

# TEXAS ENVIRONMENTAL LAW JOURNAL

Volume 41

Fall 2010

Number 1

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### **THE PRINCIPLE OF ANTIDegradation AND ITS PLACE IN TEXAS WATER QUALITY PERMITTING**

*Lauren Kalisek*

### **AS IF IT ISN'T ENOUGH TO HAVE A NON-PERFORMING LOAN: DEALING WITH ENVIRONMENTALLY IMPACTED DISTRESSED ASSETS**

*John Slavich*

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Environmental & Natural Resources Law Section**

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401 Green Acres Drive, Suite 100  
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### RECENT DEVELOPMENT COLUMNISTS

#### Air Quality

John B. Turney  
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Austin, Texas 78701-2672  
jturney@rrsfirm.com  
(512) 476-0005

#### Natural Resources

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98 San Jacinto Blvd., Suite 1500  
Austin, Texas 78701-4078  
aileen.hooks@bakerbotts.com  
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Ali Abazari  
100 Congress Ave., Suite 1100  
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(512) 236-2239

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erogers@bickerstaff.com  
(512) 472-8021

#### Water Rights

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P.O. Box 13087  
Austin, Texas 78711-3087  
rsmith@tceq.state.tx.us  
(512) 239-0463

#### Casenotes—Federal

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P.O. Box 1725  
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dklein@lglawfirm.com  
(512) 322-5818

#### Casenotes—State

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

#### Publications

Francis Chin  
1001 Fannin, Suite 4000  
Houston, Texas 77002-2770  
fchin@wm.com  
(713) 328-7187

#### Washington Update

Laura LaValle  
98 San Jacinto Blvd., Suite 1420  
Austin, Texas 78701-4082  
llavalle@bdlaw.com  
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olszewski.joshua@epa.gov  
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Allison Exall  
aexall@cttlegal.com  
(214) 270-1410

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

**JOINT PUBLICATION**

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

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With Volume 39, the *Journal* changed from a quarterly publication to a triannual publication (Fall, Winter, and Spring & Summer). Also, the *Journal* is no longer carrying the "Changes in the Environment" section. Those announcements can be found on the Section's website at [www.texasenrls.org](http://www.texasenrls.org).

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## FROM THE EDITORS

Dear Readers,

In one of our lead articles for this issue, “The Principle of Antidegradation and its Place in Texas Water Quality Permitting,” **Lauren Kalisek** helps us understand the transition from technology-based discharge permit limits to water-quality-based permit limits to possibly more restrictive permit limits and enhanced treatment technologies. Her article reviews the history of the federal antidegradation policy and identifies some of the current federal issues. It then traces the evolution of the State of Texas’s antidegradation policy in the Texas Surface Water Quality Standards and how the current Texas Pollutant Discharge Elimination System program addresses these issues. Ms. Kalisek concludes with thoughts on the future of Texas’s antidegradation policy and impacts to permitting in Texas.

**John Slavich** provides our other lead article, “As If It Isn’t Enough to Have a Non-Performing Loan: Dealing With Environmentally-Impacted Distressed Assets.” His article focuses on “the complicating issues that arise when property held as collateral by lenders is, or is suspected of being, adversely” affected by environmental concerns. Mr. Slavich notes that environmentally related concerns “can adversely effect not only the value of the collateral that the lender holds, but also the ability of the lender to dispose of the collateral.” Lenders face the specter of the possibility of exposure to environmental liability under statutory provisions that can impose strict, joint, and several liability based on lender-status with respect to a contaminated site, and not because of any the lender’s wrongdoing. This “status liability” has the potential to exceed the value of the collateral from which the liabilities arise. Mr. Slavich’s article reviews the administrative processes that lenders may use to manage environmental risks and liabilities. It looks at liabilities that can potentially arise under environmental statutes and defenses that lenders may have. Finally, it considers issues that arise in relation to the disposition of environmentally challenged collateral.

In one of our two student notes, “Fair, Effective, and Comprehensive: The Future of Texas Water Law,” **Adrian Shelley** examines the Texas system of water rights and offers suggestions to alleviate the conflict between private ownership of groundwater and the State’s management of the resource. Mr. Shelley discusses some ambiguous terms in the Texas Water Code and shows how Texas laws “have not kept pace with our understanding of water in Texas.” He also looks at the water law systems of other western states and uses their approaches to provide suggestions for improving the Texas water-law system without changing it completely.

In our second student note, “The State of CO<sub>2</sub> Sequestration in the State of Texas,” **Russell Murdock** looks at the process of carbon sequestration as a possible way for Texas “to reduce greenhouse gas emissions while using inexpensive energy sources,” such as coal. He first explains the process of carbon sequestration

FROM THE EDITORS (CONT.)

in detail and then examines Texas carbon sequestration law, which he finds to be full of gaps. Mr. Murdock also discusses recent developments in the area of carbon sequestration and offers some solutions to make the process a viable way to reduce greenhouse gas emissions in Texas.

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# THE PRINCIPLE OF ANTIDegradation AND ITS PLACE IN TEXAS WATER QUALITY PERMITTING

BY LAUREN KALISEK

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## I. INTRODUCTION

*The modern technology, which has added much to our lives, can also have a darker side. Its uncontrolled waste products are menacing the world we live in, our enjoyment and our health. The air we breathe, our water, our soil and wildlife, are being blighted by the poisons and chemicals which are the by-products of technology and industry.*

*The same society which receives the rewards of technology, must, as a cooperating whole, take responsibility for control.*

*Every major river system is now polluted. Waterways that were once sources of pleasure and beauty and recreation are forbidden to human contact and objectionable to sight and smell.*

*Enforcement authority must be strengthened to provide positive controls over the discharge of pollutants into our interstate or navigable waters. I recommend enactment of legislation to:*

*– Provide, through the setting of effective water quality standards, combined with a swift and effective enforcement procedure, a national program to prevent water pollution at its source rather than attempting to cure pollution after it occurs.*

*– President Lyndon Johnson, 1965<sup>1</sup>*

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<sup>1</sup> President Lyndon B. Johnson, Special Message to the Congress on Conservation and Restoration of Natural Beauty, Address Before the United States Congress (Feb. 8, 1965), in 1 PUB.

In his 1965 Special Message to Congress on Conservation and Restoration of Natural Beauty, President Lyndon Johnson advocated what had already been the subject of congressional consideration for at least a decade, the establishment of water-quality standards as a method of water-pollution control. Today, through the framework established by the 1965 Water Quality Act and as strengthened by the Federal Water Pollution Control Act of 1972, commonly referred to as the Clean Water Act, water-quality standards serve as the benchmarks by which water-pollution-control efforts are assessed.<sup>2</sup> The Clean Water Act requires states to submit information to the Environmental Protection Agency (EPA) on the status of water quality in that state on a biennial basis.<sup>3</sup> These state water-quality inventories provide a broad snapshot of the success of state and federal implementation of the Clean Water Act in terms of the number of waters assessed and how actual water quality compares to the water-quality standards set under the Clean Water Act. In its current National Summary of Water Quality Assessments, the EPA reports that 50 percent of the country's assessed rivers and streams meet applicable water-quality standards.<sup>4</sup> For lakes, reservoirs and ponds, the percentage decreases to 34 percent, and for bays and estuaries, the percentage is 36 percent.<sup>5</sup> Sixty-four percent of the nation's shorelines meet standards.<sup>6</sup> However, only a fraction of the nation's waters have been assessed: 26 percent of rivers and streams, 42 percent of lakes, reservoirs, and ponds, 21 percent of bays and estuaries, and 4 percent of coastal shoreline.<sup>7</sup> Thus, out of the limited number of waters assessed, close to and over a majority in most categories are impaired; this highlights the significant amount of work remaining with respect to the conventional focus of the Clean Water Act's water-quality-based permitting program—assessments and standards attainment.

What is not discussed in this national summary, however, is another significant principle of water-quality protection that is integral to the goal that President Johnson outlined in his congressional address—the prevention of pollution at its source. The report lacks any description of waters exceeding standards, and thus, any information as to how well permitting efforts protect this heightened water quality. It is this concept of antidegradation that has come under closer examination in recent Texas water-quality permitting decisions and the EPA's proposed rulemaking, reminding us that permitting inquiries do not necessarily end with standards protection, but may also require the protection of waters exceeding standards. How this principle of antidegradation works within the context of discharge permitting in Texas is the focus of this article.

Three significant components make up the water-quality standards set by states under the Clean Water Act: 1) water uses; 2) water-quality criteria set to protect such

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PAPERS 54, 155-56 (1966).

2 33 U.S.C. § 1251 (2006).

3 33 U.S.C. § 1315(b) (West 2001).

4 ENVTL. PROT. AGENCY, *Water Quality Information and Total Maximum Daily Loads Information*, <http://www.epa.gov/waters/ir/index.html> (last visited Oct. 17, 2010).

5 *Id.*

6 *Id.*

7 *Id.*

uses; and 3) antidegradation.<sup>8</sup> In Texas, the uses defined for our surface waters and the criteria applied to protect them are well understood. For fresh waters designated with an exceptional-aquatic-life use, for example, we strive to maintain a minimum daily average concentration of 6 milligrams per liter (mg/l) of dissolved oxygen in the stream.<sup>9</sup> This criterion can be measured and monitored and changes to the concentration due to impacts from a point source, such as a new treatment plant's discharge, can be modeled and predicted. What is not as straightforward is the third prong of the standards, antidegradation—a regulatory policy that generally limits the degradation of water quality already meeting and/or exceeding water-quality criteria. In essence, the principle of antidegradation requires a permitting authority to go beyond the protection of uses and answer the question of whether a proposed activity will cause degradation even though water-quality criteria and uses are still met and maintained. For example, will a proposed discharge cause an impact to an existing instream concentration of 6.5 mg/l of dissolved oxygen, even though the standard is only 6.0, and does this impact constitute degradation so that it should be controlled even though uses are not affected?

Antidegradation can easily be described as the next frontier in setting permit-discharge limits. Just as the imposition of technology-based limits dominated the early implementation of the Clean Water Act in the 1970s and early 1980s and the development of water-quality-based permit limits and toxic controls were the focus of regulatory efforts in the late 1980s and 1990s,<sup>10</sup> so now renewed attention to antidegradation implementation by the states, as evidenced by the Texas Commission on Environmental Quality (TCEQ) grappling with the doctrine in two recent permitting decisions and the EPA's recent Listening Sessions on proposed revisions to its Water Quality Standards Regulation, may lead to the imposition of even more restrictive permit limits and adoption of enhanced treatment technologies.<sup>11</sup>

In an effort to understand this transition, this article explores the history of the federal antidegradation policy and identifies some of the current federal issues. It also traces the evolution of the State of Texas's antidegradation policy in the Texas Surface Water Quality Standards ("Standards") and how these issues are addressed in the current Texas Pollutant Discharge Elimination System (TPDES) program. It will conclude with thoughts on the future of Texas's antidegradation policy and impacts to permitting in Texas.

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8 40 C.F.R. § 131.6 (2006) (the fourth component set out by federal regulation for minimum standards requirements is "methods used and analyses conducted" to support standards revisions).

9 30 TEX. ADMIN. CODE § 307.4 (b)(3)(A)(i) (2010).

10 See 63 Fed. Reg. 36,745-36,747 (July 7, 1998) [hereinafter 1998 ANPRM]. In 1998, EPA issued this Advance Notice of Public Rulemaking soliciting comments on proposed revisions to its Water Quality Standards Regulation. The 1998 ANPRM summarized the history and the then current regulatory issues surrounding water quality standards. However, the proposed rulemaking never moved forward.

11 EPA Water Quality Standards Regulation, 75 Fed. Reg. 44,930 (July 30, 2010).

**II. EARLY DEVELOPMENT OF FEDERAL ANTIDegradation POLICY:  
“STEERING A CLEAR AND WORKABLE COURSE”**

*There is no question but that we can't have a water quality improvement program if we have standards and rules which permit water to be degraded further.*

—Interior Secretary Stewart Udall, 1968<sup>12</sup>

The principle of antidegradation, as found in the Clean Water Act today, arose as the nation recognized the need for and began to implement water-quality standards at the federal level. Early congressional efforts to address water pollution stemmed in significant part from concerns over public health and water quantity. Waste dilution competed with consumptive agricultural, municipal, and industrial uses in water-basin-resource planning.<sup>13</sup> In 1959, the Senate Select Committee on National Water Resources conducted an ambitious study to assess the nation's current water supplies, current uses, future demand projections, and the measures needed to meet such demand.<sup>14</sup> The unanticipated outcome of the study was an assessment of the significant supplies needed to provide “supplemental waste dilution,” for the planning years 1980 and 2000, and recommendations for funding \$42 billion dollars of waste treatment and \$12 billion dollars for projects to maintain flows (through additional storage and release).<sup>15</sup> Water quantity and water quality were part and parcel of the same congressional drive to distribute federal dollars to support large water-resource projects and post-war economic growth. Thus, these early laws focused on treatment-plant funding and limited enforcement measures by the federal government to protect public health. Great deference was still afforded state and local agencies to address local water-pollution problems, and a healthy concept of federalism restrained any congressional attempts at direct pollution-abatement measures.<sup>16</sup>

The first attempt to demand significant actions by states beyond the construction of treatment plants came from the work of the Senate Public Works Committee after the 1958 election and was spurred primarily by a junior senator eager to develop an area of expertise—Edwin Muskie.<sup>17</sup> It also coincided with an extended drought in the northeastern United States from 1963 to 1967 that exacerbated pollution problems.<sup>18</sup> The resulting 1965 Water Quality Act, as foreshadowed in President Johnson's 1965

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12 DEP'T OF THE INTERIOR, COMPENDIUM OF DEP'T OF INTERIOR STATEMENTS ON NON-DEGRADATION OF INTERSTATE WATERS, 10 (1968) [hereinafter *Compendium*].

13 See PAUL CHARLES MILAZZO, UNLIKELY ENVIRONMENTALISTS: CONGRESS AND CLEAN WATER 1945-1972, 38-60 (2006); see also KARL BOYD BROOKS, BEFORE EARTH DAY, THE ORIGINS OF AMERICAN ENVIRONMENTAL LAW, 1945-1970, at 158-160 (2009) (detailing the 1962 dispute regarding Idaho's Snake River between upstream irrigators and downstream municipalities).

14 MILAZZO, *supra* note 13, at 42.

15 *Id.* at 53.

16 Water Pollution Control Act of 1948, Pub. L. No. 80-845, 62 Stat. 1155 (1948); Federal Water Pollution Control Act of 1956, Pub. L. No. 84-660, 70 Stat. 498 (1956); see also MILAZZO, *supra* note 13, at 21 (in 1955 the Senate Public Works Committee rejected a proposal by the Department of Health, Education and Welfare that states adopt a voluntary system of interstate water quality standards).

17 MILAZZO, *supra* note 13, at 68-74.

18 *Id.* at 76-78.

Special Message to Congress, aimed actually to reduce pollution and improve stream quality over time, rather than address pollution that has already occurred.<sup>19</sup> It required states to establish enforceable standards for instream water quality for interstate waters and submit them for review to the federal government. If states failed to develop such standards, the federal government was empowered to do so. However, the details of implementation and the establishment of actual effluent limits for dischargers were still left to the states out of a continued deference to federalism. States had until June 1967 to establish their standards.<sup>20</sup>

In late 1967 and early 1968, Secretary of Interior Stewart Udall was charged with implementation of the 1965 Water Quality Act.<sup>21</sup> Udall was an environmental reformer who had published his own book, *The Quiet Crisis*, in 1963 warning of the dangers of pollution.<sup>22</sup> His book and Rachel Carson's *Silent Spring*, published a year earlier in 1962, exemplified the growing sentiment of the time for the need to do more to protect environmental resources.<sup>23</sup> But, Udall also understood the practicalities of implementing new programs. As he would find, enforcement of the 1965 Act raised the fundamental tension inherent in any environmental regulatory scheme: how to protect the resource without unduly limiting development.

The Department of Interior established guidelines for states to follow in developing their water-quality standards. However, what Secretary Udall realized in reviewing the first round of standards from several states in November 1967 was that they did not go far enough to implement what he saw as the unique goal of the 1965 Act: to protect and enhance the quality and productivity of the nation's waters. He was concerned with the lack of protection for high-quality waters and the possibility of a cycle of clean-up followed by new degradation. Similar criticism came from the National Wildlife Federation, observing that state standards allowed for more pollution than was currently found in streams.<sup>24</sup> However, Udall was also concerned with enacting a policy that would strictly prohibit discharges to clean waters. As noted in Udall's testimony to the Subcommittee on Air and Water Pollution of the Senate Public Works Committee, "[t]he question arose as to how to interpret and carry out the policy of protecting clean waters in the face of necessary social and economic development."<sup>25</sup> As he described it, his goal was to "*steer a clear and workable course between prohibiting any treated wastewater discharges to clean waters, on the one hand, and allowing clean waters to be degraded down to the minimum levels for supporting water uses on the other.*"<sup>26</sup>

In response to this concern, Secretary Udall announced a new policy on February 8, 1968 that would apply to all state standards:

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19 *Id.* at 84-85.

20 Water Quality Act of 1965, Pub. L. No. 89-234, 79 Stat. 903 (1965).

21 Reorganization Plan No.2 of 1966, 31 Fed. Reg. 6857 (1966). Section 1(a) transfers the authority to administer the Federal Water Pollution Control Act, which the 1965 Water Quality Act amended, to the Secretary of Interior.

22 STEWART UDALL, *THE QUIET CRISIS* (Avon Books 1963).

23 See RACHEL CARSON, *SILENT SPRING* (First Mariner Books 2002) (1962).

24 MILAZZO, *supra* note 13, at 142.

25 Compendium, *supra* note 12, at 15.

26 *Id.* (emphasis added).



Waters whose existing quality is better than the established standards as of the date on which such standards become effective will be maintained at their existing high quality. These and other waters of a State will not be lowered in water quality unless and until it has been affirmatively demonstrated to the State water pollution control agency and the Department of Interior that such change is justifiable as a result of necessary economic or social development and will not interfere with or become injurious to any assigned uses made of, or presently possible in, such waters. This will require that any industrial, public or private project or development which would constitute a new source of pollution or an increased source of pollution to high quality waters will be required, as a part of the initial project design, to provide the highest and best degree of waste treatment available under existing technology, and since these are also Federal standards, these waste treatment standards will be developed cooperatively.<sup>27</sup>

Thus, under Udall's vision of antidegradation, clean waters that surpass water-quality standards cannot be lowered in quality unless such lowering is necessary for important social or economic development and will not impair uses. He was also hopeful that the policy would incentivize use of the best treatment technologies available when discharging to such high-quality waters. He later explained that the burden of proof for compliance with the policy would lie with the proposed new use.<sup>28</sup> It is interesting to note that Udall himself thought that the issue of antidegradation would "wash out" in a year or two as clean-up efforts intensified and waters were restored.<sup>29</sup>

While Udall's policy is notable in its effort to strike a balance between environmental protection and development, he leaves a crucial component unresolved—the definition of degradation itself. What level of change constitutes a "lowering" of water quality? Certainly, one could argue that any new discharge would cause some impacts. Perhaps this argument is why it was so crucial to Udall to provide relief for important social and economic-development projects—because he assumed that any additional discharges to high-quality waters would inherently cause degradation.

Another interesting aspect of Udall's policy, as reflected in his congressional testimony, is that he viewed the standards protecting uses to be the minimum floor and expected water quality to, in fact, be of better quality than those minimums. Such a regulatory focus would require tracking of water-quality data confirming not only that uses are supported but that the criteria set for those uses are exceeded. Ultimately, under the policy set out by Udall, states must assign uses to surface waters and set criteria to protect those uses, and also identify those waterbodies where current quality exceeds this criteria, and establish a procedure by which a new discharge can be made to such high-quality waters only upon a showing that the discharge is necessary for important social/economic development.

Despite his optimism, the story of the clean-up of water pollution was far from over when Udall left the Department of Interior in 1969. By 1971, only 28 states had

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27 *Id.* at 1-2.

