he had

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84 United States v. Ward, 448 U.S. 242 (1980).
85 *Id.* at 246.
86 *Id.*
87 33 U.S.C. § 1251.
88 *Ward*, 448 U.S. at 246.
89 *Id.*
90 *Id.* at 246–47.
91 *Id.* at 247.
92 *Id.* at 254.
93 *Id.* at 253.
94 *Id.*
95 Tull v. United States, 481 U.S. 412 (1987).
96 *Ward*, 488 U.S. 242.
97 *Tull*, 481 U.S. at 415; *See also* Adjustment Act, *supra* note 39.
98 *See Tull*, 481 U.S. at 415.
99 *Id.*
100 *Id.*

improperly placed there.[101] The issue before the Supreme Court was whether, under the Seventh Amendment to the Constitution, Mr. Tull was entitled to a jury trial.[102] The Supreme Court held that "the Seventh Amendment required that petitioner's demand for a jury trial be granted to determine his liability, but that the trial court and not the jury should determine the amount of penalty, if any."[103]

Civil penalties imposed on the defendant in a citizens' environmental lawsuit must be paid to the U.S. Treasury, and not to the citizen-suit plaintiff:[104]

> Courts have consistently stated that penalties in citizen suits under the Act must be paid to the Treasury. *See e.g. Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Found., Inc.*, 484 U.S. 49, 108 S. Ct. 376, 379, 98 L. Ed. 2d 306 (1987) ("If the citizen prevails in such an action, the court may order injunctive relief and/or impose civil penalties payable to the United States Treasury"); *Middlesex County Sewerage Auth. v. National Sea Clammers Ass'n.*, 453 U.S. 1, 14 n. 25, 69 L. Ed. 2d 435, 101 S. Ct. 2615 (1981) ("Under the FWPCA, civil penalties, payable to the Government, also may be ordered by the court"); *Atlantic States Legal Found. v. Tyson Foods, Inc.*, 897 F.2d 1128, 1131 n. 5 (11th Cir. 1990) ("Penalties paid as a result of a § 1365 suit do not go to the plaintiff who instituted the suit, but rather are paid into the United States Treasury"); *Sierra Club v. Simkins Indus., Inc.*, 847 F.2d 1109, 1113 (4th Cir. 1988), *cert. denied*, 491 U.S. 904, 105 L. Ed. 2d 694, 109 S. Ct. 3185 (1989) ("the judicial relief of civil penalties, even if payable only to the United States Department of the Treasury, is causally connected to a citizen-plaintiff's injury"); *Sierra Club v. Chevron U.S.A., Inc.*, 834 F.2d 1517, 1522 (9th Cir. 1987) ("any penalties recovered from such an action are paid into the United States Treasury"); *see also Sierra Club Inc. v. Electronic Controls Design, Inc.*, 703 F. Supp. 875 (1989) [rev'd., 909 F.2d 1350 (9th Cir. 1990)] (district court refusing to approve consent judgment in a citizen suit under the Act where settlement provided that monies be paid to Sierra Club Legal Defense Fund).
>
> Ordering that civil penalties be paid to the Treasury is entirely consistent with Congress' intent that citizen suits supplement the enforcement authority of the EPA. Directing that penalties be paid into the Treasury ensures that citizens bring suits to protect the public health and welfare, and not for private gain. *Middlesex County*, 453 U.S. at 18 n. 27.[105]

The media statutes provide the maximum amount of the civil penalty and, in addition, set forth a list of factors the court should consider when tailoring the civil penalty to the particular facts of the case.[106] This is the provision in the CWA:[107]

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101 *Id.*

102 *Id.* at 414.

103 *Id.* at 427.

104 Pub. Interest Research Grp. of N.J., Inc. v. Powell Duffryn Terminals, Inc., 913 F.2d 64, 82 (3d Cir. 1990).

105 *Id.*

106 The CWA sets a daily maximum for civil penalties and sets forth penalty assessment criteria at 33 U.S.C. § 1319(d). The CAA sets a daily maximum for civil penalties at 42 U.S.C. § 7413(d) (2012), and sets forth penalty assessment criteria. *Id.* § 7413(e). RCRA sets a

> Any person who violates [various provisions in the Clean Water Act] shall be subject to a civil penalty not to exceed $ 25,000 per day for each violation. In determining the amount of a civil penalty the court shall consider the seriousness of the violation or violations, the economic benefit (if any) resulting from the violation, any history of such violations, any good-faith efforts to comply with the applicable requirements, the economic impact of the penalty on the violator, and such other matters as justice may require.[108]

There is a similar provision in the CAA.[109] The approach taken in the RCRA differs slightly. As is the case in both the CWA and the CAA, there is a provision in RCRA that specifies the maximum civil penalty.[110] RCRA differs from the other two media statutes, however, because it lacks a listing of factors that the court should consider when deciding the amount of the civil penalty.[111] There is district court authority for the proposition that the court should simply borrow the factors found in an analogous part of RCRA:

> Although the statute does not contain any guidance for the Court in determining penalties in a judicial proceeding, RCRA § 3008(a)(3) [42 U.S.C. § 6928(a)(3)] provides factors that the Administrator shall consider in fixing a civil penalty in an administrative action. RCRA requires the Administrator to take into account the seriousness of the violation and any good faith efforts to comply with applicable requirements. In the absence of other statutory guidance, the Court may give consideration to these same factors in determining an appropriate penalty.[112]

Under this approach, the factors borrowed from an analogous part of RCRA are those found in 42 U.S.C. § 6928(a)(3): "In assessing such a penalty, the Administrator shall take into account the seriousness of the violation and any good faith efforts to comply with applicable requirements."[113] Although there is facially a slight difference in the factors used in both the CWA and CAA, on the one hand, and the factors used in RCRA, on the other hand, this slight facial difference translates into no meaningful difference when courts go about the task of setting the amount of the civil penalty for violations in any of the media statutes.

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daily maximum for civil penalties but sets forth only administrative penalty assessment criteria. *Id.* § 6928(a)(3) (2012).

107 33 U.S.C. § 1319(d) (2012).

108 *Id.*

109 The CAA sets a daily maximum for civil penalties, 42 U.S.C. § 7413(d) (2012), and sets forth penalty assessment criteria. *Id.* § 7413(e) (2012).

110 42 U.S.C. § 6928(g) sets the maximum at $25,000.00 per violation per day. *See also* Adjustment Act, *supra* note 39.

111 *See* 42 U.S.C. § 6928.

112 U.S. Envtl. Prot. Agency v. Envtl. Waste Control, Inc., 710 F. Supp. 1172, 1242 (N.D. Ind. 1989), *aff'd sub nom.* U.S. Envtl. Prot. Agency v. Envtl. Waste Control, Inc., 917 F.2d 327 (7th Cir. 1990) (quoting United States v. T & S Brass & Bronze Works, Inc., 681 F. Supp. 314, 321 (D.S.C.), *aff'd in part, vacated in part,* 865 F.2d 1261 (4th Cir. 1988)).

113 42 U.S.C. § 6928(a)(3).

There is well established and widespread judicial acceptance for two methods for determining the size of the civil penalty.[114] These are the "top down" and the "bottom up" methods. These two methods were explained by the Tenth Circuit as follows:

> In considering fines under the Act, courts generally presume that the maximum penalty should be imposed." *United States v. B & W Inv. Props.*, 38 F.3d at 368; *see also Dell'Aquilla*, 150 F.3d at 339 ("Courts usually calculate a fine under the CAA by starting with the maximum penalty."). When starting with the maximum penalty, courts then consider the factors described in 42 U.S.C. § 7413(e) to determine what degree of mitigation, if any, is proper. *See Dell'Aquilla*, 150 F.3d at 339; *see also United States v. Marine Shale Processors*, 81 F.3d 1329, 1337 (5th Cir. 1996) ("[W]hen imposing penalties under the environmental laws, courts often begin by calculating the maximum possible penalty, then reducing that penalty only if mitigating circumstances are found to exist."). This is not to say that this methodology must be used, but merely that we agree with the persuasive case law that concludes that this approach is satisfactory. *Dell'Aquilla*, 150 F.3d at 338 ("[A]though courts may, and frequently do, begin at the maximum, we have never suggested that such a procedure is always appropriate."). Other courts, for example, use a "bottom up" approach whereby the economic benefit a violator gained by noncompliance is established and then adjusted upward or downward, rather than a "top down" approach in which the maximum possible penalty is first established, then reduced following an examination of "mitigating" factors. *See United States v. Mun. Auth. of Union Twp.*, 150 F.3d 259, 265 (3d Cir. 1998) (collecting cases in a CWA case).[115]

It appears that most of the federal circuit courts allow the trial court to use either of the two methods. The Eleventh Circuit, however, appears to require the "top down" method.[116] The standard of review when a defendant appeals the manner in which the district court has calculated the size of the civil penalty is abuse of discretion.[117]

Several trends are apparent when reviewing the case law on civil penalties. When citizen-plaintiffs or government-plaintiffs appeal a district court's decision to impose a civil penalty of zero dollars, there is a high probability that the court of appeals will reverse.[118] Similarly, in the one court of appeals decision where the district court im-

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114 Pound v. Airosol Co., 498 F.3d 1089, 1094–95 (10th Cir. 2007).

115 *Id.* at 1094–95.

116 Atl. States Legal Found. v. Tyson Foods, 897 F.2d 1128 (11th Cir. 1990). This is a citizens' environmental lawsuit where the district court found the defendant had violated the CWA multiple times but imposed a $0 civil penalty. The Eleventh Circuit reversed and instructed the district court to first determine the maximum fine for which Tyson may be held liable and, if it chose not to impose the maximum, reduce the fine in accordance with the factors spelled out in section 1319(d), clearly indicating the weight it gave to each of the factors in the statute and the factual findings that support its conclusions. *Id.* at 1142.

117 *See* United States v. Mun. Auth. of Union Twp., 150 F.3d 259 (3d Cir. 1998); United States v. Smithfield Foods, 191 F.3d 516, 526 (4th Cir. 1999); Nat. Res. Def. Council v. Sw. Marine, Inc., 236 F.3d 985, 1001 (9th Cir. 2000); Env't Tex. Citizens Lobby, Inc. v. ExxonMobil Corp., 824 F.3d 507, 525 (5th Cir. 2016).

118 *Atl. States Legal Found.*, 897 F.2d 1128; *Env't Tex. Citizens Lobby, Inc.*, 824 F.3d 507; *Pound*, 498 F.3d 1089.

posed a civil penalty in the maximum amount, the court of appeals reversed.[119] A civil penalty that is fixed at the outer limit of the permissible range appears to invite scrutiny as to whether the district court applied the factors that are required to be considered when determining the amount of the civil penalty.[120]

Of the factors that must be considered when determining the size of the civil penalty, it is a miscalculation of the economic benefit of noncompliance that seems to cause the greatest trouble.[121] Giving proper consideration to the economic benefit the defendant received through its noncompliance is needed to "level the playing field."[122] And, when economic benefit of noncompliance is carefully proven, it will justify the affirmance of a very large civil penalty on appeal.[123]

The importance of forcing the polluter to pay an appropriate civil penalty is vital to the effectiveness of the law, as was explained by the United States District Court for the District of South Carolina when it imposed a $405,800 civil penalty on a polluter for its CWA violations.[124] The Court there wrote:

> The court in *PIRG v. Powell Duffryn Terminals, Inc.*, 720 F. Supp. 1158 (D.N.J. 1989), *aff'd in part, rev'd in part*, 913 F.2d 64 (3d Cir. 1990), *cert. denied*, 498 U.S. 1109 (1991), explained well the purposes behind civil penalties:
>
> > Civil penalties seek to deter pollution by discouraging future violations. To serve this function, the amount of the civil penalty must be high enough to insure that polluters cannot simply absorb the penalty as a cost of doing business. Otherwise, a rational profit maximizing company will choose to pay the penalty rather than incur compliance costs. Additionally, the probability that a penalty will be imposed must be high enough so that polluters will not choose to accept the risk that non-compliance will go unpunished.
>
> *Id.* at 1166 (citations omitted). Similarly, only by removing the economic benefit of noncompliance can a civil penalty ensure that a violator receives no economic advantage *vis-a-vis* its competitors who comply in a timely fashion with all environmental regulations. *PIRG v. Powell Duffryn Terminals, Inc.*, 913 F.2d at 80 (quoting S. Rep. No. 50, 99th Cong., 1st Sess. 25 (1985)).

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119 United States v. Dell'Aquilla, 150 F.3d 329 (3d Cir. 1998).

120 *See, e.g.*, *id.* at 338–39.

121 *Atl. States Legal Found.*, 897 F.2d 1128 (reversed because District Court did not consider economic benefit of noncompliance when setting amount of civil penalty); *Env't Tex. Citizens Lobby, Inc.*, 824 F.3d at 530 ("we conclude that the district court erred in failing to consider that evidence and enter specific findings as to whether the projects demonstrate that Exxon received an economic benefit from noncompliance"); United States v. Allegheny Ludlum Corp., 366 F.3d 164 (3d Cir. 2004); *Smithfield Foods*, 191 F.3d 516.

122 *Allegheny Ludlum*, 366 F.3d at 168.

123 *Mun. Auth. of Union Twp.*, 150 F.3d 259 (affirming civil penalty of $4,031,000 for CWA violations).

124 Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 956 F. Supp. 588 (D.S.C. 1997), *vacated*, 149 F.3d 303 (4th Cir. 1998), *rev'd*, 528 U.S. 167 (2000).

> Actually, to serve as an effective deterrent, a civil penalty must recover an amount beyond the economic benefit of noncompliance. If a penalty recovered merely required the polluter to disgorge the benefit it received from noncompliance, then from a purely economic standpoint, a discharger would be indifferent between spending the money necessary to achieve full compliance in a timely manner and ignoring the regulation and simply paying the civil penalty as a cost of doing business. *See SPIRG v. Monsanto Co.*, 29 Env't Rep. Cas. (BNA) 1078, 1090 (D.N.J. 1988) ("To simply equalize the economic benefit with the penalty would serve ill the possibility of discouraging other and future violations. Some additional penalty should be imposed as a sanction.").[125]

VI. CONCLUSION

Credit is owed to those who saw to the enactment of our environmental laws. They showed wisdom and great skill in putting in place legal measures to help all of us keep from poisoning ourselves with our refuse. They knew the government was needed because the free market could not keep us safe from excessive pollution. Government, though, is a human institution and is prone to human frailties. The drafters of our environmental laws recognized this basic fact and they provided the citizens' environmental lawsuit as an additional safeguard for those situations where the government ought to have acted but did not.

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125 Friends of the Earth, Inc. v. Laidlaw Envtl. Servs., Inc., 890 F. Supp. 470, 491–92 (D.S.C. 1995), *rev'd on other grounds*, 149 F.3d 303 (4th Cir. 1998), *rev'd*, 528 U.S. 167 (2007).

Discretion to Divert: Sediment Diversion Projects in Coastal Louisiana and the Marine Mammal Protection Act

By Sam Bruguera

I. Introduction

Sediment diversions that aim to re-introduce the sediment of the Mississippi River into the Mississippi River Delta ("Delta") are seen by many as a cost-effective method of strengthening and rebuilding the coastal land that is disappearing along the Louisiana coast. Erosional processes, including subsidence, sea-level rise, storms, levee construction, channelization, and development, have contributed to coastal land loss. Sediment diversions are built to counteract the loss of freshwater and sediment input from the Mississippi River due to levee construction. Erosion and the loss of sediment input causes changes in vegetation and increases salinity in lower Barataria Bay. As wetlands disappear, productivity and biodiversity of the Barataria Bay Estuarine System decrease. Even temporary collapses of small, low-trophic-level fishes can have ecosystem-wide impacts by reducing food supply to larger fish, seabirds, and marine mammals.[1]

The Louisiana Coastal Protection and Restoration Authority recently recommended moving two diversion projects, the Mid-Barataria & Mid-Breton diversion projects ("Sediment Diversion Projects"), to the engineering and design stage. Barataria Bay,

1 Malin L. Pinsky, *Unexpected Patterns of Fisheries Collapse in the World's Oceans*, 108 PNAS 8317 (2011).

deemed an estuary of national significance by the U.S. Environmental Protection Agency, is a shallow estuarine system located in central Louisiana.[2] It is bounded on the west by Bayou Lafourche, on the east by the Delta, and on the south by the Grand Terre barrier islands where it opens into the Gulf of Mexico.[3]

Diverting sediment into the Delta, however, would entail the diversion of freshwater causing a decrease in salinity around the diversions. This decrease in salinity may impact the dolphin stocks in the area and thus could present issues under the Marine Mammal Protection Act (MMPA).[4]

This Note discusses how the MMPA may be applied to the Sediment Diversion Projects and explores the ways the Sediment Diversion Projects can continue under the MMPA. Part II provides a brief introduction to the MMPA and compares and contrasts the different statutory requirements that the state faces when seeking authorization for a taking. Part III discusses the importance of the species or stock distinction in the analysis of the impact of the proposed activity on the marine mammals. Part IV discusses the need for and importance of more data. Part V discusses the baseline health of the ecosystem and the stocks against which the impacts of the Sediment Diversion Projects will be measured. Part VI describes the standards when determining the eligibility for takings authorization under the MMPA. Finally, Part VII discusses policy considerations.

II. MARINE MAMMAL PROTECTION ACT

A. MMPA BASICS

The MMPA was enacted in 1972 to address harms to marine mammals that created strong visceral reactions among the public, including seal clubbing, the near extinction of some whale species, and the killing of dolphins as bycatch.[5] Under the MMPA, it is unlawful to "take" a marine mammal.[6] "The term 'take' means to harass, hunt, capture, or kill, or attempt to harass, hunt, capture, or kill any marine mammal."[7]

The restriction on takings was initially viewed as enforcement against discrete activity of alleged violators rather than a mechanism for comprehensive ecosystem or habitat conservation.[8] Therefore, the MMPA protected marine mammals from being killed, wounded, captured, or harassed but did not provide any protection for their habitat.[9] After the 1988 amendments, the National Marine Fisheries Service (NMFS) studied the

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2 *Fish Stock Assessment 101 Series: Part 1 – Data Required for Assessing U.S. Fish Stocks*, NAT'L OCEANIC & ATMOSPHERIC ADMIN., http://www.nmfs.noaa.gov/stories/2012/05/05_23_12stock_assessment_101_part1.html (last visited Mar. 30, 2016).

3 *Id.*

4 Marine Mammal Protection Act, 16 U.S.C. § 1372 (2012).

5 Susan C. Alker, *The Marine Mammal Protection Act: Refocusing the Approach to Conservation*, 44 UCLA L. REV. 527, 534 (1996).

6 16 U.S.C. § 1372.

7 *Id.* § 1362(13).

8 John A. Bourdeau, *Validity, Construction, and Application of Marine Mammal Protection Act of 1972 (16 USCS §§ 1362 et seq.)*, 124 A.L.R. Fed. 593, § 2[a] (1995).

9 Alker, *supra* note 5, at 535.

status of many marine species.[10] The NMFS realized that the big issues of the late 1960s and 1970s (commercial whaling, seal clubbing, and incidental dolphin killing) were largely under control and that the need for marine mammal protection had shifted.[11] The 1994 amendments addressed marine mammal habitats substantively for the first time, but they did not include any implementation measures. The amendments required the NMFS to consider protection of habitat, take some undefined steps to protect habitat for species, and assess potential risks to habitat.[12] Studies of mammals and their habitat increased, but the new rules maintained their focus on species-by-species protection.[13] The new rules led some observers to believe that the MMPA had "moved away from the concept of protecting each marine mammal and was now satisfied with merely protecting the populations of the species at high enough levels to prevent extinction."[14]

B. Differences Between Regulatory Taking and Takings Permit

If the Sediment Diversion Projects constitute a taking, the state may be required to apply for authorization under the MMPA.[15] This could take the form of a specific permit (a "Takings Permit"), or the Secretary of the Department of Commerce (through the NMFS) can allow, after notice and opportunity for comment, incidental taking if such taking will have a "negligible impact"[16] on such species or stock (a "Regulatory Taking").[17] An exception to this requirement exists: a "[s]tate or local government official or employee may take a marine mammal in the normal course of his duties as an official or employee . . . if such taking . . . is for the protection of the public health or welfare."[18]

This section compares and contrasts the statutory requirements that states will face when applying for a Regulatory Taking and a Takings Permit. The processes for applying for a Regulatory Raking or a Takings Permit both have a five-year limit, a public comment procedure, a prescription of the manner of the takings, and a required finding by the NMFS of either "no significant adverse impact" or "negligible impact." [19] The aspects that are unique to the Takings Permit are the required special authorization for the taking of a young mammal, the enhancement permit option, and the governmental exception, explained below. The aspects that are unique to the Regulatory Takings are the "incidental but not intentional," "small number," and best available scientific information requirements.

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10 *Id.* at 544–45.
11 *Id.*
12 *Id.* at 550.
13 *Id.* at 550–51.
14 *Id.* at 551.
15 50 C.F.R. § 216.33 (2016).
16 "Negligible impact" is "an impact . . . [that] cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival." *Id.* § 216.103.
17 16 U.S.C. § 1371(5)(a)(i).
18 50 C.F.R. § 216.22(a)(2).
19 *See infra* Part VI.

1. *Shared Requirements*

a. Five-year limitation

Both a Takings Permit and a Regulatory Taking can authorize takings for a maximum period of five years.[20] States may hesitate to substantially invest resources in a project that would require renewal every five years, and this investment may be lost if the NMFS does not make the same finding of "no significant impact."

b. Public Comment Procedure

The permitting process requires notice of the application to be published in the Federal Register so that anyone may comment.[21] A public hearing may follow.[22] The Regulatory Taking procedure requires notice-and-comment rulemaking.[23] This would likely be more time consuming than other notice-and-comment rulemaking processes, especially if it had to be repeated every five years.

c. Prescription of Manner/Methods

A Takings Permit must prescribe the number, manner, location, and period of the taking.[24] In addition, the state must demonstrate that the proposed activity is humane and does not present any unnecessary risks to the health and welfare of marine mammals.[25] A California district court found that the agencies' limitations in the permit were arbitrary and capricious where the agencies issued a take permit for the Navy's use of sonar and only extended the coastal exclusion zone twelve nautical miles from the shore.[26] The court determined that exclusion zones extending further onto the continental shelf were practicable and that NMFS failed to identify additional biologically important areas and seasons to exclude from sonar use.[27] The permit application requires detailed information about the impact on the marine mammals that may not be currently predictable.[28] The statute defines humane methods as those "which involve[ ] the least possible degree of pain and suffering practicable to the mammal involved."[29] Deciding if the Sediment Diversion Projects cause the least possible degree of suffering would require a complex analysis of the alternatives. Additionally, determining if the Sediment Diversion Projects present any unnecessary risks requires a weighing of their likely benefits to the ecosystem with their likely costs to the health and welfare of marine mammals; with currently available data, both of these factors carry a significant degree of uncertainty. However, the magnitude of the burden to prove that the activity is humane and does not present unnecessary risks is unclear. It may be a low burden for activities that are not viscerally inhumane.

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20 16 U.S.C. § 1371 (2012); 50 C.F.R. § 216.35(b) (2016).
21 50 C.F.R. § 216.33(d)(iii).
22 *Id.* § 216.33(d)(4–5).
23 *Id.* § 216.33.
24 *Id.* § 216.36(a)(1)(i–iv).
25 *Id.* § 216.34(a)(1).
26 Nat. Res. Def. Council, Inc. v. Evans, 279 F. Supp. 2d 1129, 1154 (N.D. Cal. 2003).
27 *Id.* at 1164–65.
28 50 C.F.R. § 216.34(a).
29 16 U.S.C. § 1362(4) (2012).

For a Regulatory Taking, the NMFS must prescribe regulations setting forth permissible methods of taking and other means of effecting the least practicable adverse impact on the species and its habitat and on the availability of the species for subsistence uses, paying particular attention to rookeries, mating grounds, and areas of similar significance.[30] The "least practicable adverse impact" standard was held to be a stringent standard that the NMFS does not have discretion to violate.[31] The NMFS was found to have complied with this standard in issuing a rule allowing the Navy's use of sonar and rejecting more than 200 potential Offshore Biologically Important Areas (OBIAs) on grounds that they were located within and protected by the Navy's twelve nautical mile coastal exclusion zone.[32] Protection by the exclusion zone was found to satisfy the "least practicable adverse impact" standard, even in comparison to the OBIA protection, because the coastal exclusion zones were afforded year-round protection, whether biologically warranted or not.[33] In contrast, the NMFS violated this standard when its rule allowing takings during the Navy's use of sonar did not require pre-operation surveys by air because these surveys were "practicable and necessary to ensure that only small numbers of marine mammals [would be] taken," thus ensuring the least practicable adverse impact.[34] The NMFS was also found to have arbitrarily and capriciously refused to extend coastal exclusion zones more than 12 miles where marine mammals were equally vulnerable.[35]

"Humane manner" is a lower standard than "least practicable adverse impact" since there are many ways to be humane but only one way to have the "least" impact. Therefore, it may be more difficult to obtain a Regulatory Taking than a Takings Permit for the Sediment Diversion Projects. No cases indicate that the required specificity with which the permit or regulation must discuss the taking varies between the two.

d. Significant Adverse Impact and Negligible Impact

To grant a Takings Permit, the NMFS must find that the proposed activity will not likely have a significant adverse impact on the species or stock.[36] The NMFS website requests that applications include a thorough discussion of factors demonstrating no significant adverse impact.[37] To allow a Regulatory Taking, the NMFS must find that, based on the best scientific evidence available, the total taking during the specified time period will have a negligible impact on the species or stock.[38] "Negligible impact" is an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual

30 *Id.* § 1371(a)(5).
31 Nat. Res. Def. Council v. Pritzker, 62 F. Supp. 3d 969, 989 (N.D. Cal. 2014).
32 *Id.* at 1000–04.
33 *Id.* at 1009. On the other hand, OBIA restrictions were typically in effect only seasonally during times of biological importance. *Id.* at 1003.
34 Nat. Res. Def. Council, Inc. v. Evans, 279 F. Supp. 2d 1129, 1161 (N.D. Cal. 2003).
35 *Id.* at 1162–64.
36 50 C.F.R. § 216.34(a)(4) (2016).
37 *Apply for Incidental Take Authorization*, Nat'l Oceanic & Atmospheric Admin., http://www.nmfs.noaa.gov/pr/permits/incidental/instructions.htm#6 (last visited Oct. 5, 2016).
38 16 U.S.C. § 1371(a)(5)(i)(I) (2012).

rates of recruitment or survival.[39] The determination of negligible impact and significant adverse impact is further discussed below.