28 *Id.* at 4.

29 *Id.* at 3.

fully approved standards and none of those states imposed specific effluent limitations related to those standards, other than requiring the conventional technology of the time—secondary treatment.<sup>30</sup> In June 1969, the Cuyahoga River in Cleveland, Ohio, caught fire due to oil and other industrial wastes (although it had done so several times over a span of decades) and was given significant national media attention.<sup>31</sup> Also in 1969, a large oil spill off the coast of Santa Barbara provided public images of impacts to thirty miles of beaches and thousands of sea birds.<sup>32</sup> The President’s Council on Environmental Quality issued a report in 1971 detailing shellfish bed closures, radical declines in commercial shrimp harvesting, enormous fish kill statistics, and other evidence of widespread water pollution.<sup>33</sup> In a time of rising public awareness, focused media attention, and developing concepts of ecology, public opinion was reaching a consensus that more needed to be done than relying on the difficult and inconsistent enforcement of the 1965 Act.<sup>34</sup>

### **III. DEVELOPMENT OF CURRENT FEDERAL ANTIDEGRADATION POLICY UNDER THE CLEAN WATER ACT: A “FEW EXTRAORDINARY CIRCUMSTANCES”**

By Executive Order, President Nixon established the EPA in 1970, which assumed the responsibilities of the Department of Interior for water quality protection.<sup>35</sup> In 1972, Congress passed the Clean Water Act establishing the current permitting framework for the issuance of discharge permits under the National Pollutant Discharge Elimination System (NPDES) and incorporating an improved version of the water-quality-standards requirements first established in the 1965 Act.<sup>36</sup> Dischargers were now prohibited from discharging without a permit, thus addressing the shortcomings of the previous legislative efforts. In addition, the Clean Water Act included a clear objective: “to restore and maintain the chemical, physical and biological integrity of the Nation’s waters.”<sup>37</sup>

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30 MILAZZO, *supra* note 13, at 142-143.

31 ROBERT W. ADLER, JESSICA C. LANDMAN & DIANE M. CAMERON, *THE CLEAN WATER ACT 20 YEARS LATER* 5-6 (National Resources Defense Council, Island Press, 1993); *see also* JOHNATHON H. ADLER, *Fables of the Cuyahoga: Reconstructing a History of Environmental Protection*, 14 *FORDHAM ENVTL. L.J.* 90, 99-105 (2002) (discussing the “myth” of the 1969 fire and its place in the environmental movement).

32 MILAZZO, *supra* note 13, at 145-146.

33 Robert W. Adler, *supra* note 31, at 6 (citing Council on Env’tl. Quality Second Annual Report (Washington DC: U.S. GPO, 1971)).

34 1998 ANPRM, *supra* note 11 (explaining that “[d]ue to enforcement complexities and other problems, an approach based solely on water quality standards was deemed too weak to make a difference. The purely water quality-based approach prior to 1972 lacked enforceable Federal mandates and standards, and a strong impetus to implement plans for water quality improvement. The result was an incomplete program that in Congress’ view needed strengthening.”).

35 Reorganization Plan No. 3 of 1970, 35 Fed. Reg. 15623 (Oct. 6, 1970).

36 Clean Water Act, Pub. L. No. 92-500, 86 Stat. 816 (codified as amended at 33 U.S.C. § 1251 et. seq. (2006)).

37 33 U.S.C. § 1251(a) (2010).

Although the language of the Clean Water Act itself did not discuss antidegradation specifically, the EPA, in keeping with the precedent that Udall established at the Department of Interior, included it as an element of water-quality standards in its first 1975 Water Quality Regulation, where it remains today.<sup>38</sup> As the EPA explains in its Water Quality Standards Handbook, it based the antidegradation policy on the “spirit, intent and goals” of the Clean Water Act, especially the clause “restore and maintain the chemical, physical and biological integrity of the Nation’s waters” at Section 101(a) and the provisions at Section 303(a) that made water-quality standards “the starting point for the Act’s water quality requirements.”<sup>39</sup> According to the EPA, antidegradation was explicitly incorporated in the Clean Water Act in the 1987 amendments at Section 303(d)(4)(B) requiring satisfaction of antidegradation requirements before making certain changes in NPDES permits and also in the 1990 Great Lakes Critical Programs Act, codified at Clean Water Act Section 118(c)(2), requiring EPA to publish Great Lakes Water Quality Guidance, including antidegradation requirements and implementation procedures.<sup>40</sup>

The current EPA regulation mirrors, to a great extent, the original 1975 version<sup>41</sup> and provides as follows:

**§ 131.12 Antidegradation policy.**

- (a) The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy pursuant to this subpart. The antidegradation policy and implementation methods shall, at a minimum, be consistent with the following:
- (1) Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.

38 EPA Water Quality Standards Regulation, 40 C.F.R. § 130.17, 40 Fed. Reg. 55,340-41 (Nov. 28, 1975) (to be codified at 40 C.F.R. § 130.17) (refined and republished in 1983 by 48 Fed. Reg. 51,400 (Nov. 8, 1983) (to be codified at 40 C.F.R. § 131.12)).

39 ENVTL. PROT. AGENCY, WATER QUALITY STANDARDS HANDBOOK 4-1 (2d ed. 1993) [hereinafter “EPA Handbook”].

40 *Id.*

41 The EPA’s proposed 1985 rulemaking discussed three options for changing the existing 1975 anti-degradation policy. Option 1 was simply that existing uses be maintained. Option 2 was that high quality waters also be maintained. Option 3 would have allowed changes in an existing use if maintaining that existing use would effectively prevent any future growth in the community or if the benefits of maintaining the use did not bear a reasonable relationship to the costs. 48 Fed. Reg. 51,402. The EPA decided to keep the existing 1975 policy instead with four modifications; (1) deletion of repetitious and confusing language in Tier 1; (2) confirming that uses would be maintained and protected under Tier 1 and 2; (3) changing the phrase “significant economic or social development” to “important economic or social development” to provide a greater degree of protection; and (4) revisions to the ONRW provision to allow for temporary degradation due to construction activities, etc. In its rulemaking, the EPA asked for examples of when the existing antidegradation policy had precluded growth and no examples were provided. 48 Fed. Reg. 51,409.

- (2) Where the quality of the waters exceed levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected unless the State finds, after full satisfaction of the intergovernmental coordination and public participation provisions of the State's continuing planning process, that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. In allowing such degradation or lower water quality, the State shall assure water quality adequate to protect existing uses fully. Further, the State shall assure that there shall be achieved the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable best management practices for nonpoint source control.
- (3) Where high quality waters constitute an outstanding National resource, such as waters of National and State parks and wildlife refuges and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.
- (4) In those cases where potential water quality impairment associated with a thermal discharge is involved, the antidegradation policy and implementing method shall be consistent with section 316 of the Act.<sup>42</sup>

This modern regulation complicates the simple, direct framework first set forth by Udall. Rather than establishing a general policy applicable to all waters that allow degradation upon a showing of justification for important social/economic development, it sets up a tiered system affording different levels of protection for different types of waters. For Tier 1, applicable to all waters, existing uses and criteria must be maintained.<sup>43</sup> For Tier 2, applicable to high-quality waters that exceed fishable/swimmable criteria, degradation will be allowed only on a showing that it is necessary to accommodate important social or economic development in the region.<sup>44</sup> For Tier 3, Outstanding National Resource Waters (ONRWs), degradation is strictly prohibited.<sup>45</sup> Perhaps this categorization can be seen as furthering Udall's attempt to "steer a clear and workable course" on the issue of antidegradation and balancing environmental protection with economic and social development. By identifying specific uses for which the social/economic test will apply and providing a clear category for waters for which degradation will not be allowed, additional certainty could be provided to the permit writers and decision-makers with respect to a project.

However, even with these refinements and the enactment of the 1987 Clean Water Act amendments credited with confirming the antidegradation policy, implemen-

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42 40 C.F.R. § 131.12 (2010).

43 *Id.* § 131.12(a)(1) (2010).

44 *Id.* § 131.12(a)(2) (2010).

45 *Id.* § 131.12(a)(3) (2010).

tation by the states has been challenging.<sup>46</sup> Remaining unresolved issues stem from those issues inherent in the general policy that Udall first established, such as the definition of “degradation” itself, and also from the reworking of the policy under the Clean Water Act through the establishment of the three-tiered framework. In 1988, the EPA performed an evaluation of its ten regional offices to determine the status of state implementation of its federal antidegradation policy. Charles Sutfin, Director of the Water Division at EPA, Region V, commented at a 1989 EPA national conference that based on his own review of the evaluation, thirty-four states did not have complete policies compliant with EPA standards.<sup>47</sup>

Many of the challenges facing states in developing and implementing antidegradation policies are described in comments that the Administrator of the State of Colorado’s Water Quality Control Commission, Paul Frohardt, made at the 1989 conference. Frohardt describes Colorado’s initial refusal to adopt Udall’s original version of the antidegradation policy as a part of the water-quality standards it promulgated in response to the Water Quality Act of 1965. Colorado saw the policy as giving the Secretary of the Interior concurrent approval authority with the State over the location of new industrial plants on Colorado streams and, thus, a threat to the State’s economic and sociological growth.<sup>48</sup> As one of the original states that submitted its standards before the announcement of Udall’s new antidegradation policy, Colorado also took exception that it would have to redo its work.

In describing Colorado’s battles with finally obtaining EPA approval and litigation with environmental groups over its antidegradation policy, Frohardt points to the lack of practical explanation as to how antidegradation should work. For example, Frohardt notes the difficulty in determining which waters a state should review under Tier 2. Does a waterbody have to exceed criteria only for one parameter or all measured parameters? Should a state review the quality on a case-by-case basis at the time of permitting when the pressure to allow the development is greatest? Or can it adopt a classification system to identify which waters shall be subject to Tier 2 prior to the individual permitting decision? On what should the permitting decisions be based while such a classification effort is implemented? Can a state develop a significance threshold—in other words can it define when it considers the degradation to be insignificant so as not to trigger an antidegradation review? In his remarks, Frohardt concludes that the resolution of such issues can lead to a fairly complex state antidegradation-implementation program, and he advocates for states being able to retain flexibility to craft solutions to fit their individual needs.<sup>49</sup>

The EPA has made some attempt to refine these issues and other issues have been addressed in subsequent case law. The main issues can be broken down into the following general categories for purposes of discussion: (1) method of identifying Tier

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46 Water Quality Act of 1987, Pub. L. No. 100-4, 101 Stat. 7 (1987).

47 ENVTL. PROT. AGENCY, WATER QUALITY STANDARDS FOR THE 21<sup>ST</sup> CENTURY, EPA OFFICE OF WATER NATIONAL CONFERENCE PROCEEDINGS 183, Doc. No. 906R89103 (Dallas 1989) [hereinafter 1989 Conference Papers].

48 *Id.* at 185.

49 *Id.* at 185-188.

2 high-quality waters; (2) definition of degradation and significance thresholds and categorical exclusions; and (3) details of social/economic review.<sup>50</sup>

Method of Identifying Tier 2 High Quality Waters. Through its development of the tiered approach to antidegradation, the EPA has created a challenge for states in designating their “high-quality waters” subject to Tier 2 protection. As noted in Frohardt’s comments, questions arise concerning when a state should perform such designation and the factors the state should apply. In its *Water Quality Standards Handbook*, the EPA summarizes its current policy with respect to the question of whether a waterbody must exceed criteria for one parameter or all measured parameters to fall under Tier 2 protection. The Handbook explains that all parameters do not need to be better quality than state criteria for the water to be deemed “high quality.” It encourages the application of the policy on a “parameter-by-parameter basis,” but notes that the EPA has accepted state interpretations that take a different approach.<sup>51</sup> In its 1998 Advance Notice of Proposed Rulemaking (“1998 ANPRM”), the EPA observes that the states have developed two approaches: the parameter-by-parameter approach discussed in its Handbook and a “designational” approach that considers the characteristics of the entire waterbody. With advantages and disadvantages to each, the EPA considers both to be acceptable.<sup>52</sup> The EPA’s approval of Kentucky’s antidegradation policy, which adopted a designational approach requiring high-quality water determinations to be made in advance of the antidegradation review, was upheld by the Sixth Circuit despite arguments by environmental plaintiffs that the State should have used a parameter by parameter approach.<sup>53</sup>

Definition of Degradation and Significance Thresholds. Another issue with respect to antidegradation implementation is one that is inherent in the general policy itself dating back to its start in 1968—the definition of “degradation” and whether a state should apply some “significance” level. As noted in the 1998 ANPRM, “[a]pplying antidegradation requirements only to activities that will result in significant degradation is a useful approach that allows States and Tribes to focus limited resources where they may result in the greatest environmental protection.”<sup>54</sup> On the question of significance thresholds, an August 10, 2005 memo from Ephriam S. King, Director of the Office of Science and Technology, to Regional Water Management Division Directors provides a recommendation on significance thresholds in the context of Tier 2 antidegradation reviews. Noting that the assimilative capacity of a waterbody “is a valuable natural resource” meriting public review of decisions affecting this capacity, the memo provides guidance to regions and states in considering the establishment of significance thresholds. It recommends that, based on the EPA’s work in developing *Water Quality Guidance for the Great Lakes*, regions and states should apply the consensus developed among the scientists in that effort of using a significance threshold value of ten percent with a cumulative cap—meaning that projects that take up less

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50 This list is not exhaustive and is generally focused on the basic challenges of Tier 2 review. Other issues include the ONRW designation process, application of anti-degradation review to general permits, TMDL issues, and nonpoint source issues, among others.

51 EPA Handbook, *supra* note 39, at § 4.3.

52 1998 ANPRM, *supra* note 11, at 36,782.

53 *Kentucky Waterways All. v. Johnson*, 540 F.3d 466, 475-477 (6th Cir. 2008).

54 1998 ANPRM, *supra* note 10, at 36,783.

than ten percent of the assimilative capacity of the waterbody for a given parameter are not significant and would not be subject to antidegradation review, with some consideration given to cumulative effects.<sup>55</sup> However, it should be noted that this approach is best applied to numeric criteria and does not provide any help for proposed permitting actions potentially impacting narrative criteria. By way of example, the 1998 ANPRM describes the EPA's concern that for nutrients that often are not the subject of numeric criteria, states may not be applying Tier 2 degradation analysis to new nutrient loadings.<sup>56</sup>

Details of Social/Economic Review. With respect to the social/economic review process, EPA guidance concludes that Tier 2 review is intended to allow for degradation "only in a few extraordinary circumstances where the economic and social need for the activity clearly outweighs the benefit of maintaining water quality above that required for 'fishable/swimmable' water and both cannot be achieved."<sup>57</sup> It goes on to explain that "the burden of demonstration on the individual proposing such activity will be very high."<sup>58</sup> This burden is certainly outlined in excruciating detail in the EPA's 1995 "Interim Economic Guidance" at Chapter 5.<sup>59</sup> Worksheets, matrices, and scoring systems are all applied in multistep processes for both public and private entities. For example, as a component of the public-entity review, if the average annual cost per household exceeds 2.0 percent of median household income, then the project could be deemed to "place an unreasonable financial burden on many of the households within the community."<sup>60</sup> The guidance then applies a secondary test using debt, socioeconomic, and financial management indicators, and a scoring system to estimate the impact of the costs of pollution control. Additional considerations are then applied to the social-value component of the analysis.<sup>61</sup> In summary, one can conclude that it is a highly convoluted and complex analysis that poses significant challenges for any project coming within its scope.

Ultimately, then, what can be gleaned from this review of federal antidegradation policy development is that it originated as a broad concept applying to anticipated degradation of any waters with quality-exceeding standards and allowing such degradation upon a showing of social or economic need. Over the years, it has been replaced with a more-focused tiered approach applying differing levels of protection to different types of waters. Whereas the original policy may have anticipated the use of the social/economic justification in many permitting decisions, the current federal policy only anticipates its application in "a few extraordinary circumstances" after applying a highly complex and detailed social/economic analysis. Triggers to the application of the policy in individual permitting decisions, such as identification of Tier 2 high

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55 Memorandum from Ephriam S. King, Director of the EPA Office of Science and Technology to Regional Water Management Division Directors on Significance Thresholds (Aug. 10, 2005) available at <http://www.epa.gov/waterscience/standards/files/tier2.pdf>.

56 1998 ANPRM, *supra* note 10, at 36,783.

57 EPA Handbook, *supra* note 39, at § 4.5 (emphasis added).

58 *Id.*

59 See ENVTL. PROT. AGENCY, INTERIM ECONOMIC GUIDANCE FOR WATER QUALITY STANDARDS WORKBOOK, Doc. No. 823-B95-002, (Apr. 27, 1995).

60 *Id.* at 2-7.

61 *Id.* at 2-7 through 2-13.

quality waters and significance thresholds, are examples of some of the issues faced by states in implementing the policy. The extent to which Texas has addressed some of these issues in its own unique ways is discussed in the following section.

#### **IV. TEXAS'S ANTIDegradation POLICY**

##### **A. EARLY POLICIES**

Texas's current antidegradation policy can be traced back to early water-quality standards that the Texas Department of Water Resources (TDWR) promulgated through its "legislative" arm, the Texas Water Development Board. In 1981, the TDWR adopted new regulations to revise the Texas standards, which included an antidegradation statement. At the time, this statement required that state waters with quality "better than" applicable water-quality standards be maintained "at their high quality" and that waste discharges could not be made to these waters that would "result in the lowering of the quality of these waters unless and until it has been demonstrated to the Texas Department of Water Resources that the change is justifiable as a result of necessary economic or social development."<sup>62</sup> In addition to maintaining uses for numeric criteria, the policy also prohibited the degradation of high-quality waters "within or adjacent to national parks and wildlife refuges or wild and scenic rivers designated by law if such degradation would significantly impact the use of an area for its designated purposes."<sup>63</sup> Existing in-stream uses were to be protected in accordance with state and federal law and the TDWR would not authorize discharges that would result in the quality of any state water "being reduced below the water quality standards without complying with the federal and state laws applicable to the amendment of water quality standards."<sup>64</sup> New sources of pollution or increased sources of pollution were required to provide the "highest and best degree of waste treatment available under existing technology consistent with the best practice in the particular field affected under the conditions applicable to the project or development."<sup>65</sup> In 1984, the TDWR proposed some clarifications, which included confirmation that the policy was to be applied during specific permitting actions and approvals.<sup>66</sup>

Following the transfer of authority for the promulgation of the Standards from the TDWR to the newly created Texas Water Commission (TWC), the TWC adopted its

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62 6 Tex. Reg. 1114 (1981) (Tex. Water Dev. Bd.).