2. *Unique to the Takings Permit*

a. Special Authorization for Taking of Young Mammal

If an activity would take marine mammals that are unweaned, less than eight months old, or part of a mother-calf/pup pair, a Takings Permit must contain specific authorization.[40] Since Sediment Diversions Projects impact habitat rather than individual mammals, it would be difficult to determine whether this type of taking will occur. Therefore, a safe approach would be for the NMFS to assume that this type of taking needs coverage. On a cultural level, it is unpopular enough to request permission to take charismatic mega fauna; yet here the state is required to request special permission to take *baby* charismatic mega fauna.

b. Enhancement Permit Option

The MMPA contemplates the scenario in which some takings of marine mammals may be required for the benefit of a species or stock.[41] The MMPA allows for the authorization of enhancement permits.[42] The specific benefits of obtaining an enhancement permit over a general permit are beyond the scope of this Note. However, it may help in conveying the purpose and value of the Sediment Diversion Projects. The MMPA clearly prohibits the balancing of marine mammals' well-being with industry interests.[43] Obtaining an enhancement permit immediately differentiates this permit application from those requesting permission to take for commercial activity.[44] It may allow the framing of the application request as a question: "how dire is the need for these sediment diversions, and what are we willing to sacrifice for their predicted contributions?" Unlike the general permit application, this application allows room for considering how some takings of marine mammals may be "necessary for enhancement of the survival, recovery, or propagation of the affected species or stock."[45] For these applications, the scope and purpose of the Sediment Diversion Projects are long-term conservation. To obtain an enhancement permit, the state must fulfill all of the general permit requirements in addition to the requirements described below.[46]

The state must prove that the proposed activity serves enhancement purposes, and the permit must specify the scope of the enhancement.[47] It may seem disingenuous to argue that the Sediment Diversion Projects, which may harm the dolphins, are for "enhancement purposes." However, if preserving the current salinity of Barataria Bay and

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39 50 C.F.R. § 216.103.
40 *Id.* § 216.35(d).
41 *Id.* § 216.33(c)(ii).
42 *Id.* § 216.41.
43 Fed'n of Japan Salmon Fisheries Coop. Ass'n v. Baldridge, 679 F. Supp. 37 (D.D.C. 1987), *aff'd and remanded sub nom.* Kokechik Fishermen's Ass'n v. Sec'y of Commerce, 839 F.2d 795 (D.C. Cir. 1988).
44 *Compare* 50 C.F.R. § 216.41, *with id.* §§ 216.33–40.
45 50 C.F.R. § 216.41(b)(6)(i).
46 *Id.* § 216.41.
47 *Id.* § 216.33.

Breton Sound requires the prevention of the Sediment Diversion Projects, then preserving the salinity may also require perpetuating coastal land loss. Coastal land loss may mean the destruction of the stock's food sources and shelter. The Sediment Diversion Projects would enhance the habitat on which these stocks depend. The need for enhancement of the stock is supported by the Barataria Bay's stock's classification as a strategic stock. A strategic stock is defined as a marine mammal stock that: (1) has a level of direct human-caused mortality that exceeds the potential biological removal level, or (2) is listed or is likely to be listed as a threatened or endangered species under the Endangered Species Act (ESA).[48] A stock may be classified as depleted, after notice-and-comment rulemaking procedure, if it is determined to be below its Optimum Sustainable Population (OSP)[49] or is listed as an endangered or threatened species under the ESA.[50] Classification as a "strategic stock" mostly affects takings of marine mammals incidental to commercial fishing operations.[51] The MMPA *permits* the development and implementation of conservation or management measures for a strategic stock.[52] However, it *requires* the preparation and expeditious implementation of conservation plans for a depleted stock.[53]

The state must also demonstrate that only living marine mammals and marine mammal parts necessary for enhancement of the survival, recovery, or propagation of the affected species or stock may be taken, imported, exported, or otherwise affected under the authority of an enhancement permit.[54] This is primarily a question of alternatives. Coastal restoration alternatives likely could not provide the necessary enhancement; for example, using dredged material requires continuation of a managed, dependent ecosystem, while it can be argued that sediment diversions are the only way to foster a natural independent ecosystem.

Finally, the state must demonstrate that the activity will likely contribute significantly to maintaining or increasing distribution or abundance, enhancing the health or welfare of the species or stock, or ensuring the survival or recovery of the affected species or stock in the wild.[55]

If an enhancement permit is requested in regard to a depleted species, the activity must be consistent with the approved conservation plan developed under the MMPA.[56] While neither this species of dolphin nor the stocks in question have been deemed a depleted species, this requirement is relevant because the permitted actions must still be consistent with the NMFS's evaluation of the actions required to enhance the survival or recovery of the species or stock in light of the factors that would be addressed in a

48 16 U.S.C. § 1362(19).
49 *See infra* note 113 and accompanying text.
50 16 U.S.C. § 1362(1).
51 *Id.* § 1383b(b)(4).
52 *Id.* § 1382(e).
53 *See id.* § 1383b(b)(1)(C).
54 50 C.F.R. § 216.41(b)(6)(i).
55 *Id.* § 216.41(b)(6)(ii).
56 *Id.* § 216.41(b)(6)(iii)(A).

conservation or recovery plan.[57] The recovery plan aims to conserve and restore the species or stock to its OSP.[58]

c. GOVERNMENTAL PERMIT EXCEPTION

If available, the governmental exception to the permit requirement may be the least burdensome.[59] A state or local government official or employee may take a marine mammal without a permit if the taking is for the protection of public health or welfare.[60] However this exception seems to be limited in nature because it requires a written report every six months.[61] This reporting requirement may be too cumbersome for a long-term project, especially because the permit and the rulemaking options also have reporting requirements.

The permit exception requires that the proposed activity be in the interest of protecting the public health or welfare.[62] There is a strong argument that the coastal restoration effects of the Sediment Diversion Projects will be hugely beneficial to the public welfare in preventing coastal land loss and ecosystem collapse and providing additional protection from storms and sea level rise. The taking must also be accomplished in a humane manner.[63] Also, the state must take "[a]ll steps reasonably practicable under the circumstances . . . to prevent injury or death to the marine mammal."[64] The intended scope of this exception is unclear. However, the state would be required to submit a written report every six months;[65] this may indicate this exception is not intended to apply to permanent or long term projects affecting habitat without direct evidence of a harmed marine mammal. The reports must contain "(1) the animal involved, (2) the circumstances requiring the taking, (3) the method of taking, and (4) the name and official position of the State official or employee involved."[66]

3. UNIQUE TO THE REGULATORY TAKING

a. "INCIDENTAL BUT NOT INTENTIONAL" TAKING

A Regulatory Taking only permits "incidental but not intentional" takings. "Incidental but not intentional" means takings that are infrequent, unavoidable, or accidental.[67] It does not mean that the taking must be unexpected.[68] The stringency of this standard has not been clearly established.

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57 *Id.* § 216.41(b)(6)(iii)(B).
58 *Id.* § 216.41(b)(6)(iii)(A).
59 *See id.* § 216.22.
60 *Id.*
61 *Id.* § 216.22(b).
62 *Id.* § 216.22(a)(2).
63 *Id.* § 216.22(a)(1).
64 *Id.* § 216.22(a)(3).
65 *Id.* § 216.22(b).
66 *Id.* § 216.22(b)(1–4).
67 *Id.* § 18.27(c).
68 *Id.*

b. Small Number

The MMPA requires that regulations only allow small numbers of marine mammal takings.[69] The court's finding that this is a distinct standard from the negligible impact standard is further discussed below.[70]

c. Best Available Scientific Information

A request for a Regulatory Taking and the decision to promulgate such a rule must be based upon the best available scientific information.[71] Specifically, the request for such a rule must include:

> (A) an estimate of the species and numbers of marine mammals likely to be taken by age, sex, and reproductive conditions, and the type of taking . . . and the number of times such taking is likely to occur; (B) a description of the status, distribution, and seasonal distribution (when applicable) of the affected species or stocks likely to be affected by such activities; (C) the anticipated impact of the activity on the species or stocks[, and on] the habitat of the marine mammal populations[; and the] impact of the . . . modification of the habitat on the marine mammal population involved.[72]

Much more data is needed to fully understand these issues and, as will be discussed below, the court can review the choice of methodology and data collection that the NMFS makes.[73]

III. Defining the Denominator: Species or Stock Distinction and Small Numbers

The species or stock distinction plays a critical role in the scope of analysis related to the impact of the proposed activity on the marine mammals. This is a question of defining the denominator. The National Oceanic and Atmospheric Administration defines a "stock" as a group of a particular species "that live in the same geographic area and mix enough to breed with each other when mature."[74] Because the population of a stock is typically much smaller than the population of an entire species, the same activity can have a vastly different proportional impact to each.

The NMFS is required to contemplate the impacts of the activity on both the species and the stock.[75] The Sediment Diversion Projects would likely have little impact on the *Tursiops truncatus* species as a whole. However, they may have a greater impact on the Barataria Bay and Breton Sound stocks. Even if the Sediment Diversion Projects have a positive impact on the species as a whole or on other stocks of the common bottlenose dolphin, the NMFS cannot grant a permit without finding that there is no

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69 16 U.S.C. § 1371(a)(5).
70 *See infra* Part II.B.
71 50 C.F.R. § 18.27(d)(1)(iii).
72 *Id.* § 18.27(d)(1)(iii)–(v).
73 *See infra* Part III.
74 Nat'l Oceanic & Atmospheric Admin., *supra* note 2.
75 *See* 16 U.S.C. § 1371(a)(5)(i)(I) (2012); 50 C.F.R. § 216.34(a)(4).

significant adverse impact on the two stocks in question, nor can they grant a Regulatory Taking without a finding of negligible impact on the same stocks.[76] The opportunity that the NMFS has to make these finding is further discussed below.

The requirements for obtaining a Regulatory Taking include a "small numbers" limitation that is not found in the requirements for a Takings Permit. "Small numbers" was originally given a circular definition of "a portion of a marine mammal species or stock whose taking would have a negligible impact on that species or stock."[77] Although the NMFS receives *Chevron* deference in its definitions, the Ninth Circuit has held that "small numbers" must act as a separate and distinct standard when an agency promulgates incidental take regulations.[78] This seemingly prevents the possibility of a large taking being masked by a large population acting as a denominator. The "small numbers" requirement may prevent a Regulatory Taking from being granted if it is found to be a taking of large numbers, even if it is only affecting a small percentage of the species or stock.[79] However, the court also held that defining "small numbers" in relation to the large population would be permissible.[80] The Ninth Circuit seems to have left open the potential for "smaller numbers" to be a more stringent standard but only required that it act as a distinct standard.

This issue has not yet been addressed by the Fifth Circuit. If the NMFS grants a Regulatory Taking for the Sediment Diversion Projects, someone may challenge the rule, arguing that the NMFS's finding of "small numbers" was arbitrary and capricious or that its definition of "small numbers" is improper. The Fifth Circuit could potentially require "small numbers" to be a more stringent standard than "negligible impact." The Takings Permit does not have a similar or equivalent "small numbers" requirement, which may make pursuing a permit for the Sediment Diversion Projects more predictable.[81]

IV. WHAT WE KNOW AND WHAT WE DON'T KNOW

Strong supporting data is critical to protecting the NMFS from legal challenges.[82] The applicant or any party opposed to a permit may seek judicial review of the terms and conditions of such permit or of a decision to deny a permit under the Administrative Procedure Act (APA).[83] The court may intervene in the actions of the NMFS if its actions are arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.[84] A well-developed record of supporting data is essential because the "arbi-

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76 *See* 16 U.S.C. § 1371(a)(5)(i)(I); 50 C.F.R. § 216.34(a)(4).
77 50 C.F.R. § 216.103.
78 Ctr. for Biological Diversity v. Salazar, 695 F.3d 893, 907 (9th Cir. 2012).
79 *Id.*
80 *Id.*
81 *See* 50 C.F.R. § 216.34.
82 *See, e.g.*, Humane Soc. of U.S. v. Locke, 626 F.3d 1040, 1048 (9th Cir. 2010) (holding that the NMFS violated the APA because it had not adequately explained its findings, even though it prepared four lengthy environmental assessments).
83 5 U.S.C. § 702.
84 *Id.* § 706(2)(A).

trary and capricious" standard focuses on the evidence and the reasoning behind the agency action.[85] Every finding that the NMFS makes is susceptible to an APA challenge.[86]

With regard to the Sediment Diversion Projects, the NMFS is in a very vulnerable position because of holes in the data. Its 2015 Barataria Bay Estuarine System Stock Assessment concluded that there is insufficient data to determine the minimum population estimate, population trends, and OSP.[87] This gap in the data makes it impossible to determine the Potential Biological Removal (PBR).[88] A principle question in the Takings Permit or Regulatory Takings analysis is one of negligible impact. The analysis of negligible impact considers the proportion of how many individual takings would need to be authorized compared to the total population of the stock.[89] The NMFS is vulnerable because *any decision they make could be challenged as arbitrary* because of the missing population data.

In addition, the NMFS's choice of evidence used in its decision-making can be challenged independently from the decision.[90] The NMFS must use the best scientific evidence available in prescribing regulations with respect to the taking and importing of marine mammals.[91] The Ninth Circuit held that the NMFS did not use the best scientific evidence available when it disregarded comprehensive and reliable data collected by federal observers because the decision to ignore the data was arbitrary.[92] "Best scientific evidence" is not specified as a requirement for authorizing a Takings Permit; however, it is not safe to assume that the standard for quality of evidence is any less stringent for a Takings Permit. Quoting the statutory requirement of "best scientific evidence available" may bring more attention to the agencies' chosen methodologies, but a similar analysis could likely be done under any APA standard.[93]

Unfortunately, there are a lot of questions without clear answers at the moment. Although the 1994 amendments require stock assessment reports for all marine mammal populations found in United States waters, there is still more to learn.[94] Is it certain that these areas contain discrete stocks? What is the population of each potential stock? How

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85 Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983) (explaining that, under the APA, "the agency must examine the relevant data and articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.").

86 *See* 5 U.S.C. § 706(2).

87 NAT'L OCEANIC & ATMOSPHERIC ADMIN., COMMON BOTTLENOSE DOLPHIN (*Tursiops* truncatus truncatus) Barataria Bay Estuarine System Stock 245, 247 (May 2015), http://nefsc.noaa.gov/publications/tm/tm231/245_gmexbodobarataria_F2014July.pdf.

88 *See id.*; *see also* 16 U.S.C. § 1362(20).

89 *See* 16 U.S.C. § 1371(a)(5)(A)(i).

90 *See id.* § 1373(a) (requiring the Secretary of Commerce to prescribe regulations based on "the best scientific evidence available").

91 *Id.*

92 Am. Tunaboat Ass'n v. Baldrige, 738 F.2d 1013, 1017 (9th Cir. 1984).

93 Bowman Transp., Inc. v. Arkansas-Best Freight Sys., Inc., 419 U.S. 281, 284 (1974) (holding that, even though an agency decision may have been supported by substantial evidence, where other evidence in the record detracts from that relied upon by the agency, the court may properly find that the agency rule was arbitrary and capricious).

94 Alker, *supra* note 5, at 552–53.

will they react to the Sediment Diversion Projects? Do they encounter naturally occurring changes in salinity, and how do they react? What would happen to the animals if the Sediment Diversion Projects are not completed and the coast continues to disappear? Did bottlenose dolphins previously inhabit this area?

The policy section of the MMPA acknowledges that "there is inadequate knowledge of the ecology and population dynamics of such marine mammals and of the factors that bear upon their ability to reproduce themselves successfully[.]"[95] The MMPA must still function amidst these uncertainties. Moving forward with the Sediment Diversion Projects will require a credible, reviewable record, with substantial support for each of the individual findings the NMFS makes.

V. DEFINING THE BASELINE: INJURED OUTSIDE OF THE MMPA

Before the 1994 amendments, the MMPA did not protect marine mammals from habitat degradation but instead focused on particular industries or human activities known to come into direct bodily contact with marine mammals.[96] The 1994 amendments now require the agencies to consider protection of habitat, take some undefined steps to protect habitat for species, and assess potential risks to habitat, although no specific implementation measures concerning habitat were passed.[97] Therefore, the harm that bottlenose dolphins experience from habitat degradation occurs unhindered by the MMPA.

The NMFS considers the Barataria Bay common bottlenose dolphins to be a strategic stock under the MMPA.[98] This is due to an Unusual Mortality Event (UME) of "unprecedented size and duration" and health assessment findings indicating compromised health.[99] Common bottlenose dolphins are not listed as threatened or endangered under the Endangered Species Act, nor are they listed as depleted under the MMPA. Bottlenose dolphins in the northern Gulf of Mexico are experiencing a UME of cetaceans that began in February of 2010.[100] The UME is considered to include "cetaceans that stranded prior to the Deepwater Horizon oil spill . . . , during the spill, and after."[101] Seventy-one stranded cetaceans were found between 2010 and 2012.[102] The Barataria Bay and Breton Sound stocks may also have been affected by a previous UME in 1990, during which 367 cetaceans were found stranded in the northern Gulf of Mexico.[103]

Bottlenose dolphins in the Gulf of Mexico have also been greatly impacted by the Deepwater Horizon oil spill, which occurred merely fifty miles southeast of the Delta and

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95 16 U.S.C. § 1361(3).
96 Alker, *supra* note 5, at 531–32.
97 *Id.* at 550.
98 NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 87, at 250.
99 *Id.*
100 *Id.* at 248.
101 *Id.*
102 *Id.*
103 *Id.*

released 4.9 million barrels of oil into the Gulf.[104] Although the magnitude of this spill was unprecedented and the entire scope of the damage is unknown,[105] the MMPA could not protect the bottlenose dolphins from the damage caused by the spill. Barataria Bay received some of the heaviest oiling in Louisiana.[106] Natural Resource Damage Assessment (NRDA) research studies have indicated that the health of many of the dolphins is compromised.[107] Health effects caused by the oil dispersant, and burn residue compounds include: chemical burns, infections, pneumonia, impaired ability to digest and absorb food, kidney damage, liver damage, brain damage, immune suppression, anemia, lowered reproductive success, and decreased survival.[108] Specific to the location at issue, the study found that:

> Barataria Bay dolphins were 5 times more likely to have moderate-severe lung disease and many showed evidence of compromised adrenal function. Based on the observed disease conditions, 17% of the dolphins sampled in Barataria Bay were given a poor prognosis, indicating that they would likely not survive. The disease conditions in Barataria Bay dolphins were greater in prevalence and severity as compared to the reference site, as well as compared to disease previously reported in other wild populations.[109]

Wetlands habitat loss and degradation is also a concern for the Barataria Bay and Breton Sound bottlenose dolphins.[110] The MMPA could not protect the marine mammals from the erosional processes that are causing wetlands to disappear and decreasing the productivity and the biodiversity of the Barataria Bay Estuarine System.[111] Erosional processes that the MMPA cannot regulate include sea-level rise, subsidence induced by wetland draining, levee construction, channelization, and development. These activities result in land loss, changes in vegetation, and increased salinity in wetlands such as Barataria Bay.[112]

Including the context of the health of the dolphins in the analysis is not about pointing fingers or justifying takings by shifting blame. Instead, it is the only way to complete the analysis of the impacts of the Sediment Diversion Projects on the species or stock so that the best outcome for marine mammals and the ecosystem can be determined. This might seem strange in the context of the MMPA; however, as the MMPA changes, the analysis will change as well. Analyzing a Takings Permit for a coastal restoration project, like the Sediment Diversion Projects, is more complex than the analysis for a Takings Permit for incidental bycatch of dolphins by one fishing boat.

The MMPA defines the concept of Optimum Sustainable Population (OSP), with respect to any population stock, as "the number of animals that will result in the maximum productivity of the population or the species, keeping in mind the carrying capacity of the habitat and the health of the ecosystem of which they form a constituent ele-

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104 *Id.* at 249.
105 *Id.*
106 *Id.*
107 *Id.*
108 *Id.*
109 *Id.* (citation omitted).
110 *Id.*
111 *See id.*
112 *Id.*

ment."[113] The maximum productivity of marine mammals is not a reference to harvesting a resource but relates to establishing the circumstances in which any incidental depletion of the resource will be allowed.[114] OSP does not act as a mandatory population quota that NMFS must work to achieve (although they are required to estimate the potential biological removal level for the stock, which is related to the OSP).[115] Instead, it acts as policy guidance. OSP is never mentioned in the regulations about acquiring a Takings Permit, but it must be included in the record during the notice-and-comment procedures required for a Regulatory Taking.[116]

The OSP of the Barataria Bay Estuarine stock has not been determined.[117] Applying the concept of OSP to this situation creates a conflict between the maximization of a particular population in the ecosystem and the health of the ecosystem as a whole.[118] The definition of OSP does not necessarily clarify this conflict. The D.C. Circuit has given agencies deference in dealing with this ambiguity.[119] This is significant: if agencies have discretion in determining OSP, they may have enough discretion to use the MMPA for habitat conservation purposes as long as they do not act arbitrarily or capriciously.

The D.C. Circuit has also held that it was a violation of the MMPA for the government to allow a Regulatory Taking to commercial fishers without first ascertaining the OSP of the species incidentally affected.[120] The court noted that the fact that actual stocks may be stable supplied little or nothing to the determination of the effect on OSPs, and therefore, the permit issued by the NMFS was inconsistent with the purposes of the MMPA.[121] This distinction between sustainability and stability recognizes that sustainability might require a change in the status quo. It may be possible for the Barataria Bay and Breton Sound stocks to achieve stability, but could they ever achieve sustainability? It is often true in fishery and marine mammal management that the OSP is greater than the current population, but that may not be true here.

The NMFS has wide discretion in determining the OSP.[122] They may have enough discretion to determine that an OSP is zero. However, the court has defined OSP not as a fixed population but as a range that helps determine how many animals can be taken each year without depleting the population.[123] Therefore, the maintenance of a population range that will lead to the depletion of the population cannot be the OSP.

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113 16 U.S.C. § 1362(9).

114 Donna R. Christie, *Living Marine Resources Management: A Proposal for Integration of United States Management Regimes*, 34 ENVTL. L. 107, 134 (2004).

115 16 U.S.C. § 1386(a)(6).

116 *See id.* § 1361.

117 NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 87, at 250.

118 Christie, *supra* note 114, at 134.

119 Animal Welfare Inst. v. Kreps, 561 F.2d 1002, 1014 (D.C. Cir. 1977).

120 *See* Comm. for Humane Legislation, Inc. v. Richardson, 540 F.2d 1141, 1150 (D.C. Cir. 1976). It may also be possible to challenge the NMFS's calculation of OSP as being arbitrary and capricious, although this may not be successful due to the agency's broad discretion to define OSP.

121 *Id.*

122 *See* Christie, *supra* note 114, at 127.

123 *Kreps*, 561 F.2d at 1014.

This would not automatically remove all protections of the marine mammals in habitats with OSPs of zero, but it could change how agencies weigh factors in their balancing decisions.

If the NMFS makes a finding of an OSP greater than zero, could this be challenged as arbitrary and capricious if there is evidence that its number is in fact unsustainable? What if there is evidence that habitat restorations is good for the species as a whole because dolphins' diets depend on species that reproduce in estuarine habitats? What if there is evidence that, given low reproductive rates, these particular dolphin populations might not be sustainable anyway? What if the dolphins are relative newcomers to these habitats as a result of saltwater intrusion?

VI. Significant Adverse Impact and Negligible Impact

As stated above, a Takings Permit requires a finding of no significant adverse impact on the species or stock, while a Regulatory Taking requires a finding of negligible impact on the species or stock.[124] This is the core of the statute's ability to restrict NMFS's power to allow takings. These required finding may be of particular concern in regards to the Sediment Diversion Projects because the analyses do not allow balancing, and the analysis is at the stock level.[125] This analysis may be able to prevent the authorization of takings if the activity has a significant adverse impact on just one stock, even if it benefits the ecosystem or other stocks.

The NMFS website requests that, to obtain a "negligible impact" determination, the applicant must provide information about:

> the number of animals potentially taken in different ways (i.e., mortality, injury, disturbance)[;] the nature, intensity, and duration of harassment of the species; impacts on important behaviors, including disruption of reproductive behaviors, blockage of entrance or egress from a biologically important area, and disruption of feeding during a critical time or at a critical location; physiological effects[; the] status of species or stock (e.g., depleted, increasing, decreasing, etc.)[; the] effects on habitat that will affect recruitment or survival rates[; and] how mitigation may reduce the number and/or severity of takes or impacts to habitat[.][126]

The practical differences between a "significant adverse impact" inquiry and a "negligible impact" inquiry are not analyzed in this Note. Unlike the negligible impact analysis, the significant adverse impact analysis is not explicitly required to be based on the best scientific evidence.[127] A negligible impact is one that results "from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival."[128] It is not clear if "significant adverse impact" is a similar or more lenient standard. Even the NMFS uses the phrase "negligible impact" on the Takings Permit application al-

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124 *See* 16 U.S.C. § 1371(a)(5)(i)(I); 50 C.F.R. § 216.34(a)(4).
125 *See* 16 U.S.C. § 1371(a)(5)(i)(I); 50 C.F.R. § 216.34(a)(4).
126 *Apply for Incidental Take Authorization*, *supra* note 37.
127 *See* 50 C.F.R. § 216.34(a)(4).
128 *Id.* § 18.27(c).

though "significant adverse impact" is the statutory standard for a Takings Permit.[129] The following cases focus on court discussions of the "negligible impact" standard.