63 *Id.*

64 *Id.*

65 *Id.*

66 9 Tex. Reg. 5610, 5611 (1984) *repealed* 13 Tex. Reg. 1776 (1988) (clarifications included: (1) confirming that the "important economic or social development" reviewed for high quality waters was "for the area in which the waters are located;" (2) addition of "other waters of exceptional recreational or ecological significance designated by law" to the types of waters for which no degradation would be allowed; (3) confirmation that uses associated with general as well as numeric criteria would be maintained and protected; (4) replacement of technology standards under the Clean Water Act for the previous state regulatory standard for new and increased pollution sources; (5) confirmation that the Department would still establish modified thermal discharge limitations; and (6) inclusion of a statement regarding implementation methods noting that the policy is implemented through specific permitting reviews and approvals).



own set of Standards in 1988, which began to incorporate the tiered approach of the current EPA Water Quality Standards Regulation. The 1988 TWC policy confirmed that existing uses would be maintained and protected (Tier 1) and that no activities causing “significant degradation of waters exceeding fishable/swimmable quality will be allowed unless it can be shown to the commission’s satisfaction that the lowering of water quality is necessary for important economic or social development” (Tier 2).<sup>67</sup> The 1988 TWC policy defined “significant degradation” as “a lowering of water quality to more than a de minimis extent, but not to the extent that an existing use is impaired.”<sup>68</sup> It defined “fishable/swimmable” as “waters which have quality sufficient to support propagation of indigenous fish, shellfish and wildlife and recreation in and on the water.”<sup>69</sup> For Tier 3, the policy expanded the protection for outstanding waters to include high-quality waters within or adjacent to national parks and wildlife refuges, state parks, wild and scenic rivers designated by law, and other designated areas of exceptional recreational or ecological significance.<sup>70</sup>

The 1988 TWC policy also added a description of specific implementation procedures involving the review of wastewater-discharge-permit applications or amendments and associated preliminary determinations of the existing uses of the receiving water that are to be maintained and protected. In the permit-application process for discharges into waters exceeding fishable/swimmable quality, the 1988 TWC policy required the agency to make a preliminary determination of whether the discharge was expected to cause significant degradation of water quality.<sup>71</sup> It also mandated that all pollutants that could cause significant degradation were to be considered in the evaluation.<sup>72</sup> Statements in the public notice of the application were required for permit actions when significant degradation of waters exceeding fishable/swimmable was anticipated.<sup>73</sup> The policy importantly noted that “the determination of existing use and the probability of significant degradation are issues upon which evidence can be introduced in permit hearings.”<sup>74</sup> The policy confirmed that “[i]nterested parties will be given the opportunity to provide comments and additional information concerning the determination of existing uses, anticipated impacts of the discharge, baseline conditions, and necessity of the discharge for important economic or social development if significant degradation of water quality is expected.”<sup>75</sup>

In 1991, the TWC revised the policy to focus on “degradation” rather than “significant degradation” because it determined that the use of the adjective “significant” was implied in the definition of degradation.<sup>76</sup> In a later 1995 rulemaking, the then Texas Natural Resource Conservation Commission (TNRCC), successor agency to the TWC, expanded the application of the policy to all actions subject to regulation

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67 13 Tex. Reg. 1776, 1786-1787 (1988) (Tex. Water Comm’n).

68 *Id.*

69 *Id.*

70 *Id.*

71 *Id.*

72 *Id.*

73 13 Tex. Reg. 1776, 1786-1787 (1988) (Tex. Water Comm’n).

74 *Id.*

75 *Id.*

76 16 Tex. Reg. 3400 (1991) (Tex. Water Comm’n).

increasing pollutant loads to state waters, not just TNRCC actions. It also noted that it was not proposing any ONRWs for inclusion in the Standards despite the earlier circulation of draft proposals because of “substantial public and legislative concern”.<sup>77</sup>

The TNRCC made additional clarifying changes in its 2000 Standards Revisions (“Standards”), adopting the tier designations from the federal rule, confirming that the development and implementation of Total Maximum Daily Loads (TMDL) are subject to the antidegradation policy, and discussing applicability in different permitting contexts.<sup>78</sup>

## B. CURRENT TEXAS POLICY

The substance of the current Texas antidegradation policy, as stated in the Standards, remains much as it was in 1988. Under Tier 1, existing uses and water quality sufficient to protect those uses must be maintained.<sup>79</sup> Under Tier 2, activities that would cause degradation of waters that exceed fishable/swimmable quality are not allowed unless it can be shown to the former TNRCC’s, now renamed the Texas Commission on Environmental Quality (TCEQ), satisfaction that the lowering of water quality is necessary for important economic or social development.<sup>80</sup> “Degradation” is defined as a lowering of water quality by more than a de minimis extent, but not to the extent that an existing use is impaired.<sup>81</sup> “Fishable/swimmable” waters are defined as waters that have quality to support propagation of indigenous fish, shellfish, and wildlife and recreation in and on the water.<sup>82</sup> The quality of ONRWs must be maintained and protected. However, the Standards do not designate any ONRWs.<sup>83</sup> As for implementation methods, the Standards provide that the highest water quality sustained since November 28, 1975 (the date that the EPA promulgated its federal Water Quality Standards Regulation) defines baseline conditions for determination of degradation under Tier 2 review and includes public notice and hearing requirements for permitting actions undergoing a Tier 2 review.<sup>84</sup> The Standards note that evidence can be introduced in public hearings or during the public-comment process regarding determinations of existing uses and criteria, the assessment of degradation, the social and economic justification for lowering water quality, requirements and conditions necessary to preclude degradation, and any other issues related to antidegradation.<sup>85</sup>

These provisions in the Texas Surface Water Quality Standards are supplemented and further refined in the TCEQ guidance: Procedures to Implement the Texas Water Quality Standards (“Implementation Procedures”).<sup>86</sup> Region VI of the EPA reviews

77 20 Tex. Reg. 4701, 4704 (1995) (Tex. Natural Res. Cons. Comm’n).

78 25 Tex. Reg. 7765-7766 (2000) (Tex. Natural Res. Cons. Comm’n).

79 30 TEX. ADMIN. CODE § 307.5(b)(1) (2010).

80 *Id.* § 307.5(b)(2).

81 *Id.*

82 *Id.*

83 *Id.* § 307.5(b)(3).

84 *Id.* § 307.5(c)(2)(B).

85 30 TEX. ADMIN. CODE § 307.5(c)(2)(E) (2010).

86 TEX. COMM’N ENV. QUALITY, PROCEDURES TO IMPLEMENT THE TEXAS SURFACE WATER QUALITY STANDARDS (2003), RG-194, available at [http://www.tceq.texas.gov/publications/rg/rg-194.html/at\\_download/file](http://www.tceq.texas.gov/publications/rg/rg-194.html/at_download/file) [hereinafter 2003 IMPLEMENTATION PROCEDURES].

and approves the Implementation Procedures as a part of the State's Continuing Planning Process and in accordance with the Memorandum of Agreement between the TCEQ and the EPA Regional office delegating authority for the NPDES program in Texas.<sup>87</sup>

The Implementation Procedures describe how the agency determines "increases in pollution" on a permit-by-permit basis. Tier 1 review is applicable to all waterbodies and confirms that uses will be maintained and protected.<sup>88</sup> Essentially, this review does not add substantively to the TCEQ's already-established procedures for developing water-quality-based permit limits set out elsewhere in the Implementation Procedures, except when discharges to impaired waters are proposed prior to the adoption of a TMDL.<sup>89</sup>

For Tier 2, the Implementation Procedures specify that this review applies to waterbodies with existing, designated, or presumed uses of contact recreation and intermediate, high, or exceptional aquatic-life use.<sup>90</sup> It notes that the effect of the proposed discharge "is compared to baseline water quality conditions in order to assess the potential for degradation."<sup>91</sup> Baseline conditions for 1975 as described in the Standards are estimated from existing conditions as set out in the latest Surface Water Quality Inventory or "other available information, unless there is information indicating that degradation in ambient water quality has occurred in the receiving waters since November 28, 1975."<sup>92</sup>

The Implementation Procedures go on to explain that for Tier 2, proposed increases in loading are initially screened to determine if "sufficient potential for degradation exists" that would require further analysis.<sup>93</sup> The guidance is careful to note that these initial screens do not necessarily define degradation, but are to be used as general guidance to identify those increases in loadings that are small enough "to preclude the need for additional evaluation."<sup>94</sup> The ten-percent-significance threshold is woven into these initial screening procedures. For existing discharges, increases in permitted loading of ten percent over the loading allowed by the existing discharge permit are not considered degradation if water-quality standards are maintained, the aquatic ecosystem is not unusually sensitive, and the discharge is not relatively large. For new discharges, increases in loading that use less than ten percent of the existing assimilative capacity of the water body at the edge of the mixing zone (calculated by using a specific formula) are also not considered to be degradation so long as the aquatic ecosystem in the area is not unusually sensitive. However, this screening procedure for

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87 See ENVTL. PROT. AGENCY & TEX. NATURAL RES. CONSERV. COMM'N, MEMORANDUM OF AGREEMENT BETWEEN THE TEX. NATURAL RES. CONSERV. COMM'N AND THE U.S. ENVTL. PROT. AGENCY, REGION 6 CONCERNING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (1998), available at <http://www.tceq.state.tx.us/assets/public/permitting/waterquality/attachments/municipal/c1.pdf>.

88 2003 IMPLEMENTATION PROCEDURES, *supra* note 86, at 24-29.

89 *Id.*

90 *Id.* at 30-35.

91 *Id.* at 31.

92 *Id.*

93 *Id.*

94 2003 IMPLEMENTATION PROCEDURES, *supra* note 86, at 31.

assimilative capacity is not applied to all parameters. Cumulative impacts from successive permit actions are addressed by the acknowledgment that these effects will be considered.<sup>95</sup>

The guidance requires additional screening for those discharges that are not eliminated in the initial screening. It lists examples of situations in which degradation is “likely” and “unlikely” to occur while noting that specific conditions at individual waterbodies may lead to different outcomes.<sup>96</sup> For examples that do not likely constitute degradation, the guidance includes the following:

- Increased total suspended solids (TSS) loading if the effluent concentrations are maintained at 20 mg/l or less;
- Increased loading of oxygen-demanding materials if the dissolved oxygen in the “sag zone” is lowered by less than 0.5 mg/l from baseline instream concentrations and if the potentially affected aquatic organisms are not unusually sensitive to changes in dissolved oxygen; and
- Increased loading of total phosphorus, nitrate, or total nitrogen—if it can reasonably be demonstrated that detrimental increases to the growth of algae or aquatic vegetation will not occur.<sup>97</sup>

The guidance includes the following in its set of examples that likely do constitute degradation:

- Increased loading of oxygen-demanding substances that is projected to decrease dissolved oxygen by more than 0.5 mg/l for a substantial distance in a waterbody that has exceptional aquatic life and a relatively unique and potentially sensitive community of aquatic organisms; and
- Increased loading of phosphorus and/or nitrogen into a reservoir that supplies drinking water, if the loading would result in significant elevations in algae or potentially detrimental aquatic vegetation over a substantial area.<sup>98</sup>

The Implementation Procedures explain that when initial and additional screening under Tier 2 preliminarily indicates degradation, the TCEQ will notify the applicant, so that the applicant may provide the information necessary to undertake the social/economic analysis that is required.<sup>99</sup>

For Tier 3, the guidance reaffirms the regulatory definition of Tier 3 waters and confirms that pollution that would cause degradation is not allowed in ONRWs. The guidance notes that ONRWs are to be specifically designated in the Standards and recognizes that currently the Texas Standards do not designate any ONRWs.<sup>100</sup> Notably, however, this section of the guidance includes a summary of additional Watershed Protection Rules that apply additional requirements to certain specific sensitive wa-

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95 *Id.* at 32.

96 *Id.* at 32-34.

97 *Id.* at 33.

98 *Id.* at 34.

99 *Id.*

100 2003 IMPLEMENTATION PROCEDURES, *supra* note 86, at 35.

tersheds. These requirements include discharge bans, phosphorus limits, advanced treatment, and other limitations.<sup>101</sup> Finally, the guidance defines the public notice requirements in the TCEQ's implementation of the antidegradation policy and the process by which the opportunity for public comment is accepted during the permitting process.<sup>102</sup>

Texas's antidegradation policy, as set forth in the Standards and the Implementation Procedures, on its face addresses at least two of the three issues that other states confront in implementing the federal regulations as discussed in Part III: (i) identification of high-quality waters; and (ii) the definition of antidegradation and significance thresholds. With respect to the identification of high-quality waters, the policy adopts a parameter-by-parameter approach. The Implementation Procedures categorically apply a preliminary Tier 2 review to all discharges to waterbodies with certain aquatic-life uses and contact recreation. Individual permitting actions are then reviewed for impacts for each parameter of concern. For the definition of degradation, the Standards adopt the concept of a significance threshold and it is used in the Implementation Procedures to frame the inquiry as to whether a full Tier 2 social/economic review should proceed. The ten-percent threshold identified in the King memo is adopted for some parameters. Finally, rather than try to establish procedures or guidance on significance thresholds applicable to all waterbodies throughout the State for all possible parameters, the Implementation Procedures provide examples of what may or may not constitute degradation for many common parameters. Resolution of the third issue, the details of social/economic review, are not revealed in the text of the policy as laid out in the Standards or Implementation Procedures given that the discussion afforded the process is so brief. However, the need for such detailed resolution can be addressed in examining how the policy as a whole is implemented by the State, as discussed in Part V.

#### **V. TEXAS'S ANTIDEGRADATION POLICY IMPLEMENTED**

Because of the applicability of the Tier 2 review process to all waterbodies with contact recreation and intermediate and above aquatic-life uses, Texas should be credited for affording a significant portion of its surface waters with this level of protection.<sup>103</sup> Such a broad application has obviated the need for detailed analysis identifying specific water bodies where current quality exceeds the criteria set for uses. At the same time, it has created a flexible process through multiple screening procedures that is driven to a large extent by the specific conditions of a specific waterbody. Because many degradation questions are addressed prior to the development of a draft permit through these screening procedures, Texas has had only a few permits, and none in recent years, go through a full social/economic review.<sup>104</sup> The TCEQ has found that

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101 *Id.* at 36.

102 *Id.* at 36-37.

103 Texas Standards apply designated and presumed fishable/swimmable uses to a significant portion of the State's classified and unclassified waters. See 30 TEX. ADMIN. CODE § 307.4 (2010) (Tex. Comm'n Env'tl. Quality).

104 Telephone Interview with David Galindo, TCEQ staff in Office of Water (August 23, 2010); Telephone Interview with Dr. Jim Davenport, TCEQ staff in Office of Water (Sept. 1, 2010).

most permittees, when faced with the choice between a public Tier 2 antidegradation review and a process change or project relocation, opt against the review.<sup>105</sup> Indeed, one can understand the dilemma that the Commissioners would face in approving a permit coupled with a degradation finding.

Truly, the EPA's guidance that permit issuance under Tier 2 is available only in a "few extraordinary circumstances" has been realized in the State's implementation of the policy—not through the application of the social/economic analysis but rather the desire to avoid it. Therefore, the State has not found it necessary to further refine the details of the social/economic review process. However, the State has confronted other issues in its antidegradation implementation that merit discussion, including ONRW designation and the application of Tier 2 review to narrative standards.

One potential criticism that could be lodged regarding the Texas program is the lack of ONRWs as was raised in the public debate during the 1995 round of Standards revisions. The counterargument is that Texas has identified some waterbodies to which discharges are not allowed through a separate rule rather than an ONRW designation—the Highland Lakes Rules.<sup>106</sup> This prohibition against discharges to the Highland Lakes in Central Texas and portions of their tributaries was recently reaffirmed in response to a petition by area municipalities to ease the ban under certain protective conditions.<sup>107</sup> Other specific rules apply additional protections for other watersheds as well, including Clear Lake, Lake Houston, Colorado River below Town Lake, Onion Creek, Lake Worth, Eagle Mountain Reservoir, Cedar Creek Reservoir, Lake Arlington, Benbrook Lake, and Richland-Chambers Reservoir.<sup>108</sup> Again, the treatment of these waterbodies by separate specific rules, rather than relying on a general ONRW designation, is consistent with Texas's approach to apply tailored protections based on specific conditions in the particular watershed.

Drawbacks to this watershed-specific approach include the time and resources needed to develop such specialized provisions. The permit applications do not stop while the Commission works to develop new standards and criteria, and this can present special problems in individual permitting decisions. This dilemma is especially true for nutrients. Until recently, the Standards did not contain any numeric criteria for nutrients. The most recent 2010 Standards revision adopted specific numeric criteria for approximately 100 Texas reservoirs after a nine-year effort involving multiple workgroups and significant stakeholder input.<sup>109</sup> With these numeric standards, it becomes easier to evaluate degradation through the comparison of numeric values. Narrative criteria that generally prohibit the excessive growth of aquatic vegetation still control nutrients for streams and rivers.<sup>110</sup> Evaluating degradation based on the level

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105 *Id.*

106 30 Tex. Admin. Code §§ 311.1-16, .51-.56 (2010) (Tex. Comm'n Env'tl. Quality).

107 Tex. Comm'n Env'tl. Quality, *Decision of the Commission Regarding the Petition for Rulemaking Filed by the City of Granite Shoals and the City of Leander*, Docket No. 2009-1586-RUL (Nov. 20, 2009) (final order denying petition).

108 See 30 TEX. ADMIN. CODE § 311 (2010) (Tex. Comm'n Env'tl. Quality).

109 35 Tex. Reg. 6294 (2010) (to be codified at 30 TEX. ADMIN. CODE §§ 307.1-10) (proposed Jan. 29, 2010) (Tex. Comm'n Env'tl. Quality).

110 30 Tex. Admin. Code § 307.4(e) (2010).

of predicted plant growth is more nuanced and may be subject to the best professional judgment of the scientist evaluating the matter.

In two recent permitting cases, the lack of specific nutrient criteria for streams generated a significant amount of legal wrangling over Tier 2 antidegradation review: the *Application of Hays County Water Control & Improvement District No. 1 (Hays County WCID No. 1)* and the *Application of Lerin Hills, Ltd. (Lerin Hills)*.<sup>111</sup> In *Hays County WCID No. 1*, the water district sought an amendment to its land-disposal permit to authorize the discharge of 500,000 gallons per day (gpd) of treated effluent into the headwaters of Bear Creek, a tributary of Onion Creek and over the Edwards Aquifer recharge zone to serve a residential subdivision.<sup>112</sup> The draft permit prepared by the TCEQ's Executive Director included effluent limits of 5 mg/l biochemical oxygen demand (BOD); 5 mg/l TSS; 2 mg/l ammonia nitrogen; 0.15 mg/l total phosphorus; and 5 mg/l dissolved oxygen.<sup>113</sup> The City of Austin, the Lower Colorado River Authority, the Barton Springs-Edwards Aquifer Conservation District, Hays County, the City of Dripping Springs, the Hays Trinity Groundwater Conservation District, various downstream property owners, homeowners associations, and the Save Our Springs Alliance all protested the application and were named parties in the contested case hearing that the State Office of Administrative Hearings conducted.<sup>114</sup> Within a week of the hearing, a partial settlement agreement was reached with some of the parties that led to a revision of the ED's proposed draft permit to include a 6 mg/l total nitrogen limit; 126 mg/l e.coli CFU/100 ml; use of a UV disinfection system; and a requirement for a Class A operator.<sup>115</sup> Other settlement-agreement provisions required the water district to build additional effluent storage and irrigation fields and only discharge up to 350,000 gpd when its irrigation land is frozen or saturated and the effluent pond is full or when Bear Creek is flowing at a rate of 14 cubic feet per second.<sup>116</sup>

Because not all of the protesting parties settled, the case proceeded to hearing. The Administrative Law Judges (ALJs) hearing the case considered water-quality impacts under the terms of the original draft permit and under the conditions of the partial settlement. In their Proposal for Decision (PFD), the ALJs struggled with the application of a Tier 2 review for the State's narrative criteria for nutrients. Citing the Sixth Circuit's discussion in *Kentucky Waterways Alliance v. Johnson* of the EPA guidance statements indicating that a more than ten-percent reduction in assimilative capacity would be significant and thus not de minimis, they displayed an inclination to apply the ten-percent test even while recognizing this definition was not binding

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111 Tex. Comm'n on Env'tl. Quality, *Order Concerning the Application of Hays County Water Control & Improvement District No. 1 for Amendment to TPDES*, Docket No. 2007-1426-MWD (Mar. 16, 2009) (final order) [hereinafter *Hays County WCID No. 1 Order*]; and *In the Matter of the Application by Lerin Hills, Ltd. for Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0011472001*, SOAH Docket No. 582-08-0690; TCEQ Docket No. 2007-1178 MWD (July 7, 2009) (final order) [hereinafter *Lerin Hills Order*].

112 See *Hays County WCID No. 1 Order*, *supra* note 111.

113 *Id.* at 5-6.

114 *Id.* at 2.

115 *Id.* at 3-4.

116 *Id.*

on the TCEQ.<sup>117</sup> The difficulty in this issue, of course, lay in the fact that this EPA guidance had been developed through the numeric-criteria development in the Great Lakes Water Quality Program.