Under the ESA, the Ninth Circuit held that the U.S. Fish and Wildlife Service's (USFWS) finding that proposed oil and gas activities resulting in non-lethal "take" would have a negligible impact on the polar bear population was not arbitrary and capricious.[130] The plaintiffs argued that the finding of negligible impact was arbitrary and capricious because USFWS failed to account for the increased vulnerability of polar bears due to climate change.[131] The court noted that, under the USFWS regulations, "to find a 'negligible impact' requires analysis of those effects that are 'reasonably expected' and 'reasonably likely' but not those effects that are speculative or uncertain."[132] The court reasoned that "reduced physical fitness due to climate change likely poses a serious threat to the Beaufort Sea polar bear population, but the Service could reasonably conclude that such a threat could not be 'reasonably expected' to manifest itself in the context of regional oil and gas activities."[133] The court held that the agency did not act arbitrarily and capriciously because USFWS "made scientific predictions within the scope of its expertise" and, therefore, the court exercised its "greatest deference."[134]

A Hawaii district court found that the NMFS's finding of negligible impact in regards to proposed naval training and testing activities in an area occupied by thirty-nine identified marine mammals was arbitrary and capricious because the NMFS failed to consider the impact on all affected species and to consider the best scientific evidence.[135] The NMFS made conclusions about all of the potentially affected species, writing that "any resulting impacts to individuals are not expected to affect annual rates of recruitment or survival."[136] However, they failed to provide data or analysis about the population and the likely impact of the activities on the species.[137] The court also reasoned that the finding of negligible impact was arbitrary and capricious because the NMFS failed to use best available scientific evidence.[138] Although PBR data was available, the NMFS authorized takes in excess of what the calculations recommended.[139] The court attempted to clarify the relationship between a negligible impact finding, PBR, and OSP.[140] The MMPA provides that "species and population stocks . . . should not be permitted to diminish below their optimum sustainable population."[141] The NMFS ar-

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129 *Compare Apply for an Incidental Take Authorization*, *supra* note 37, *with* 50 C.F.R. § 216.34(a)(4).

130 Ctr. for Biological Diversity v. Kempthorne, 588 F.3d 701, 710–11 (9th Cir. 2009).

131 *Id.* at 710.

132 *Id.* at 710–11 (construing 50 C.F.R. § 18.27(c) (1991)).

133 *Id.* at 711.

134 *Id.*

135 Conservation Council for Haw. v. Nat'l Marine Fisheries Serv., 97 F. Supp. 3d 1210, 1222 (D. Haw. 2015).

136 *Id.* at 1224.

137 *Id.*

138 *Id.* at 1225.

139 *Id.* at 1225–27.

140 *Id.* at 1225.

141 16 U.S.C. § 1361(2); *see also* Incidental Take of Endangered, Threatened and Other Depleted Marine Mammals, 54 Fed. Reg. 40,341, 40,342 (Sept. 29, 1989) ("In order to make a negligible impact finding, the proposed incidental take must not prevent a depleted popula-

gued that they are not restricted by PBR levels and that PBR was added to the MMPA as a fisheries management tool, not as a limit on the NMFS's authority.[142] Petitioners argued that, because any mortality level that exceeds PBR will not allow the stock to reach or maintain its OSP, such a mortality level could not be said to have only a "negligible impact" on the stock.[143] Yet, the court found that, since the NMFS had treated PBR as the best scientific evidence available, it acted arbitrarily and capriciously in disregarding it.[144] The court reasoned that, although the statute did not require the NMFS to rely on PBR in this context, the NMFS had previously used PBR in the same context and had no compelling reason not to apply PBR to this case.[145]

A court's reasoning is contingent on the availability of the PBR, which are not currently available for the Barataria Bay or Breton Sound stocks. The NMFS argued that they have no duty to create such data, but the court did not make a finding on that issue.[146] However, the court noted that lack of information does not justify a finding of negligible impact or the authorization of a take level.[147] The court found that it was "clearly arbitrary and capricious" for the NMFS to make a "negligible impact" finding without articulating its basis in data.[148] This means that, without more data, the NMFS may be required to err on the side of restricting takings rather than permitting them. For this reason, data collection is critical to the furtherance of the Sediment Diversion Projects for this reason.

Neither of these cases are binding in the Fifth Circuit, but they demonstrate the ambiguities around the NMFS's discretion in making a "negligible impact" finding. A negligible impact finding is arbitrary and capricious under the MMPA only if the agency entirely fails to consider an important aspect of the problem.[149] The Ninth Circuit held that the agency did not act arbitrarily and capriciously because USFWS made scientific predictions within the scope of its expertise and therefore the court should exercise its "greatest deference."[150] The court stopped short of making a finding about the adequacy of the reasoning the agency did provide for the species that were not excluded from the discussion.[151] However, the second case demonstrates that a court may be able to require the NMFS to make decisions that are in line with the OSP and PBR.[152]

The boundaries of discretion have not yet been defined in the Fifth Circuit, so the safest thing for the NMFS to do in the face of uncertainty is to not grant the permit. An advocate for the Sediment Diversion Projects would want to create a record with a low

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tion from increasing toward its OSP . . . . If a particular stock were known to be within its OSP range, then the Service believes a finding of negligible impact can only be made if the permitted activities are not likely to reduce that stock below its OSP. However, not all takings that do not reduce the population below its OSP would be considered negligible.").

142 *Conservation Council*, 97 F. Supp. 3d at 1227.
143 *Id.* at 1224.
144 *See id.* at 1227–28.
145 *Id.* at 1228.
146 *See id.* at 1225.
147 *Id.*
148 *See id.* at 1224–25.
149 Ctr. for Biological Diversity v. Kempthorne, 588 F.3d 701, 710 (9th Cir. 2009).
150 *Id.* at 710–11 (internal quotations omitted).
151 *Id.*
152 *See Conservation Council*, 97 F. Supp. 3d at 1228.

OSP (possibly zero) for the stock and evidence that the species as a whole will not be harmed—and even may be benefited—so that the NMFS can articulate a rational connection between its fact findings and decisions.

VII. POLICY CONSIDERATIONS

The MMPA states that species and population stocks "should not be permitted to diminish beyond the point at which they cease to be a significant functioning element in the ecosystem of which they are a part."[153] However, it also states that marine mammals

> should be protected and encouraged to develop to the greatest extent feasible commensurate with sound policies of resource management and that *the primary objective of their management should be to maintain the health and stability of the marine ecosystem*. Whenever consistent with this primary objective, it should be the goal to obtain an OSP keeping in mind the carrying capacity of the habitat.[154]

The Secretary is required to

> give full consideration to all factors which may affect the extent to which such animals may be taken or imported, including . . . (1) existing and future levels of marine mammal species and population stocks; . . . (3) the marine ecosystem and related environmental considerations; (4) the conservation, development, and utilization of fishery resources; and (5) the economic and technological feasibility of implementation.[155]

The Sediment Diversion Projects provide an opportunity to rebuild a natural, independent ecosystem. The ecosystem is in flux; the coast will either continue to wash away, or it will be preserved by coastal restoration efforts. Preserving the salinity for these stocks may lead to the collapse of the ecosystem of the bay and with it, the destruction of their sources of food and shelter. For example, the current stock boundary does not include any coastal waters outside of the barrier islands,[156] yet these barrier islands are very vulnerable to erosion and will likely disappear without coastal restoration efforts.[157] If coastal land loss continues, the biological producers of the ecosystem will disappear with the coast; this impact could expand beyond the two stocks being discussed. Loss of these producers could have a detrimental effect on the fisheries and the ecosystem as a whole. Although the MMPA places limitations on the fishing industry, it has always been treated as self-evident that it was not intended to destroy the fishing

153 16 U.S.C. § 1361(2) (2012).
154 *Id.* § 1361(6) (emphasis added).
155 *Id.* § 1373(b).
156 NAT'L OCEANIC & ATMOSPHERIC ADMIN., *supra* note 87, at 246.
157 *See Louisiana Barrier Islands: A Vanishing Resource*, U.S. GEOLOGICAL SURVEY, http://pubs.usgs.gov/fs/barrier-islands/ (last visited November 4, 2016).

industry.[158] The Sediment Diversion Projects may stabilize the ecosystem on which economically important fisheries depend.[159]

One can ask if the MMPA can permit harm to marine mammal habitat but prevent its restoration. The MMPA has allowed, in circumstances that require it, the disruption of some marine mammals for the preservation of an ecosystem. One example of this is the allowance of takings of protected pinnipeds when they are significantly and negatively impacting salmanoid fishery stocks.[160] The statute requires that a state apply for these takings and that the NMFS approve them.[161] Initially, the moratorium on the taking of marine mammals in the MMPA restored a declining California sea lion population.[162] However, the moratorium caused the sea lions to return in greater numbers, which negatively impacted the salmon population.[163] The MMPA did not compel the state to restore the population balance, but it did permit the state to consider more than the management of a single species.[164]

VIII. Conclusion

The requirements for a Takings Permit and a Regulatory Takings share many features: the five-year limitation, a public comment procedure, a prescription of the manner of the takings, and a required finding by the NMFS of either "no significant adverse impact" or "negligible impact." The aspects that are unique to the Takings Permit are the required special authorization for the taking of a young mammal, the enhancement permit option, and the governmental exception. The aspects that are unique to the Regulatory Takings are the "incidental but not intentional," "small number," and best available scientific information requirements. The application for a Regulatory Taking is more difficult and more vulnerable to APA challenges to the notice-and-comment rulemaking procedure, the "least practicable adverse impact" requirement, the "small numbers" requirement, and the "best available scientific information" requirement. The Takings Permit is more difficult to obtain due to the special authorization for the taking of a young mammal. The difference between "no significant adverse impact" and "negligible impact" remains unclear; however, with an adequate record, the NMFS should have the discretion to make both of these findings. Therefore, due to the increased vulnerability to APA challenges under the requirements listed above, pursuing a Takings

158 Alker, *supra* note 5, at 538.

159 "The marshes and swamp forests which characterize Barataria Bay supply breeding and nursery grounds for an assortment of commercial and recreational species of consequence, such as finfish, shellfish, alligators, songbirds, geese and ducks, as well as for migratory birds." Nat'l Oceanic & Atmospheric Admin., *supra* note 87, at 246.

160 16 U.S.C. § 1389(b)(1) (2012).

161 *Id.*

162 *Endangered Salmon Predation Prevention Act: Hearing on H.R. 946 Before the Subcomm. on Fisheries, Wildlife, Oceans, and Insular Affairs of the H. Comm. on Nat. Res.*, 112th Cong. 6-8 (2011) (statement of James Lecky, Director, Office of Protected Resources, Nat'l Marine Fisheries Serv.).

163 *Id.*

164 *See* 16 U.S.C. § 1389(f).

Permit for the Sediment Diversion Projects may be the best choice for the state, keeping in mind that the Sediment Diversion Projects may qualify for the governmental exception. The additional requirements of the enhancement permit may help convey the importance of and benefits to the Sediment Diversion Projects. The Sediment Diversion Projects provide an opportunity to rebuild a natural, independent ecosystem, and the NMFS likely has the discretion to allow the Sediment Diversion Projects under the MMPA if they can be supported by a strong record.

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They Can Have My Hose When They Pry It From My Cold, Dead Hands: When California is Faced With a Drought, Who Gets Water and Who Goes Without?

By Kristin L. Martin

I. INTRODUCTION

Languishing in the grip of its worst drought in 500 years,[1] California is starting to run dry.[2] Life in the Central Valley[3]—the hardest hit region in the state—has already begun changing to resemble an amalgam of modern industrialized living and Second World, foreign aid-subsidized muddling through.[4] For an ever increasing number of residents, indoor running water is becoming a memory.[5] While those with deeper wells water their lawns and flower beds, others, perhaps even next door, use bottled water to do dishes.[6] Some don't use soap so that they can give the leftover water to their children.[7]

Traditional water law in the Golden State is poorly equipped to handle the changing conditions this extreme drought has caused.[8] Some uses of water, once appropriate and reasonable, are now unconscionably wasteful.[9] The judicial response to this brave new

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1 Darryl Fears, *Scientists Say California Hasn't Been This Dry in 500 Years*, WASH. POST (Sept. 14, 2015), http://www.washingtonpost.com/news/energy-environment/wp/2015/09/14/scientists-say-its-been-500-years-since-california-was-this-dry/.

2 *Id.*

3 Encompassing eighteen counties and an area larger than nine different states, California's Central Valley stretches over 450 miles from Bakersfield to Redding. *See* Mark Bittman, *Everyone Eats There*, N.Y. TIMES MAG. (Oct. 10, 2012), http://www.nytimes.com/2012/10/14/magazine/californias-central-valley-land-of-a-billion-vegetables.html?hp; *see also* Kenneth W. Umbach, Ph.D., *A Statistical Tour of California's Great Central Valley*, CALIFORNIA RESEARCH BUREAU (Aug. 1997), http://www.library.ca.gov/crb/97/09/#Heading1 (the Central Valley is composed of the San Joaquin Valley and the Sacramento Valley and is home to some of the most fertile soil on the planet).

4 Nick Janes, *California Drought Could Wipe Cities Off Map If Their Water Runs Out*, CBS SACRAMENTO (July 28, 2015), http://sacramento.cbslocal.com/2015/07/28/california-drought-could-wipe-cities-off-map-if-their-water-runs-out/.

5 Eli Saslow, *California Drought Makes Quest for Water a Consuming Grind*, WASH. POST (July 19, 2015), https://www.washingtonpost.com/national/california-drought-makes-quest-for-water-a-consuming-grind/2015/07/19/de165c1c-2c93-11e5-a250-42bd812efc09_story.html ("In a county where half of all residents depend on well water, their well was the 1,352nd to go dry.").

6 Janes, *supra* note 4.

7 *Id.*

8 *See, e.g.*, Camille Pannu, *Comment: Drinking Water and Exclusion: A Case Study from California's Central Valley*, 100 CAL. L. REV. 223 (2012).

9 *See* Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 225–26 (Ct. App. 2014) (upholding a regulation designed to protect fish from grape farmers' sudden increased water use by limiting how much water farmers could take); *see also* Rob Kuznia, *Rich Californians Balk at Limits: 'We're Not All Equal When It Comes to Water,'* WASH. POST (June 13, 2015), https://www.washingtonpost.com/national/rich-californians-youll-have-to-pry-the-hoses-from-our-cold-dead-hands/2015/06/13/fac6f998-0e39-11e5-9726-49d6fa26a8c6_story.html; Paul Solman, *Is It Nuts to Grow Almonds in a Drought?*, PBS NEWSHOUR (Apr. 30, 2015), http://www.pbs.org/newshour/bb/nuts-grow-almonds-drought/ ("It's almost an act of suicide when you see these new [almond tree] plantings now because the water demand actually increases at about five years into the orchard. It's kind of like a time bomb that's going to really get worse before it gets better.").

world of water law has required courts to ignore outdated precedents as they struggle to adapt old legal concepts to these emerging issues.[10] One major issue is the struggle faced by municipalities with inferior water rights to those of the agriculture industry.[11] While past courts have honored the superior rights of farmers, modern courts must consider provisions of the California Constitution and the California Water Code ("Water Code") that provide a higher priority to domestic water use than to irrigation, while also finding a way to honor municipalities' inferior rights over the agricultural industry's superior rights without causing economic mayhem.[12]

California uses a unique, dual-hybrid system of water rights.[13] Each of the two systems, surface rights and groundwater rights, contains its own hierarchy of use.[14] Riparian rights to surface water, often considered "sacred,"[15] are among the oldest water rights in the state.[16] These rights attach to parcels of land abutting a watercourse.[17] Overlying rights contain many of the same characteristics as riparian rights, but apply to percolating groundwater.[18] Riparian and overlying rights are considered the most superior water rights.[19] Appropriative rights allow a right holder to take surplus water, subordinate to the needs of the riparian or overlying right holder.[20] Prescriptive rights, gained through

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10 *See Light*, 173 Cal. Rptr. 3d at 225–26.

11 *Cf.* City of Barstow v. Mojave Water Agency, 5 P.3d 853, 863 (Cal. 2000) (adjudicating a dispute between a municipality and private citizens with superior rights).

12 *Id.*

13 *See Water Rights: Frequently Asked Questions*, STATE WATER RES. CONTROL BD., http://www.waterboards.ca.gov/waterrights/board_info/faqs.shtml#toc178761089 (last visited Jan. 12, 2016) [hereinafter Water Rights FAQ].

14 *Id.*

15 *"Scary": California Community Close to Running Out of Water*, CBS NEWS (June 19, 2015), http://www.cbsnews.com/news/california-drought-could-leave-mountain-house-community-without-water/ ("Those old water rights were thought to be sacred but California's historic drought is changing the rules."); *see also, City of Barstow*, 5 P.3d at 869 ("Thus, although it is clear that a trial court may impose a physical solution to achieve a practical allocation of water to competing interests, the solution's general purpose cannot simply ignore the priority rights of the parties asserting them.").

16 *See* CBS NEWS, *supra* note 15.

17 *See, e.g.*, United States v. Fallbrook Pub. Util. Dist., 101 F. Supp. 298, 302–03 (S.D. Cal. 1951) (riparian rights arose out of the common law).

18 City of Pasadena v. City of Alhambra, 207 P.2d 17, 28 (Cal. 1949) ("an overlying right, analogous to that of a riparian owner in a surface stream"); PAUL M. BARTKIEWIZC, ET AL, A SUMMARY OF THE CALIFORNIA LAW OF SURFACE WATER AND GROUNDWATER RIGHTS 5 (2006) https://www.co.sutter.ca.us/pdf/pw/wr/gmp/WaterRightsSummary.pdf (riparian and overlying rights refer to the same set of rights and are differentiated only by the location of the water).

19 United States v. Fallbrook Pub. Util. Dist., 165 F. Supp. 806, 824 (S.D. Cal. 1958) ("[T]he riparian right is prior and superior to rights based on appropriation . . . .") (because riparian and overlying rights are analogous, it is unnecessary to mention them separately in this context); *see also*, Gary W. Sawyers, *A Primer on California Water Rights* 2, http://aic.ucdavis.edu/events/outlook05/Sawyer_primer.pdf (last visited Oct. 10, 2015).

20 *City of Barstow*, 5 P.3d at 863 ("Any water not needed for the reasonable beneficial use of those having prior rights is excess or surplus water and may rightly be appropriated on privately owned land for non-overlying use, such as devotion to public use or exportation

adverse use of another's water, guarantee the right holder a certain amount of water per year based on how much water the right holder appropriated during the prescriptive period.[21] In overdraft situations, when the groundwater supply cannot support all of its users, courts equitably apportion water to riparian right holders and fully apportion water to prescriptors.[22] After that, if a surplus remains, courts apportion water to appropriative right holders according to the rule of "first in time, first in right."[23] Overdraft situations are not the norm, but are also not terribly uncommon.[24]

In a California with enough water to fulfill everyone's needs, the dual-hybrid system works well.[25] It is predictable, easily regulated, and, in general, fair.[26] In a California without enough water for everyone's intended uses, this system runs afoul of a formerly innocuous section of the Water Code, section 106.[27]

Article X, section 2 of the California State Constitution provides that water can only be used for reasonable and beneficial uses.[28] This requirement attaches to all water rights.[29] Water Code section 106 states that domestic use is the highest use for water in the state, followed by irrigation as the second highest.[30] Not just a statement of values, this provision suggests a "reasonable, beneficial use" definition for purposes of water rights under the state constitution.[31] The definition of "reasonable and beneficial" will necessarily change based on the situation at hand,[32] but the legislature has taken the time to identify domestic use as more reasonable and beneficial than irrigation, and domestic use and irrigation as more reasonable and beneficial than all other uses.[33]

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beyond the basin or watershed."); Ruby E. Huffman, 64 Interior Dec. 57, 64 (1957); Sawyers, *supra* note 19, at 2–3.

21 *City of Barstow*, 5 P.3d at 863 ("Prescriptive rights are not acquired by the taking of surplus or excess water. [But] [a]n appropriative taking of water which is not surplus is wrongful and may ripen into a prescriptive right where the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years, and under claim of right." (quoting Cal. Water Serv. Co. v. Edward Sidebotham & Son, Inc., 37 Cal. Rptr. 1, 7 (Dist. Ct. App. 1964))); Sawyers, *supra* note 19, at 3.

22 *City of Pasadena*, 207 P.2d at 29 ("As between overlying owners, the rights, like those of riparians, are correlative and are referred to as belonging to all in common; each may use only his reasonable share when water is insufficient to meet the needs of all.").

23 *Id.* at 29 ("As between appropriators, however, the one first in time is the first in right, and a prior appropriator is entitled to all the water he needs, up to the amount that he has taken in the past, before a subsequent appropriator may take any.").

24 *See, e.g.*, *id.*; *City of Barstow*, 5 P.3d at 853.

25 *See, e.g.*, *City of Pasadena*, 207 P.2d at 28–29.

26 Eric T. Freyfogle, *Context and Accommodation in Modern Property Law*, 41 STAN. L. REV. 1529, 1532 (1989). *Cf. infra* note 32 and accompanying text.

27 CAL. WATER CODE § 106 (West 2015).

28 CAL. CONST. art. X, § 2.

29 *See id.*

30 CAL. WATER CODE § 106.

31 *See id.*

32 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 217–18 (Ct. App. 2014) ("What constitutes an unreasonable use of water changes with circumstances, including the passage of time.").

33 CAL. WATER CODE § 106.

Though California courts should begin prioritizing municipalities' appropriative rights over farmers' riparian rights—if only to stave off a human rights crisis—they must also take care to minimize the impacts of those decisions until policy and legislative changes to the water law system can adequately safeguard the state's long-term economic and environmental viability.[34] Accordingly, the purpose of this Note is two-fold: First, it attempts to define and outline the scope of the problems California's legal system will face as a result of the drought. Second, it proposes potential solutions for those problems.[35] Part II outlines the existing structure of statutory and case law within which future water cases will be decided. Part III analyzes how these laws' applications will change as water becomes increasingly scarce and describes some of the consequences of those applications. Part IV discusses the problems that current remedies may create. Part V concludes that, while California's legal system has a limited role in keeping imminent disaster at bay, the solution to the state's water woes will ultimately be a political one, and will require a legislative solution for reasons of institutional competency.

II. An Overview of California's Unique Water Rights System

"While California has a system in place that averts crisis and system collapse, it continues to suffer a variety of dysfunctional results growing out of a system that is at odds with hydrologic reality."[36] This common sentiment exemplifies how bemusing Californian water law can be to people in other states.[37] Their puzzlement likely stems from the state's unique dual-hybrid water law system.[38] California adopted both riparian and appropriative right systems to create the hybrid system.[39] Its dual system also separates water into surface water—which may actually be underground at times—and groundwater, despite modern hydrology contending that water is a singular system.[40] These extra facets make the water law system quite complex, requiring participants to determine what they can use, how much they can use, what kind of right they hold, where

34 Many critics of the current water law system claim that problems arise out of its age. *See* Richard M. Frank, *Another Inconvenient Truth: California Water Law Must Change*, S.F. Chron. (Apr. 10, 2015), http://www.sfchronicle.com/opinion/article/Another-inconvenient-truth-California-water-law-6192703.php.

35 This Note will not analyze the effects of environmental and conservation laws on California's water rights. For more information on those topics, *see* Leon F. Szeptycki, et. al., *Environmental Water Rights Transfers: A Review of State Laws*, Water In The West 22 (Aug. 31, 2015), http://waterinthewest.stanford.edu/sites /default/files/WITW-WaterRightsLawReview-2015-FINAL.pdf.

36 Joseph L. Sax, *We Don't Do Groundwater: A Morsel of California Legal History*, 6 U. Denv. Water L. Rev. 269, 271 (2003).

37 *Id.* at 270.

38 Oklahoma is the only other state to use a hybrid riparian–appropriative system. *Compare* Roderick E. Walston, *California Water Law: Historical Origins to the Present*, 29 Whittier L. Rev. 765, 766 (2008), *with* Franco-Am. Charolaise, Ltd. v. Okla. Water Res. Bd., 855 P.2d 568, 571 (Okla. 1990).

39 Walston, *supra* note 38.

40 Sax, *supra* note 36, at 270.

they stand in the hierarchy of priority, and whether they need a state permit for their use.[41]

A. WHO OWNS CALIFORNIA'S WATER AND HOW MAY IT BE USED?

California water rights are considered real property rights.[42] Those rights are, however, usufructuary, meaning Californians have a right to take and divert water for their own use, but they do not own it.[43] A person cannot lay claim to an individual drop of water as it flows by;[44] the "ownership" of flowing water in California lies with the state and its people.[45] Thus, the state's water law system establishes who gets to *use* water

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41 *See The Water Rights Process*, STATE WATER RES. CONTROL BD., http://www.waterboards.ca.gov/waterrights/board_info/water_rights_process.shtml (last visited Nov. 21, 2016).

42 *Franco-Am. Charolaise*, 855 P.2d at 573.

43 Palmer v. R.R. Comm'n of Cal., 138 P. 997, 999 (Cal. 1914) ("One may have the right to take water from the stream, even the exclusive right to do so, but in that case he does not have the right to a specific particle of water until he has taken it from the stream and reduced it to possession.").

44 This is true both from a practical perspective but is also a component of the substantive law. *Id.* at 999 ("The true reason for the rule that there can be no property in the *corpus* of the water running in a stream is not that it is dedicated to the public, but because of the fact that so long as it continues to run there cannot be that possession of it which is essential to ownership.").

45 *See* Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 209–10 (Ct. App. 2014). The people's ownership of flowing water in California begs the question of whether individuals have a right to take water, free of charge. In some modern democracies, such as South Africa, the right to water is listed in their constitutions as a basic human right. CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA Feb. 4, 1997, ss. 27 1(b). The United States, however, has no such policy. All water rights are granted by the state, *Light*, 173 Cal. Rptr. 3d at 209–10, and, therefore, California could, theoretically, charge right holders for the water they take. While backlash to this policy would likely be severe, *see* Kuznia, *supra* note 9, it could allow right holders to continue taking as much of their allotted water as they wished while simultaneously encouraging conservation and decreased use. Certainly the system could help manage water resources in the long-term, once water availability levels off, without stripping right holders of their privileges. Unfortunately, the state is unlikely to be able to implement such a strategy without generating a slew of lawsuits. *See* Julia Lurie, *California Water Districts Just Sued the State Over Cuts to Farmers*, MOTHER JONES (June 22, 2015), http://www.motherjones.com/blue-marble/2015/06/water-districts-just-sued-state-over-water-rights. While charging for water may have its practical and political advantages, it may be a poor choice for a state that supports human and socioeconomic rights. The United Nations has declared access to water to be a basic human right and is calling on nations to provide more financial support for access. Francis, *supra*, at 508 (citing Comm. on Econ. & Soc. & Cultural Rights, General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant), U.N. Doc. E/C.12/2002/11 (2002). In 2014, the U.N. cited violations of fundamental rights in Detroit, MI, when utility companies shut off over 25,000 residents' water for failure to pay. *In Detroit, City-Backed Water Shut-Offs 'Contrary to Human Rights,' Say UN Experts*, UN NEWS CTR. (Oct. 20, 2014), http://www.un.org/apps/news/story.asp?NewsID=49127#.WDJt56OZO8U. California enacted Bill 685, the Human Right to Water Bill, into law in 2012, establishing for every human being the "right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Skylar Marshall, *California Declares a Human Right to Water*, U. DENV. WATER L.

when there is a shortage,[46] which may avoid the perils of state level "takings" claims that often accompany regulation of real property.[47]

REV. (June 10, 2013), http://duwaterlawreview.com/ca-human-right-to-water/. There is still some ambiguity as to what "affordable" means and whether the law creates a private right of action for citizens. *Id.* Even if the law only targets administrators, if California began charging right holders for the right to capture the people's water, the state would have to set up a safety net for those who could not afford or had no access to water.

46 While water law applies even when there is no shortage, California's system only allows users to take as much water as they can reasonably and beneficially use. CAL. CONST. art. X, § 2. When there is not shortage of water, other users may take whatever water is surplus, subject to the same reasonable and beneficial use restrictions. City of Barstow v. Mojave Water Agency, 5 P.3d 853, 863 (Cal. 2000). Therefore, the operative functions of California's hierarchical water law system only truly activate when there is a water shortage and courts must decide who will get water and how much they will get.

47 Constitutional "takings" claims under the California constitution, CA CONST. art. 1, §19, and the federal constitution, U.S. CONST. amend. V, against the State Water Resources Control Board (SWRCB) for actions taken to curtail water use during drought are likely to be unsuccessful. First and foremost, California owns the water and it cannot "take" what it already owns. *See, e.g.*, Rock-Koshkonong Lake Dist. v. State Dep't of Nat. Res., 833 N.W.2d 800, 820 n.31 (Wis. 2013), 2013 WI 74, ¶ 84 n.31 ("Virtual state ownership of navigable waters . . . does not implicate questions of eminent domain. The State has no need to take what it already 'owns.'"). The relative absence of case law on this particular kind of taking suggests that this interpretation, that the regulations target the water the state owns rather than targeting the "right to use" that the individual owns, may be the prevailing interpretation in California's courts. Furthermore, even if the SWRCB regulations targeted the "right to use" owned by the individual, the state's actions do not meet the criteria set by California's "takings" jurisprudence.

California has adopted the federal takings framework. Thus, to survive a takings challenge, the character of the government action must be general and the action must serve a compelling reason without causing undue interference with the individual's rights. Penn Cent. Transp. Co. v. New York City, 438 U.S. 104 (1978); People v. Murrison, 124 Cal. Rptr. 2d 68, 78 (Ct. App. 2002) (quoting Hensler v. City of Glendale, 876 P.2d 1043, 1048–49 (Cal. 1994)) (applying the traditional takings test to California water regulation). The SWRCB's curtailment actions, thus far, are general in nature because they are applied to a region or watershed rather than to an individual right holder. No one individual is singled out "to bear a burden that should be borne by the public as a whole." *Murrison*, 124 Cal. Rptr. 2d at 78 (quoting *Hensler*, 876 P.2d at 1048). Moreover, California's compelling interest in ensuring a sustainable water supply for future generations outweighs the impacts that water curtailments will have on individual right holders. Furthermore, the SWRCB's actions and curtailments do not constitute *per se* takings. They do not remove all economic value from the individual's property or "right to use." *See* Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1015 (1992). Courts have held that there is a physical taking when the government diverts water for its own use, but that is not the case here. *Cf.* Klamath Irrigation v. United States, No. 1-591L, 2016 U.S. Claims LEXIS 1933, at *19-20 (Fed. Cl. Dec. 21, 2016) (citing Washoe Cty. v. United States, 319 F.3d 1320, 1326 (Fed. Cir. 2003)). The state, in this instance, is not diverting water, nor is water being withheld for state use. What's more, California courts have interpreted the state's public trust doctrine such that the state's duties as trustee of California's navigable waters and the lands under them eclipse any individual water right. Nat'l Audubon Soc'y v. Superior Court, 33 Cal. 3d 419, 445

Because California owns the water and rights to use that water flow from the state, the state may place limits on the right to use water.[48] Article X, section 2 of California's constitution imposes a reasonable and beneficial use requirement on all water use.[49] This section, added to the constitution by referendum in 1928, protects the Golden State's water resources from waste.[50] Tellingly, the language does not define "reasonable" or "beneficial," allowing the meaning to change as circumstances and common sensibilities evolve.[51]

Courts have some guidance when defining "reasonable and beneficial." In 1943, the state legislature passed what is now Water Code section 106,[52] prioritizing domestic use over irrigation and both of those above all other uses.[53] Water Code section 106.5 articulates an intent to protect the rights of municipalities to obtain water.[54] Sections 106 and 106.5 ensure that California residents will have enough water to provide for their health and safety.[55] These statutes, and several others in the Water Code, provide a framework within which the courts can decide disputes between water right holders.[56]

B. THE DUAL-HYBRID CATEGORIES OF INDIVIDUAL WATER RIGHTS

In California, water rights grew out of the common law.[57] The state recognizes a dual system of *individual* water rights:[58] surface rights and groundwater rights.[59] Within those

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(1983). For the foregoing reasons, the SWRCB's actions and curtailment orders do not violate the California or United States "takings" clauses and the affected right holders are not entitled to compensation. There is, however, pending legislation on the issue prompted by new SWRCB curtailment orders. *See*, *infra* note 160, and accompanying text; *see also* Lauren Sommer, *Court Battles Loom Over California's Senior Water Rights*, KQED SCI. (June 15, 2015), http://ww2.kqed.org/science/2015/06/15/court-battles-loom-over-challenge-to-state-water-rights/.

48 CAL. CONST. art X, § 5.

49 *Id.* § 2.

50 *Id.*

51 Tulare Irr. Dist. v. Lindsay-Strathmore Irr. Dist., 45 P.2d 972, 1007 (Cal. 1935) ("What is a beneficial use, of course, depends upon the facts and circumstances of each case. What may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time."); *see also* Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 210–11 (Ct. App. 2014).

52 Statutes of California, ch. 368, 1943 Stat. 1604, 1606.

53 CAL. WATER CODE § 106; *see also* Meridian, Ltd. v. San Francisco, 90 P.2d 537, 550 (Cal. 1939) ("The highest use in accordance with the law is for domestic purposes, and the next highest use is for irrigation.").

54 CAL. WATER CODE § 106.5.

55 *See* Deetz v. Carter, 43 Cal. Rptr. 321, 323 (Dist. Ct. App. 1965); *see also* Prather v. Hoberg, 24 Cal. 2d 549, 562 (1944). California's water code does not clearly define "domestic use."

56 *See* CAL. WATER CODE §§ 100–113 (outlining California's general water policies).

57 Walston, *supra* note 38.

58 In California, pueblo rights are a separate category of water rights that are unavailable to individuals. These rights are only available to the cities and municipalities that succeeded the pueblos after California's transition from Mexico to the United States. Pleasant Valley

categories, hierarchies of priority determine who has a superior right to use water.[60] There are two tiers of rights for surface water—riparian rights and appropriative rights[61]—and three tiers for groundwater—overlying rights, appropriative rights, and prescriptive rights.[62]

1. Surface Water Rights: Riparian and Appropriative

Surface water rights apply to water that flows through a channel with a relatively impermeable bed and banks; if that channel is underground, it is also treated as surface water.[63] The two categories of surface rights, riparian and appropriative rights, are technically not in a hierarchy. However, because appropriative rights may be lost through non-use,[64] nearly all riparian rights are older than, and therefore superior to, current appropriative rights.[65]

Riparian rights, adopted by California from English and eastern U.S. common law,[66] are thought of as the most absolute and secure form of water rights and have often been tied to a specific property for more than a century.[67] Riparian rights attach to land that

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Canal Co. v. Borror, 72 Cal. Rptr. 2d 1, 7 (Ct. App. 1998) ("[P]ueblo water rights, which apply only to the municipal successors of the former Spanish and Mexican pueblos."). Pueblo rights are superior even to riparian rights and allow the few cities that have them to use water as needed, subject to a requirement of reasonable and beneficial use. City of Los Angeles v. City of Glendale, 142 P.2d 289, 292 (Cal. 1943) ("It has long been established that as successor to the pueblo of Los Angeles, the city of Los Angeles has a right, superior to that of a riparian or an appropriator, to satisfy its needs from the waters of the Los Angeles River."). Because there is no question as to whether municipal pueblo rights are superior to riparian rights, this Note does not address them when discussing general municipal water rights.

59 N. Gualala Water Co. v. State Water Res. Control Bd., 43 Cal. Rptr. 3d 821, 831 (Ct. App. 2006) ("California is the only western state that still treats surface water and groundwater under separate and distinct legal regimes."); Sax, *supra* note 36, at 270 ("It must seem surprising to people elsewhere that California, unlike other western states, continues to treat surface water and groundwater under separate and distinct legal regimes, even though everyone today acknowledges that water comprises a continuum through which the water moves wherever gravity takes it.").

60 Peabody v. City of Vallejo, 40 P.2d 486, 494–95 (Cal. 1935).

61 People v. Shirokow, 605 P.2d 859, 864 (Cal. 1980).

62 City of Barstow v. Mojave Water Agency, 5 P.3d 853, 862–63 (Cal. 2000) ("Courts typically classify water rights in an underground basin as overlying, appropriative, or prescriptive.").

63 The test to determine whether underground water is a "subterranean stream," groundwater that is treated as surface water, has four parts. *See* Garrapata Water Co., Decision 1639, 3–4 (State Water Res. Control Bd. June 17, 1999). First, there must be a subsurface channel. *Id.* at 4. Second, that channel's bed and banks must be relatively impermeable. *Id.* Third, the channel's course must be known or determinable through reasonable inference. *Id.* And fourth, groundwater must flow through the channel. *Id.*

64 *See, e.g.*, Erickson v. Queen Valley Ranch Co., 99 Cal. Rptr. 446, 448 (Ct. App. 1971).

65 *See* Sawyers, *supra* note 19, at 2. *Compare Erickson*, 99 Cal. Rptr. at 448, *with* In re Waters of Long Valley Creek Stream Sys., 599 P.2d 656, 660–61 (Cal. 1979).

66 Walston, *supra* note 38, at 769.

67 *See generally* Sawyers, *supra* note 19.

abuts a watercourse.[68] Such rights run with the land and allow right holders to take as much water as they can put to reasonable and beneficial use.[69] In times of overdraft, right holders share the shortage.[70]

Appropriative rights do not attach to land[71] and are acquired subject to the "first in time, first in right" rule, which establishes a hierarchy of priority among appropriators to a water source.[72] An appropriative right arises when an appropriator takes and uses surplus water.[73] Generally, appropriative rights are junior to riparian rights.[74] In times of overdraft, once the riparians have shared the shortage, appropriators may take their water.[75] They do not, however, share the shortage as the riparians do.[76] In such an event, appropriators may take their full amount of water, starting with the earliest established (most senior) appropriative right and moving down the hierarchy through the "first in time, first in right" rule.[77] However, the surplus available to appropriators is subject to the riparian right holder's use.[78] In a severe overdraft, many or all appropriators may not be able to divert any water at all.[79]

Appropriative rights are further divided into categories labeled pre-1914 appropriative rights and post-1914, "modern" appropriative rights.[80] The difference between them is one of permitting.[81] The Water Commission Act, implemented on December 19, 1914, created what eventually became the State Water Resources Control Board (SWRCB) for the purpose of regulating appropriative water rights through an extensive permitting system.[82] Most appropriators today hold modern appropriative rights, obtained through the SWRCB's statutory system.[83]

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68 Anaheim Union Water Co. v. Fuller, 88 P. 978, 980 (Cal. 1938).

69 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 209 (Ct. App. 2014) (observing that riparian users are "those who possess water rights by virtue of owning the land by or through which flowing water passes"); *see also* Rancho Santa Margarita v. Vail, 81 P.2d 533, 547 (Cal. 1938).

70 *Light*, 173 Cal. Rptr. 3d at 209.

71 *Id.* (observing that appropriators are "those who hold the right to divert such water for use on noncontiguous lands").

72 N. Kern Water Storage Dist. v. Kern Delta Water Dist., 54 Cal. Rptr. 3d 578, 583 (Ct. App. 2007) ("[T]he fundamental first-in-time, first-in-right nature of appropriative rights means that a newly permitted SWRCB appropriative right will be junior to all existing pre–1914 rights.").

73 WATER RIGHTS FAQ, *supra* note 13.

74 *Light*, 173 Cal. Rptr. 3d at 209–10.

75 *Id.* at 210.

76 *Id.*; *see also* City of San Bernardino v. City of Riverside, 198 P. 784, 793 (Cal. 1921).

77 *City of San Bernardino*, 198 P. at 793.

78 *Light*, 173 Cal. Rptr. 3d at 210 ("[A]ppropriators may be deprived of all use of water when the supply is short.").

79 *Id.*

80 *Id.* at 209–10.

81 *See id.*

82 *See* People v. Shirokow, 605 P.2d 859, 864–65 (Cal. 1980).

83 *See* CAL. WATER CODE §§ 1225, 1250–1259.4; *see also* WATER RIGHTS FAQ, *supra* note 13.

2. Groundwater Rights—Overlying, Appropriative, and Prescriptive

Groundwater rights could be more accurately labeled percolating groundwater rights.[84] While subterranean streams, hydrologically considered groundwater, are treated as surface water under California law, groundwater must be, in essence, part of the soil, percolating down from rain or snow.[85] Despite this semantic legal fiction, the categories of groundwater rights are quite similar to those of surface water rights.[86] Overlying and appropriative groundwater rights are analogous to the riparian and appropriative rights of surface water.[87] Groundwater rights may also be prescriptive, or adversely obtained.[88]

Overlying rights attach to and run with land over a groundwater source, such as an aquifer.[89] Analogous to riparian rights on the surface,[90] such rights are correlative, meaning right holders share the shortages during overdrafts.[91] Appropriative rights are also analogous to their surface water counterparts.[92] Most municipalities, regardless of their proximity to water sources, are considered appropriators.[93]

An appropriator gains a prescriptive right if the water taken is not surplus and the taking is open and notorious, actual, continuous, and adverse for five years (California's prescriptive period).[94] These rights can only be granted by a court and give the prescriptor a right to continue taking the amount of water they have previously taken,[95] regardless of whether there is a surplus or a shortage, and regardless of the riparian right holder's objections.[96] Prescriptive rights are quite difficult to obtain because the would-

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84 City of Barstow v. Mojave Water Agency, 5 P.3d 853, 863 (Cal. 2000).

85 City of Los Angeles v. Pomeroy, 57 P. 585, 596 (Cal. 1899).

86 *City of Barstow*, 5 P.3d at 862–63.

87 *Id.*; *see also* Katz v. Walkinshaw, 74 P. 766, 772 (Cal. 1903) (Finding that in regard to groundwater, "the rights of the first class of landowners are paramount to that of one who takes the water to distant land; but the landowner's right extends only to the quantity of water that is necessary for use on his land, and the appropriator may take the surplus.").

88 Cal. Water Serv. Co. v. Edward Sidebotham & Son, Inc., 37 Cal. Rptr. 1, 7 (Dist. Ct. App. 1964) ("An appropriative taking of water which is not surplus is wrongful and may ripen into a prescriptive right where the use is actual, open and notorious, hostile and adverse to the original owner, continuous and uninterrupted for the statutory period of five years, and under claim of right."); Sawyers, *supra* note 19, at 3.

89 *City of Barstow*, 5 P.3d at 862–63.

90 *Id.*

91 *Id.* at 863.

92 *Id.*

93 David Aladjem, Presentation on California Water Law at the California Constitution Center, University of California Berkeley School of Law, titled Local Governments: Navigating the California Constitution, at powerpoint slide 7 (Feb. 8, 2013), https://www.law.berkeley.edu/files/Aladjem_-_Water_Rights_101__Local_Governments_Navigating_the_California_Constitution_v1.ppt. *But see*, *supra* note 58.

94 Cal. Water Serv. Co. v. Edward Sidebotham & Son, Inc., 37 Cal. Rptr. 1, 7 (Dist. Ct. App. 1964).

95 Water Rights FAQ, *supra* note 13 (particularly referencing the Water Rights section).

96 City of Pasadena v. City of Alhambra, 207 P.2d 17, 31–32 (Cal. 1949); *see also* City of San Bernardino v. City of Riverside, 198 P. 784, 793 (Cal. 1921) ("When that occurs the principle stated in section 1414 of the Civil Code, that 'as between appropriators, the one first in time is the first in right,' applies. It is a principle which applies as well to ordinary pre-

be prescriptor must obtain a permit from the SWRCB before beginning to adversely take water.[97]

III. THE FUTURE OF CALIFORNIA'S WATER RIGHTS SYSTEM AND ITS APPLICATION

The issues that drought-riddled California currently faces are novel, serious, and rapidly changing.[98] As courts wrestle with competing water needs, they must find a way to protect the people's right to water while also protecting California's agrarian economy.[99] The first step toward a solution is understanding what these drastic changes are. This Part does so by analyzing these new issues within the framework of the existing, traditional system of the state's water rights. The discussion reveals the challenges judges face in apportioning water, and exposes the inadequacy of existing doctrines. The second step requires a fresh interpretation of the constitutional "reasonable and beneficial use" provision, one which still recognizes the need for irrigators to retain some water rights, while confronting the reality that the risks and consequences of total water loss proscribe continuing the status quo.

A. OVERDRAFT SITUATIONS IN THE PAST

In wetter days gone by, overdraft conditions happened from time to time, especially during short term dry spells. Courts were often called upon to adjudicate disputes over who got how much water while also protecting the water source for future use.[100] In these situations, courts first apportioned water to riparian and prescriptive right holders.[101] This typically occurred when a right holder found out just how much water a court considered to be "reasonable" for his or her uses and whether those uses were "beneficial."[102] Water was equitably apportioned between riparian right holders according to how much each needed.[103] Prescriptors usually received their full annual water

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scriptive rights as to rights of appropriation under the code."). Because prescriptive rights ripen out of appropriative rights, they are not correlative, but instead follow the doctrine of first in time, first in right. *Id.*

97 WATER RIGHTS FAQ, *supra* note 13 (particularly referencing the Water Rights section).

98 *See California Faces Growing Water Management Challenges*, PUB. POLICY INST. OF CAL. (Feb. 2015), http://www.ppic.org/content/pubs/report/R_215EH2R.pdf ("The three years between fall 2011 and fall 2014 were the driest since recordkeeping began.").

99 *See id.* (stating that water demand is expected to increase in urban regions while agricultural demand is increasingly less flexible).

100 *See, e.g.*, City of Barstow v. Mojave Water Agency, 5 P.3d 853 (Cal. 2000).

101 City of Pasadena v. City of Alhambra, 207 P.2d 17, 28–29 (Cal. 1949) ("Proper overlying use, however, is paramount, and the right of an appropriator, being limited to the amount of the surplus, must yield to that of the overlying owner in the event of a shortage, unless the appropriator has gained prescriptive rights through the taking of nonsurplus waters.").

102 *City of Barstow*, 5 P.3d at 871 ("When the water is insufficient, overlying owners are limited to their 'proportionate fair share of the total amount available based upon [their] reasonable need[s].'" (alterations in original) (quoting Tehachapi-Cummings Cnty. Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 924 (Ct. App. 1975))).

103 *Id.*

allotment.[104] Any water remaining after this apportionment went to appropriators according to the "first in time, first in right rule.[105]

B. Courts Should Reevaluate Past Precedents in Light of Drought Conditions

As previously highlighted,[106] California recently experienced what may be the most severe drought in the state's history.[107] Water levels in reservoirs and aquifers dropped as water users struggled to offset shortages.[108] If the drought ended today, it would still take years to replenish the state's groundwater reserves.[109] Parts of the state, such as the Central Valley, already lack sufficient water for everyone's needs.[110] The rest of the state need only look to those areas to see a picture of its own grim future if the drought continues.

When apportioning water, California courts should weigh the reasonable and beneficial qualities of water use in light of the state's changing environment. The four category system of common law rights worked well for over 100 years, with little need for the Water Code's prioritization statutes. When water was abundant, courts typically adjudi-

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104 *Id.*; *see also* Fresno Canal & Irrigation Co. v. People's Ditch Co., 163 P. 497, 499–500 (Cal. 1917) ("[A]s riparian proprietors, the plaintiffs would be entitled, as against the defendants, to the natural and usual flow of all the waters in the river, except as such right had been limited or divested by the agreement referred to, or by prescription.").

105 *City of Barstow*, 5 P.3d at 863; Sawyers, *supra* note 19, at 6–7 ("As against other prescriptive users, the first in time probably is first in right").

106 *See supra* notes 1–7 and accompanying text.

107 Though there are many similarities to the intense drought of 1976–77, the current drought has persisted far longer and does not appear to be waning at all. Ellen Powell, *As the Snowpack Piles Up, Is California's Drought Over? No, Say Experts*, Christian Sci. Monitor (Feb. 4, 2017), http://www.csmonitor.com/Environment/2017/0204/As-the-snowpack-piles-up-is-California-s-drought-over-No-say-experts; Michael Hiltzik, *No, California's Drought Isn't Over. Here's Why Easing the Drought Rules Would Be a Big Mistake*, L.A. Times (Apr. 4, 2016), http://www.latimes.com/business/hiltzik/la-fi-hiltzik-drought-20160404-snap-htmlstory.html ("Long-term reserves in groundwater have been drained to the point that years, even decades, of wet weather would be required to replenish them."); *U.S. Drought Monitor*, The National Drought Mitigation Center et al., http://droughtmonitor.unl.edu/ (last visited Feb. 6, 2017) (showing nearly half of California in drought states ranging from moderate to exceptional in January 2017); *See generally* Fears, *supra* note 1; Daniel Swain, *A comparison of California's extreme 2013 dry spell to the 1976–1977 drought*, The Cal. Weather Blog (Dec. 22, 2013), http://www.weatherwest.com/archives/1038.

108 Colleen Shalby, *Even Scarier Than California's Shrinking Reservoirs Is Its Shrinking Groundwater Supply*, PBS Newshour (Mar. 20, 2015), http://www.pbs.org/newshour/rundown/californias-groundwater-loss-mean-entire-u-s/. California can no longer survive on its rainfall and snow melt and must turn to its reservoirs and aquifers (groundwater) for sustenance. *Id.* The aquifer drilling is particularly troubling because "[g]roundwater extraction can cause subsidence, or sinking, of the land above the aquifers. And that can lead to breaks in infrastructure like roads and buildings, and the buckling of canals." *Id.*

109 Steve Cole & Alan Buls, *NASA Analysis: 11 Trillion Gallons to Replenish California Drought Losses*, NASA (July 30, 2015), https://www.nasa.gov/press/2014/december/nasa-analysis-11-trillion-gallons-to-replenish-california-drought-losses.

110 Janes, *supra* note 4.

cated questions such as who could have more water, who could use the most convenient sources of water, and who would have to pay to import water.[111] Now, in addition to those decisions, courts are beginning to decide when riparian right holders can use water at all.[112] The meaning of "reasonable and beneficial" is changing.[113] For instance, if cosmetic uses create a water shortage that hinders food production, they may be far less reasonable and beneficial than they were previously. This determination is, ultimately, up to the courts. However, due to the new circumstances surrounding water rights disputes, courts facing decisions of this type now must break new ground with little to no guidance from precedent.

The current precedents defining "reasonable and beneficial use" are inadequate to protect municipal water supplies during the new drought conditions. Nearly all municipalities use appropriated water.[114] So far, no municipality has gone toe–to–toe with agriculturist riparian right holders over which one will get water to the exclusion, and perhaps the eventual destruction, of the other. The precedents set in previous overdraft decisions offer little assistance to courts as they seek to balance the pro-municipal Water Code statutes against the superior rights of riparian right holders.[115]

C. Appropriators May Have a Superior Claim to Water Over Riparians as the Rule Against Unreasonable Use Colors the Rule of Priority

All Californian water rights are subject to state regulation.[116] As in any area of law, California's constitutional provisions are superior to its statutes and its statutes are superior to its common law.[117] Therefore, before the common law Rule of Priority (i.e. giving priority to riparian and overlying landowners) can be applied, the constitutional require-

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111 *See, e.g.*, City of Santa Maria v. Adam, 149 Cal. Rptr. 491 (Ct. App. 2012); El Dorado Irrigation Dist. v. State Water Res. Control Bd., 48 Cal. Rptr. 3d 468 (Ct. App. 2006); Cent. & W. Basin Water Replenishment Dist. v. S. Cal. Water Co., 135 Cal. Rptr. 2d 486 (Ct. App. 2003).

112 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 218–19 (Cal. Ct. App. 2014) (finding that when water dropped to a certain level, grape farmers' use of water was no longer reasonable and therefore restrictions on that use during those times did not violate the Rule of Priority).

113 *Id.*

114 ALADJEM, *supra* note 93, at powerpoint slide 7.

115 *See* Brian E. Gray, *The Reasonable Use Doctrine in California Water Law and Policy*, in SUSTAINABLE WATER: CHALLENGES AND SOLUTIONS FROM CALIFORNIA 90–93 (Allison Lassiter ed., 2015).

116 *Light*, 173 Cal. Rptr. 3d at 218–19 ("[N]o party can acquire a vested right to appropriate water in a manner harmful to public trust interests and the state has 'an affirmative duty' to take the public trust into account in regulating water use by protecting public trust uses whenever feasible . . . . [T]he doctrine applies as well in the context of riparian and pre–1914 appropriator rights." (quoting Nat'l Audubon Soc'y v. Superior Ct., 65 P.2d 709, 728 (Cal. 1983))). *See also supra* note 47.