The PFD goes on to identify boundary-concentration levels for total phosphorus and total nitrogen between oligotrophic, mesotrophic, and eutrophic waters and then applies the ten-percent assimilative capacity test to the proposed discharge as measured against these thresholds.<sup>118</sup> The additional difficulty with this analysis is that none of these standard, the ten-percent assimilative capacity test for nutrients, nor the classification of a stream's trophic status, much less the boundary-concentration levels, is included in the Standards or Implementation Procedures and has not been fully vetted in a public-stakeholder process. However, the ALJs were confronted with difficult technical questions without a clear modeling protocol. Ultimately, the ALJs determined that the applicant had not met its burden of proof in showing that its proposed discharge would not cause more than a de minimis degradation of the receiving waters without incorporating the terms of the partial settlement agreement limiting the amount of discharge and the conditions at which it could occur.<sup>119</sup> Consequently, the TCEQ issued a permit incorporating these settlement conditions.<sup>120</sup>

The TCEQ more directly confronted the problem of Tier 2 antidegradation analysis of nutrient standards several months later when it faced a recommendation from an ALJ to deny Lerin Hill's permit application. Lerin Hills had applied for a new discharge permit authorizing the discharge of 500,000 gpd into an unnamed tributary, Deep Hollow Creek, Frederick Creek, and then to Upper Cibolo Creek in Segment 1908 of the San Antonio River Basin.<sup>121</sup> This discharge route included two on-channel impoundments. The Executive Director prepared a draft permit with the following effluent limits: 5 mg/l CBOD; 5 mg/l TSS; 1 ammonia nitrogen; 0.5 mg/l total phosphorus (TP) and 6.0 mg/l dissolved oxygen.<sup>122</sup>

In her review of applicable law, the ALJ notes in her PFD that "[f]or constituents like nutrients (for which there are no numerical criteria in the water quality standards) . . . the [Implementation Procedures] offer little further guidance about analyzing the potential for degradation; the only guidance is in the form of lists of short hypothetical factual scenarios. . ."<sup>123</sup> Again faced with evidence that did not include a quantitative estimate of the amounts of algal and plant growth from the discharge over time, the ALJ looked to the nutrient loadings from the discharge even with a 0.5 mg/l TP limit and resulting instream nutrient concentrations as compared to sampled back-

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117 State Office. Admin. Hearings, *In the Matter of the Application of Hays County Water Control and Improvement Dist. No. 1 for Amendment to TPDES Permit No. WQ0014293001*, Docket No. 582-08-0202, at 13 (Nov. 19, 2008) (proposal for decision) [hereinafter Hays County WCID No. 1 PFD]; *Kentucky Waterways Alliance v. Johnson*, 540 F.3d 466, 487 (6th Cir.2008).

118 Hays County WCID No. 1 PFD, *supra* note 117, at 14-15.

119 *Id.* at 40.

120 Hays County WCID No. 1 Order, *supra* note 111, at 11.

121 Lerin Hills Order, *supra* note 99, at 2-4.

122 *Id.* at 4-5.

123 State Office Admin. Hearings, *In the Matter of the Application by Lerin Hills, Ltd. for Texas Pollutant Discharge Elimination System (TPDES) Permit No. WQ0014712001*, Docket No. 582-08-0690, at 9 (Mar. 4, 2009) (proposal for decision) [hereinafter Lerin Hills PFD].



ground concentrations.<sup>124</sup> Because the evidence showed phosphorus concentrations in the impoundments to be as much as 150 to 1,200 percent of measured background, the ALJ determined that the applicant had not met its burden of proof on the issue.<sup>125</sup> She concluded “[w]ithout showing how much nutrient loading and how much increased biomass growth there is likely to be, Lerin Hills cannot persuasively demonstrate that the changes will be trifling.”<sup>126</sup>

Because the PFD recommended an outright denial of a permit, it drew input from the regulated community. The Water Environment Association of Texas and the Texas Water Conservation Association both filed written comments with the TCEQ Commissioners prior to their consideration of the Lerin Hills matter pointing out that the TCEQ had an ongoing process for the adoption of specific numeric criteria for nutrients, and until that time, the Tier 2 antidegradation review should be applied in a qualitative rather than a quantitative fashion.<sup>127</sup> The comments argued that establishing correlations between nutrient loadings/concentrations and expected plant growth should not be made on an ad hoc permit-by-permit basis, but should be addressed in the Standards rulemaking process.<sup>128</sup> Comments filed by Pecan Grove Municipal Utility District also raised the concern that TPDES permitting could be “placed on hold” until the TCEQ developed numeric nutrient criteria.<sup>129</sup>

At its agenda meeting, the TCEQ Commissioners discussed the status of nutrient criteria development with staff and ultimately determined to issue the permit, concluding that the ALJ “misapplied the Commission’s policies and rules related to antidegradation . . . by requiring the applicant to present quantitative data on cumulative loading of phosphorus over time and resulting biomass.”<sup>130</sup> The Commissioners went on to conclude that “such data was not required in order for the Applicant to meet the current narrative standards for nutrients and that such data and modeling were not appropriately required of an applicant until the agency has an opportunity to develop a numeric standard in the future, after providing sufficient public notice and sound scientific vetting of that proposed new standard.”<sup>131</sup> The order that the Commissioners issued also includes findings that despite the additional phosphorus loadings and resulting increase in instream phosphorus concentrations, any increase in plant and algal growth that the discharge causes will be de minimis with an effluent limit of 0.5 mg/l TP.<sup>132</sup>

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124 *Id.* at 32.

125 *Id.* at 33.

126 *Id.* at 34.

127 Letter from Carol Batterton, Executive Director, Water Envtl. Ass’n Tex., to LaDonna Castañuela, Chief Clerk, Tex. Comm’n Envtl. Quality (May 13, 2009) (on file with author); Letter from Edmond R. McCarthy, Jr., Vice Chairman, Water Laws Committee, Tex. Water Cons. Ass’n to LaDonna Castañuela, Chief Clerk, Tex. Comm’n Envtl. Quality (May 19, 2009) (on file with author).

128 *Id.*

129 Letter from Joe Taylor, President, Bd. of Directors Pecan Grove Mun. Utility Dist. to Buddy Garcia, Larry R. Soward, and Bryan W. Shaw, Commissioners, Tex. Comm’n Envtl. Quality, April 29, 2009 (on file with the author).

130 Lerin Hills Order, *supra* note 111, at 13.

131 *Id.*

132 *Id.* at 6-7.

Since *Lerin Hills* and *Hays County WCID No.1*, the TCEQ has attempted to address interim nutrient controls while developing specific numeric criteria by proposing new nutrient-screening procedures for reservoirs, streams, and rivers in its most recent round of revisions to the Implementation Procedures. Although the TCEQ has adopted the new 2010 Implementation Procedures, they are not effective until Region VI of the EPA approves them.<sup>133</sup> The new 2010 Implementation Procedures confirm that the new nutrient-screening procedures also constitute the antidegradation review for nutrients.<sup>134</sup> When the screening factors indicate that a phosphorus control may be needed, the new Implementation Procedures clarify that the effluent limit is based on “reasonably achievable technology based limits” with consideration of the sensitivity of the site.<sup>135</sup> Unless additional screening factors indicate otherwise, flows less than 500,000 gpd can expect to receive a 1 mg/l TP limit; flows between 500,000 gpd to 3 million gallons per day (MGD) can expect to receive a 1-0.5 mg/l TP limit, and flows greater than 3 MGD would typically be assigned a 0.5 mg/l TP limit.<sup>136</sup>

For reservoirs with new specific nutrient limits in place for their main pools, the new screening procedures lay out the quantitative analysis the ALJs were searching for in *Hays County WCID No.1* and *Lerin Hills*. Modeling is used to determine the effects on phosphorus levels and chlorophyll *a*. If the TP concentration is estimated to change by ten percent or less, then a TP limit is not needed.<sup>137</sup> If it is predicted to be greater than ten percent, the additional chlorophyll *a* screening is performed to determine the relative increase in chlorophyll *a*.<sup>138</sup> If the projected decrease in the estimated assimilative capacity of chlorophyll *a* is less than 20 percent, then a limit for TP is indicated.<sup>139</sup> If the projected decrease is ten to 20 percent, then monitoring for TP is indicated.<sup>140</sup> If the projected decrease is less than ten percent, then neither a TP limit nor monitoring is indicated.<sup>141</sup>

For local effects in reservoirs without numeric limits and screening for rivers and streams, qualitative and quantitative screening factors are used to assess the eutrophication potential rated in terms of low, medium, and high.<sup>142</sup> These screening factors form the basis of a “weight-of-evidence” assessment to identify the need for a nutrient effluent limit.<sup>143</sup> When a substantial number of factors are rated as “moderate” or “high” a TP limit is usually warranted.

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133 TEX COMM’N ENVTL. QUALITY, PROCEDURES TO IMPLEMENT THE TEXAS SURFACE WATER QUALITY STANDARDS, RG-194 (June 2010) (on file with author) [hereinafter 2010 Implementation Procedure]; see also 35 Tex. Reg. 578 (2010) (Tex. Comm’n Env’tl. Quality).

134 *Id.* at 28.

135 *Id.* at 29.

136 *Id.* at 29.

137 *Id.* at 37.

138 *Id.*

139 *Id.* at 37.

140 *Id.*

141 *Id.*

142 *Id.*

143 For local effects reservoir screening, the 2010 Implementation Procedures look to the following screening factors to assess eutrophication potential: size of discharge; distance from reservoir; sensitivity to nutrient enrichment—water clarity; sensitivity to growth of aquatic

As noted above, until Region VI of the EPA approves these screening procedures, they will not form the basis of an official permit review and have not yet undergone the test of a contested case-hearing process. However, as an answer to the ALJs' dilemma in *Hays County WCID No.1* and *Lerin Hills*, they do provide much more guidance and explanation as to how the TCEQ goes about its decisions in controlling nutrients and developing associated permit limits. Notably, the TCEQ's 2011-2015 Strategic Plan identifies appeals of both the *Hays County WCID No. 1* and *Lerin Hills* permits in Travis County District Court as potentially affecting how the agency implements its antidegradation policy for nutrient narrative criteria.<sup>144</sup> Although only one of those appeals currently remains pending, *Lerin Hills*, the fallout from these two cases and resulting refinement of agency policy may not yet be concluded.<sup>145</sup>

In summary, the current state of the implementation of antidegradation policy in Texas has addressed some of the national concerns by casting a wide net in the number of waterbodies subject to Tier 2 review and integrating the concept of significance thresholds, while maintaining flexibility to address specific conditions in a given waterbody. However, this policy has been challenged by the lack of specific numeric criteria and the application of Tier 2 review to waterbodies governed by narrative standards, such as for nutrients. It is currently transitioning in this regard as the State has adopted specific numeric nutrient criteria for some, but not all of its reservoirs, and as it employs new screening procedures for waterbodies still relying on narrative standards.

## **VI. ANTIDEGRADATION: THE FUTURE**

The TCEQ has identified the percentage of Texas waters that meet or exceed water-quality standards as a benchmark toward its goal of conserving and protecting the State's natural resources.<sup>146</sup> At the end of Fiscal Year 2009, the TCEQ met its benchmark with 64.3 percent of the State's surface waters meeting or exceeding Texas Standards, which is not an insignificant statistic given that Texas has over 190,000 miles of surface water bodies with approximately 36 percent of those water

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vegetation—observations; sensitivity to growth of aquatic vegetation—shading and sunlight in narrow backwaters and small coves; consistency with similar permits; local dispersion and mixing; impact on the main pool of the reservoir; and existence of listed concern for nutrients or aquatic vegetation in the TCEQ's § 305(b) report. 2010 Implementation Procedure, *supra* note 133, at 39. Similar screening factors are used for rivers and streams: size of discharge; instream dilution; sensitivity to growth of attached algae—type of bottom; sensitivity to growth of attached vegetation—depth; sensitivity to nutrient enrichment—water clarity; sensitivity to growth of aquatic vegetation—observations; sensitivity to growth of aquatic vegetation—shading and sunlight; streamflow sustainability; impoundments and pools; consistency with other permits; and existence of listed concern for nutrients or aquatic vegetation in the TCEQ's 305(b) report. *Id.* at 54.

144 Tex. Comm'n. Envtl. Quality, STRATEGIC PLAN FISCAL YEARS 2011-2015, 66-67 (July 2010) available at [http://www.tceq.state.tx.us/assets/public/comm\\_exec/pubs/sfr/035\\_11.pdf](http://www.tceq.state.tx.us/assets/public/comm_exec/pubs/sfr/035_11.pdf) [hereinafter 2011-2015 Strategic Plan].

145 Kendall County Utility Company v. TCEQ, No. D-1-GN-09-003254 (126th Dist. Ct., Travis County, Tex. Sept. 25, 2009).

146 2011-2015 Strategic Plan, *supra* note 144, at 5.

bodies protected by site-specific water-quality standards.<sup>147</sup> Continued protection of these waters under Tier 2 will most likely be the ongoing focus of much of the State's efforts with respect to antidegradation, especially as it continues to develop and implement numeric nutrient criteria and related permitting procedures. In addition, the recent permitting decisions in *Hays County WCID No.1* and *Lerin Hills* have directed new attention to the challenges of Tier 2 review as applied to narrative criteria. Whether this new focus results in stricter permit limits in the form of additional nutrient controls than would have otherwise occurred is difficult to discern. However, at a minimum, the process for these permitting decisions is clarified through the new screening procedures adopted in the Implementation Procedures. As these new screening procedures are employed, it is likely that they too will generate their own set of issues and challenges providing further fodder for additional discussion, debate, and revisions.

As noted in Part I, looming on the horizon is additional rulemaking by the EPA. In its Semiannual Regulatory Agenda for Spring 2010, the EPA proposed changes to its Water Quality Standards Regulation to include "targeted clarifications to the water quality standards regulation to improve its effectiveness in helping restore and maintain the Nation's waters."<sup>148</sup> The EPA believes that new regulatory interpretations are needed to "reduce the rate of new water quality impairments" and "increase the rate of water quality improvements."<sup>149</sup> One of the six targeted changes to the Water Quality Standards Regulation is modification of antidegradation-policy requirements. The EPA is considering whether to adopt specific minimum requirements for antidegradation implementation methods to be included in state standards thereby requiring EPA approval.<sup>150</sup>

The EPA conducted public listening sessions in August 2010 and plans to publish the proposed rule in the summer of 2011. It is difficult to ascertain the scope and depth of what the EPA may ultimately propose from the comments made during the listening sessions. Some commentors focused on the better use of OWNRS and procedures to facilitate public nomination and the states' timely review of such designations. Some commentors expressed frustration with the limited application of the antidegradation policy by some states. Comments also noted the challenge posed by trying to include a state's often detailed and lengthy antidegradation-implementation methods in the state's standards. A specific list of preferred methods was not proposed

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147 Susan Combs, *Texas in Focus: A Statewide View of Opportunities*, TEXAS COMPTROLLER OF PUB. ACCTS., 14 (January 17, 2008) available at <http://www.window.state.tx.us/specialrpt/tif/index.html>; TEX. COMM'N ON ENVTL. QUALITY, 2009 Fourth Quarter Performance Measure Report, 4 (Oct. 2009) available at [http://www.tceq.state.tx.us/assets/public/comm\\_exec/pubs/sfr/055\\_094.pdf](http://www.tceq.state.tx.us/assets/public/comm_exec/pubs/sfr/055_094.pdf).

148 ENVTL. PROT. AGENCY, SPRING 2010 SEMIANNUAL REGULATORY AGENDA, 145 (Spring 2010) available at <http://www.epa.gov/lawsregs/search/regagenda.html>.

149 *Id.*

150 Stakeholder Input: Revisions to Water Quality Standards Regulation, 75 Fed. Reg. 44,931 (July 2010).

or discussed. However, more refinement may come through the submission of additional written comments.<sup>151</sup>

It is probably premature to predict how this rulemaking may affect the Texas program although, as has been previously discussed, Texas has already addressed several of the implementation problems identified at the federal level. Texas has adopted a policy based on the tiered approach established in the EPA's Water Quality Standards Regulation, including a significance threshold for de minimis impacts. The Standards also already include written implementation methods regarding triggers for review, review process and documentation, and public notice and participation requirements that are reviewed and approved by the EPA. These implementation methods are further refined in its written guidance in the Implementation Procedures. Therefore, it is likely that Texas is already implementing many of the minimum elements that may be established in the rulemaking and that these elements will be retained.

## **VII. CONCLUSION: REMEMBERING THE WHOLE RIVER**

*A whole river is mountain country and hill country and flat country and swamp and delta country, is rock bottom and sand bottom and weed bottom and mud bottom, is blue, green, red, clear, brown, wide, narrow, fast, slow, clean, and filthy water, is all the kinds of trees and grasses and all the breeds of animals and birds and men that pertain and have ever pertained to its changing shores, is a thousand differing and not compatible things in-between that point where enough of the highland drainlets have trickled together to form it, and that wide, flat, probably desolate place where it discharges itself into the salt of the sea.*

—John Graves, 1959<sup>152</sup>

John Graves' description of a river is important because it requires us to step back and ponder, at the end of the day, the enormous task of crafting any administrative policy capable of fully protecting something so diverse and dynamic. How is it possible to put words on paper that anticipate all of the nuances of the complex hydrologic, chemical, biologic, and aquatic (and sometimes terrestrial in Texas) system that is a river (or pond, lake, wetland, or estuary)? We are asking a lot of our regulatory program. Starting in 1967 with Stewart Udall's simple statement of a "clear and workable course" and evolving to the modern three-tiered approach focused on "a few extraordinary circumstances" while generating countless pages of guidance, comments, and legal briefs, the over 40-year antidegradation effort has certainly been prodigious. As we move from a national policy applicable to every regulated waterbody in the country to implementation of the policy by the states at the very local level, this complexity should not be discounted. Advancement of a national framework to achieve the federal goal "to prevent pollution at its source," as articulated by President Johnson, will continue as individual states and communities strive to fill in the details—all within the context of trying to bal-

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151 ENVTL. PROT. AGENCY, Listening Sessions for the Public, Public Session I Transcript (Aug. 24, 2010), available at [http://water.epa.gov/lawsregs/lawguidance/wqs\\_listening.cfm#written](http://water.epa.gov/lawsregs/lawguidance/wqs_listening.cfm#written).

152 JOHN GRAVES, GOODBYE TO A RIVER 4 (1959).

ance protection of our diverse natural resources with sustainable economic and social development.

*Ms. Kalisek is a principal with the firm of Lloyd Gosselink Rochelle & Townsend in Austin, Texas, and has been practicing in the areas of Texas water-quality and water-utilities law for over fifteen years. Ms. Kalisek specializes in providing counsel to cities, river authorities, water districts, and other local governmental organizations on water-quality regulatory matters. She earned her bachelor's degree with honors from The University of Texas at Austin and her Juris Doctorate from The University of Texas School of Law. She is an active member of the Texas Commission on Environmental Quality Stakeholder Group on Texas Surface Water Quality Standards and the Texas Water Conservation Association Water Quality Subcommittee, and supports these groups' efforts in shaping Texas's water-quality regulatory policy. Ms. Kalisek is co-author of the chapter on Water Quality in West Texas Practice Series: Environmental Law, and is an Associate Editor of the Texas Environmental Law Journal. She has served as a speaker on the topic of water quality and Texas's regulation of water utilities at various conferences, including the National Association of Clean Water Agencies, the International CLE Texas Water Law Conference, the Texas Association of Water Board Directors, the Texas Rural Water Association, the Texas Water Conservation Association, and the Texas Environmental Superconference.*

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# AS IF IT ISN'T ENOUGH TO HAVE A NON-PERFORMING LOAN: DEALING WITH ENVIRONMENTALLY IMPACTED DISTRESSED ASSETS

BY JOHN SLAVICH

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## **I. OVERVIEW**

As we are all painfully aware, the effects of the economic downturn that began in earnest in September 2008 have rippled through the United States economy. Lenders



are addressing the fallout from the sudden deflation of a property asset bubble.<sup>1</sup> Economic conditions have adversely impacted borrowers' ability to repay loans, and the value of assets held as collateral has tumbled.<sup>2</sup> A report in February 2010 by the Congressional Oversight Panel stated that since 2007, property values have fallen by an average of 40 percent, and of the \$1.4 trillion in commercial mortgage debt to come due through 2014, about half of the loans are underwater with the borrowers owing more than their properties are currently worth.<sup>3</sup>

These estimates indicate that a massive amount of commercial mortgage debt (approximately equal to the size of the projected United States' fiscal deficit for 2010) is coming due for which refinancing is anticipated to be problematic because the value of collateral has materially declined.<sup>4</sup> Lenders once again have to address issues that have not presented a significant problem in Texas since the savings-and-loan/banking crisis of the 1980s.<sup>5</sup> Much of the hard-earned institutional knowledge from that era has dissipated in the interim, and a new generation has to grapple with the issues relating to distressed assets.