117 *Introduction to Legal Research Resources*, LILLIAN GOLDMAN L. LIBRARY, YALE L. SCH., http://library.law.yale.edu/introduction-legal-research-resources (last visited Feb. 7, 2017).

ment of "reasonable and beneficial use" (the "Rule Against Unreasonable Use") must be satisfied.[118]

In *Light v. State Water Resources Control Board*, the SWRCB had adopted a regulation designed to protect threatened and endangered salmonids in the Russian River from strandings[119] caused by frost damage prevention efforts.[120] The regulation required local bodies to submit a plan to prevent strandings to the SWRCB for approval.[121] Once the plan was approved, any contrary use would be considered unreasonable.[122] The plaintiffs challenged the regulation on several grounds, claiming first and foremost that the SWRCB did not have the ability to regulate non-permitted riparian and early appropriative rights.[123] Though the plaintiffs were initially able to obtain an preliminary injunction against the state,[124] on appeal, the court rejected the claim, stating that the SWRCB has the authority to regulate unreasonable uses of water.[125] Furthermore, the court found that the SWRCB could weigh public purposes against common law rights when regulating what water uses are unreasonable.[126] The Supreme Court of California later declined to review the appellate court's decision.[127]

Light demonstrates how the definition of "reasonable" can change as environmental and social conditions change.[128] In that case, the salmonids were statutorily protected.[129] The statute became at odds with common law water rights when the statute's purpose, fish protection and the common law use, agriculture, could no longer occur at the same time.[130] At that point, to ensure that the constitutional provision requiring reasonable

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118 *Light*, 173 Cal. Rptr. 3d at 218 ("[N]o one can have a protect[a]ble interest in the unreasonable use of water . . . when the rule of priority clashes with the rule against unreasonable use of water, the latter must prevail." (quoting El Dorado Irrigation Dist. v. State Water Res. Control Bd., 48 Cal. Rptr. 3d 468, 490 (Cal. Ct. App. 2006))).

119 "To cause (a whale or other sea animal) to be unable to swim free from a beach or from shallow water." *Strand*, THE AMERICAN HERITAGE DICTIONARY OF THE ENGLISH LANGUAGE (5th ed. 2011).

120 *Light*, 173 Cal. Rptr. 3d at 205.

121 *Id.*

122 *Id.*

123 *Id.*

124 *Id.* at 209.

125 *Id.* at 205–06.

126 *See id.* at 205 ("We conclude that, in regulating the unreasonable use of water, the Board can weigh the use of water for certain public purposes, notably the protection of wildlife habitat, against the commercial use of water by riparian users and early appropriators.").

127 Light v. State Water Res. Control Bd., No. S220256, 2014 Cal. LEXIS 8008 (Oct. 1, 2014).

128 *See id.* at 210–11 ("California courts have never defined, nor as far as we have been able to determine, even attempted to define, what constitutes an unreasonable use of water, perhaps because the reasonableness of any particular use depends largely on the circumstances. . . . 'What may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time.'" (quoting Tulare Dist. v. Lindsay-Strathmore Dist., 45 P.2d 972, 1007 (Cal. 1935))).

129 *Id.* at 205.

130 *Id.* at 207–08.

use was followed, the SWRCB weighed the two purposes and determined that the statutory purpose made the riparian right holders' use unreasonable.[131] Though the facts in *Light* did not involve a dispute between individual right holders in a watershed, the rule the case demonstrates would apply in that scenario.[132] The Rule of Priority allows a junior right holder's reasonable water use to prevail over a senior right holder's unreasonable water use.[133] The Rule passes over superior rightholders with unreasonable or nonbeneficial uses because those uses are not a part of the superior right.[134] Thus, the highest ranking right to use water may be an appropriator's right to reaonsable and beneficial use when a riparian's use is unreasonable or nonbeneficial.[135]

While they may not be able to rely on precedent for help in determining what uses now, *Light* was not the first time California courts have emphasized the shifting nature of the "reasonable and beneficial" requirement—though it is certainly not a common analysis in the state's jurisprudence.[136] In *Tulare Irrigation District v. Lindsay-Strathmore Irrigation District*, a landmark case decided over eighty years ago, the California Supreme Court found that,

> What is a beneficial use, of course, depends upon the facts and circumstances of each case. What may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need. What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time.[137]

Light is a modern iteration of *Tulare*. With such an enduring pedigree, this doctrine of fluidity appears solidly rooted in California's water jurisprudence.[138]

D. IN EMERGENCY DROUGHT CONDITIONS, COURTS MUST REDEFINE "REASONABLE AND BENEFICIAL" AS PROTECTING MUNICIPAL, AS WELL AS AGRICULTURAL, INTERESTS

Because California's constitution does not define "reasonable" or "beneficial," courts, lawmakers, and lawyers must divine their meanings from surrounding bodies of law. Water Code section 106, interpreted *in pari materia*[139] with Article X, section 2, suggests that domestic use is more reasonable and beneficial than irrigation.[140] Water Code sec-

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131 *Id.* at 205–06.
132 *See id.*
133 *See id.* at 205–06.
134 *See id.* at 210–11.
135 *See* Gray, *supra* note 115, at 93.
136 Tulare Dist. v. Lindsay-Strathmore Dist., 45 P.2d 972, 1007 (Cal. 1935).
137 *Id.*
138 The SWRCB has the authority to decide if a use is reasonable or unreasonable. *See Light*, 173 Cal. Rptr. 3d at 218 ("[T]he [SWRCB] has the ultimate authority to allocate water in a manner inconsistent with the rule of priority, when doing so is necessary to prevent the unreasonable use of water.").
139 "It is a canon of construction that statutes that are *in pari materia* may be construed together, so that inconsistencies in one statute may be resolved by looking at another statute on the same subject." *See In pari materia*, BLACK'S LAW DICTIONARY (10th ed. 2014) (meaning "[o]n the same subject" or "relating to the same matter").
140 *Compare* CAL. WATER CODE § 106, *with* CAL. CONST. art. X, § 2.

tion 106.5—which states that municipal rights to acquire and hold water should be protected to the fullest extent necessary to protect existing and future uses—strengthens that interpretation.[141] These statutes have not been widely cited in water rights decisions in the past because municipalities and agriculture rarely faced zero-sum water disputes.[142] They will, however, become increasingly helpful as the state of California faces decisions about who will get its remaining water.

1. *Water Code Sections 106 and 106.5 Lend Guidance to What Is and Is Not Reasonable*

"Reasonable and beneficial," for the purposes of California water law, is a variable term of art. Its meaning changes with the circumstances surrounding its use.[143] Water Code sections 106 and 106.5 define the state's policy on what water uses are most important, thereby indicating what the state considers "reasonable" and "beneficial."[144] Since the state can regulate all water rights,[145] this statement of policy matters a great deal for broad interpretations of Article X, section 2.[146]

Common sense definitions of "reasonable and beneficial" are easy to infer. In times of plenty, irrigating a crop that uses considerable quantities of water—alfalfa, for instance—may be reasonable because the benefit to the economy from the sale or use of that alfalfa far outweighs the environmental and economic "costs" of the water used.[147]

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141 Cal. Water Code § 106.5. While not all municipal uses are domestic, the majority of water used in urban and suburban areas in California is used for domestic purposes. Matthew Heberger, et. al., *Urban Water Conservation and Efficiency Potential in California* 2, *in* Pac. Inst. & Nat. Res. Def. Council, The Untapped Potential of California's Water Supply (2014), http://pacinst.org/wp-content/uploads/sites/21/2014/06/ca-water-urban.pdf. For urban and suburban areas in 2014, according to the California Department of Water Resources, residential use accounted for 64 percent of water use. *Id.* Institutional and commercial use accounted for 23 percent of water use. *Id.* Manufacturing and industry accounted for only 3 percent of water use. *Id.* Because institutions such as schools and hospitals, as well as commercial businesses that provide for daily needs, can be considered "domestic," the vast majority of urban and suburban water use in California is domestic. Deetz v. Carter, 43 Cal. Rptr. 321, 323 (Dist. Ct. App. 1965) ("Without question the authorities approve the use of water for domestic purposes as first entitled to preference. That use includes consumption for the sustenance of human beings, for household conveniences, and for the care of livestock." (quoting Prather v. Hoberg, 150 P.2d 405, 412 (Cal. 1944))).

142 *See* Gray, *supra* note 115, at 98.

143 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 210–11 (Ct. App. 2014).

144 *See generally Deetz*, 43 Cal. Rptr. at 323.

145 United States v. State Water Res. Control Bd., 227 Cal. Rptr. 161, 171 (Ct. App. 1986).

146 A broad interpretation of Cal. Const. art. X, § 2 indicates that because the Water Code prioritizes some uses over others, those provisions of the Water Code indirectly define domestic and municipal use as more reasonable and beneficial than irrigation.

147 "Costs" can include regulatory costs, utility and food prices, labor and employment costs, market gains or losses, natural resource depletion, and habitat loss. Alfalfa's value is as cattle feed. Todd Woody, *Holy Cow! Crops That Use Even More Water Than Almonds*, Take Part (May 11, 2015), http://www.takepart.com/article/2015/05/11/cows-not-almonds-are-biggest-water-users. Therefore, alfalfa's value should be measured by cattle products. One gallon of milk requires a cow to eat roughly six pounds of alfalfa, which required 683 gallons

But, as water becomes more and more scarce, the "cost" of the water grows higher and higher until it begins to outweigh the economic benefit of the crop's sale or use.[148] At that point, alfalfa cultivation is no longer a reasonable or beneficial use of water.

Because California has statutory provisions detailing priorities of water use, those statutes must color the meaning of reasonable and beneficial.[149] Sections 106 and 106.5 can be interpreted as government statements that domestic and municipal uses of water are more likely than other uses to be reasonable and beneficial.[150] Therefore, in times of plenty, growing alfalfa may be a reasonable water use because it would not threaten other uses that are statutorily protected or prioritized more highly than agriculture. Once water becomes so scarce, however, that alfalfa farming threatens protected or higher priority uses, such as municipal use, alfalfa farming becomes unreasonable. The alfalfa farmer may not have to wind down his business altogether.[151] Instead, the farmer could grow less alfalfa or cultivate a crop whose water demands are low enough to not threaten protected uses.[152]

Comparisons between the Water Code and the California Constitution may prove somewhat troublesome for this proposed interpretation of "reasonable and beneficial." The language used in Article X, section 2 of California's Constitution is different from the language used in the Water Code.[153] If Water Code sections 106 and 106.5 are meant to help interpret Article X, section 2, why is the language so different? While it is

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of water to grow. Julia Lurie & Alex Park, *It Takes HOW Much Water to Make Greek Yogurt?!*, MOTHER JONES (Mar. 10, 2014), http://www.motherjones.com/environment/2014/03/california-water-suck (based on 2010 U.S. Departmnet of Agriculture data). It takes 106.5 gallons of water to produce one ounce of beef. Kyle Kim et al., *[X Gallons of Water] Were Used to Make This Plate*, L.A. TIMES (Apr. 7, 2015), http://graphics.latimes.com/food-water-footprint/. At the time this Note was written, California alfalfa prices hovered around $200.00 per ton. *See* U.S. DEPT. OF AGRIC., NATIONAL HAY, FEED & SEED WEEKLY SUMMARY (Jan. 8, 2016), http://www.ams.usda.gov/mnreports/lswfeedseed.pdf (last visited Jan. 12, 2016) (providing weekly updates on alfalfa prices).

148 *See generally* Cal. Water Serv. Co., Schedule No. 14.1: Water Shortage Contingency Plan With Staged Mandatory Reductions And Drought Surcharges 1, 13–15 (2016), https://www.calwater.com/docs/rates/rates_tariffs/all/20160331-Schedule_14.1_Mandatory_Drought_Requirements.pdf; Rory Carroll, *California Water Prices Set to Rise Next Year: Fitch*, Reuters (Aug. 18, 2015), http://www.reuters.com/article/us-california-water-rates-idUSKCN0QN1PH20150818.

149 *See, e.g.*, *Deetz*, 43 Cal. Rptr. at 323.

150 *See generally* Erickson v. Queen Valley Ranch Co., 99 Cal. Rptr. 446, 448 (Ct. App. 1971).

151 *See generally* Daniel H. Putnam, *Why Alfalfa Is the Best Crop to Have in a Drought*, U. OF CAL. DIV. OF AGRIC. & NAT. RES. ALFALFA & FORAGE NEWS (May 13, 2015), http://ucanr.edu/blogs/blogcore/postdetail.cfm?postnum=17721.

152 For instance, black eyed peas and several other kinds of beans require lots of heat and little water to grow properly. *See* Judy Scott, *Some Vegetables Require Less Water Than Others*, OR. STATE U. EXTENSION SERV. (Apr. 22, 2011), http://extension.oregonstate.edu/gardening/some-vegetables-require-less-water-others. Depending on the severity of the water shortage, these kinds of crops may be reasonable to cultivate in a drought. Under the legal theories proposed in this Note, California's farmers should consider the risks in planting long-term commitment crops, such as almond trees which must be watered every year, over more flexible crops that can be switched as water availability changes.

153 *Compare* CAL. CONST. art. X, § 2, *with* CAL. WATER CODE §§ 106, 106.5.

impossible to know the mind of every legislator who worked on the statute, it is likely just a semantic difference. An elected legislature enacted Water Code section 106 fifteen years after[154] the people of California adopted Article X, section 2.[155] Two different bodies enacted these laws at two different times and for two different types of law. Some semantic differences can be expected. Even so, these Water Code statutes so greatly affect water use in California that they must color the meaning of "reasonable and beneficial use."

2. *Water Code Section 106 Has Not Been Widely Cited in the Past Because it Was Unnecessary To Do So*

Should a municipality seek to exercise its rights under Water Code section 106, agriculturists may point to precedent as a primary defense.[156] Traditionally, section 106 has not factored into decisions on water conflicts between irrigators and municipalities in a significant way, provided that the municipality still had access to water.[157] Domestic use was not truly threatened, even when challenged by irrigation, and thus courts did not need the legislature's "worst case scenario" safeguard.[158] Thus, the statute has lain rela-

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154 *See* Eric L. Garner & Lucas I. Quass, *California's New Basic Human Right to Water Will Frame Future Policy Debates*, 7 BUREAU OF NAT'L AFF. WATER L. POL'Y MONITOR 38, 40 (2013).

155 Harrison C. Dunning, *Article X, Section 2: From Maximum Water Development to Instream Flow Protection*, 17 HASTINGS CONST. L.Q. 275, n.2 (1989). The Water Code statutes referenced here, passed after Article X, section 2 was ratified, should be interpreted as being constitutional because a valid interpretation outweighs an invalid interpretation. *See Presumption Of Validity*, BLACK'S LAW DICTIONARY (10th ed. 2014); *see also*, *Constitutional-Doubt Canon*, BLACK'S LAW DICTIONARY (10th ed. 2014).

156 City of Barstow v. Mojave Water Agency, 5 P.3d 853, 871 (Cal. 2000) ("When the water is insufficient, overlying owners are limited to their 'proportionate fair share of the total amount available based upon [their] reasonable need[s].'" (alterations in original) (quoting Tehachapi-Cummings Cnty. Water Dist. v. Armstrong, 122 Cal. Rptr. 918, 924 (Ct. App. 2000))).

157 *Compare*, *e.g.*, *City of Barstow*, 5 P.3d 853 *with* City of Santa Maria v. Adam, 211 Cal. App. 4th 266, 297 (2012) *and* Brief for Appellant at 107–08, Wineman v. City of Santa Maria, No. 1-97-CV77-214 (Cal. Ct. App. 2010), 2010 CA App. Ct. Briefs LEXIS 6347, *rev'd sub nom* City of Santa Maria v. Adam, 211 Cal. App. 4th 266 (2012). In *City of Barstow*, the court eschewed legal water rights for equitable apportionment, affirming the trial court's assertion that such a physical solution would be the fairest to the litigants. *City of Barstow*, 5 P.3d at 860–61. The Water Code barely made an appearance, presenting in the briefest of nods to state policy. In this instance, there was enough water for the city to function with equitable apportionment. However, in *Wineman/Adams*, the cities (there were several joined in one lawsuit) were litigating over prescriptive rights, which would cut into the Appellants' water allotments inequitably. The Appellants argued Water Code section 106.5 and the court discussed Water Code sections 106 and 106.5. The scarcity of water seems to have brought out a discussion of the Water Code. The *Adams* decision is also notable in this context because drought conditions had intensified in the twelve years since the *Barstow* decision, making it a good example of how the Water Code will become more important as the drought worsens.

158 Though the courts did not need section 106 often, its prioritization of domestic use over irrigation has been reiterated many times during the decades since it was eneacted. *See, e.g.*, Rank v. Krug, 142 F. Supp. 1, 144 (S.D. Cal. 1956) ("Furthermore, the class acreage here

tively dormant for much of California's history. Prices may have risen because of lost lawsuits, but water still flowed from the tap.

Now, however, domestic use is coming under real threat.[159] Small cities, such as Mountain House, California, are already having their water supply curtailed and the SWRCB predicts that eventually San Francisco will face the same fate.[160] Sections 106 and 106.5 instruct courts how to rule if, between municipalities and farmers, only one side can have water.[161] They also instruct agencies and lawmakers, as they craft new rules and drought relief legislation, as to whose water rights should be curtailed.[162] The state may prevent non-domestic users from pumping groundwater, either completely or partially, if nearby citizens' wells are going dry.[163] Furthermore, the Water Code allows the state to reduce or curtail irrigation when farmers' continued pumping would cause municipal wells to run dry.[164]

Already, water districts are suing the state over water cuts to farmers,[165] claiming that their rights to water are being violated and challenging the state's right to manage

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affected by the diversions, including those taking directly from the river as well as from wells, includes cities, towns, villages, and seven domestic water districts within the class area furnishing water for what the California Water Code declares, Section 106, to be the highest and best use."); Deetz v. Carter, 43 Cal. Rptr. 321, 323 (Dist. Ct. App. 1965) ("It follows that plaintiffs are entitled to injunctive relief to protect their reasonable need for domestic water. If plaintiffs reasonably need the entire flow of Cold Creek for domestic purposes, defendant, who had demonstrated no need other than agricultural, was properly enjoined from all use of the creek."); Bldg. Indus. Assn. v. Marin Mun. Water Dist., 1 Cal. Rptr. 2d 625, 629 (Ct. App. 1991) (finding that when a water district decides to ration water, it must "allocate or set aside the amount of water needed for domestic use, sanitation, and fire protection, and may then establish priorities for the use of water for other purposes").

159 *See* Janes, *supra* note 4; *see also* Brian Clark Howard, *California Cuts Water to Some Farms and Cities*, NAT'L GEOGRAPHIC (May 30, 2014), http://news.nationalgeographic.com/news/2014/05/140529-sacramento-river-water-rights-california-drought/.

160 Sommer, *supra* note 47.

161 In following the Water Code's directives, courts should protect municipal water use over use by farmers. *See* CAL. WATER CODE §§ 106, 106.5 (West 2015) (declaring as California policy that "the right of a municipality to acquire and hold rights to the use of water should be protected to the fullest extent necessary for existing and future uses" subject to certain exceptions); Rank v. Krug, 142 F. Supp. 1, 144 (S.D. Cal. 1956) ("These are not sections which regulate only administrative action. . . . They are substantive law.").

162 Irrigation should be curtailed before municipal or domestic use. *See* CAL. WATER CODE §§ 106, 106.5 (declaring as state policy that domestic use of water is the highest use of water, while use for irrigation is the second highest use).

163 *See, e.g.*,*id.* § 106. Presumably, this would include industrial and manufacturing users, though those uses are not specifically addressed in section 106. Again, this Note addresses the tension between municipal and agricultural water use. Environmental issues, the rights of Native Nations, and other federal concerns are beyond its scope.

164 *See*, *e.g.*, *id.* § 106.5.

165 Lurie, *supra* note 45. The SWRCB ordered 114 riparian right holders to stop pumping water from the San Joaquin and Sacramento watersheds; litigation quickly ensued. *Id.*

pre-1914 riparian and appropriative water rights.[166] The cuts, heavy handed and broad, affect pre-1914 appropriators—including some small municipalities[167]—and are the first cuts since the 1970s to affect these right holders.[168] The plaintiffs argue that the state has no authority to regulate these "senior" rights since they were established prior to the state's involvement in water regulation.[169] However, as discussed in Part II, all water rights extend from the state[170] and are subject to the state's police power.[171] Thus, these water districts cannot escape California's constitutional and statutory limitations on water rights.

E. As Products of Common Law, Traditional Water Rights Are Inferior to the California Constitution and Water Code

Whether a right holder subscribes to a riparian system, an appropriative system, or California's complex dual-hybrid system, traditional water rights arise out of the common law.[172] In California, all water rights come from the state,[173] and the system in which these rights are granted and applied has been refined by the state's courts over the

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166 *Id.*; *see also Coordination Proceeding Special Title (Rule 3.550) Cal. Water Curtailment Cases*, Case #1-15-CV-285182 (Ca. Super. Ct. Santa Clara, Sept. 24, 2015), http://www.waterboards.ca.gov/waterrights/water_issues/programs/hearings/byron_bethany/docs/bbid_sept24_cases.pdf (last visited Feb. 18, 2017), State Water Res. Control Bd., Senior Water Rights Curtailed in Delta, San Joaquin & Sacramento Watersheds, Water Rts. News, (June 12, 2015), http://www.swrcb.ca.gov/press_room/press_releases/2015/pr061215_sr_curtailments fnl.pdf (hereafter "SWRCB Senior Rights"). Any appropriative or prescriptive water right acquired after 1914 must be permitted by the SWRCB. Water Rights FAQ, *supra* note 13. The state can regulate all water rights, including riparian and overlying rights. United States v. State Water Res. Control Bd., 227 Cal. Rptr. 161, 171 (Ct. App. 1986).

167 CBS News, *supra* note 15.

168 SWRCB Senior Rights, *supra* note 166.

169 Lurie, *supra* note 45.

170 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 209–10 (Ct. App. 2014). Though some senior right holders believe that their water rights originated before the state constitution was adopted and are therefore not subject to state regulation, comparisons with pueblo rights suggest otherwise. *See supra* note 58 and accompanying text. Pueblo rights are a re-recognition of Mexican California's municipal water rights. *See* Pleasant Valley Canal Co. v. Borror, 72 Cal. Rptr. 2d 1, 7 (Ct. App. 1998). The fact that these rights required specific acknowledgement after California joined the United States suggests that existing water rights were reissued by the state and thus no water right pre-dates the state constitution.

171 Turlock Irr. Dist. v. Zanker, 45 Cal. Rptr. 3d 167, 178 (Ct. App. 2006) ("The right to use of water has long been regulated in California, both to protect water users and to protect the resource itself. . . . The rights and obligations created thereby were subject, from the beginning and as a matter of law, to the regulation under the police power and, subsequently, under article X, section 2 of the California Constitution."); *State Water Res. Control Bd.*, 227 Cal. Rptr. at 171 ("[N]o water rights are inviolable; all water rights are subject to governmental regulation."). *But see* Dale Kasler & Ryan Sabalow, *Water Rights Ruling a Setback for California Drought Regulators*, Sacramento Bee (July 10, 2015), http://www.sacbee.com/news/state/california/water-and-drought/article26994334.html.

172 *See, e.g.*, Lux v. Haggin, 4 P. 919 (Cal. 1884).

173 *See State Water Res. Control Bd.*, 227 Cal. Rptr. at 171.

last one hundred fifty years. The hierarchy of legal authority, therefore, places these common law water rights below even agency rules.[174] Regulations from the SWRCB, Water Code statutes, and the California Constitution all have greater precedential authority than common law water rights.[175]

Over the last century and a half, this legal hierarchy was used so rarely in water disputes that it seems to have been nearly forgotten among California's water right holders.[176] For instance, the general manager of Oakdale Irrigation District in California's Central Valley was recently quoted, saying:

> Water right holders were here before the state exerted any authority over water, . . . Most of our water rights go back to the mid-1800s. So the state having authority over something that we developed long before the state got into this business is the legal question we will be asking a judge.[177]

In his statement, the general manager speaks to the common law development of water rights in California, yet he speaks of those common law rights as if they are sacred beyond the U.S. legal system's hierarchy of legal authority.[178] Indeed, water rights have been viewed as sacred for much of California's history,[179] but, in the end, they are common law rights and therefore lie at the bottom of the legal authority hierarchy.[180] Traditional water rights should be interpreted in a manner that is consistent with the controlling statutes, constitutional provisions, and agency rules. Thus, California courts should consider the directives of the the state's constitution and the Water Code when applying the Rule of Priority.

IV. POTENTIAL PROBLEMS, CONSEQUENCES, AND REMEDIES

Unlike many state law issues, California's water law concerns have potential national and global effects.[181] California's tax contributions help subsidize other states' budgets.[182] The state has one of the largest economies in the world.[183] Most importantly,

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174 YALE L. SCH., *supra* note 117.

175 *See id.*

176 Sommer, *supra* note 47 ("Senior water rights have largely been considered untouchable in California. They've only been cut off once before, during the 1976–77 drought."). In 1977, riparians and pre-1914 appropriators along the San Joaquin River System and pre-1914 appropriators in the San Joaquin Valley had their water use curtailed completely. CAL. DEP'T OF WATER RES., THE 1976-1977 CALIFORNIA DROUGHT—A REVIEW 121 (1978). Riparians in the Delta and the San Joaquin Valley were asked to cut back their water use. *Id.*

177 Sommer, *supra* note 47;*see also supra* note 170 and accompanying text.

178 Sommer, *supra* note 47.

179 *See* CBS NEWS, *supra* note 15.

180 YALE L. SCH., *supra* note 117.

181 *See, e.g.*, Charles W. Schmidt, *Environment: California Out in Front*, 115 ENVTL. HEALTH PERSP. A144 (2007).

182 *See* THE TAX FOUND., FACTS & FIGURES: HOW DOES YOUR STATE COMPARE? 17 (2014), http://taxfoundation.org/article/facts-figures-2014-how-does-your-state-compare.

California's Central Valley feeds not just the nation, but the globe.[184] California's agricultural water needs are, in essence, too big to fail. In a rare opportunity to impact policy on a national level, the state judiciary can help combat drought-related problems by applying new constitutional and statutory interpretations to traditional common law water rights.

A. Current Legal Remedies May Create New Problems

Many California water right holders have held their rights so long that they have forgotten or never knew that their rights are subject to state control.[185] This ignorance could cause state– and nation–wide problems given farming's significance to California's economy[186] (the state grows nearly all of some common foods).[187] Agricultural production and processing creates over 1.3 million jobs in California and the state's farming

183 Michael B. Marois & Shin Pei, *Brown's California Overtakes Brazil With Companies Leading World*, Bloomberg (Jan. 15, 2015), http://www.bloomberg.com/news/articles/2015-01-16/brown-s-california-overtakes-brazil-with-companies-leading-world ("California is overtaking Brazil as the world's seventh-largest economy, bolstered by rising employment, home values and personal and corporate income, a year after the most-populous state surpassed Russia and Italy.").