For the time being, lenders are dodging the threat of a tsunami of defaults, foreclosures, and distressed asset sales by following a policy, with the tacit approval of the regulators, commonly referred to as "extend and pretend" or "delay and pray," in which lenders extend loan terms to manage the number of defaults.<sup>6</sup> A popular phrase characterizing this strategy is "a rolling loan gathers no loss."<sup>7</sup>

This article will focus on the complicating issues that arise when property held as collateral by lenders is, or is suspected of being, adversely effected by environmental concerns. These adverse effects may occur in various ways: spills or releases of contaminants through business operations (e.g., underground storage tanks or dry-cleaning plants); the presence of contamination from historic operations at a site; migration of contaminants onto the site from offsite sources; or hazardous substances incorporated in building materials (e.g., asbestos) or components (e.g., PCBs).

Environmentally related concerns can adversely effect not only the value of the collateral that the lender holds, but also the ability of the lender to dispose of the collateral, if it should prove necessary to do so to cover loan losses. Also of significant concern to lenders is the possibility of exposure to environmental liability under statutory provisions that can impose strict, joint, and several liability on a lender based on its status with respect to a contaminated site, and not because of any wrongdoing by the lender. That type of "status liability" has the potential to exceed the value of the collateral from which the liabilities arise. Lenders arguably enjoy the best insulation from these liabilities of any person in the class of "potentially responsible parties" under environmental statutes. However, this insulation may be less than meets the

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1 CONG. OVERSIGHT PANEL, COMMERCIAL REAL ESTATE LOSSES AND THE RISK TO FINANCIAL STABILITY 2 (Feb. 10, 2010), available at <http://cop.senate.gov/documents/cop-021110-report.pdf>.

2 *Id.*

3 *Id.*

4 *Id.*

5 *Id.* at 16.

6 *Id.* at 102.

7 Robert Knakal, *A Rolling Loan Gathers No Loss*, N.Y. OBSERVER, Sept. 15, 2009, available at <http://www.observer.com/2009/real-estate/rolling-loan-gathers-no-loss>.

eye. The statutory defenses that provide the insulation do not provide comprehensive protection; and a lender does not have any bright-line standards to follow in its efforts to perform the required actions necessary to qualify for the protections that may be available.

This article will briefly consider administrative processes that lenders can use to manage environmental risks and liabilities. It will then look at liabilities that can potentially arise under the various environmental statutes and defenses that may be available to lenders. Finally, it will consider issues that arise in connection with the disposition of environmentally-challenged collateral that will be of concern to lenders and to potential purchasers of that collateral.

## **II. ENVIRONMENTAL RISKS AND LIABILITIES**

Lenders tend to operate at the conservative end of the risk spectrum, and their best-case scenario is having the loan principal repaid with interest. Consequently, when considering the risk/reward equation, lenders generally take the position that a limited potential for reward is appropriately balanced by a lower tolerance for risk.

In originating a loan, lenders focus on repayment risk including risks that may arise out of the borrower's operations and assets. One way lenders manage their financial risk exposure is by taking an interest in collateral as security for the borrower's repayment of the loan.

As a result of concerns posed by environmental risks, many lenders have established an environmental risk policy to help guide lending decisions. These policies should involve the following components:

- A process to identify and evaluate environmental risk when a loan is originated. Lenders should look at how environmental costs and other obligations may adversely effect the borrower's ability to repay the loan. Lenders should examine properties that they are considering as collateral for the loan, particularly when operations of potential concern have been conducted or are being conducted. Lenders should also be concerned with whether historical contamination adversely effects the collateral. This process includes establishing due-diligence protocols for appropriate inquiry into the uses of the property to satisfy the "all appropriate inquiry" component of certain statutory defenses available under federal law, as discussed later in this article.
- A process to monitor the environmental status of the borrower's operations and the collateral throughout the life of the loan. Loan documents will typically have provisions requiring the borrower to report environmental claims or events to the lender. Loan documents also usually include provisions that allow lenders to perform, at the borrower's expense, additional assessments of collateral through the life of the loan, generally following a triggering event.
- A process to reconsider and reanalyze environmental risk associated with collateral securing a non-performing loan. This process, which is addressed in more detail later in this article, includes consideration of alternative strategies for recovering the value of collateral both with and without foreclosure.
- A process for addressing risks post-foreclosure. This process is also addressed in more detail later in this article and will apply should the lender decide to

exercise its security interest and foreclose on the collateral that secures a non-performing loan.

## A. APPLICABLE ENVIRONMENTAL LAWS

Some of the environmental laws that drive lenders' risk concerns are summarized below to provide a framework for later analysis in this article.<sup>8</sup>

### 1. FEDERAL LAW

#### A. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT (CERCLA)

The federal CERCLA<sup>9</sup> statute provides a broad legal framework that creates potential liability for the cost of cleaning up property contaminated with hazardous substances. Persons that may be potentially responsible for liability under CERCLA (also referred to as Superfund) include:

- the current owner and/or operator of a facility;
- an owner and/or operator of a facility at the time of disposal of any hazardous substances;
- a person who arranged for the disposal or treatment of hazardous substances, or arranged for transportation of hazardous substances for disposal or treatment; and
- a person who accepts hazardous substances for transport to a site and selects the site.<sup>10</sup>

Liability under CERCLA is strict (without fault being necessary) and joint and several, which can expose a responsible party to the entire cost of the cleanup even if that party is not the only responsible party.<sup>11</sup> The government or third parties may bring cost-recovery actions under CERCLA.<sup>12</sup>

Of particular interest to lenders is the "secured creditor exemption" under CERCLA, discussed in more detail in Subsection B of this Section II., below. The secured-creditor exemption can provide qualifying lenders with an exemption from status as an "owner or operator" even in situations in which the lender forecloses and takes title to a property.

CERCLA also provides a limited defense to liability for certain qualifying purchasers of property with known contaminants.<sup>13</sup> One of the requirements necessary to qualify as a "bona fide prospective purchaser" is that the person conduct "all appropriate inquiry" (AAI) prior to purchasing, or taking title to, property.<sup>14</sup> The AAI standard will require that an appropriately scoped Phase I environmental site assessment be

8 The summary overview of a complex environmental legal area is not intended as a comprehensive discussion of applicable law, nor to serve as guidance for any particular situation.

9 42 U.S.C. §§ 9601-9675. (2010).

10 42 U.S.C. § 9607(a) (2010).

11 *Id.*

12 See 42 U.S.C. § 9659 (2010).

13 42 U.S.C. § 9601(40) (2010); 42 U.S.C. § 9607(r)(1) (2010).

14 40 C.F.R. § 312.1(b)(1)(ii) (2010).

conducted prior to property acquisition.<sup>15</sup> The owner must also meet continuing obligations during its ownership to maintain bona fide prospective purchaser status.<sup>16</sup>

#### **B. THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)**

Another federal law that can impose liability as a result of contamination is RCRA.<sup>17</sup> RCRA governs hazardous waste from the time it is generated through storage, transportation, and disposal. Under certain conditions, RCRA also requires the cleanup of property contaminated with hazardous waste. The United States Environmental Protection Agency (EPA) has delegated to many states the authority to establish and administer their own RCRA programs.

Of particular importance to lenders is the fact that underground storage tanks (USTs) are regulated under RCRA and its state counterparts. USTs will many times be part of the collateral for loans not only for gas stations and convenience stores, but also for other property with industrial or commercial operations. Lenders need to be concerned about compliance with applicable laws regarding the installation, operation, and removal of USTs. The federal secured-creditor exemption is also available to provide qualifying lenders with an exemption from status as an “owner or operator” of USTs under RCRA.<sup>18</sup>

#### **C. OTHER FEDERAL ENVIRONMENTAL LAWS**

Other federal environmental laws, such as the Clean Air Act, Clean Water Act, and the Toxic Substance Control Act, can also create liability.<sup>19</sup> The potential for liability under these laws will depend upon the type of operations conducted at a property and other factors.

## **2. STATE LAW**

Many states have adopted statutes that parallel the previously noted federal statutes and include similar provisions, such as the secured-creditor exemption. When the administration of federal programs is delegated to a state, the state’s laws and regulations must be at least as stringent as federal provisions. States are not, however, limited only to addressing those provisions contained in the federal laws and regulations. State provisions can impose additional requirements that a lender must meet to receive protection under defenses and exemptions similar to those provided by the federal secured-creditor exemption discussed above.

The Texas rules governing USTs provide an example of a situation in which the state regulatory provisions are more stringent than both the federal and the state statutory provisions.<sup>20</sup> In particular, the Texas UST rules require a lender to begin removal of any underground tank from service within ninety days of the time that the lender

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15 40 C.F.R. § 312.20 (2010).

16 42 U.S.C. § 9601(40) (2010).

17 42 U.S.C. §§ 6901–6908a (2010).

18 42 U.S.C. § 6991(b)(h)(9) (2010).

19 See 42 U.S.C. §§ 7401–7515 (2010), 33 U.S.C. §1251–1387 (2010), 15 U.S.C. §§ 2601–2608 (2010), respectively.

20 See 30 TEX. ADMIN. CODE § 334 (2010).

forecloses or becomes owner of the property.<sup>21</sup> In addition, under the Texas UST rules, the lender becomes liable as an owner or operator of the UST system located at that property at the end of twelve months if the lender has not sold the property by that time.<sup>22</sup>

## B. SECURED CREDITOR EXEMPTION

As previously noted, lenders may incur status liability under CERCLA, RCRA, and their state counterparts by owning or operating a given property or satisfying another one of the categories that impose status liability. Section 101(20) of CERCLA provides a liability exemption for secured-interest holders, excluding from the definition of an “owner or operator” lenders that, without participating in the management of a facility, hold indicia of ownership primarily to protect a security interest in the facility.<sup>23</sup> This exclusion from liability does not extend to the other statutory “status” categories under which a lender could incur liability as a responsible party. However, as originally drafted, CERCLA did not provide an explanation of the scope of that liability exemption.

The potential risk exposures under the status liability provisions of federal and state law were brought home to lenders in the *Fleet Factors* case.<sup>24</sup> The court in that case held that the CERCLA liability exemption for lenders was not available in situations in which the lender was in a position to participate in financial management of a facility to a degree indicating a capacity to influence a borrower’s waste-disposal decisions, even if the lender did not actually exercise that control.

The EPA responded to lenders’ concerns about potential liability exposure under the *Fleet Factors* case by promulgating a rule in 1992 interpreting the CERCLA liability exemption for lenders.<sup>25</sup> The rule clarified that actual conduct, rather than the ability to influence conduct, generally was necessary before liability would attach to lenders. However, the court in *Kelley v. EPA* invalidated that EPA rule in 1994 on the grounds that the EPA exceeded its authority in promulgating a rule that extended beyond the bounds of the statute.<sup>26</sup> Following the *Kelley* decision, the EPA and the Department of Justice issued a joint policy stating that they would nonetheless follow the vacated rule. Congress subsequently amended CERCLA and RCRA when they adopted the Asset Conservation, Lender Liability and Deposit Insurance Protection Act of 1996 (1996 Amendments). The 1996 Amendments, which are generally viewed as a codification of the concepts in the invalidated EPA rule, added language intended to clarify the scope of the liability exemption for lenders, as well as protections for fiduciaries discussed in Subsection C, below.<sup>27</sup>

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21 See *id.* § 334.15(d).

22 See *id.* § 334.15(h).

23 42 U.S.C. § 9601(20)(A) (2010).

24 *United States v. Fleet Factors Corp.*, 724 F.Supp. 955 (S.D. Ga. 1988).

25 National Oil and Hazardous Substances Pollution Contingency Plan; Lender Liability Under CERCLA, 50 Fed. Reg. 18,344 (Apr. 29, 1992) (to be codified at 40 C.F.R. pt. 300).

26 *Kelley v. EPA*, 15 F.3d 1100 (D.C. Cir. 1994).

27 42 U.S.C. §§ 9601(20)(E), 9607(n)(5)(A)(i) (2010).

The 1996 Amendments expressly state that the secured creditor exemption applied to any person “that is a lender” that did not “participate in management.”<sup>28</sup> The term “lender” was broadly defined to include:

- insured depository institutions;
- insured credit unions;
- a bank chartered under the Farm Credit Act of 1971;
- a leasing or trust company that is affiliated with an insured depository institution;
- any person making a bona fide extension of credit to or taking or acquiring a security interest from a nonaffiliated person;
- the Federal National Mortgage Association, the Federal Home Loan Mortgage Corporation, the Federal Agricultural Mortgage Corporation, or another entity that in a bona fide manner buys or sells loans or interests in loans;
- persons that insure or guarantee against a default in the repayment of an extension of credit, or act as surety with respect to an extension of credit to nonaffiliated persons; and
- persons that provide title insurance and that acquire a facility as a result of assignment or conveyance in the course of underwriting claims.<sup>29</sup>

In addition, the 1996 Amendments addressed two important questions relating to the availability of the Secured Creditor Exemption that were left open after the EPA’s rule had been vacated: (1) what is “participation in management,” which is a particular concern to lenders pre-foreclosure; and (2) whether foreclosure would render a lender an “owner or operator” for status liability purposes.

## 1. PARTICIPATION IN MANAGEMENT

A lender must not participate in the management of a facility pre-foreclosure if it expects to qualify for the federal secured-creditor exemption. For purposes of the secured-creditor exemption, the term “participate in management” includes actually participating in the management or operational affairs of a property. Merely having the opportunity to influence or control operations is not sufficient; the lender must actually exercise control.

The language of the secured-creditor exemption provides that a lender will be considered to have participated in management if, while the borrower is still in possession of the property, the lender does any of the following:

- exercises decision-making control over the environmental compliance related to the property, such that the lender has undertaken responsibility for the hazardous-substance handling or disposal practices related to the property; or
- exercises control at a level comparable to that of a manager of the property, such that the lender has assumed or manifested responsibility:
  - for the overall management of property encompassing day-to-day decision making with respect to environmental compliance; or

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28 42 U.S.C. § 9601(20)(E)(i) (2010).

29 See *id.* § 9601(20)(G)(iv).

- for all, or substantially all, of the operational functions (as distinguished from financial or administrative functions) of the property other than the function of environmental compliance.<sup>30</sup>

The language of the secured creditor exemption also provides that a lender can perform the following acts which do not rise to the level of participating in management:

- holding a security interest or abandoning or releasing a security interest;
- including in the loan documents a covenant, warranty, or other term or condition that relates to environmental compliance;
- monitoring or enforcing the terms and conditions of the loan documents;
- monitoring or undertaking inspections of the property;
- requiring a response action or other lawful means of addressing the release or threatened release of a hazardous substance in connection with the property prior to, during, or on the expiration of the term of the loan;
- providing financial or other advice or counseling in an effort to mitigate, prevent, or cure default or diminution in the value of the property;
- restructuring, renegotiating, or otherwise agreeing to alter the terms and conditions of the loan, or exercising forbearance;
- exercising other remedies that may be available under applicable law for the breach of a term or condition of the loan; or
- conducting a response action under Section 107 of CERCLA under the direction of an on-scene coordinator appointed under the National Contingency Plan.<sup>31</sup>

Under the 1996 Amendments, the CERCLA provisions noted above were also extended to provide a secured-creditor exemption under the provisions in RCRA that relate to owners and operators of USTs.<sup>32</sup>

State statutes and regulations impose separate requirements to qualify under state counterparts of the federal secured-creditor exemption. These state requirements may differ from the requirements of the federal secured-creditor exemption, so compliance with the federal provisions will not guarantee compliance with state provisions.

The statutory provisions of the Texas Solid Waste Disposal Act (TSWDA), which generally parallel CERCLA in scope, include a secured-creditor exemption that follows the exemption provisions in CERCLA, but relate to solid-waste facilities and hauling and disposal of solid waste, in contrast to the hazardous substances that CERCLA addresses.<sup>33</sup> Additionally, under the TSWDA, a lender can perform a response action if the Texas Commission on Environmental Quality (TCEQ) has approved the cleanup plan for that response action.

In contrast, the Texas statutory and regulatory provisions that provide a limit on the liability of lenders that hold a security interest in USTs or aboveground storage tanks, do not track the secured-creditor exemption provisions in the Texas Solid Waste Disposal Act noted above. The statutory provision that most closely relates to the secured creditor exemption provides that:

30 See *id.* § 9601(20)(F)(i)-(ii).

31 See *id.* § 9601(20)(F)(iv).

32 42 U.S.C. § 6991(b)(h)(9) (2010).

33 See TEX. HEALTH & SAFETY CODE §§ 361.701–361.702 (2010).

“A lender that exercises control over a property before foreclosure to preserve the collateral or to retain revenues from the property for the payment of debt, or that otherwise exercises the control of a mortgagee-in-possession, is not liable as an owner or operator . . . unless that control leads to action that the [TCEQ] finds is causing or exacerbating contamination associated with the release of a regulated substance from a tank located on the property.”<sup>34</sup>

The statute also recognizes that a lender can remove a tank from service or take corrective action at any time before foreclosure, but that the corrective action must be performed in accordance with requirements of the TCEQ.<sup>35</sup> For the limitation to apply to a lender after foreclosure, the statute requires that the lender “did not participate in the management of the aboveground or underground storage tank or real or personal property related thereto before foreclosure”; but does not explain what that participation may involve.<sup>36</sup>

An additional issue related to pre-foreclosure actions by a lender involves the rights it holds under the various documents that make up the loan documents. Although it would be expected that a secured lender is afforded broad rights under the documents that grant the security interest, this expectation is not always fulfilled. Counsel for lenders should review all relevant loan documents before advising lenders about rights they may have to enter the property, whether to perform subsurface investigation, or to undertake environmental response actions.

## 2. POST-FORECLOSURE REQUIREMENTS

### A. FEDERAL LAW

For a lender to preserve its secured-creditor exemption under federal law post-foreclosure, the lender must not have “participated in management” of the facility prior to foreclosure, and it must divest itself of the property at the earliest practicable, commercially reasonable time, on commercially reasonable terms, taking into account market conditions and legal and regulatory requirements.<sup>37</sup> While CERCLA does not specifically address the term “commercially reasonable,” current EPA guidance indicates that the lender must attempt to sell, re-lease, or otherwise divest itself of the property within twelve months of foreclosure.<sup>38</sup> If the lender meets this standard, then it may generally maintain business activities; wind up operations; and take actions to preserve, protect, or prepare the property for sale so long as the lender lists the property with a broker or advertises it for sale in an appropriate publication.<sup>39</sup> Although

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34 TEX. WATER CODE § 26.3514(c) (2010).

35 See *id.* § 26.3514(e).

36 See *id.* § 26.3514(f)(1).

37 42 U.S.C. § 9601(20)(E)(ii) (2010).

38 See U.S. Env'tl. Prot. Agency Office of Enforcement Compliance Assurance, Superfund Frequently Asked Questions: Laws, Policy and Guidance, Question 5, [www.epa.gov/compliance/resources/faqs/cleanup/superfund/laws-faqs.html](http://www.epa.gov/compliance/resources/faqs/cleanup/superfund/laws-faqs.html) (last updated Jan. 8, 2009) (referencing the EPA's 1997 policy that clarifies when the EPA intends to use the 1992 CERCLA Lender Liability Rule and its preamble in interpreting CERCLA's lender provisions).