184 Alan Bjerga, *California Drought Transforms Global Food Market*, Bloomberg (Aug. 11, 2014), http://www. bloomberg.com/news/articles/2014-08-11/california-drought-transforms-global-food-market ("On its own, California would be the world's ninth-largest agricultural economy, according to a University of California at Davis study. Shifts in its production reverberate globally, said Dan Sumner, another agricultural economist at the school."); *see also* Cal. Dep't Food & Agric., California Agricultural Statistics Review, 2014–2015 113 (2015), https://www.cdfa.ca.gov/statistics/PDFs/2015Report.pdf (reporting California's 2014 agricultural export values at $21.59 billion).

185 *See* Sommer, *supra* note 47 and accompanying text.

186 Cal. Dep't Food & Agric., *supra* note 184, at 2; *see also* Karen Ross & Daniel Sumner, *California Agriculture: It's Worth the Water*, L.A. Times (June 2, 2015), http://www.latimes.com/opinion/op-ed/la-oe-0602-ross-sumner-water-agriculture-20150601-story.html (examining how agriculture touches nearly every part of California's economy and stating that "California's agricultural productivity and diversity are not readily duplicated elsewhere. Our soils and climate are what have made it possible for us to supply so much of our nation's and the world's food. Food is central to California in more than just the nutritional sense. It contributes to nearly every aspect of our economy and our lives.").

187 Shalby, *supra* note 108 ("The [Central Valley] is the source of roughly 25 percent of the nation's table food."); Cal. Dep't Food & Agric., *supra* note 184, at 5 (reporting California as first in the nation in crop cash receipts, bringing in over $53.4 billion of the nation's $421.9 billion in crop cash receipts). Looking at national production, California grows "99 percent of artichokes, 99 percent of walnuts, 97 percent of kiwis, 97 percent of plums, 95 percent of celery, 95 percent of garlic, 89 percent of cauliflower, 71 percent of spinach, and 69 percent of carrots." *See* Brian Palmer, *The C-Free Diet: If We Didn't Have California, What Would We Eat?*, Slate (July 10, 2013), http://www.slate.com/articles/health_and_science/explainer/2013/07/california_grows_all_of_our_fruits_and_vegetables_what_would_we_eat_without.html.

industry is worth over $40 billion.[188] If the SWRCB orders widespread water right curtailments, agriculture could suffer.[189] A sudden drop in a farmer's water allowance could have disastrous effects for her livelihood, her employees' livelihoods, and—if her story is common enough—national food availability.[190] Though municipalities and domestic water users may have a better claim to water during the drought by virtue of the Water Code, lawmakers and courts should still exercise caution and protect agricultural interests as best they can.

B. FALLOUT AND CONSEQUENCES: WHO IS HARMED AND WHO IS HELPED?

Given the water rights system's current inadequacy, the political process needs to facilitate a long-term solution to the water shortage. It is easy to scapegoat the agriculture industry for the state's problems and, in certain situations, that may not be entirely inappropriate.[191] However, should California's agriculture industry dry up, Americans will experience immediate adverse effects.[192] Without a strong agriculture industry in California, the nation could suffer food shortages[193] and widespread unemployment.[194] California's courts must find a way to honor the state's laws and commitments to domestic and municipal water uses while protecting irrigation uses.

California is the main producer of most things Americans eat.[195] Produce is perhaps the most well-known of the state's mega-exports; California's climate is, but for its water problems, ideal for growing produce.[196] Over two-thirds of fruits and nuts grown in the United States, as well as over one-third of vegetables, are produced in California.[197] Should water become scarce for farmers, produce prices will rise.[198] While this will be an

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188 MECHEL PAGGI, THE CTR. FOR AGRIC. BUS., CALIFORNIA AGRICULTURE'S ROLE IN THE ECONOMY AND WATER USE CHARACTERISTICS 3–5 (Nov. 2011), http://www.californiawater.org/cwi/docs/AWU_Economics.pdf.

189 David Siders & Dale Kasler, *California Warns of Deep Water Rights Curtailments Amid Drought*, Sacramento Bee (April 8, 2015), http://www.sacbee.com/news/state/california/water-and-drought/article17920022.html; *see also* Letter from John and Cathy Maas to the California State Water Control Board (June 30, 2014), http://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/coments063014/docs/john_maas.pdf.

190 *See* Siders & Kasler, *supra* note 189.

191 *See, e.g.*, Woody, *supra* note 147.

192 Natasha Geiling, *California's Drought Could Upend America's Entire Food System*, THINK PROGRESS (May 5, 2015), http://thinkprogress.org/climate/2015/05/05/3646965/california-drought-and-agriculture-explainer/.

193 Geiling, *supra* note 192.

194 *California's Drought Ripples Through Businesses, Then To Schools*, NAT'L PUBLIC RADIO (Apr. 21, 2014), http://www. npr.org/201 4/04/20/304173037/californias-drought-ripples-through-businesses-and-even-schools.

195 *See id.*; *see also* Woody, *supra* note 147.

196 NAT'L PUBLIC RADIO, *supra* note 194.

197 CAL. DEP'T FOOD & AGRIC., *supra* note 184, at 2.

198 U.S. DEP'T AGRIC. ECON. RESEARCH SERV., *California Drought: Food Prices and Consumers*, http://www.ers.usda.gov/topics/in-the-news/california-drought-farm-and-food-impacts/california-drought-food-prices-and-consumers.aspx (last updated Sept. 8, 2016) ("Owing to higher production costs, insufficient water, or both, producers may opt to reduce total acre-

inconvenience of variable significance to most Americans, it will affect those on government food assistance most of all.[199] Already, concerns are growing about the Supplemental Nutrition Assistance Program (more commonly referred to as "SNAP" or "food stamps") recipients' ability to obtain enough fresh food to maintain a healthy diet;[200] higher produce prices would make proper nutrition nearly impossible.[201]

In addition to higher food costs nationwide, increased unemployment is another consequence of decreased irrigation in California.[202] In the Central Valley, there is already widespread unemployment among those associated with farming and agriculture.[203] The unemployment problem is reaching other industries as well, such as education.[204] The unemployed are beginning to move out of the state;[205] if this happens on a large scale, other states' social safety net systems, such as public housing and Medicaid, could become overburdened as "riparian refugees" struggle to start new lives. The Catch–22 is that, if municipalities do not have an adequate water supply, labor shortages could ensue as residents leave for towns with running water, leaving the agriculture industry unable to produce just as surely as if irrigation was cut off.

The state's water law system may cause anxiety,[206] fear,[207] and aggression[208] in California, but Midwestern and Southern states have quite a bit to gain from a decrease in Californian food exports.[209] Farmers across the Midwest and South may be able to grow crops such as broccoli or artichokes, most of which currently come from California, rather than government subsidized corn or soybeans.[210] Diversifying crops across states could also protect against future climate problems wiping out a massive part of the U.S. economy.[211]

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age, driving up prices not just this year but for years to come. At this point we have started to see this happen, but it is too soon to discuss the extent to which this is likely to happen throughout California.").

199 Roberto A. Ferdman, *The Key Difference Between What Poor People and Everyone Else Eats*, WASH. POST (Sept. 17, 2015), https://www.washingtonpost.com/news/wonk/wp/2015/09/17/the-depressing-difference-in-what-poor-people-and-everyone-else-eats/.

200 *Id.*

201 *Id.*

202 NAT'L PUBLIC RADIO, *supra* note 194.

203 *Id.*

204 *Id.*

205 *Id.*

206 *Id.* ("[P]eople here say the worst is yet to come.").

207 CBS NEWS, *supra* note 15 ("'I know other parts of the world go without water, but obviously it's something we're not accustomed to, so it's definitely, definitely scary,' the mother of five said.").

208 Kuznia, *supra* note 9.

209 *See* Tom Philpott, *Will California's Drought Bring About $7 Broccoli?*, MOTHER JONES (May/June 2014), http://www.motherjones.com/environment/2014/06/california-drought-water-produce-fruit-vegetables (citing a 2010 Iowa State University study that showed that fewer than 600,000 acres of land in the Midwest could produce enough tomatoes, strawberries, apples, onions, kale, cucumbers, and lettuce to fill much of the gap left by an unproductive California).

210 Geiling, *supra* note 192.

211 *Id.*

Cattle and dairy farmers, in particular, have much to gain from California's woes.[212] While domestic use in California includes the watering of livestock, it does not include the cultivation of feed for that livestock.[213] Alfalfa, one of the thirstiest crops grown in California, is the main source of cattle feed in that state.[214] As California's farmers look for ways to maximize their profits under new, lower water allotments, the Golden State's beef and dairy industries may shrink.[215] This could leave an opening for states like Wisconsin to increase their share of the beef and dairy markets.[216]

C. COURTS SHOULD INTERPRET WATER CODE SECTIONS 106 AND 106.5 NARROWLY UNTIL A LASTING POLITICAL SOLUTION IS IN PLACE

In addition to creating legal issues, California's water shortage also presents economic, environmental, and political problems.[217] Thus, a lasting solution will necessarily require input from all of those disciplines, not just the judiciary. In the meantime, courts can take intermediate measures to minimize the drought's damage to the state and its residents.

Just as "reasonable and beneficial" is not defined in the constitution,[218] "use" is not defined in the Water Code.[219] The commonly used definitions of "use" are outdated, no longer in harmony with Artcle X, section 2.[220] The new water rights cases the courts will decide are readily distinguishable from prior cases because drought conditions are suffi-

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212 *Id.*

213 *See* Deetz v. Carter, 43 Cal. Rptr. 321, 323 (Ct. App. 1965).

214 Woody, *supra* note 147.

215 U.S. DEPT. AGRIC. ECON. RESEARCH SERV., *supra* note 198 ("The drought has the potential to increase the price and decrease the availability of alfalfa, the primary feed for dairy cattle, which could drive up fluid milk prices.").

216 Rob Schultz, *Who's Happy Now? Wisconsin's Dairy Cows Get the Edge on Their Bovine Sisters in California*, LACROSSE TRIB. (Sept. 14, 2015), http://lacrossetribune.com/news/local/whos-happy-now-wisconsin-s-dairy-cows-get-the/article_2f93fa1c-9218-575f-a74c-faff135c5d57.html ("Farmers believe the better the cows eat, the more milk they produce. In California, where dairy farmers buy the majority of their feed rather than grow it, high feed prices due to the drought and other factors have forced them to opt for cheaper, less nutritious feed, Stephenson said. They are also culling more cows to make ends meet.").

217 Shalby, *supra* note 108. Land subsidence, food production, and jobs are among the leading concerns in California's drought. *Id.*

218 *See* CAL. CONST. art. X, § 2.

219 *See* CAL. WATER CODE §§ 106, 106.5 (West 2015). CAL. WATER CODE § 106.5 was added by 1945 Cal. Stat., ch 1344, § 2. 1945 Cal. Stat., ch 1344, § 3 states that "[t]he purpose of [the] act is to effectuate the policy declared in Section 2 [now CAL. WATER CODE § 1203] of this act and this act shall be liberally construed by the judicial and executive branches of the State Government to carry out its purpose." Section 1203 allows the appropriation of excess municipal water only so long as the municipality does not need it. CAL. WATER CODE § 1203. This declaration of purpose does not affect the court's ability to interpret Water Code section 106.5 narrowly when there is no excess water to appropriate. CAL. WATER CODE § 106.5.

220 *Compare* Deetz v. Carter, 43 Cal. Rptr. 321, 323 (Ct. App. 1965), *with* Woody, *supra* note 147.

cient to significantly change the cases' facts.[221] Thus, the courts may find that the definitions of "domestic use" and "municipal use" have changed with the times.

When forced to decide between domestic or municipal water use and irrigation, courts should adopt a narrow interpretation of Water Code sections 106 and 106.5, ensuring that municipalities and domestic users have just enough water to meet basic health, safety, and public welfare standards and not a drop more.[222] At the most basic level, health, safety, and public welfare do not require running water in every home.[223] In the Central Valley, many families are living without running water right now and are finding that they use far less water than they did when it came from the tap.[224] Adoption of the narrow interpretation would serve as a stop-gap measure, giving governmental and political actors time to create sustainable policies and long-term solutions.[225] It would allow irrigation (and the economic necessities that come with it) to continue on a smaller scale, while highlighting for the public the weaknesses in current law.

When narrowly interpreting the Water Code, courts should apportion water very specifically and in a way that can be measured. It is common in water disputes for California's state courts to apportion water in specific amounts.[226] While a simple "gallons per day" limit may sound sufficient, such a solution would not change with the climate and the parties may end up back in court later. Accordingly, courts should apportion water by percentage while maintaining a gallons per day cap. This would allow the solution to change with the climate while still maintaining conservation and storage measures during intermittent wet periods. However, should water become so scarce that an individual[227] or municipality can no longer function within its allotted water percentage, that entity must be allowed to draw more.[228] Thus, any court order should contain an emergency clause stating that, should the risk to the health and safety of individuals or municipalities reach unacceptable levels as defined by the order or state law, those individuals or municipalities may draw as much water as is needed to restore the minimum

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221 *Compare Deetz*, 43 Cal. Rptr. 321, *with* Lurie, *supra* note 45.

222 While this could be seen as judicial overreach into the realm of legislation and policy, reminiscent of *Lochner* Era jurisprudence, California courts receive their authority to interpret the Water Code this way from the California Constitution and its "reasonable and beneficial use" requirement. CAL. CONST. art. X. § 2; *see also* Woody, *supra* note 117 (state constitutions are supreme over state statutes). It would be unreasonable and non-beneficial for a court to award more water to a municipality at the expense of the farms that provide jobs to the municipality's residents.

223 *See* Janes, *supra* note 4.

224 Saslow, *supra* note 5 (documenting how water conscious some families without running water have become).

225 However, without a responsive and thorough disaster relief program in place, the narrow interpretation may not be feasible or reasonable.

226 *See, e.g.*, City of Pasadena v. City of Alhambra, 207 P.2d 17, 27 (Cal. 1949) ("The amount of water limited to each party, designated the 'decreed right,' was set out in the findings, and this allocation gave each party about two-thirds of the amount it had been pumping.").

227 In this instance, "individual" refers to a domestic user.

228 *See* Water Code §§ 106, 106.5.

acceptable level of health and safety. Additionally, that water should be drawn from irrigators' shares.[229]

The narrow interpretation of Water Code sections 106 and 106.5 may encourage voluntary changes among municipalities and farmers—changes that could buy more time for the legislative process to form a longterm solution. Drought-stricken communities seeking to prevent the loss of running water may voluntarily adopt strict water rationing.[230] With far less water available than in previous years, farmers may make preventative shifts to more sustainable crops and agricultural practices;[231] those unable to switch crops may invest in conservation measures or begin phasing out their thirstier crops. Ideally, the narrow interpretation would serve as a warning to large communities after only a one or two applications in small-scale disputes, thus minimizing the narrow interpretation's impact and increasing the demand for sustainable policies and programs from the state and federal governments.

V. THE FEDERAL GOVERNMENT MUST GET INVOLVED

While California's judges can buy the state time, they cannot permanently fix the its water issues. Clearly the state legislature must act to update the state's outmoded water rights system and to create more conservation programs. However, the federal government also has an important role in any long-term Western water solution. Federal farm subsidies encourage farmers across the country to grow commodity crops, such as corn, soybeans, and sugar.[232] The result is a monoculture in which variety foods that humans require for a healthy diet are more scarce and more expensive.[233] If California's variety

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229 This approach is mindful of environmental water rights. Because many environmental water uses are federally mandated through conservation and endangered species programs, those rights may be superior even to domestic and municipal water rights granted by the state. ENVTL. & NAT. RES. DIV., U.S. DEP'T OF JUSTICE, FEDERAL RESERVED WATER RIGHTS AND STATE LAW CLAIMS, https://www.justice.gov/enrd/federal-reserved-water-rights-and-state-law-claims (last updated May 12, 2015) (outlining the evolution of federal reserved water doctrine to include Indian reservations, national parks, public land, and protection of endangered species). Thus, this plan takes a zero-sum approach to the waters available once superior federal rights are satisfied.

230 *Cf.* Ellen Hanak et. al., Cal. Pub. Policy Inst., What If California's Drought Continues? 7–9 (2015) (describing how California cities are expected to continue using conservation as an important tool for adapting to increased water scarcity).

231 *See, e.g.*, *Squeezed By Drought, California Farmers Switch to Less Thirsty Crops*, NAT'L PUBLIC RADIO (July 28, 2015), http://www.npr.org/sections/thesalt/2015/07/28/426886645/squeezed-by-drought-california-farmers-switch-to-less-thirsty-crops.

232 Alli Condra, *Why Fruits, Vegetables Are Excluded From Farm Subsidies*, FOOD SAFETY NEWS (Nov. 9, 2011), http://www.foodsafetynews.com/2011/11/fairness-why-fruits-vegetables-are-excluded-from-farm-subsidies/#.WB7Cxs4n3wz ("Historically, farm bills have provided financial support for commodity crops (such as wheat, corn and soybeans) and no financial support for fruits and vegetables.").

233 Press Release, Union of Concerned Scientists, Less Corn, More Fruits and Vegetables Would Benefit U.S. Farmers, Consumers and Rural Communities (Oct. 22, 2013), http://www.ucsusa.org/news/press_release/less-corn-more-fruits-and-vegetables-0378

crop farmers are no longer able to sustain their operations, there is currently no significant population of farmers willing or able to take their place.[234] While Midwestern and Southern farms could certainly produce the diverse crops grown in California, corn and soybeans are so heavily subsidized under current farm bills that it does not make sense for many farmers to grow anything else.[235] Federally subsidized crop insurance, which heavily favors monocultures, exacerbates the problem.[236] While most farmers enroll in federally subsidized crop insurance,[237] these programs make it difficult to cultivate more than one crop at a time or to cultivate crops while also raising livestock.[238]

Congress should act quickly to begin transitioning the nation's farms to variety crop production in preparation for phasing out California's role as their primary producer. As an addition or alternative to some of the current farm subsidies it provides,[239] Congress should consider providing rebates, loans, subsidies, or grants to California farmers who will switch to crops that use less water, and to farmers nationwide who will diversify their crops to fill the gaps left when California farmers make the switch.[240] It should then

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.html#.V5zo0ZODGko ("Only about 2 percent of U.S. farmland is used to grow fruits and vegetables, while 59 percent is devoted to commodity crops. But this situation isn't just bad for our waistlines—it's also holding back farmers and rural economies, and hurting the quality of life in farm communities and beyond.").

234 Palmer, *supra* note 187 ("The loss of California's output would create a dire situation for at least a decade.").

235 Tamar Haspel, *Farm bill: Why Don't Taxpayers Subsidize the Foods That Are Better For Us?*, WASH. POST (Feb. 18, 2014), https://www.washingtonpost.com/lifestyle/food/farm-bill-why-dont-taxpayers-subsidize-the-foods-that-are-better-for-us/2014/02/14/d7642a3c-9434-11e3-84e1-27626c5ef5fb_story.html.

236 Telephone Interview with Paul Wolfe, Policy Specialist, National Sustainable Agricultue Coalition (Apr. 24, 2016) [hereinafter Interview]; *see also* Jacqui Fatka, *The Downside of Crop insurance: Part One in a Series*, FARM FUTURES (Mar. 26, 2016), http://farmfutures.com/story-downside-crop-insurance-part-series-17-139130 ("crop insurance has insulated poor agronomic choices, and soils are going to pay for it with lower future productivity").

237 JIM KLEINSCHMIT, INST. FOR AGRIC. & TRADE POLICY, A RISKY PROPOSITION: CROP INSURANCE IN THE FACE OF CLIMATE CHANGE 1 (2011), http://www.iatp.org/documents/a-risky-proposition ("In 2009, more than 80 percent of corn, soybean, wheat, cotton and peanut farmers participated in some form of federal crop insurance program.").

238 Interview, *supra* note 236; Kleinschmit, *supra* note 237 ("The majority of crop and revenue insurance policies, however, are skewed in favor of less diverse farming systems because they make it difficult to insure a mixture of crops or integrated crop and livestock operations.").

239 While finding money in the federal budget for new projects is almost always difficult, the cost of losing California's economy will be far reaching. Currently, California receives less than one dollar back from the federal government for every dollar it pays in federal taxes. THE TAX FOUND., *supra* note 182, at 17. Losing California's agriculture without finding a replacement industry could end up negatively impacting states that are heavily dependent on the federal government. *See id.* By reducing the overall tax dollars paid into the federal government (as a result of unemployment, low yields, and higher deductions for work related costs, such a water), the amount of funding available to poorer states drops. Meanwhile, California's federal funding needs may increase. Congressional delegates from across the country have a stake in California's success. Congress should strongly consider expanding farm subsidies to encourage sustainable agriculture in California.

240 *Id.*

phase in buyouts to those California farmers who do not wish to switch to a sustainable crop.

In the long-term, the federal government should proceed carefully, and with the help of experts, when implementing shifts in farm subsidies and crop insurance that encourage farmers across the United States to grow the diverse crops currently grown in California while simultaneously buying out and reforming California farms.[241] Though it is complex, this plan would help keep food costs low[242] while allowing California to transition to new economic ventures, such as renewable energy.[243] California has the potential to be a major solar energy producer.[244] Existing farm subsidies could be converted to provide the training and equipment needed for farmers to switch to producing clean, zero-carbon energy. A shift away from agriculture must herald a shift to new Californian industries, such as solar and wind energy. Alternatively, desalination plants could solve many of California's water concerns,[245] though an entirely new category of water rights would likely be created in the process.[246] But these changes will take time to implement and California is already withering and parched, so, until the political process can affect necessary change, it is up to the courts to keep the drought situation under some semblance of control—holding together municipal and agricultural water needs with both hands—while the men and women of the Central Valley pray for rain.

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241 This idea is largely unexplored but has been proposed in the past. *See* Tom Philpott, *There's a Place That's Nearly Perfect for Growing Food. It's Not California.*, MOTHER JONES (Apr. 20, 2015), http://www.motherjones.com/tom-philpott/2015/04/decalifornify-cotton-vegetables-fruit-south ("I bounced my idea of a Cotton Belt fruit-and-vegetable renaissance off a few experts to see if it was nuts. Ferd Hoefner, policy director of the National Sustainable Agriculture Coalition, called it 'noncrazy.'"). Paul Wolfe, a policy specialist at the National Sustainable Agriculture Coalition surmised that the idea could work well if legislators and farmers could work together to actually make the necessary changes. Interview, *supra* note 236.

242 *See* Philpott, *supra* note 241.

243 Am. Council on Renewable Energy, *Renewable Energy in California*, *in* RENEWABLE ENERGY IN THE 50 STATES: WESTERN REGION 11, 11 (2014), http://acore.org/files/pdfs/states/California.pdf.

244 Lauren Sommer, *What Will California Do With Too Much Solar?*, KQED SCI. (Apr. 4, 2016), http://ww2.kqed.org/science/2016/04/04/what-will-california-do-with-too-much-solar/ ("Solar energy records are falling left and right in California these days, as the state steams ahead toward its ambitious renewable energy goals.").

245 David Kasler, *Southern California desalination plant will help ease water crunch, but price is steep*, SACRAMENTO BEE (Dec. 12, 2015), http://www.sacbee.com/news/state/california/water-and-drought/article49468770.html.

246 *See* Karen M. O'Neill Ocasio, *Feeling Salty? Regulating Desalination Plants in the United States and Spain*, 48 CORNELL INT'L L.J. 451, 464 (2015). Desalination, perhaps surprisingly, is quite controversial due to its environmental impacts. Ry Rivard, *Desalination Plant Again Faces Environmental Questions*, VOICE OF SAN DIEGO (June 20, 2016), http://www.voiceofsandiego.org/topics/science-environment/desalination-plant-faces-environmental-questions/. *See also* Heather Cooley, Newsha Ajami, & Matthew Heberger, *Key Issues in Seawater Desalination in California: Marine Impacts*, PACIFIC INSTITUTE (Dec. 11, 2013), http://pacinst.org/publication/desal-marine-impacts/.

VI. Conclusion

Though heavy winter rains have relieved some of the water supply conditions in California,[247] the severity and impacts of the drought have highlighted that California may have a long-term, if not permanent, water supply problem.[248] If the SWRCB must issue more orders curtailing water use, it will likely be subject to an even greater number of lawsuits claiming infringements upon water rights and improper applications of the Rule of Priority.[249] The duty of the courts is to apply the law as it stands, not rewrite it.[250] California courts should, therefore, favor domestic and municipal use over irrigation[251] and should enforce SWRCB's decisions on reasonableness,[252] though the manner in which the courts enforce these laws and decisions may change as the drought continues. Due to water policy's highly technical nature (hydrology, economics, environmental conservation, sanitation, and infrastructure are just some of the fields implicated in water policy), courts lack the institutional competence required to make changes in water law.[253] Thus, the courts should, as far as is lawful, support the policies that the legislature and specialized agencies, such as the SWRCB, put forth.

The long-term solution to California's water problems must come from the political process, not the courts. While some blame the state's water rights system for the state's water woes, calling California water laws byzantine[254] or antiquated,[255] the common law rights system did not cause the water problems, and thus the courts cannot provide lasting solutions on their own. Rather, the water scarcity has been created in large part by a quickly growing population and by cultivation of water-intensive crops in the desert.[256] These issues are complex and the political process can involve experts in ways that the courts cannot, making it better-equipped to offer well-tailored, well-planned, and well-executed solutions to California's water shortage.

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247 Paul Rodgers, *2016 in Review: California Drought Eased, But It's Not Over*, Mercury News (Dec. 26, 2016), http://www.mercurynews.com/2016/12/26/fire-and-rain-california-drought-eased-but-not-over/.

248 Cheryl Katz, *They've Seen Lots of Droughts, But This One's Different*, Nat'l Geographic (July 6, 2010), http://news.nationalgeographic.com/2015/07/150706-drought-california-water-conservation-environment/.

249 *See* Sommer, *supra* note 47.

250 People v. Cordova, 203 Cal. Rptr. 3d 700, 712 (Ct. App. 2016).

251 Cal. Water Code §§ 106, 106.5.

252 Light v. State Water Res. Control Bd., 173 Cal. Rptr. 3d 200, 218–19 (Ct. App. 4th 2014).

253 For a more in–depth discussion of the difficulties that judges face when forced to rely on expert testimony to decide highly technical or scientific questions, see, generally, John B. Meixner & Shari Seidman Diamond, *The Hidden* Daubert *Factor: How Judges Use Error Rates In Assessing Scientific Evidence*, 2014 Wis. L. Rev. 1063. (2014).

254 Lurie, *supra* note 45.

255 Bettina Boxall, *Lawsuits Over California Water Rights Are a Fight a Century in the Making*, L.A. Times (June 29, 2015), http://www.latimes.com/local/california/la-me-water-rights-legal-20150629-story.html.

256 *See* Amanda Zamora, Lauren Kirchner and Abrahm Lustgarten, et al., *California's Drought Is Part of a Much Bigger Water Crisis. Here's What You Need to Know*, ProPublica (June 25, 2015), https://www.propublica.org/article /california-drought-colorado-river-water-crisis-explained.

The national problem of water in California requires a national solution, provided by the political process and supported by the courts. Changes in the West must come hand in hand with changes in Congress to ensure continuity of food supplies and economic stability for the entire country. While the drought remained "exceptional" or "extreme" in a substantial portion of the state through most of 2016,[257] both the federal[258] and state[259] governments were already making efforts to lessen the impacts and preserve the water that remains in California. Voluntary conservation efforts and a statewide mandate to reduce overall water consumption have been very successful and those programs are likely to remain in effect.[260] Importantly, these efforts do not typically cause Rule of Priority conflicts.[261] They also tend to involve less supervision, enforcement, and defense than mandatory programs.[262] To reduce the frequency and necessity of judicial intervention in water conflicts, these efforts must continue.

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257 Nat'l Integrated Drought Info. Sys., Nat'l Oceanic & Atmospheric Admin., *U.S. Drought Monitor—California*, https://www.drought.gov/drought/california (last visited Sept. 20, 2016).

258 Nat'l Integrated Drought Info. Sys., Nat'l Oceanic & Atmospheric Admin., *Federal Actions to Assist the Drought Emergency* (Sept. 16, 2015), https://www.drought.gov/drought/sites/drought.gov.drought/files/media/ndrp/Federal%20Actions%20to%20Assist%20the%20Drought%20Emergency.pdf.

259 Press Release, Cal. State Water Res. Control Bd., Top Story: California's Cumulative Water Savings Continue to Meet Governor's Ongoing Conservation Mandate (Dec. 1, 2015), http://drought.ca.gov/topstory/top-story-51.html.

260 *Id.*

261 *See* A. Dan Tarlock, *Prior Appropriation: Rule, Principle, or Rhetoric?*, 76 N.D. L. REV. 881, 883 (2000).

262 *See generally* Paul Rogers & Lisa M. Krieger, *California Drought: New Water Restrictions Carry Penalty of Up to $500*, MERCURY NEWS (Aug. 12, 2016), http://www.mercurynews.com/2014/07/15/california-drought-new-water-restrictions-carry-penalty-of-up-to-500/.

THE EPA'S AMENDED NEW SOURCE PERFORMANCE STANDARDS FOR OIL & GAS

INTRODUCTION

On June 3, 2016, the U.S. Environmental Protection Agency (EPA) promulgated rules amending New Source Performance Standards (NSPS) for the oil and gas industry.[1] The rulemaking primarily focused on oil and natural gas sources, expanding standards for greenhouse gas (GHG) emissions and volatile organic compounds (VOCs) to previously unregulated sources.[2] However, this rulemaking was extremely controversial and was immediately challenged by numerous states and industry groups, including Texas.[3]

This Development explores the environmental problems that the EPA was seeking to address, the rule as promulgated by the EPA, and the legal challenges to the rule currently before the D.C. Circuit.

THE NSPS AMENDMENTS

The NSPS amendments focus on providing standards for GHGs, particularly methane and VOCs. The EPA contends that both GHGs and VOCs are threats to human health and welfare, and claims statutory authority to regulate both GHG and VOC emissions under the Clean Air Act (CAA).[4]

METHANE (CH_4): A POTENT GHG

Since 2009, the EPA has maintained that, "by causing or contributing to climate change, GHGs endanger both the public health and the public welfare of current and future generations."[5] Methane, a primary component of natural gas, is a potent GHG.[6]

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1 Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60).

2 *Id.* at 35,825.

3 Petition for Review at 1, Texas v. U.S. Envtl. Prot. Agency, No. 16–1257 (D.C. Cir. July 28, 2016) (consolidated under North Dakota v. U.S. Envtl. Prot. Agency, No. 16–1242) (hereinafter *Texas*); Stan Parker, *DC Circuit Challenge to EPA's New Methane Rules Gains Steam*, LAW360 (Aug. 2, 2016), http://www.law360.com/articles/824335/dc-circ-challenge-to-epa-s-new-methane-rules-gains-steam.

4 Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. at 35,828–29, 35,832–37; Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*

5 *Id.* at 35,825, 35,833–37.

Methane remains in the atmosphere for one to two decades before decaying into carbon dioxide, and has a significantly higher global warming potential than carbon dioxide.[7]

In 2014, methane gas comprised approximately 11 percent of human–generated GHGs.[8] Human–driven methane emissions have many sources, including livestock, the oil and gas industry, and landfills.[9] The EPA estimates that, in 2014, human activity in the United States resulted in the emission of approximately 731 million metric tons of carbon dioxide equivalents.[10] Natural gas and petroleum systems comprise the largest source, accounting for approximately 33 percent of methane emissions.[11]

HEALTH THREATS FROM VOCS

For purposes of the CAA regulations, the EPA has defined VOC as "any compound of carbon, excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate, which participates in atmospheric photochemical reactions."[12] While VOCs are generally not acutely toxic, many are hazardous air pollutants (HAPs) and pose significant risks to human health.[13] In addition to direct

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6 Gayathri Vaidyanathan, *How Bad of a Greenhouse Gas is Methane?*, SCI. AM. (Dec. 22, 2015), https://www.scientificamerican.com/article/how-bad-of-a-greenhouse-gas-is-methane/.

7 *Id.*; *Overview of Greenhouse Gases: Methane Emissions*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/ghgemissions/overview-greenhouse-gases (last visited Oct. 21, 2016) (observing that while methane breaks down more quickly than carbon dioxide, it is pound–for–pound "more efficient at trapping radiation" and generates "more than 25 times greater [impact on climate change] . . . over a 100–year period").

8 U.S. ENVTL. PROT. AGENCY, *supra* note 7 (noting that methane emissions in the United States were second only to carbon dioxide emissions in 2014).

9 U.S. ENVTL. PROT. AGENCY, *supra* note 7.

10 *Greenhouse Gases Inventory Data*, U.S. ENVTL. PROT. AGENCY, https://www3.epa.gov/climatechange/ghgemissions/inventoryexplorer/#allsectors/allgas/gas/all (last visited Oct. 21, 2016); Chris Mooney, *The U.S. has been emitting a lot more methane than we thought, says EPA*, WASH. POST (April 15, 2016), https://www.washingtonpost.com/news/energy-environment/wp/2016/04/15/epa-issues-large-upward-revision-to-u-s-methane-emissions/?utm_term=.8c94f5e45a87.

11 U.S. ENVTL. PROT. AGENCY, *supra* note 7; Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824, 35,838 (June 3, 2016) (to be codified at 40 C.F.R. pt. 60) (stating, in Table 4(a), that oil and natural gas production and natural gas processing and transmission emitted 232 million metric tons of carbon dioxide equivalents in 2014). *But see* Mooney, *supra* note 10 (observing that "a major industry group, the American Petroleum Institute, disputed the numbers . . . [because] '[EPA] made a significant modification to the inventory estimates, and we believe that it is seriously flawed'").

12 40 C.F.R. § 51.100(s) (2016). The EPA has defined VOC as such in the outdoor context because the primary goal of the CAA regulation of VOC has historically been to prevent smog. See Technical Overview of Volatile Organic Compounds, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds (last visited Oct. 21, 2016).

13 Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. at 35,837 (identifying VOC health risks as including cancer, lung and heart diseases, asthma, and respiratory distress).

threats to human health, VOCs also can have harmful effects on the development of some flora, and thus, the local ecosystem.[14]

"The Methane Rule": The EPA's 2016 NSPS Amendments

The EPA asserts regulatory authority for this rulemaking under CAA section 111(b).[15] After performing a cost–benefit analysis, the EPA determined that the monetized benefits outweighed the compliance costs of the regulation.[16]

In the final rule, the EPA primarily focused on amending both GHG and VOC standards to apply, with some exceptions, to:

> [(1)] sources . . . unregulated under the current NSPS . . . [particularly] hydraulically fractured oil well completions, pneumatic pumps, and fugitive emissions from well sites and compressor stations[; (2)] sources . . . currently regulated . . . for VOC, but not for GHGs [particularly] hydraulically fractured gas well completions and equipment leaks at natural gas processing plants[; and (3)] certain equipment . . . for which the current NSPS . . . regulates emissions of VOC from only a subset [particularly] pneumatic controllers, centrifugal compressors, and reciprocating compressors.[17]

In response to extensive public comments from environmental and industry groups, the final rules also include several significant changes from the proposed rules.[18] Some of the most significant changes include: requiring monitoring of "fugitive emissions" for low production wells; increasing the frequency of required monitoring for compressor stations; and providing six months for companies to outfit hydraulically fractured wells with flare–replacement technologies.[19]

Challenges by States and Industry

The newly promulgated rules were immediately challenged by some states and industry groups, and defended by other states and environmental groups. The challenge con-

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14 Id.
15 Id. at 35,828–29, 35,832–43, 35,874–77.
16 Id. at 35,827–28, 35,886.
17 *Id.* at 35,825, 35,843–48.
18 *See generally id.* at 35,848–71.
19 Christine Powell, *North Dakota Asks DC Circ. To Set Aside EPA Methane Rule*, Law360 (July 19, 2016), http://www.law360.com/articles/818919/north-dakota-asks-dc-circ-to-set-aside-epa-methane-rule.

sisted of nine separate challenges to the rules and two motions to intervene.[20] The consolidated cases are currently pending before the D.C. Circuit.[21]

The states challenging the rulemaking include North Dakota,[22] Texas,[23] and West Virginia, joined by Alabama, Arizona, Kansas, Kentucky, Louisiana, Michigan, Montana, Ohio, Oklahoma, South Carolina, and Wisconsin.[24] In the consolidated suit, over twenty industry groups, including Independent Petroleum Association of America,[25] Interstate Natural Gas Association of America,[26] Western Energy Alliance,[27] GPA Midstream Association,[28] Texas Oil and Gas Association,[29] and American Petroleum Institute[30] joined those states as petitioners. The petitioners argue that "the EPA final rule . . . exceeds EPA's statutory authority, goes beyond the bounds established by the United States Constitution and is arbitrary, capricious, an abuse of discretion and not in accordance with law."[31]

Officials in Texas are among the most vociferous opponents of the rulemaking. Texas Attorney General Ken Paxton has called the methane rules "a gross demonstra-

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20 Petition for Review at 1, North Dakota v. U.S. Envtl. Prot. Agency, No. 16–1242 (D.C. Cir. July 15, 2016) [hereinafter *North Dakota*]; *Texas*, *supra* note 3, at 1; Petition for Review at 2–3, Indep. Petroleum Ass'n of Am. v. U.S. Envtl. Prot. Agency, No. 16–1262 (D.C. Cir. Aug. 2, 2016) [hereinafter *IPAA*] (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 1, Interstate Nat. Gas Ass'n of Am. v. U.S. Envtl. Prot. Agency, No. 16–1263 (D.C. Cir. Aug. 2, 2016) [hereinafter *INGAA*] (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 2, West Virginia v. U.S. Envtl. Prot. Agency, No. 16–1264 (D.C. Cir. Aug. 2, 2016) (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 1, W. Energy All. v. U.S. Envtl. Prot. Agency, No. 16–1266 (D.C. Cir. Aug. 2, 2016) [hereinafter *WEA*] (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 1, GPA Midstream Ass'n v. U.S. Envtl. Prot. Agency, No. 16–1267 (D.C. Cir. Aug. 2, 2016) [hereinafter *GPA*] (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 1, Tex. Oil & Gas Ass'n v. U.S. Envtl. Prot. Agency, No. 16–1269 (D.C. Cir. Aug. 2, 2016) [hereinafter *TOGA*] (consolidated under *North Dakota*, No. 16–1242); Petition for Review at 1, Am. Petroleum Inst. v. U.S. Envtl. Prot. Agency, No. 16–1270 (D.C. Cir. Aug. 2, 2016) [hereinafter *API*] (consolidated under *North Dakota*, No. 16–1242); Unopposed Motion for Leave to Intervene as Respondents at 5, *North Dakota*, No. 16–1242; Motion to Intervene in Support of Respondent at 1, *North Dakota*, No. 16–1242.

21 *See North Dakota*, No. 16–1242. Pursuant to the CAA, these challenges were filed directly with the D.C. Circuit. *See* 42 U.S.C. § 7607(b)(1) (2012).

22 Powell, *supra* note 19.

23 Jim Malewitz, *Texas Challenges EPA's Crackdown on Oilfield Methane*, TEX. TRIB. (July 29, 2016), https://www.texastribune.org/2016/07/29/texas-challenges-epas-methane-crack-down-oilfields/.

24 Devin Henry, *Thirteen states sue over EPA methane rule*, THE HILL (Aug. 2, 2016), http://thehill.com/policy/energy-environment/290159-thirteen-states-sue-over-epa-methane-rule.

25 *IPAA*, *supra* note 20, at 1.

26 *INGAA*, *supra* note 20, at 1.

27 *WEA*, *supra* note 20, at 1.

28 *GPA*, *supra* note 20, at 1.

29 *TOGA*, *supra* note 20, at 1.

30 *API*, *supra* note 20, at 1.

31 *North Dakota*, *supra* note 20, at 1.

tion of federal overreach," and contends that the "EPA has failed to consider the steep cost of this rule on the existing industry."[32] According to Texas Railroad Commission Chairman David Porter, "[t]hese rules are . . . a blatant attempt to forcibly take over the regulation of Texas' oil and gas industry . . . [and] accomplish nothing other than encumbering business, wounding our economy and killing the jobs Texans rely on to support their families."[33] Texas Railroad Commissioner Christi Craddick observed that "methane emissions have dramatically fallen during recent energy growth, thanks to technology and industry leadership," and, accordingly, the rules would have "little to no impact on the environment while placing an undue burden on . . . industry."[34] Similarly, Texas Railroad Commissioner Ryan Sitton argued that the rules cause great harm with little benefit, and the "EPA needs to follow the law, produce better scientific analysis, and properly consider the economic implications of their rules."[35]

California, Connecticut, Illinois, Massachusetts, New Mexico, New York, Oregon, Rhode Island, and Vermont have joined with the EPA as respondents.[36] Several major environmental groups have also intervened in support of the respondents, including the Natural Resources Defense Council, the Environmental Defense Fund, the Sierra Club, the Clean Air Council, Earthworks, and the Environmental Integrity Project.[37] The petitioners argue that the rules are a critical step in tackling climate change, providing both the foundation for state rules and future federal rules on existing methane sources.[38] New York Attorney General Eric Schneiderman, whose statements are representative of the parties joining the EPA, said in a statement that "[t]he regulations . . . reflect the ready–availability of proven, effective, and affordable measures for reducing methane emissions from new and modified sources in the oil and gas industry," and Respondents will "aggressively [defend] these important controls on climate change pollution."[39]

Conclusion

The fate of the methane rulemaking is unclear at this point. However, the pending litigation is part of an ongoing struggle between parties interested in federalizing climate change regulations through the CAA and parties committed to maintaining a smaller

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32 Malewitz, *supra* note 23; James Osborne, *Texas sues EPA over methane emissions crackdown*, Hous. Chron. (Aug. 1, 2016), http://www.houstonchronicle.com/business/article/Texas-suing-EPA-over-methane-crackdown-9008109.php.

33 News Release, Texas Railroad Commission, RRC Commissioners Today Ask AG's Office to Consider Litigation Related to EPA Methane Rules (June 07, 2016), http://www.rrc.state.tx.us/all-news/060716a/.

34 *Id.*

35 *Id.*

36 Unopposed Motion for Leave to Intervene as Respondents, *supra* note 20, at 1. *See also* Anthony Adragna, *EPA Gets High-Profile Backers in Methane Legal Battle*, Bloomberg BNA (Aug. 17, 2016), http://www.bna.com/epa-gets-highprofile-n73014446473/.

37 Motion to Intervene in Support of Respondent, *supra* note 20, at 1. *See also* Adragna, *supra* note 36.

38 Unopposed Motion for Leave to Intervene as Respondents, *supra* note 20, at 5–9.

39 Adragna, *supra* note 36.

federal role. The recent change in Administration has also put this rule's future in doubt, with the Trump administration recently asking the D.C. Circuit to put a hold on the litigation.[40]

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SOLID WASTE

PAKOOTAS V. TECK COMINCO METALS, LTD., 830 F. 3D, 975 (9TH CIR. 2016)

INTRODUCTION

In *Pakootas v. Teck Cominco Metals, Ltd.*, the Ninth Circuit addressed whether an owner-operator of a smelter can be held liable for cleanup costs and natural resource damages under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)[1] when that smelter emits hazardous substances through a smokestack and contaminates land or water downwind.[2] The Ninth Circuit determined that the answer turned on whether the smelter owner-operator arranged for "disposal" of those hazardous substances within the meaning of CERCLA.[3] The court was bound by a previous en banc decision's interpretation of "disposal" as not including solid waste emitted directly into the air or the gradual spread of contaminants without human intervention.[4] As this was the only theory of disposal presented on appeal, the court held that the owner-operator of a smelter that emits hazardous substances through smokestacks could not be held liable under CERCLA.[5]

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40 Notice of Executive Order and Motion to Hold Case in Abeyance, American Petroleum Inst. v. U.S. Envtl. Protection Agency, No. 13-1108 (D.C. Cir. April 7, 2017).

1 *See* 42 U.S.C. § 9607(a)(3) (2012).

2 Pakootas v. Teck Cominco Metals, Ltd. (*Pakootas III*), 830 F.3d 975, 978 (9th Cir. 2016).

3 *Id.*

4 *Id.*

5 *Id.*

Background

Canadian mining company Teck Cominco Metals, Inc. ("Teck") owns a smelter located ten miles north of the Canada–United States border in Trail, British Columbia.[6] Injuries from toxic chemical emissions from Teck's smelter have been the cause of legal disputes for nearly a century.[7] This lawsuit initially focused on Teck's dumping of slag into the Columbia River, which flowed downstream into the United States ("River Pathways Claims").[8] However, after the completion of Phase I of the trial—concerning issues relevant to the River Pathways Claims—plaintiffs, Pakootas and others,[9] amended their complaint to allege claims for cost recovery and natural resource damages resulting from Teck's air emissions ("Air Pathways Claims").[10] In the amended complaint, Pakootas alleged:

> From approximately 1906 to the present time, Teck Cominco emitted certain hazardous substances, including, but not limited to, lead compounds, arsenic compounds, cadmium compounds and mercury compounds into the atmosphere through the stacks at the Cominco Smelter. The hazardous substances, discharged into the atmosphere by the Cominco Smelter airborne hazardous substances into the Upper Columbia River Site.[11]

Alleged environmental impacts of the air emissions include deposition of air emissions in the groundwater and sediment of the Upper Columbia River Site ("UCR Site"), causing humans to be exposed to and inhale or ingest hazardous substances contained in the air emissions.[12]

Teck moved to strike or dismiss the Air Pathways Claims, arguing that CERCLA does not impose liability when hazardous substances travel through the air and are then deposited on or into land or water.[13] The district court rejected this argument and denied Teck's motion.[14]

One month later, the Ninth Circuit issued an opinion in *Center for Community Action*, holding that emitting particulate matter into the air and allowing that matter to be transported by wind and air currents onto land and water does not constitute "disposal" in the context of the Resource Conservation and Recovery Act (RCRA).[15] Reacting to

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6 Pakootas v. Teck Cominco Metals, Ltd. (*Pakootas II*), 646 F.3d 1214, 1216 (9th Cir. 2011).
7 *Pakootas III*, 830 F.3d at 978.
8 *Pakootas II*, 646 F.3d at 1216.
9 Plaintiff-Appellees include Joseph A. Pakootas, an individual and enrolled member of the Confederated Tribes of the Colville Reservation; Donald R. Michel, an individual and enrolled member of the Confederated Tribes of the Colville Reservation; Confederated Tribes of the Colville Reservation. The State of Washington is an Intervenor-Plaintiff-Appellee. *Pakootas III*, 830 F.3d at 975.
10 *Id.* at 979.
11 *Id.*
12 *Id.* at 979–80.
13 *Id.* at 980.
14 *Id.*
15 Ctr. for Cmty. Action & Envtl. Justice v. BNSF Ry. Co., 764 F.3d 1019, 1023–24 (9th Cir. 2014); 42 U.S.C. §§ 6901 *et seq.*

this decision, Teck filed a motion for reconsideration.[16] Teck argued that the Ninth Circuit's decision in *Center for Community Action* foreclosed the Air Pathways Claims because CERCLA cross-references RCRA's definition of "disposal."[17] The district court rejected this argument, stating that the CERCLA "disposal" in this case occurred when Teck's air emissions entered the land and water at the UCR Site, not upon initial release of the substances into the air.[18] However, the district court recognized that the question of whether air emissions leading to deposition of hazardous substances constitutes arranging for disposal in the CERCLA context was an issue of first impression.[19] The district court certified the question for interlocutory appeal and the Ninth Circuit granted permission to appeal the decision.[20]

In its reversal of the district court's denial of Teck's motion to dismiss, the Ninth Circuit relied on two of its recent decisions: *Center for Community Action* and *Carson Harbor*.[21]

CENTER FOR COMMUNITY ACTION

In *Center for Community Action*, the court held that "disposal" of solid waste within the meaning of RCRA does not extend to emissions of solid waste directly into the air.[22] Defendant, BNSF Railway, owned and operated railyards in California, which emitted various diesel particulate matter (an EPA classified carcinogen) into the air.[23] Plaintiffs, Center for Community Action, filed a RCRA citizen-suit against BNSF Railway alleging disposal of hazardous waste that endangered public health or the environment.[24] In an en banc decision, the court held that emissions of solid waste directly into the air do not constitute disposal under RCRA.[25] The court explained that, although the definition of "disposal" under RCRA is ambiguous, statutory and legislative history demonstrated that Congress intended for RCRA to govern "land disposal" and did not imagine air emissions as "disposal."[26]

CARSON HARBOR

In *Carson Harbor*, the court held that the terms "deposit" and "disposal" in the context of specific CERCLA provisions do not include the gradual spread of contaminants without human intervention.[27] During an assessment of the property, the plaintiffs discovered tar-like hazardous substances on the property that had naturally migrated onto a

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16 *Pakootas III*, 830 F.3d at 980.
17 *Id.*
18 *Id.*
19 *Id.*
20 *Id.*
21 *Pakootas III*, 830 F.3d at 986; *see generally* Ctr. for Cmty. Action & Envtl. Justice v. BNSF Ry. Co., 764 F.3d 1019 (9th Cir. 2014); Carson Harbor Vill., Ltd. v. Unocal Corp., 270 F.3d 863, 879 (9th Cir. 2001).
22 *Center for Community Action*, 764 F.3d at 1023–24.
23 *Id.* at 1021.
24 *Id.* at 1020.
25 *Id.* at 1021–22.
26 *Id.* at 1029.
27 Carson Harbor Vill., Ltd. v. Unocal Corp., 270 F.3d 863, 879 (9th Cir. 2001).

wetlands area.[28] The plaintiffs sued the defendants, who had owned the property from 1977 to 1983, as potentially responsible parties (PRPs).[29] In determining whether the defendants were PRPs, the court held that nothing in the text of the statute suggested that the gradual spread of contaminants without human intervention constitutes disposal.[30] Thus, because they did not dispose of hazardous waste, the defendants were not PRPs.[31]

The Pakootas Decision

Pakootas' Argument

Pakootas argued that: (1) the Ninth Circuit should deviate from its interpretations of disposal in *Center for Community Action* and *Carson Harbor*; and (2) allowing hazardous substances to be deposited constitutes arranging for disposal.[32]

First, Pakootas argued that the interpretation of "disposal" in the CERCLA context should be distinguished from its interpretation in *Center for Community Action* and *Carson Harbor*.[33] Pakootas contended that precluding atmospheric deposition from the definition of "disposal" was inconsistent with CERCLA's broad remedial purpose.[34] Additionally, Pakootas argued that "Teck's interpretation might render CERCLA's 'federally permitted release' exception surplusage."[35] Thus, the definition of disposal asserted in *Center for Community Action* and *Carson Harbor* cases would "thwart the overall statutory scheme or lead to an absurd result."[36]

Second, Pakootas stated that their atmospheric deposition theory depended on Teck allowing the "deposition" of hazardous substances on the UCR Site.[37] Because deposition is a term used to describe disposal, Pakootas argued that it should be included in the definition of disposal.[38] Asserting a definition different than that found in *Carson Harbor* or *Center for Community Action*, Pakootas cited numerous dictionary definitions of "deposit," all of which refer to laying or putting down by a natural process.[39] Rather than alleging that Teck directly disposed hazardous substances on the UCR Site, Pakootas'

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28 *Id.* at 868.
29 *Id.* at 869.
30 *Id.* at 879.
31 *Id.* at 874.
32 Pakootas v. Teck Cominco Metals, Ltd. (*Pakootas III*), 830 F.3d 975, 983–85 (9th Cir. 2016).
33 *Id.* at 985.
34 *Id.*
35 *Id.* The federally permitted releases exception applies to emissions subject to specified permit programs or regulations. Recovery for response costs or damages resulting from a federally permitted release are subject to existing law in lieu of CERCLA Chapter 103. 42 U.S.C. §§ 9601(10), 9607(j) (2012).
36 *Id.*
37 *Id.* at 983.
38 *Id.*
39 *Id.*

allegations relied on Teck allowing hazardous substances to be laid down, or deposited, at the UCR site by wind and other natural processes.[40]

TECK'S ARGUMENT

Teck argued that an emission of solid waste directly into the air, which is spread gradually and without human intervention, does not constitute arranging for disposal.[41] Teck argued that the Ninth Circuit's decisions in *Center for Community Action* and *Carson Harbor* foreclosed the Air Pathways Claims.[42] Specifically, Teck contended that, because CERCLA cross-references RCRA's definition of "disposal," the court was bound by its en banc decision in *Center for Community Action*, which stated that emitting solid waste directly into the air does not constitute arranging for disposal.[43] Second, Teck asserted that the court is bound by its decision in *Carson Harbor*, which stated that the gradual spread of contaminants without human intervention does not constitute disposal in the CERCLA context.[44] Thus, when an emission directly into the air is spread gradually and without human intervention, as Teck's emission was, it cannot constitute arranging for disposal in the CERCLA context.[45]

THE NINTH CIRCUIT'S HOLDING AND REASONING

The Ninth Circuit began its *de novo* review of Teck's motion to dismiss by looking at the common meaning and usage of "disposal" within the context of CERCLA's complex regulatory scheme.[46] The court noted that CERCLA cross-references RCRA's definition of "disposal" and that, due to the frequency of the word within the CERCLA, its interpretation in this circumstance would have "ripple effects" through the entire statute.[47]

Next, addressing Pakootas' argument, the court observed that, while Pakootas' definition of "disposal" may be reasonable, the court is not "writing on a blank slate."[48] The court agreed with Pakootas that *Center for Community Action*'s interpretation of "disposal" in the RCRA context did not foreclose a different interpretation in the CERCLA context.[49] However, the court found the reasoning and textual analysis in *Center for Community Action* and *Carson Harbor* persuasive and found no reason to interpret the term differently in this case.[50]

The court continued its review of the interpretation of "disposal" and "deposit" in the CERCLA context by considering the application of its interpretation in the circumstances presented in *Pakootas*.[51] If the court's previous interpretation of "disposal" in the RCRA context "would thwart the overall statutory scheme" of CERCLA or "lead to an

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40 *Id.*
41 *See id.* at 984–85.
42 *Id.* at 980.
43 *See id.* at 984–85.
44 *See id.*
45 *See id.*
46 *Id.* at 980–81.
47 *Id.* at 982–83.
48 *Id.* at 983.
49 *Id.* at 984.
50 *Id.*
51 *Id.* at 984.

absurd result" in the present circumstances, there may be reason for deviating from that interpretation.[52] However, the court found that, although including air emissions like Teck's in the definition of "disposal" would effectuate CERCLA's broad remedial purpose, such a broad interpretation was not "grounded in the statute's text or structure."[53]

Furthermore, the court found Pakootas' assertion that "Teck's interpretation might render CERCLA's 'federally permitted release' exception surplusage" wholly unpersuasive.[54] Although there may be legislative history to support Pakootas' argument, the release exception can be read as addressing air emissions as releases, not disposal.[55] Thus, Teck's interpretation of disposal does not contradict CERCLA. Moreover, the court found Pakootas' interpretation of "deposit" to be inconsistent with CERCLA.[56] Under Pakootas' interpretation of air emissions as depositions that constitute disposals, disposal would be a never-ending process that would eliminate the innocent landowner defense.[57]

Finally, because there was no legislative history, agency interpretation, or Supreme Court ruling to guide the interpretation of "disposal," the court concluded that it could not deviate from its decisions in *Center for Community Action* and *Carson Harbor*.[58] Thus, the court reversed the denial of Teck's motion for dismissal and remanded the case for further proceedings.[59]

Conclusion

The Ninth Circuit, bound by its decisions in *Center for Community Action* and *Carson Harbor*, determined that emission of hazardous substances through a smokestack did not constitute arranging for "disposal" within the meaning of CERCLA.[60] Thus, Teck could not be held liable for cleanup costs and natural resource damages under CERCLA for smelter emissions through its smokestacks.[61]

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52 *Id.* at 985.
53 *Id.*
54 *Id.*
55 *Id.*
56 *Id.*
57 *Id.*
58 *Id.* at 986.
59 *Id.*
60 *Id.* at 978.
61 *Id.*

STATE CASENOTE

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY V. EXXONMOBIL OIL CORP., NO. 03–14–00667–CV, 2016 WL 1406859 (TEX. APP.—AUSTIN 2016, NO PET.).