39 42 U.S.C. § 9601(20)(E)(ii)(II) (2010).



those permissible activities sound much like “participation in management,” in at least two cases courts determined that a “no participation in management” requirement also extends post-foreclosure.<sup>40</sup> The lender may also be able to qualify as a “bona fide prospective purchaser” provided that it can demonstrate that it conducted “all appropriate inquiry” into the property prior to foreclosure and subsequently took the necessary steps to stop any continuing release; prevent any threatened future release; and prevent exposure to previously released hazardous substances.<sup>41</sup>

## B. STATE LAW

The Texas Solid Waste Disposal Act provides similar protection to lenders that foreclose on contaminated property, but provides specific details on how the property is to be listed or advertised for sale, when the twelve-month period begins (e.g., the date of foreclosure or when marketable title is acquired), and the actions the lender may take without becoming an owner or operator.<sup>42</sup> With respect to underground and aboveground storage tanks, the lender has an additional obligation to remove the tanks from service and complete any corrective action in response to any release from the tank.<sup>43</sup> Removal or corrective action must begin within ninety days from the time the lender becomes the owner of the property.<sup>44</sup> Furthermore, a lender becomes the owner of an underground or aboveground storage tank at the earlier of twelve months from when the lender forecloses or acquires marketable title, or when ownership is no longer held to protect a security interest even though the lender complied with the other requirements.<sup>45</sup>

## 3. JUDICIAL AUTHORITY

Only a handful of courts have analyzed a lender’s pre- or post-foreclosure activities to determine whether it had lost the protections of the secured-creditor exemption. With respect to pre-foreclosure activities, courts have tended to recognize the exemption even when faced with facts that indicate some degree of participation in management. For instance, in *Z & Z Leasing v. Grayling Reel*, the court held that a lender did not participate in management when it had caused environmental surveys to be conducted on the property, had its environmental consultant remove underground storage tanks, and reported a release of hazardous substances to the State of Michigan.<sup>46</sup>

However, in *United States v. Mirabile*, the court denied a bank’s motion for summary judgment that it had not participated in management based upon evidence that a loan officer was “always” present at the site, perhaps visiting the plant once a week.<sup>47</sup> In addition, the record contained evidence that the bank stated that the borrower would have to accept the day-to-day supervision if it wanted to continue operations

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40 *United States v. Fleet Factors Corp.*, 901 F.2d 1550, 1556 (11th Cir. 1990); *United States v. McLamb*, 5 F.3d 69, 72 (4th Cir. 1993).

41 42 U.S.C. § 9601(35)(A)(i) (2010).

42 TEX. WATER CODE § 26.3514(d) (2010); *see also* 30 TEX. ADMIN. CODE § 334.15 (2010).

43 TEX. WATER CODE § 26.3514(d) (2010).

44 *Id.*

45 30 TEX. ADMIN. CODE § 334.15(h) (2010).

46 *Z & Z Leasing v. Grayling Reel*, 873 F.Supp. 51, 54 (E.D. Mich. 1995).

47 *United States v. Mirabile*, 1985 WL 97, at \*3 (E.D. Penn. 1985).

with bank funds. The loan officer also purportedly came to the site frequently and insisted on certain manufacturing changes and reassignment of personnel. In *New York v. HSBC USA, N.A.*, the State of New York claimed that the lender did not qualify for the exemption because the lender had obtained control over the operating funds of the borrower, which allegedly prevented the borrower from complying with its environmental obligations.<sup>48</sup> The lender purportedly instituted a lock-box arrangement with the borrower that permitted the lender to disburse funds on behalf of the borrower. Allegedly, the lender failed to make certain disbursements, which led to environmental non-compliance for the borrower. The matter ultimately settled, so the court did not opine on the situation presented.<sup>49</sup> Nonetheless, the case presents a not-uncommon set of facts in the context of the “participation in management” standard.

With respect to post-foreclosure activities, very little guidance is available on the issue of what constitutes commercially reasonable efforts by a lender to divest itself of property. Courts have found the secured-creditor exemption applies if the lender reasonably and promptly attempts to sell the property. For instance, in *Bancamerica Commercial Corp. v. Trinity Industries, Inc.*, the court concluded that the efforts were sufficiently prompt even though the lender rejected three offers that were less than the loan amount owed on the property, because soon after the lender took the deed in lieu of foreclosure, it listed the property with an agent who actively tried to sell the property.<sup>50</sup> However, in *United States v. Pesses*, the court found that the exemption was not available to a lender that took control of property post-foreclosure for over two years, took over responsibility for security of the property, hired people to clean up the plant and perform maintenance tasks, received assigned rent payments from the local development authority, and made arrangements to lease part of the facility to a new lessee when the debtor defaulted.<sup>51</sup> In another case, *XDP, Inc. v. Watumull Properties Corp.*, the court held that based upon the totality of the facts, the record presented a question of fact as to whether the lender was merely protecting its security interest or was actively involved in the management of the facility after it acquired the property.<sup>52</sup>

### C. LIMITATION OF FIDUCIARY LIABILITY

The 1996 Amendments also provide that the liability of fiduciaries is expressly limited to the assets held in a fiduciary capacity, but only if an independent basis for liability other than ownership as a fiduciary or actions taken in a fiduciary role is not established.<sup>53</sup> A fiduciary may also be liable for its negligent action that “cause or

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48 *New York v. HSBC USA, N.A.*, No. 07-3160 (S.D.N.Y. filed May 30, 2007).

49 See Stephen C. Jones, Noah AnStraus & H. Hamilton Hackney, *CERCLA's 'Safe Harbor' Can Turn Rough for Unsuspecting Lenders*, (June 1, 2007), <http://www.gtlaw.com/portalresource/lookup/wosid/contentpilot-core-401-7067/pdfCopy.pdf?view=attachment> (last visited Nov. 7, 2010).

50 *Bancamerica Commercial Corp. v. Trinity Indus., Inc.*, 900 F.Supp. 1427, 1457 (D. Kan. 1995).

51 *United States v. Pesses*, 1996 WL 143875, at \*3-4 (W.D. Pa. 1996).

52 *XDP, Inc. v. Watumull Prop. Corp.*, 2004 WL 1103023, at \*18 (D. Or. 2004).

53 42 U.S.C. § 9607(n)(1) (2010).

contributes to the release or threatened release” of hazardous substances.<sup>54</sup> The Texas Solid Waste Disposal Act has similar provisions for fiduciaries.<sup>55</sup>

A fiduciary is any person acting for the benefit of another as a bona fide: (1) trustee; (2) executor; (3) administrator; (4) custodian; (5) guardian of estates or guardian ad litem; (6) receiver; (7) conservator; (8) committee of estates of incapacitated persons; (9) personal representative; (10) trustee acting under an indenture agreement, trust agreement, lease or similar financing agreement for debt securities, certificates of interest or certificates of participation in debt securities, or other forms of indebtedness as to which the trustee is not, in the capacity of trustee, the lender; or (11) representative in any other capacity that the EPA Administrator, after public notice, determines to be similar to the capacities listed above.<sup>56</sup>

The 1996 Amendments also establish a “safe harbor” for the purpose of describing actions that will not give rise to personal liability to the fiduciary if the fiduciary is:

undertaking or directing other persons to undertake a response action under Section 107(d)(1) of CERCLA or under the direction of a coordinator appointed under the National Contingency Plan;

- undertaking or directing another person to undertake lawful means of addressing a hazardous substance at the facility;
- terminating the fiduciary relationship;
- including in the terms of the fiduciary relationship a covenant, warranty, or other condition that relates to compliance with an environmental law or monitoring, modifying or enforcing a term or condition;
- monitoring or undertaking inspections of the facility;
- providing financial or other advice or counseling to other parties to the fiduciary relationship, including the settlor or beneficiary;
- restructuring, renegotiating, or otherwise altering the terms and conditions of the fiduciary relationship;
- administering as fiduciary, a facility that was contaminated before the fiduciary relationship began; or
- declining to take any of the actions described above, with the exception of those related to response actions.<sup>57</sup>

However, fiduciaries are specifically excluded from the benefits of the 1996 Amendments when a person: (a) is acting as a fiduciary with respect to a trust actively carrying on a business for profit, unless the trust was created due to the incapacity of a natural person; or (b) acquires ownership or control of a facility to avoid liability.<sup>58</sup>

### **III. DISPOSITION OF ENVIRONMENTALLY IMPACTED COLLATERAL BY LENDERS**

At some point in time, the lender may need to consider the disposition of collateral it holds as security for non-performing loans. If attempts to restructure the loan

54 See *id.* § 9607(n)(3).

55 See TEX. HEALTH & SAFETY CODE §§ 361.65-52 (2010).

56 42 U.S.C. § 9607(n)(5)(A)(i)(I-XI) (2010).

57 42 U.S.C. § 9607(n)(4)(A)-(I) (2010).

58 See *id.* § 9607(n)(5)(A)(ii).

terms through a workout are unsuccessful and the lender wants to salvage value from the collateral it holds (as opposed to abandoning its interest in the collateral due to concerns about exposure to environmental liabilities), it will be faced with a decision of how to proceed.

As earlier noted, lenders should have a process in place for analyzing the environmental risks of non-performing loan collateral. Before deciding how to proceed with collateral from non-performing loans, the lender should go through an updated due-diligence process. If the lender considered environmental-risk issues in the original loan-underwriting process and in the subsequent loan-management process, the lender will probably not be faced with environmental surprises from the updated due diligence. If, however, it is determined that the cost of addressing environmental problems exceeds the value of the collateral, the lender will want to walk away from its security interest. Alternatively, if the cost of addressing the environmental problems is less than the collateral is worth, the asset has net value, at least from the standpoint of an environmental analysis. The lender will then want to determine how best to capture that value and minimize its loan loss.

By acquiring a property through foreclosure or other means, such as through the lender tendering a deed in lieu of foreclosure, the lender places itself in the chain of title for contaminated property. If the lender qualifies for the secured-creditor exemption, it creates an anomalous situation in which the lender holds title to property, but is not considered an “owner” of that property for status-liability purposes. A lender may, nevertheless, inadvertently step into unexpected obligations by foreclosing on property. One example is the affirmative requirements imposed on a foreclosing lender under Texas statutory and regulatory provisions relating to USTs.<sup>59</sup> Foreclosing lenders can also be hit with the cost of storm-water-control obligations when they have foreclosed on uncompleted property developments.<sup>60</sup> Additionally, water intrusion into structures can require action, and related cost, to avoid mold contamination and preserve the value of the foreclosed collateral.

Consequently, lenders may want to consider strategies that do not involve foreclosure, or other means of taking title to property, so they can effectively avoid issues associated with both ownership and concerns as to whether they have satisfied the requirements necessary for compliance with the secured creditor exemption. One option is that a lender faced with environmentally-impacted collateral may forego foreclosure and instead sue the debtor on the underlying note, or the guarantor of the secured debt on its guarantee, so that the lender does not become the owner of the property covered by its deed of trust lien.

## **A. RECOVERING VALUE FROM COLLATERAL – PRE-FORECLOSURE CONSIDERATIONS**

Strategies a lender may consider that do not require it to foreclose on property, or at least minimize its exposure from foreclosure, include the following:

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59 30 TEX. ADMIN. CODE § 334.15(d),(h) (2010).

60 See Texas Commission on Environmental Quality, *Storm Water Permits for Construction*, [http://www.tceq.state.tx.us/nav/permits/wq\\_construction.html](http://www.tceq.state.tx.us/nav/permits/wq_construction.html) (last visited November 5, 2010).

### **1. SALE OF NOTE**

One approach is to sell the underlying note and assign the related security interest in the collateral to a third party. A lender may explore the active market of investors interested in pursuing a variant of that transaction—referred to as “loan-to-own.” In that case, a party acquires a note collateralized by property. If the loan is in default, the assignee can exercise its rights under the loan documents to foreclose on property that secures the note. By selling the note, the lender avoids potential liability and other issues that could arise by foreclosing on the collateral. Note, however, that the assignee of the note will not qualify for the secured-creditor exemption if it intends to acquire the property securing the note for investment.

### **2. SHORT SALE**

The lender may also facilitate a short sale of the collateral by the defaulting borrower directly to a third-party purchaser. In that transaction, the lender will agree to take a loss on the loan in exchange for the sales proceeds from the sale of the collateral being applied against the outstanding loan balance. Under this strategy, the lender recovers some of the value that the collateral provides, but avoids being in the chain of title for the collateral sold.

### **3. RECEIVERSHIP**

The loan documents may include, as one of the lender’s remedies that arise upon default, a right to appoint a receiver for the collateral. Receivership offers a way for a lender to have an unaffiliated third party, under supervision of a court, address environmental issues at the property that serves as loan collateral, and sell the property without the lender being involved in management of the property. The downsides of receivership are that it involves additional administrative cost and that lenders effectively lose control of the collateral.

### **4. ASSIGNMENT TO SPECIAL-PURPOSE ENTITY**

To better insulate itself from environmental liability, lenders may choose to assign the loan and its lien to an affiliated special-purpose entity in advance of foreclosure. That strategy attempts to isolate in the special-purpose entity liability that may arise from the environmental conditions of the property acquired through foreclosure.

## **B. RECOVERING VALUE FROM COLLATERAL – POST-FORECLOSURE CONSIDERATIONS**

If the lender forecloses on property rather than pursuing one of the avenues noted above, the lender will need to actively market the assets it acquires through foreclosure (many times referred to by lenders as real-estate-owned, or REO, property) in order to qualify for the post-foreclosure protection of the secured-creditor exemption under federal and state laws. With the onset of the economic downturn, many investors anticipated that lenders would be offering REO properties at significant discounts to the values the lenders show on their books, as was the case during the savings-and-loan/banking crisis in Texas in the 1980s. For a number of reasons, that anticipated result has not occurred, at least so far, during the current economic downturn. While lenders may be in the market to sell REO property (and be especially motivated for publicly reporting or regulatory purposes to sell as the end of their fiscal quarters ap-

proach), the spread between the lenders' asking price and the bid prices investors offer generally remains significant. That being stated, some deals involving REO property are being completed.

A number of environmentally-related matters that selling lenders and purchasing investors may want to consider in negotiating their deals are discussed below.

## 1. DUE DILIGENCE

Before lenders foreclose, they should understand the then-current condition of the collateral, and the risks and liabilities that may arise out of their ownership of REO property. This effort will usually involve obtaining an updated environmental assessment, which may or may not be performed using the AAI standards.<sup>61</sup>

A potential buyer may ask to utilize the lender's updated environmental assessment and also additional reports and other information from the lender's files. Unless the lender and its consultant agree to provide reliance on those reports, the buyer will not have any recourse against the lender's consultant if a problem arises that the consultant did not identify in the reports.

The bottom line is that buyers are well advised to use their own consultants to assess the collateral they plan to purchase. First of all, a report meeting AAI standards is necessary for a buyer's eligibility to utilize the bona fide prospective purchaser defense and other certain defenses under CERCLA.<sup>62</sup> Additionally, the buyer should consider whether it needs to look at environmental issues that are outside the scope of the AAI standards. Examples of matters excluded from the scope of an AAI report include analysis of wetlands and endangered-species issues, which will be of interest to buyers of undeveloped property, and asbestos, lead-based paint, and mold issues for properties with existing structures.

Investors looking to purchase distressed assets from lenders may make the business decision that if they are successful in negotiating a substantial discount on the purchase price, they may forego conducting their own environmental due diligence. Their rationale would be that the borrower would have also performed due diligence in acquiring the assets serving as collateral, and that the lender would have performed due diligence at the time the loan was made and before foreclosing, so the environmental risk should be minimal. That approach to risk analysis appears to be short-sighted for a number of reasons. The most obvious one is that the issues of concern are dynamic. Onsite and offsite conditions may have changed since previous due diligence was undertaken. An issue of particular concern is whether a borrower in financial distress may have ceased using its operating capital on environmental compliance or disposal of wastes, either of which could result in new environmental conditions affecting the property that serves as collateral. Even historic conditions may have changed because of exacerbating circumstances. Additionally, the fact that the loan-underwriting standards of many borrowers deteriorated in the years preceding the economic downturn is broadly acknowledged.<sup>63</sup> It is not reasonable to believe that environmental components of underwriting standards avoided that trend.

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61 See 40 C.F.R. § 312.20(b) (2010).

62 42 U.S.C. § 9607(q) (2010).

63 Sheila C. Bair, Chairman, Fed. Deposit Insurance Corp., On the Causes and Current State of the Financial Crisis before the Financial Crisis Inquiry Commission (Jan. 14, 2010), *available*

## 2. PRICING

A second issue is pricing the REO property. In determining what to offer for an REO property, the prospective buyer will seek to adjust the price by an amount to reflect both the cost of environmental remediation and the perceived risk associated with the property. Unless the lender understands the site conditions, and in particular the potential remediation strategies and cost ranges related to those strategies, the lender can be foregoing significant recovery in pricing the property for sale.

In many cases, the lender cannot afford to, or does not otherwise want to, physically address the environmental issues at a property. Where regulatory closure issues remain open, prospective buyers may shy away from bidding on the property. One technique successfully used for a bankruptcy trustee client to assist in the marketing process for contaminated property was to create, with assistance of an environmental consultant, an analysis of the available strategies (including a Municipal Setting Designation<sup>64</sup>) to achieve regulatory closure, and ranges of costs associated with those strategies. The analysis served as a way to help potential buyers understand that regulatory closure could be accomplished for a reasonable cost and in a reasonable time frame at that particular contaminated site.

## 3. RISK ALLOCATION

The contractual allocation of environmental risks and liabilities is a third important issue in deal negotiations. A lender will want the buyer to assume responsibility for environmental conditions impacting property being sold. The prevailing practice to accomplish that goal is to sell property “as is” and “with all faults.” Under Texas law, an “as is” sale is considered a recognition that the seller is not giving any representations or warranties regarding the property other than those relating to title or otherwise specifically set forth in the contract of sale.<sup>65</sup> An “as is” sale is intended to serve as an implicit bar to later claims by a buyer based upon breach of a representation or warranty and thereby removes the buyer’s ability to bring a claim against seller for environmental conditions unless the seller has engaged in bad-faith practices, most notably fraudulent misrepresentation, concealment, or impairment of inspection.<sup>66</sup> The parties may also choose to clarify the scope of the risk allocation by specifically stating in the contract that at closing, as between seller and buyer, buyer will become solely responsible for all environmental conditions impacting the property.

An “as is” sale will not, however, bar a buyer from performing clean up at a property it has purchased on an “as is” basis and then suing responsible parties, including the lender, under applicable statutory cost-recovery provisions.<sup>67</sup> Consequently, in selling property acquired through foreclosure, the lender would be advised to require a release of liability from the buyer from all claims, including environmentally related

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at <http://www.fdic.gov/news/news/speeches/chairman/spjan1410.html>.

64 TEX. HEALTH & SAFETY CODE §§ 361.801–361.808 (2010).

65 *Prudential v. Jefferson*, 896 S.W.2d 156, 161 (Tex.1995).

66 *Id.* at 162.

67 See TEX. HEALTH & SAFETY CODE §§ 361.001–361.966 (2010); see also 42 U.S.C. § 9607 (2010); see also *Bonnie Blue, Inc. v. Reichenstein*, 127 S.W.3d 366, 369 (Tex. App.—Dallas 2004, no pet.).

claims, which would explicitly bar the buyer from seeking cost recovery from the selling lender.

Lenders may also request a buyer to provide contractual indemnification.<sup>68</sup> The purpose of indemnification is to protect the lender from third-party claims, since the release would bar first-party claims by the buyer. Among other things, indemnification would provide protection to the seller against cost-recovery claims from subsequent purchasers that will not be bound by the release provided to the lender by the original buyer. Buyers are, understandably, reluctant to provide indemnity protection to the lender-seller.

#### **4. ENVIRONMENTAL INSURANCE**

If a buyer is not willing to provide an indemnity, or if an indemnity is of limited value because of the buyer's lack of financial wherewithal, the lender may want to consider an environmental insurance policy. Insurance can allow environmental risks to be allocated to an entity that is not a party to the purchase transaction and that has demonstrated financial wherewithal. But environmental insurance may have other limitations that a lender selling REO property finds unattractive in comparison to a contractual indemnity from the buyer. An insurance policy will have specified coverage limits and a specified term. In contrast, indemnification provisions in the purchase and sale agreement can be negotiated so that it does not have a monetary limit on coverage or a time limit on the indemnity obligation. Additionally, environmental insurance policies have contractual exclusions that may limit their usefulness. One significant issue is an exclusion of coverage for clean-up costs for known pollution conditions, the so-called "burning building" for which insurers will not provide coverage. Finally, the cost of the policy may make it an unattractive alternative to contractual indemnification from the buyer.

#### **5. OTHER MATTERS**

The secured-creditor exemption requires the lender to make commercially reasonable efforts to divest itself of the property at the earliest practicable, commercially reasonable time. Because the lender's compliance with these requirements will necessarily be considered in hindsight, the lender is well advised to document its efforts to market the property. In particular, it should document its reasoning for rejecting any offer for the property. One particular situation of concern may arise when a potential buyer makes an offer to the lender with a price that appears to be commercially reasonable, but has other aspects that are not acceptable to the lender. An example is when the lender insists upon a contractual indemnification from the buyer, but the buyer is unwilling to provide one.

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68 For a dated, but still useful, analysis of matters relating to contractual indemnification, see Parker and Slavich, *Contractual Efforts to Allocate the Risk of Environmental Liability: Is There a Way to Make Indemnities Worth More Than the Paper They Are Written On?*, 44 *SOUTHWESTERN L.J.* 1349 (1991).



#### **IV. CONCLUSION**

With the secured-creditor exemption, lenders are arguably better protected than other parties that similarly may be subject to status liability under federal and state environmental laws. Nevertheless, that protection is not comprehensive, and lenders face a number of potential pitfalls that can make the secured-creditor exemption unavailable. Lenders are well advised to establish an environmental-risk policy that will provide guidance concerning environmental issues from loan inception, throughout the life of a loan, and in the event the borrower defaults on the loan.

A lender will want to undertake pre-workout due diligence before deciding how to address collateral relating to non-performing loans. As it moves forward, the lender may choose a strategy that will keep it out of the chain of title for the property. If the lender chooses instead to foreclose, it will want to consider carefully the structure of the deal to protect itself from environmental legacy issues related to the REO property it held as collateral.

*This article was prepared in August 2010 as a general discussion of the issues presented and is not to serve as, or to be relied upon as, legal advice. This article would not have been completed without the assistance of Michael Goldman and Erika Erikson, my colleagues at Guida, Slavich & Flores, P.C. The views expressed in the article are the author's, and not of Guida, Slavich & Flores, P.C. or its clients*

*John Slavich is a shareholder/principal in the law firm of Guida, Slavich & Flores, P.C. in Dallas. He has a diversified environmental law practice in which he provides strategic advice to clients on a broad range of environmental issues, including the environmental aspects of transactions, brownfields redevelopment, remediation matters, risk management, compliance matters, and climate change. Mr. Slavich's environmental practice is complemented by more than a decade of prior experience practicing corporate finance and transactional law.*

*Mr. Slavich received his law degree from Washington University in St. Louis, where he was a member of the Board of Editors of the Washington University Law Quarterly. He earned his master of business administration degree from Southern Methodist University and his undergraduate degree from Earlham College. He was selected as Best Lawyer's 2011 Dallas Environmental Lawyer of the Year. Texas Monthly magazine named him as a Texas Super Lawyer in their inaugural listing in 2003 and in each subsequent listing.*

# FAIR, EFFECTIVE, AND COMPREHENSIVE: THE FUTURE OF TEXAS WATER LAW

BY ADRIAN SHELLEY

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“...[T]he extensive statutory changes in 1997, together with the increasing demands on the State’s water supply, may result before long in a fair, effective, and comprehensive regulation of water use . . . ”

— Justice Hecht, *Sipriano* concurrence, 1999<sup>1</sup>

## I. INTRODUCTION

Justice Nathan Hecht’s words come from a concurring opinion to a significant Texas Supreme Court decision, *Sipriano v. Great Spring Waters of America, Inc.*<sup>2</sup> *Sipriano* affirmed a strict rule of groundwater ownership that was nearly a century old.<sup>3</sup> It left Texas as the only state to apply the rule of capture to groundwater.<sup>4</sup> It demonstrated that, though we recognize the urgency of responsible management of limited water resources, we are not ready to abridge the ownership rights of Texans as a solution.

This note argues around that solution. It is easy to say that we need to simply wrest groundwater from its owners and give it to the State. It is logistically impossible, however, to do so. Just because we choose not to give up private ownership of groundwater does not mean that we cannot manage it as a resource. This note examines the current status of water rights in Texas and offers a few suggestions.

Part II of this note outlines the dual system of surface water and groundwater that exists in Texas. Part III points out ambiguous terms in the Texas Water Code and shows how they have created issues in a current Texas Supreme Court case. Part IV points out that our laws have not kept pace with our understanding of water in Texas, then compares the Texas system to that of other western states. Some suggestions for improvement are drawn from those states, and from Texas law itself. The note concludes that, although unifying Texas water law may be impossible, Texas still has a way forward.

## II. TEXAS’S WATER LAW SYSTEM

### **A. DEVELOPMENT OF TEXAS WATER LAW**

Surface water rights in Texas developed from a variety of historical allocation systems. Our oldest water rights—older, in fact, than Texas itself—were contained in Spanish and Mexican land grants.<sup>5</sup> Without an explicit grant of water within a land grant, the grant did not have a water right.<sup>6</sup> Later, as an independent republic, Texas adopted

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1 *Sipriano v. Great Spring Waters of America*, 1 S.W.3d 75, 83 (Tex. 1999) (Hecht, J., concurring).

2 *Id.*

3 *Id.* at 75.

4 JOSEPH SAX ET AL., *LEGAL CONTROL OF WATER RESOURCES* 417–18 (4th ed. 2006).

5 *City of Marshall v. City of Uncertain*, 206 S.W.3d 97, 101 (Tex. 2006).

6 *Id.*; *In re Adjudication of Water Rights of Brazos III Segment of Brazos River Basin*, 746 S.W.2d 207, 209 (Tex. 1988) (“[O]wners of all Spanish and Mexican lands granted prior to 1840 must affirmatively show a grant of irrigation rights from the sovereign to claim a riparian right.”).

the English riparian-rights system.<sup>7</sup> Under this system, an owner of land adjacent to a stream had the right to use a reasonable amount of water for irrigation.<sup>8</sup>

As West Texans know well, much of the land in our state is not adjacent to water. The need for a system of non-riparian appropriative rights led Texas to pass the Irrigation Acts of 1889 and 1895.<sup>9</sup> These acts ushered in a system that is often described as “first in time, first in right.”<sup>10</sup> However, water was still appropriated without any permitting or assessment of water availability.<sup>11</sup> A permitting system created in 1913 gave the State the right to grant or deny permits, but the system foundered in the face of unrecorded yet valid rights from the past.<sup>12</sup>

Texas unified this confusing system with the Water Rights Adjudication Act of 1967 (“WRA Act”).<sup>13</sup> The WRA Act was essentially a statewide quiet title action, requiring all water-rights holders to file a claim to preserve their historical uses. Priority was given by date of historical use. Because these uses were not allocated with regard to water availability, water was overappropriated even after the WRA Act.<sup>14</sup> In 1997, the legislature enacted Senate Bill 1 to address the State’s growing water shortage.<sup>15</sup>

## B. MODERN WATER LAW

### 1. SURFACE WATER

Like many western states, Texas operates a dual system of surface-water and groundwater rights. Generally speaking, surface water is state-owned while groundwater is privately owned. Surface water is called “state water” in the Texas Water Code and is defined as:

water of ordinary flow, underflow, and tides of every flowing river, natural stream, and lake, and of every bay or arm of the Gulf of Mexico, and the storm water, floodwater, and rainwater of every river, natural stream, canyon, ravine, depression, and watershed in the state . . .<sup>16</sup>

The public has the right to appropriate state water and put it to a beneficial use. Two hundred acre-feet of water may be appropriated for domestic and certain other uses without a permit.<sup>17</sup> All other appropriations must be acquired by permit.<sup>18</sup> Permit applications are made to and approved by the Texas Commission on Environmental Quality.<sup>19</sup>

<sup>7</sup> *City of Marshall*, 206 S.W.3d at 101-02.

<sup>8</sup> *Id.* at 102.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> *Id.*

<sup>14</sup> *Id.* at 103.

<sup>15</sup> *Id.*

<sup>16</sup> TEX. WATER CODE ANN. § 11.021(a) (Vernon 2009).

<sup>17</sup> *Id.* § 11.142.

<sup>18</sup> *Id.* § 11.121.

<sup>19</sup> *Id.*

Courts have also recognized a distinction between diffuse surface water and water in a watercourse.<sup>20</sup> Diffuse surface water—usually storm or floodwater—is water that has gathered on the land but not yet passed into a watercourse.<sup>21</sup> This water is unappropriated and may be taken by the landowner.<sup>22</sup> Water that has entered a watercourse is owned by the State and held in trust for the public.<sup>23</sup>

## 2. GROUNDWATER

Groundwater rights and regulations are completely separate from surface-water rights.<sup>24</sup> The Texas Supreme Court adopted the “English” or “absolute ownership rule” of groundwater in *Houston & T. C. Ry. Co. v. East*.<sup>25</sup> The *East* decision was in 1904, when the nature of groundwater was still “secret, occult, and concealed.”<sup>26</sup> Although today we understand that groundwater in Texas is inextricably linked to surface water, contemporary courts have affirmed the absolute ownership rule and its corollary, the rule of capture.<sup>27</sup> Texas is unique in applying the rule of capture to groundwater.<sup>28</sup>

Texas courts have declared that absolute ownership creates in landowners a vested right that is entitled to constitutional protection.<sup>29</sup> Although the Texas Water Code does not employ the term “absolute ownership,” it does exempt vested private rights from its provisions other than through the WRA Act.<sup>30</sup> The Water Code also recognizes the “ownership and rights” of landowners to groundwater, subject only to rules that groundwater conservation districts have promulgated.<sup>31</sup> Districts cannot deprive or divest owners of their groundwater rights, but those rights may be “limited or altered.”<sup>32</sup>

Although ownership in groundwater is absolute, this ownership does not mean the State cannot regulate groundwater. The Edwards Aquifer Authority Act (“EAA Act”) is one example of groundwater regulation; it regulates pumping in central

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20 *City of San Marcos v. Texas Comm’n on Envtl. Quality*, 128 S.W.3d 264, 271 (Tex. App.—Austin 2004, pet. denied) (quoting *Domel v. City of Georgetown*, 6 S.W.3d 349, 353 (Tex. App.—Austin 1999, pet. denied); see also Ronald Kaiser, *Who Owns the Water?*, TEXAS PARKS AND WILDLIFE, July 2005, available at [http://www.tpwmagazine.com/archive/2005/jul/ed\\_2/](http://www.tpwmagazine.com/archive/2005/jul/ed_2/)).

21 *Domel*, 6 S.W.3d at 353.

22 *City of San Marcos*, 128 S.W.3d at 272.

23 *Id.*

24 TEX. WATER CODE ANN. § 35.003 (Vernon 2009) (“The laws and administrative rules relating to the use of surface water do not apply to groundwater.”).

25 *Houston & T. C. Ry. Co. v. East*, 81 S.W. 279, 280 (Tex. 1904).

26 *Id.* at 281.

27 *Sipriano v. Great Spring Waters of America*, 1 S.W.3d 75, 00-01 (Tex. 1999); *City of Del Rio v. Clayton Sam Colt Hamilton Trust*, 269 S.W.3d 613, 617–18 (Tex. App.—San Antonio 2008, pet. denied).

28 SAX, *supra* note 4, at 417–418; *City of San Marcos*, 128 S.W.3d at 271.

29 *Edwards Aquifer Authority v. Day*, 274 S.W.3d 742, 756 (Tex. App.—San Antonio 2008, pet. granted).

30 TEX. WATER CODE ANN. §11.001(a) (Vernon 2009).

31 *Id.* § 36.002.

32 *Id.*

Texas's Edwards Aquifer. The EAA Act states that actions taken under its authority may not be construed as "depriving or divesting" a groundwater-rights owner.<sup>33</sup> It also states that compensation should be paid for a taking of private property or an impairment of a contract.<sup>34</sup>

The EAA Act provides the Edwards Aquifer Authority ("Authority") with broad powers "necessary to manage, conserve, preserve, and protect the aquifer and to increase the recharge of, and prevent the waste or pollution of water in, the aquifer."<sup>35</sup> The Authority's powers do not extend to surface water.<sup>36</sup> The EAA Act also requires groundwater users to apply for a permit to preserve existing uses.<sup>37</sup> A permit application requires a declaration of use during the historical period from June 1, 1972 through May 31, 1993.<sup>38</sup> This declaration of historical use looks similar to the declarations that the Water Rights Adjudication Act of 1967 required. The requirement to affirmatively demonstrate use during a historical period has been held constitutional.<sup>39</sup> These provisions of the Edwards Aquifer act demonstrate that significant regulation of groundwater can occur without taking property.

## C. THE CHANGING CHARACTER OF WATER

### 1. SURFACE WATER TO GROUNDWATER

The Texas Water Code states that surface water can be changed into groundwater by the affirmative actions of private landowners in limited circumstances.<sup>40</sup> Water users can convert certain kinds of surface water into groundwater by pumping it into an aquifer as recharge.<sup>41</sup> Section 11.023(c) of the Water Code allows (1) unappropriated storm water or floodwater, not water from the ordinary flow of a watercourse, to be used to recharge the Edwards Aquifer in Kinney, Uvalde, Medina, Bexar, Comal, and Hays Counties, (2) if expert testimony establishes that an unreasonable loss of state water will not occur; and (3) the water used to recharge the aquifer will be capable of being withdrawn and applied to a beneficial use in the future.<sup>42</sup>

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33 Edwards Aquifer Authority Act § 1.07, Act of May 30, 1993, 73d Leg., R.S., ch. 626, 1993 Tex. Gen. Laws 2350 (current version at Act of May 28, 2007, 80th Leg., R.S., ch. 1430, §§ 12.01-12.12, 2007 Tex. Gen. Laws 4612), available at <http://edwardsaquifer.org/files/EAAact.pdf>.

34 *Id.* Litigants under the Act have yet to be successful in winning compensation for any taking. See, e.g., *Day*, 274 S.W.3d at 756 (remanding issues of constitutional taking claim for further proceedings).

35 Edwards Aquifer Authority Act § 1.08(a), Act of May 30, 1993, 73d Leg., R.S., ch. 626, 1993 Tex. Gen. Laws 2350 (current version at Act of May 28, 2007, 80th Leg., R.S., ch. 1430, §§ 12.01-12.12, 2007 Tex. Gen. Laws 4612), available at <http://edwardsaquifer.org/files/EAAact.pdf>.

36 *Id.* § 1.08(b).

37 *Id.* § 1.16(a).

38 *Id.*

39 *Barshop v. Medina Cnty. Underground Water Conservation Dist.*, 925 S.W.2d 618, 632 (Tex. 1996).

40 See TEX. WATER CODE ANN. § 11.023 (Vernon 2009).

41 *Id.* § 11.023(c).

42 *Id.*

Water used for these recharge purpose changes character from surface water to groundwater.<sup>43</sup> As stated in Section 11.023(d) of the Water Code:

When it is put or allowed to sink into the ground, water appropriated under Subsection (c) of this section loses its character and classification as storm water or floodwater and is considered percolating groundwater.<sup>44</sup>

Subsection (d) limits itself to water appropriated under Subsection (c). What about water that is not appropriated, but merely sinks into the ground by natural processes? The Water Code does not explicitly state that this water changes character as well. However, Subsection (d) implies that such water may change character.<sup>45</sup>

## 2. GROUNDWATER TO SURFACE WATER

The Texas Water Code is even less clear on the conversion from groundwater to surface water. Despite this lack of clarity, Texas courts consider it “well-settled” that water becomes state water when it enters a watercourse.<sup>46</sup> This conversion happens even if the source of the water is groundwater.<sup>47</sup>

It is possible for groundwater to be placed into a watercourse yet retain its character as privately owned.<sup>48</sup> Groundwater owners are permitted to transport their water using a watercourse with a bed-and-banks authorization.<sup>49</sup> Factors that the State will view favorably in issuing a bed-and-banks authorization include that “the owner of the groundwater exercised control over the water, knew the amount pumped into the watercourse, and withdrew approximately that same amount, or knew how much of the water was lost in transit and withdrew only the remaining water.”<sup>50</sup> If a groundwater rights holder simply allows water to flow into a watercourse without measuring or regulating its flow, that water changes character to state-owned surface water.<sup>51</sup>

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43 TEX. WATER CODE ANN. § 11.023(d) (Vernon 2009).

44 *Id.*

45 *See id.* Water “allowed to sink into the ground” is stated to be converted to groundwater, and thus a natural process is implicitly determined to be a conversion by the Water Code.

46 *Edwards Aquifer Authority v. Day*, 274 S.W.3d 742, 752 (Tex.App.—San Antonio 2008, pet. granted).

47 *Id.* at 753.

48 *See* TEX. WATER CODE ANN. § 11.042 (Vernon 2009); *see also* *City of Corpus Christi v. City of Pleasanton*, 276 S.W.2d 798 (Tex. 1955) (pumping directly into a watercourse and transporting more than 100 miles downstream with substantial loss is not waste if the recovered water is lawfully used); *City of San Marcos*, 128 S.W.3d 264 (discharge of groundwater-derived effluent into a watercourse constitutes abandonment and converts effluent to state water); *Denis v. Kickapoo Land Co.*, 771 S.W. 2d 235 (Tex. App.—Austin 1989, writ denied) (underground spring water captured, measured, and channeled into a watercourse retains its character as privately owned groundwater).

49 TEX. WATER CODE ANN. § 11.042 (Vernon 2009).

50 *Day*, 274 S.W.3d at 753.

51 *City of San Marcos v. Texas Comm’n on Env’tl. Quality*, 128 S.W.3d 264, 272 (Tex.App.—Austin 2004, pet. denied).

Groundwater that leaves an aquifer, including by natural means, is defined as “discharge.”<sup>52</sup> Groundwater conservation districts must, in their management plans, account for water lost via discharge from aquifers “to springs and any surface water bodies, including lakes, streams, and rivers.”<sup>53</sup> Therefore, the Texas Water Code recognizes that groundwater lost by discharge becomes surface water, but only implicitly. Streams that receive some of their water from aquifer discharge are termed “gaining streams” and the water they gain is called “inflow.”<sup>54</sup> In reality, a single stream can be both a gaining stream and, conversely, a losing stream, depending on location and water conditions. The Texas Water Code fails to account for this and other complex realities of Texas hydrology.

### **III. AMBIGUITY IN THE CODE AND CONVOLUTED LITIGATION**

#### **A. AMBIGUITY IN THE TEXAS WATER CODE**

One problem with the current Texas Water Code is that many terms are either ambiguous or completely undefined. This section points out some of these ambiguities and illustrates how they were employed in a case currently before the Texas Supreme Court, *Edwards Aquifer Authority v. Day*.

##### **1. STATE WATER AND GROUNDWATER**

Two of the most fundamental definitions in the Texas Water Code can sometimes lead to confusion. As mentioned above, the Water Code fails to articulate exactly when groundwater becomes state water. The definition of groundwater should be amended to explain that groundwater is converted to state water when it commingles with state water in a watercourse in the absence of a bed-and-banks permit.

##### **2. CONJUNCTIVE USE**

Conjunctive use is defined as “the combined use of groundwater and surface-water sources that optimizes the beneficial characteristics of each source.”<sup>55</sup> Conjunctive use is one of the most important concepts of modern water law. Yet, outside of the provision where it is defined, it is mentioned only once in the entire Texas Water Code.<sup>56</sup> Conjunctive use should be mandated in many more stages of water planning and development. A more complete definition, perhaps with examples, is needed.