BACKGROUND

In 2000, the predecessor agency to the Texas Commission on Environmental Quality (TCEQ) began an investigation of the Voda site, an oil-blending and recycling site in Gregg County, Texas.[1] After approximately a decade of investigation, the TCEQ issued an administrative order in 2010, establishing the Voda site as a state superfund site and naming Exxon Mobil Corporation ("Exxon"), Shell Oil Company ("Shell") and "approximately 350 other entities" as potentially responsible parties (PRPs).[2] The Voda Order was issued under the Solid Waste Disposal Act (SWDA), and required the PRPs to investigate and perform remedial actions.[3] In Texas, the state superfund program allows the TCEQ to issue such administrative orders through two separate provisions of the SWDA: Texas Health and Safety Code section 361.188 ("188 Orders") and section 361.272 ("272 Orders"). Further, under the SWDA, the TCEQ has the authority to issue these remedial orders in the absence of an evidentiary hearing when a site "presents imminent and substantial endangerment to public health and safety or to environment."[4]

Exxon and Shell responded by filing suit in Travis County District Court, appealing the administrative order classifying them as PRPs.[5] After several years of discovery, the TCEQ filed a plea to the jurisdiction for the purpose of limiting the jurisdictional basis of the appeal.[6] In its plea, the TCEQ argued that,

> (1) a Superfund order can be issued under either Section 361.188 or Section 361.272, but not both; (2) the Voda Order was issued only under Section 361.188, not Section 361.272; (3) an order issued under Section 361.188 may only be reviewed under Section 361.321, which provides for review under the substantial-evidence standard; and (4) therefore, the trial court lacked subject matter jurisdiction to review the Voda Order under any standard other than the one found in Section 361.321 because the Legislature has not granted any other waiver of sovereign immunity for 188 orders.[7]

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1 Tex. Comm'n on Envtl. Quality v. Exxon Mobil Corp., No. 03-14-00667-CV, 2016 WL 1406859, at *4 (Tex. App.—Austin 2016, no pet.).
2 *Id.*
3 *Id.*
4 *Id.*; TEX. HEALTH & SAFETY CODE ANN. §§ 361.188(a)(1), 361.272(a) (West 2016).
5 *Exxon Mobil Corp.*, 2016 WL 1406859 at *4.
6 *Id.*
7 *Id.*

Exxon and Shell countered that,

> (1) nothing in the [SWDA] supports a conclusion that an administrative order may be issued only under Section 361.188 or Section 361.272, but not both; (2) the Voda Order was issued under both Sections; (3) because the Voda Order was issued under both Sections, it should be reviewed under the preponderance-of-evidence standard provided for in Section 361.322; and (4) the separation-of-powers doctrine does not bar judicial review under Section 361.322 because the order is not a quasi-legislative act and thus the Legislature is not prohibited from authorizing its judicial review via trial *de novo*.[8]

Exxon and Shell also contended that the TCEQ's plea did not implicate the trial court's subject matter jurisdiction since it did not challenge the waivers of sovereign immunity found in the SWDA.[9] The district court denied the TCEQ's plea, and the TCEQ initiated an interlocutory appeal of that denial.[10]

State Superfund Dichotomy Between 188 Orders and 272 Orders

In general, 188 Orders are directed at hazardous waste facilities "that may constitute an imminent and substantial endangerment to public health and safety or the environment due to a release or threatened release of hazardous substances into the environment."[11] 272 Orders, on the other hand, more directly track language from the federal Comprehensive Environmental Response, Compensation, and Liability Act,[12] and are directed at "an actual or threatened release of *solid waste* [rather than 'hazardous substances'] that presents an imminent and substantial endangerment to the public health and safety or the environment" from "a solid waste facility" or any site where solid waste was stored, processed, or disposed of in the past, regardless of legality.[13]

Texas Health and Safety Code sections 361.321 and 361.322 define the SWDA appeal process. Section 361.321 sets the standard of review as substantial evidence and requires that the plaintiff show that the TCEQ's "action [be] invalid, arbitrary, or unreasonable."[14] Section 361.322 provides a different standard of review, requiring that the TCEQ show by a preponderance of the evidence that: (1) "there is an actual or threatened release of solid waste or hazardous substances that is an imminent and substantial endangerment to the public health and safety or the environment"; and (2) "the person made subject to the administrative order is liable for the elimination of the release or threatened release, in whole or in part."[15]

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8 *Id.*
9 *Id.*
10 *Id.*
11 *See* Tex. Health & Safety Code Ann. §§ 361.181–361.203.
12 42 U.S.C. §§ 9601 *et seq.*
13 *Exxon Mobil Corp.*, 2016 WL 1406859 at *7–8 (citing Tex. Health & Safety Code §§ 361.271–361.280) (emphasis added).
14 *See* Tex. Health & Safety Code § 361.321.
15 *Id.* § 361.322.

ISSUES ON APPEAL

There were three principal issues on appeal to the Third Court of Appeals: (1) does the SWDA allow a single order to serve as both a 188 Order and a 272 Order; (2) did the TCEQ issue the Voda Order as only a 188 Order; and (3) does the Court have subject matter jurisdiction to review the Voda Order under any section other than section 361.321 because of the doctrine of sovereign immunity?[16]

ANALYSIS BY THE THIRD COURT OF APPEALS

On appeal, the TCEQ claimed that 188 Orders and 272 Orders are mutually exclusive and that a single order could not be issued under both provisions.[17] The Court summarily dismissed that argument based on a plain language construction of the SWDA, additionally noting that allowing an order to be based on both provisions "comports with the [SWDA's] purpose of protecting the environment."[18] Because the Voda Order was expressly issued under both sections, the court agreed with Exxon that the preponderance-of-evidence standard from section 361.322 applied to review of the appealed order.[19] The court concluded, again based on plain language, that section 361.188(b) expressed the clear intent to subject both 188 Orders and 272 Orders to the deadlines and standard of review provisions in section 361.322.[20]

Based on this analysis, the Court did not reach the issue of whether the Voda Order was issued solely as a 188 Order.[21] However, the Court observed that the "plain language of the Voda Order indicates that it was issued under both Sections 361.188 and 361.272."[22] The Court also disagreed with the TCEQ that the court lacked subject matter jurisdiction to review the Voda Order outside of section 361.321 because of its conclusion that section 361.322 applies to 188 Orders.[23] Based on this analysis, the Third Court of Appeals affirmed the trial court's denial of the TCEQ's plea to the jurisdiction.[24]

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16 *Exxon Mobil Corp.*, 2016 WL 1406859 at *5.
17 *Id.* at *8.
18 *Id.* at *8–*9.
19 *Id.* at *9.
20 *Id.*
21 *Id.* at *10.
22 *Id.*
23 *Id.*
24 *Id.* at *11.

WATER RIGHTS

COYOTE LAKE RANCH, LLC V. CITY OF LUBBOCK: TEXAS SUPREME COURT APPLIES OIL & GAS ACCOMMODATION DOCTRINE TO GROUNDWATER

INTRODUCTION

The accommodation doctrine, a concept from Texas oil and gas law, now applies to severed groundwater estates following the Texas Supreme Court's ruling in *Coyote Lake Ranch, LLC v. City of Lubbock*.[1] The opinion clarifies the presumptive legal relationship between the owners of severed groundwater and surface estates by finding that: (1) a severed groundwater estate is dominant to the surface estate;[2] and (2) the accommodation doctrine, thus, applies to the relationship between groundwater and surface estates, meaning that the groundwater estate owner must exercise extraction rights "with due regard" for the rights of the surface estate owner.[3]

BACKGROUND: THE ACCOMMODATION DOCTRINE

The Texas Supreme Court first developed and applied the accommodation doctrine in *Getty Oil Co. v. Jones*.[4] Prior to *Getty Oil*, it was well settled that, when a mineral estate (such as oil and gas) has been severed from the surface property, the mineral estate is the dominant estate and the surface estate is the servient estate.[5] This means that the mineral estate has an implied right to use "as much of the [surface] premises as is reasonably necessary to produce and remove the minerals."[6] This implied right exists because a mineral right would be worthless if the mineral estate owner were unable to enter the surface property to explore for and extract minerals.[7] The mineral owner's estate is not dominant because it is superior to the surface estate; instead, it is dominant because the mineral owner "receives the benefit of the implied right of use of the surface estate."[8]

However, while the mineral estate owner has an implied right to use the surface, the mineral owner does not have unrestricted license to extract minerals without regard for

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1 Coyote Lake Ranch, LLC v. City of Lubbock, 498 S.W.3d 53 at 65 (Tex. May 27, 2016).
2 *Id.* at 64.
3 *Id.* The accommodation doctrine does not apply if the parties, by express terms of agreement, stipulate that the doctrine shall not apply. *Id.*
4 Getty Oil Co. v. Jones, 470 S.W.2d 618, 623 (Tex. 1971).
5 *Id.* at 621.
6 *Id.*
7 *Coyote Lake Ranch*, 498 S.W.3d. at 60.
8 *Id.*

the existing land uses on the surface.[9] In *Getty Oil*, the Texas Supreme Court adopted and applied the accommodation doctrine to resolve surface use conflicts that arise between mineral and surface estate owners, requiring that the dominant mineral estate act "with due regard" for the rights of the servient surface estate.[10]

To obtain an accommodation, the surface owner, as the servient estate, has the burden of proving that: (1) the mineral owner's use "completely precludes or substantially impairs" the surface owner's existing use; and (2) the surface owner has no reasonable alternative method for continuing his existing use of the surface property.[11] If the surface owner succeeds in proving the first two elements, then he must prove that (3) there are "alternative reasonable, customary, and industry-accepted methods available" to the mineral owner that would permit both mineral extraction and allow the surface owner to continue the existing land use.[12] If the surface owner can prove these three elements, then the mineral owner is obligated to reasonably accommodate the surface owner's existing use by adopting a reasonable alternative method for mineral recovery.[13]

Since *Getty Oil*, the Texas Supreme Court has applied the accommodation doctrine in a variety of other contexts related to mineral rights, noting that its jurisprudence represents "[a] definite trend toward conciliation of conflicts and accommodation of both [mineral and surface] estates" using the doctrine.[14]

In *Sun Oil Co. v. Whitaker*, the court applied the accommodation doctrine analysis to a case where the mineral lessee, Sun Oil, sought to enjoin the surface owner, Whitaker, from interfering with the oil company's production of groundwater, which was required for oil production.[15] In *Sun Oil*, the surface owner still held the rights to the groundwater beneath his land, and so the mineral lessee's implied right of reasonable use of the surface was held to include the right to use as much water as reasonably necessary to carry out the lessee's mineral production operations under the lease.[16] The court, finding that the mineral lessee had no reasonable alternative method for obtaining water, rendered judgment granting the permanent injunction.[17]

The court also applied the accommodation doctrine in a nontraditional context in *Humble Oil & Refining Co. v. West*.[18] The Wests, under a contract with Humble Oil, were entitled to a royalty from natural gas produced on land that they had conveyed to Humble Oil in fee simple.[19] When Humble Oil began using an underground reservoir on that land to store natural gas produced elsewhere, the Wests sought to enjoin the company from doing so until all the native natural gas in the reservoir had been produced.[20] The court determined that the accommodation doctrine should apply to balance the

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9 *Getty Oil*, 470 S.W.2d at 621.
10 *Id.*
11 Merriman v. XTO Energy, Inc., 407 S.W.3d 244, 249 (Tex. 2013).
12 *Id.*
13 *Id.*
14 Sun Oil Co. v. Whitaker, 483 S.W.2d 808, 817 (Tex. 1972).
15 *Id.* at 812.
16 *Id.* at 811.
17 *Id.* at 812.
18 Humble Oil & Refining Co. v. West, 508 S.W.2d 812, 816 (Tex. 1974).
19 *Id.* at 813.
20 *Id.*

interests of the parties, and remanded the case to the trial court "to determine whether the volume of native gas on which the Wests were entitled to a royalty could be established with reasonable certainty, thus balancing their right to a full profit with Humble's right to preserve the storage capability of the reservoir."[21]

Thus, while it was not clearly given that the court would apply the accommodation doctrine to severed groundwater estates in *Coyote Lake Ranch*—and a number of legal scholars confidently believed that the court would not do so[22]—the application of the accommodation doctrine to groundwater is in line with the court's previous application of the accommodation doctrine to a variety of disputes over subterranean natural resources that have been severed from the surface property.

Application of Mineral Law to Groundwater Law in Texas

The Texas Supreme Court has long recognized that, for legal purposes, groundwater and minerals can often be treated as analogous.[23] As early as 1904, the Texas Supreme Court decided that a mineral law doctrine was also effective for addressing groundwater disputes, when the court held that mineral law's Rule of Capture should apply to groundwater.[24] In *Edwards Aquifer Authority v. Day*, the court held that groundwater, like minerals, is owned in place, and thus may not be taken for public use without adequate compensation.[25] In *Day*, the court found that the major differences between groundwater and minerals—including the resources' renewability, market value, and societal uses—did not provide any basis for treating the resources differently under common law.[26]

The court decided in *Coyote Lake Ranch*, as it had in *Day*, that groundwater and minerals shared commonalities that were relevant from a legal standpoint.[27] Both resources require subterranean extraction and can be severed from surface property to be made into legally separate estates.[28] Both are subject to the Rule of Capture, and both are protected from waste.[29] A severed groundwater estate owner, like a severed mineral estate owner, has the right to use the surface for resource extraction purposes, creating the basis for the court to decide that the accommodation doctrine should apply to groundwater in *Coyote Lake Ranch*.[30]

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21 Coyote Lake Ranch, LLC v. City of Lubbock, 498 S.W.3d. at 62 (Tex. May 27, 2016) (citing *Humble Oil & Refining Co.*, 508 S.W.2d at 816, 819).

22 Tiffany Dowell, *Texas Supreme Court: Accommodation Doctrine Applies to Groundwater*, Tex. Agric. L. Blog (June 8, 2016), http://agrilife.org/texasaglaw/2016/06/08/texas-supreme-court-accommodation-doctrine-applies-groundwater/.

23 *See Coyote Lake Ranch*, 498 S.W.3d. at 64.

24 Hous. & Tex. Cent. Ry. v. East, 81 S.W. 279, 281 (Tex. 1904). The court affirmed the application of the Rule of Capture to groundwater in Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75 (Tex. 1999).

25 Edwards Aquifer Authority v. Day, 369 S.W.3d 814, 817 (Tex. 2012).

26 *Id.* at 831.

27 *Coyote Lake Ranch*, 498 S.W.3d at 65; *Day*, 369 S.W.3d at 829.

28 *Id.*

29 *Id.*

30 *Id.*

APPLYING THE ACCOMMODATION DOCTRINE TO GROUNDWATER IN *COYOTE LAKE RANCH*

The *Coyote Lake Ranch* dispute arose in arid West Texas, where the respondent, the City of Lubbock, had purchased groundwater rights in 1953 from the petitioner, Coyote Lake Ranch, during Texas's devastating seven-year drought of record.[31] The Ranch's groundwater comes from the Ogallala Aquifer, a major formation in the High Plains aquifer system that is heavily depleted and continues to be pumped at an unsustainable rate.[32] By May 2016, the City had only drilled seven wells on the Ranch's northern edge.[33] However, the Ranch's claim against the City arose when, in 2012, the City announced plans to significantly increase groundwater extraction on the Ranch.[34] The City proposed to drill as many as 20 test wells in the middle of the Ranch, and another 60 wells spread across the Ranch.[35] The City understood this increased use of its existing water rights as "integral" to its water plan, given that drought had drastically diminished its surface water sources, and its groundwater resources had also become depleted.[36]

The Ranch objected to the City's groundwater extraction plan, finding that grass removal done to carry out the "checkerboard"-patterned siting plan for the wells had caused erosion, undermining the Ranch's efforts to preserve its fragile grasslands for cattle grazing.[37] Replanting the grass would not alleviate the harm, the Ranch said, because the cattle—which had begun using the mowed areas as cattle trails—would overgraze and destroy the new grass.[38] The Ranch also argued that the City's use of aboveground power lines jeopardized the endangered Lesser Prairie Chicken by providing perches for hawks and other birds that prey upon that endangered species.[39]

The Ranch argued that the damage to its pastures could have been minimized by a different mowing configuration that the City had decided not to use,[40] implying that there was a reasonable alternative to the City's mowing configuration. The Ranch also alleged that the City could have avoided jeopardizing the Lesser Prairie Chicken's habitat by burying its power lines rather than installing aboveground power lines.[41] The Ranch argued that the accommodation doctrine should be applied because it provides "a means for balancing the parties' competing rights to surface use,"[42] potentially requiring

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31 *Id.* at 55-56. *See also* Major Droughts in Modern Texas, Tex. State Library & Archives Comm'n (May 20, 2016), https://www.tsl.texas.gov/lobbyexhibits/water-droughts.

32 Jane Braxton Little, *The Ogallala Aquifer: Saving a Vital U.S. Water Source*, Sci. Am. (March 1, 2009), https://www.scientificamerican.com/article/the-ogallala-aquifer/.

33 *Coyote Lake Ranch*, 498 S.W.3d at 57.

34 *Id.*

35 *Id.*

36 Respondent's Brief on the Merits at 3–4, *Coyote Lake Ranch*, 2016 WL 3176683 (No. 14-0572).

37 Petitioner's Brief on the Merits at 16–17, *Coyote Lake Ranch*, 2016 WL 3176683 (No. 14-0572).

38 *Id.* at 18.

39 *Id.*

40 *Id.*

41 *Id.* at 19.

42 *Id.* at 47.

the City to accommodate the Ranch's surface rights by adopting reasonable alternative methods for developing its groundwater estate.[43]

The City argued that all its groundwater extraction efforts were permitted under the deed, leaving no "gap" in the contract for the court to fill with the common law accommodation doctrine.[44] The deed provided the City with full rights of ingress and egress, "so that the [City] may *at any time and location* drill water wells and test wells on said lands for the purpose of investigating, exploring[,] producing, and getting access to percolating and underground water."[45] The City was also given the rights to use all parts of the Ranch "necessary or incidental to the taking[,] production, treating[,] transmission[,] and delivery of. . .water."[46] The deed additionally stipulated that: the City could construct certain facilities across the Ranch, including water lines, fuel lines, power lines, and access roads; the City had to pay rent for occupying surface property; and the City was required to "pay for damages to any surface property proximately caused by any operations or activities on [the] land by the City."[47]

In the City's view, the deed "granted broad rights" to the City to explore for and extract groundwater, and "did not specify or restrict any particular manner or method by which the City could perform its contractual rights."[48] The City also argued that, because a groundwater estate is not considered to be dominant in relation to the surface estate, the accommodation doctrine cannot be applied to groundwater, because it was only adopted in mineral law to "protect [the surface estate] from excessive exploitation" by the mineral estate as the dominant mineral estate exercised its implied right "to use as much of the surface as reasonably necessary" for mineral extraction and exploration.[49]

The court sided with the Ranch. Chief Justice Nathan Hecht, writing for the majority, found that: (1) groundwater is a dominant estate "for the same reason a mineral estate is; it is benefitted by an implied right to the reasonable use of the surface"; and (2) the implied right came with a corresponding obligation, under the accommodation doctrine, for the mineral estate to act "with due regard" for the rights of the surface estate.[50] In the court's view, the laws common to mineral and groundwater estates "compel the conclusion that the accommodation doctrine extends to groundwater estates," in the absence of any express agreement that the parties have made to the contrary.[51]

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43 *Id.* at 28–29.

44 Respondent's Brief on the Merits at 10, *Coyote Lake Ranch*, 2016 WL 3176683 (No. 14-0572).

45 *Coyote Lake Ranch*, 498 S.W.3d. at 57 (alterations in original) (emphasis added).

46 *Id.* (alterations in original).

47 *Id.* (alterations in original).

48 Respondent's Brief on the Merits at 29–30, *Coyote Lake Ranch*, 2016 WL 3176683 (No. 14-0572).

49 *Id.* at 19, 21 (citing Getty Oil Co. v. Jones, 470 S.W.2d 618, 621 (Tex. 1971)).

50 *Coyote Lake Ranch*, 498 S.W.3d. at 64.

51 *Id.* at 65.

THE CONCURRING VIEW IN *COYOTE LAKE RANCH*

Justice Jeffrey S. Boyd, joined in the concurrence by Justices Don Willett and Debra Lehrmann, agreed that the accommodation doctrine should apply to groundwater rights when the parties' dispute is not governed by the express terms of their contract.[52] However, in Justice Boyd's view, the accommodation doctrine did not apply in *Coyote Lake Ranch* because the contract expressly governed the City's use—specifically, by granting the City the right to drill wells "at any time and location" to access groundwater underlying the Ranch.[53]

CONCLUSION: WHAT DOES *COYOTE LAKE RANCH* MEAN FOR SEVERED GROUNDWATER ESTATES IN TEXAS?

In Texas, demand for water is rising, while available water supplies are expected to decline.[54] Growing water scarcity and, perhaps, some speculative tendencies have led to larger-scale groundwater deals.[55] In *Coyote Lake Ranch*, the petitioner argued that it was important for the court to resolve the issue of whether the accommodation doctrine should apply to groundwater because, as groundwater becomes more scarce and valuable, "conflicts between landowners and owners of severed groundwater estates will inevitably emerge, and those parties need to know the legal rules governing their relationships and property."[56] The *Coyote Lake Ranch* decision clarifies the legal relationship between groundwater and surface estates,[57] increasing protections for surface estate owners and potentially increasing extraction costs for groundwater estate owners.[58]

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52 *Id.* at 66.

53 *Id.* at 67.

54 Keith Phillips et al., Fed. Reserve Bank of Dall., Water Scarcity a Potential Drain on the Texas Economy (2013), https://www.dallasfed.org/assets/documents/research/swe/2013/swe1304b.pdf; *see also* U.S. Envtl. Prot. Agency, EPA-430-F-16-045, What Climate Change Means for Texas (2016), https://www3.epa.gov/climatechange/Downloads/impacts-adaptation/climate-change-TX.pdf.

55 Ronald C. Griffin & Gregory W. Characklis, *Issues and Trends in Water Marketing*, 121 J. Contemp. Water Res. and Educ. 29, 32 (2002), http://opensiuc.lib.siu.edu/cgi/viewcontent.cgi?article=1144&context=jcwre.

56 Petitioner's Brief on the Merits at 15, *Coyote Lake Ranch*, 2016 WL 3176683 (No. 14-0572).

57 *The Accommodation Doctrine Flows Freely in Texas Coyote Lake Ranch, LLC v. City of Lubbock*, Legge Farrow (June 2016), http://leggefarrow.com/assets/docs/news/Newsletter-Coyote LakeRanchvCityOfLubbock.pdf.

58 John C. Crossley & Alison M. Nelson, *Texas Supreme Court Extends Accommodation Doctrine to Groundwater*, Husch Blackwell (June 3, 2016), http://www.huschblackwell.com/businessinsights/texas-supreme-court-extends-accommodation-doctrine-to-groundwater.

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