##### **3. DIFFUSE SURFACE WATER**

The term “diffuse surface water” is undefined in the Texas Water Code, but state courts have stepped in to supply a definition.<sup>57</sup> When surface water is diffuse, the

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52 See TEX. WATER CODE ANN. § 36.001(28) (Vernon 2009).

53 *Id.* § 36.1071(e)(3)(D).

54 SAX, *supra* note 4, at 399.

55 TEX. WATER CODE ANN. § 36.001(21) (Vernon 2009).

56 TEX. WATER CODE ANN. § 16.053(e)(5)(C) (Vernon 2009). Section 16.053(e)(5)(C) includes “conjunctive use” in a list of “potentially feasible water management strategies.”

57 *Domel v. City of Georgetown*, 6 S.W.3d 349, 353 (Tex.App.—Austin 1999, pet. denied).



landowner has a right to capture and use it.<sup>58</sup> Diffuse surface water becomes percolating groundwater the moment it penetrates the surface of the earth.<sup>59</sup> By contrast, water in a watercourse that sinks into the ground is called “underflow.”<sup>60</sup> Underflow is considered state water, but the term “underflow” is otherwise undefined in the Texas Water Code.<sup>61</sup>

#### 4. UNDERFLOW AND PERCOLATING GROUNDWATER

Complications arise when distinguishing “underflow” from “percolating” groundwater. The following definitions help to explain why the distinction is complicated. The “saturated zone” is the area underground in which all openings are filled with groundwater.<sup>62</sup> The “water table” is the depth that marks the top of the saturated zone.<sup>63</sup> A “losing stream” is one that loses water to the ground by outflow through the streambed.<sup>64</sup> Some losing streams lie above an unsaturated zone between the streambed and the top of the water table.<sup>65</sup> In these streams, outflowing water must pass through the unsaturated zone in order to enter the water table.<sup>66</sup> It is generally understood that outflow from losing streams becomes groundwater as soon as it enters the unsaturated zone.<sup>67</sup> In a situation where the losing stream lies above the top of the water table, this outflow must “percolate” through the dry zone to reach the water table.<sup>68</sup> Some losing streams do not have an unsaturated zone; a continuous zone of saturation connects the stream to the water table.<sup>69</sup> It is not clear in that situation where the underflow of the stream ends and the percolating groundwater begins.

A Texas court has held that to be defined as “underflow” water must be moving in the sand and gravel beneath a streambed and that the water must be hydrologically connected to the surface flow of the stream.<sup>70</sup> As noted earlier, in a losing stream without an unsaturated zone, the hydrologic connection is from the stream all the way down to the aquifer.<sup>71</sup> In this case, the difference between underflow and percolating groundwater must be distinguished as follows. Underflow should be defined as water that moves downstream through the soil in conjunction with the water in a

58 *City of San Marcos v. Texas Comm’n on Env’tl. Quality*, 128 S.W.3d 264, 272 (Tex.App.—Austin 2004, pet. denied).

59 TEX. WATER CODE ANN. § 35.002(5) (Vernon 2009). “Groundwater’ means water percolating below the surface of the earth.”

60 30 TEX. ADMIN. CODE § 297.1 (2010).

61 TEX. WATER CODE ANN. §11.021(a) (Vernon 2009). The term “underflow” appears once in Texas statutes, without explanation, in the definition of “state water”.

62 SAX, *supra* note 4, at 397. “Saturated zone” and the following terms are undefined in the Texas Water Code, although they have unambiguous scientific definitions: “unsaturated zone,” “losing stream,” and “gaining stream.”

63 *Id.*

64 *Id.* at 399–400.

65 *Id.* at 400.

66 *Id.*

67 *Id.*

68 *Id.*

69 *Id.*

70 Kaiser, *supra* note 20.

71 SAX, *supra* note 4, at 400.

watercourse. If the watercourse should dry up, the underflow will cease. Percolating groundwater, by contrast, should be defined as water that moves downward through the ground into the water table because its destination is the aquifer. In a losing stream without an unsaturated zone, the only way to separate underflow from groundwater would be to deplete the stream or the aquifer until the saturated zone recedes, severing the connection. This explanation shows that, under certain circumstances, it is impossible to tell whether water belongs to the surface or the ground.

### **B. EXPLOITING AMBIGUITY: EDWARDS AQUIFER AUTHORITY V. DAY**

When the law is ambiguous, litigation is inevitable. In February 2010, litigants presented arguments before the Texas Supreme Court in the case of *Edwards Aquifer Authority v. Day*.<sup>72</sup> The dispute in *Day* might not exist if Texas's system more clearly defined the distinction between surface and groundwater. When parties disagree about the character of water, as they do in this case, regulation becomes difficult or impossible.

Burrell Day and Joe McDaniel ("Day") own land over the Edwards Aquifer.<sup>73</sup> Day sought an Initial Regular Permit (IRP) to pump 700 acre-feet of water from the Aquifer, thus subjecting the Day & McDaniel partnership to the regulations of the Authority.<sup>74</sup> An IRP requires applicants to show proof of "(1) beneficial use of groundwater from the Aquifer by themselves or a predecessor in interest during the historical period, and (2) the amount of water pumped and used without waste during any one year of the historical period."<sup>75</sup>

Day's land contained an old well, without a pump or meter, which flowed freely into a manmade ditch and then into a lake.<sup>76</sup> The lake was created decades earlier by damming a creek.<sup>77</sup> The lake is still partially creek-fed, and found to be a watercourse.<sup>78</sup> During the historical period, 300 acres of land were irrigated using a sprinkler system and pump that drew water from the lake.<sup>79</sup> Based on these facts, the General Manager of the Authority made a preliminary decision recommending the issuance of an IRP for 600 acre-feet of water (two acre-feet per acre of irrigated land) to Day, but the General Manager later changed his recommendation to a denial of the application based upon additional information.<sup>80</sup>

It should be pointed out that what Day wanted to do was not impermissible per se. It is possible for a groundwater owner to pump water to the surface, convey it into

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72 Jonathan Cannon. *Area's Groundwater Conservation District Struggles To Start Work*, HERALD DEMOCRAT, Jul. 29, 2010, available at <http://www.heralddemocrat.com/hd/7-29-10-Area-s-groundwater-conservation-district-struggles-to-start-work>.

73 *Edwards Aquifer Authority v. Day*, 274 S.W.3d 742, 748 (Tex.App.—San Antonio 2000, pet. granted).

74 *Id.*

75 *Id.*

76 *Id.* at 748-49.

77 *Id.* at 753.

78 *Id.* at 749-750, 753.

79 *Id.* at 749.

80 *Id.* at 748-49.

a watercourse, and withdraw it for use later.<sup>81</sup> Day would need to measure the water as the water was pumped, and then withdraw that exact amount later for a beneficial use. If Day, or one of the partnerships' predecessors, had done so, Day would have qualified for a bed-and-banks authorization under Section 11.042 of the Water Code. But Day needed the IRP before the partnership could get the authorization, and Day could not get the IRP on the existing facts.

After the General Manager recommended denial of Day's permit application, Day requested a hearing with the State Office of Administrative Hearings.<sup>82</sup> At the hearing, an Administrative Law Judge (ALJ) found that irrigation from the lake was a use of surface water.<sup>83</sup> The ALJ's theory was that because the lake was partially creek-fed, it was state water.<sup>84</sup> The ALJ held that when Day allowed the well to flow unregulated into the lake, the well water changed character from groundwater to state water.<sup>85</sup>

Day had also historically been irrigating five to seven acres of land by damming the ditch and flooding those acres.<sup>86</sup> This form of irrigation moved the well water from the ground, into a manmade ditch, and then to the beneficial use of irrigation.<sup>87</sup> The ALJ determined that the well water used in this manner never made contact with the state water of the lake, and therefore, was still groundwater and not state water.<sup>88</sup> The difference between these two determinations is subtle, but significant. Water that never commingles with state water never changes character. Accordingly, the ALJ issued a permit for fourteen acre-feet of water.<sup>89</sup> Day appealed this decision all the way to the Texas Supreme Court.<sup>90</sup>

The difference between the water pumped from the lake and the water flooded out of the ditch is slight. In both cases the water came from Day's well, remained on Day's land, and was used for the same beneficial purpose. It takes a discerning mind to understand why the water was privately owned in one case, and state-owned in the other case. Because the distinction is so subtle, it opened the floodgates to a slew of unusual, convoluted arguments.

### C. DAY'S ARGUMENTS BEFORE THE TEXAS SUPREME COURT

The various arguments that Day made to the Supreme Court exploit the ambiguity in the Texas Water Code. Day starts at the very beginning: with the definition of state water in Section 11.021(a) of the Texas Water Code.<sup>91</sup> Day then argues that groundwater cannot change character to state water because the definition of "state water" does

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81 *Id.* at 753-54.

82 *Id.*

83 *Id.* at 750.

84 *Id.*

85 *Id.* at 749-750.

86 *Id.* at 749.

87 *Id.*

88 *Id.* at 750.

89 *Id.*

90 *Id.*

91 Brief for the Petitioners at 12, *Edwards Aquifer Authority v. Day*, No. 08-0964 (Tex. filed Sept. 18, 2009), 2009 WL 3253585 at \*16.

not include “groundwater.”<sup>92</sup> This argument seems to assert that groundwater can never change character to state water, and the appellate court recognized this as absurdity.<sup>93</sup> When Day renewed this argument before the Texas Supreme Court, Justice Phil Johnson constructed an on-the-spot *reductio ad absurdum* that demonstrated the faulty logic of such a stance.<sup>94</sup>

Day’s argument would be impossible if the Texas Water Code clearly stated when groundwater changes character to state water. As previously noted, the Water Code states that water used for recharge is converted to groundwater.<sup>95</sup> Therefore, the Water Code should be amended to state that groundwater changes character and becomes state water as soon as it commingles with other state waters.

Day also tried to misuse the term “conjunctive use.” Day argued that the partnership was using surface water and groundwater conjunctively.<sup>96</sup> As the appellate court pointed out, “‘conjunctive use’ is a water-management strategy recognizing the reality that many water users rely on a combination of groundwater and state water for their water supplies.”<sup>97</sup> Day’s use was simply an unmonitored commingling of surface water and groundwater. Even a modest construction of the term “conjunctive use” would agree that Day’s actions are inapplicable, and yet Day renewed this argument before the Supreme Court.

Day next argued that the groundwater retains its character as it flows into the ditch and “reservoir,” Day’s carefully chosen term for the “lake.” Day noted that the water never left Day’s property and that Day never relinquished control of the water.<sup>98</sup> Day offered a case comparison with *Bartley v. Sone*, in which a spring and the manmade ditch it fed were located wholly on plaintiff’s property, entitling plaintiff to use the water for any purpose.<sup>99</sup> But *Bartley* appears distinguishable in that the water stayed in a manmade ditch and never entered a watercourse. In *Day*, the water entered the lake, which the appellate court found to be a watercourse.<sup>100</sup> The appellate court determined that Day could not have maintained control if Day allowed the water to flow unregulated into a watercourse.<sup>101</sup>

Furthermore, *Bartley* stands for the proposition that spring water will be presumed to be percolating groundwater.<sup>102</sup> That presumption was more significant in light of

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92 *Id.*

93 *Day*, 274 S.W.3d at 754 (“Applicants’ argument that groundwater is forever groundwater . . . would confer ownership of an undetermined amount of Hill Country water upon the owners of land containing springs from which many Texas rivers emanate.”).

94 Transcript of Oral Argument at 13, *Edwards Aquifer Authority v. Day*, No. 08-0964 (Tex. filed Sept. 18, 2009), available at <http://www.supreme.courts.state.tx.us/oralarguments/transcripts/08-0964.pdf>.

95 See TEX. WATER CODE ANN. § 11.023 (Vernon 2009).

96 Brief for the Petitioners, *supra* note 91, at 17.

97 *Day*, 274 S.W.3d at 754.

98 Brief for the Petitioners, *supra* note 91, at 5-6.

99 *Id.* at 13-14.

100 *Day*, 274 S.W.3d at 753.

101 See *id.*

102 See *Bartley v. Sone*, 527 S.W.2d 754, 760 (Tex. App.—San Antonio 1975, writ ref’d n.r.e.) (quoting *Texas Co. v. Burkett*, 296 S.W. 273, 278 (Tex. 1927)).

the old Texas Water Code's exemption of "subterranean streams."<sup>103</sup> In fact, Day ignores this fact, going so far as to quote *Bartley* citing the old Water Code without mentioning that the definition cited has been repealed.<sup>104</sup> Whether or not this omission is significant, it illustrates the complexity of water law in Texas.

Despite this complexity, it seems unlikely that Day would have overlooked the fact that the quoted language was from the old Water Code; Day's Supreme Court brief evidences careful wording and language. The appellate court called the reservoir a "lake," and found on the evidence that the lake was a watercourse.<sup>105</sup> Day avoids using the word "lake," preferring instead the term "reservoir."<sup>106</sup> By contrast, Day stresses the existence of the manmade ditch, hoping perhaps to perfect the analogy with *Bartley*.<sup>107</sup> Again, this distinction is subtle: water coming out of Day's ditch is groundwater; water coming out of Day's reservoir is state water.

At times Day's brief seems to turn a blind eye to evidence at hand. On one occasion, Day calls the lake "the reservoir constructed on the creek bed" and adds in a footnote that "[t]his creek known as Post Oak, was usually dry."<sup>108</sup> This claim is of little consequence given the appellate court's finding that the reservoir is a watercourse.<sup>109</sup> Without explicitly rejecting the evidence or the appellate court's conclusion, it does not do Day any good to gloss over the fact of the lake and the deposition of groundwater into it.

It seems that Day's strategy is to exploit ambiguity in the Texas Water Code to bolster a legally indefensible argument. At times, these attempts are bewildering. Day asserts that *Bartley* "clearly established the axiom [that] groundwater could be transported in a land depression, crevice, creek or arroyo within the boundary of the property on which the groundwater was brought to the surface."<sup>110</sup> In fact, that axiom does not exist in *Bartley*. The case does not even employ the words "land depression," "crevice," or "arroyo," while "creek" is used twice in a proper name.<sup>111</sup> A search through Texas cases for this distinctive list of water conveyances did not yield any results. It is unclear why Day chooses to coin this axiom.

*Edwards Aquifer Authority v. Day* is only one current example of litigation resulting from a convoluted and ambiguous system. The only way to stop such litigation is to fix that system.

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103 See Act of 1925, 39th Leg., R.S., ch. 25, § 3 (repealed by Act of Jun. 16, 1995, 74th Leg., R.S., ch. 933, §6) (the exclusion was located at former TEX. WATER CODE ANN. § 52.001(3)).

104 Brief for the Petitioners, *supra* note 91, at 8.

105 *Day*, 274 S.W.3d at 753.

106 Brief for the Petitioners, *supra* note 91, at 5, 12. The term "lake" is used only once in the 47 page brief.

107 *Id.* at 5, 12, 14, 16.

108 *Id.* at 12.

109 *Day*, 274 S.W.3d at 753.

110 Brief for the Petitioners, *supra* note 91, at 14.

111 See generally *Bartley v. Sone*, 527 S.W.2d 754 (Tex.App.—San Antonio 1975, writ ref'd n.r.e.).

#### IV. TOWARD A SOLUTION

##### **A. THE COMPLEXITY OF TEXAS HYDROGEOLOGY**

It is fair to say that the nature of groundwater is no longer “secret, occult, and concealed.”<sup>112</sup> Amazing tools are available today, such as Groundwater Availability Modeling. Groundwater Availability Models (GAMs) use data measuring the physical structure of aquifers and water movement to estimate groundwater availability.<sup>113</sup> GAMs of all major Texas aquifers are now available without cost to water-planning organizations.<sup>114</sup>

Even though more is known about Texas’s water today than ever before, the situation remains complicated. Central Texas is dominated by a geological landscape known as “karst topography.”<sup>115</sup> Karst topography is formed by the erosion of soluble rock and is characterized by springs, sinkholes, and caves.<sup>116</sup> The ground is very porous, allowing water to move about freely.<sup>117</sup> The current Texas Water Code defines “groundwater” as “water percolating below the surface of the earth.”<sup>118</sup> In a region with karst topography, the word “percolating” often fails to describe the subterranean movement of water. Karst aquifers like Central Texas’s Edwards Aquifer are often characterized by “a dynamic flow system and the rapid movement of large volumes of water.”<sup>119</sup>

The old Texas Water Code recognized the percolating/flowing distinction in underground water. Before 1995, the definition of groundwater read as follows:

(6) “Underground water” means water percolating below the surface of the earth and that is suitable for agricultural, gardening, domestic, or stock raising purposes, but does not include defined subterranean streams or the underflow of rivers.<sup>120</sup>

The modern definition of groundwater does not contain the exclusion present in this provision. Underflow is now explicitly designated as state water, but subterranean streams do not have a separate designation.<sup>121</sup> If subterranean streams did have such a designation, it is possible that the “dynamic flow” of the Edwards Aquifer would qualify as state water. When the old Water Code was in effect, courts required that a subterranean stream possess “all of the characteristics of a surface water course, such as a bed, banks forming a channel, and a current of water.”<sup>122</sup> If the Edwards Aquifer

112 *Houston & T.C. Roy. Co. v. East*, 81 S.W. 279, 281 (Tex. 1904).

113 James Beach, *Groundwater Availability Modeling*, GOV’T ENGINEERING, November–December 2006 at 54, available at [www.govengr.com/ArticlesNov06/groundwater.pdf](http://www.govengr.com/ArticlesNov06/groundwater.pdf).

114 *Id.*

115 See GEORGE VENI ET AL., *LIVING WITH KARST: A FRAGILE FOUNDATION* 8 (2001).

116 *Id.* at 11.

117 *Id.* at 16.

118 TEX. WATER CODE ANN. §35.002(5) (Vernon 2009).

119 VENI, *supra* note 115, at 15.

120 Act of 1925, 39th Leg., R.S., ch. 25, § 3 (repealed by Act of Jun. 16, 1995, 74th Leg., R.S., ch. 933, §6) (the old definition was located at former TEX WATER CODE ANN. § 52.001(6)).

121 See TEX. WATER CODE ANN. § 11.021(a) (Vernon 2009).

122 *Denis v. Kickapoo Land Co.*, 771 S.W.2d 235, 238 (Tex.App.—Austin 1989, writ denied).

possessed these characteristics, it may have been classified state water under the old Water Code.

The reality is that surface water and groundwater are inextricably connected in Texas. This fact is recognized in certain rules governing the Texas Commission on Environmental Quality (TCEQ). The TCEQ, although it regulates surface water, must consider the effect a surface-permit application will have on connected groundwater.<sup>123</sup> In the end, however, Texas still has two parallel systems of water law. These separate systems frustrate efforts to manage what is actually a single hydrologic environment.

## B. A UNITARY SYSTEM IS NOT FEASIBLE IN TEXAS

Ideally, a single authority would regulate all water in the State. At first glance, the logical way to a single system is to declare all water state-owned. The solution is not that simple. Landowners have vested, constitutionally protected ownership rights in groundwater.<sup>124</sup> Taking these rights would require compensation, but it is unclear how much compensation would be necessary.

Estimates of water use in Texas vary widely. The Texas Parks and Wildlife Department estimated annual use in 2005 to be 17 million acre-feet.<sup>125</sup> The United States Geological Survey estimated Texas's annual use at about 30 million acre-feet.<sup>126</sup> About sixty percent of the water used in Texas is groundwater.<sup>127</sup> A conservative estimate suggests that Texas uses at least 10 million acre-feet of groundwater a year. In the *Day* litigation, Day requested compensation of \$2,500 per acre-foot.<sup>128</sup> Using this figure, a statewide taking of just the groundwater currently in use would cost \$25 billion. This estimate is to say nothing of unused groundwater, or the cost of adjudicating thousands of takings claims across the state. What is needed is regulation that does not affect a taking. The regulatory systems of other states may offer some guidance as to how such a system can be implemented.

## C. OTHER STATE SYSTEMS

Other western states have a variety of methods for water regulation. The systems of some western states would be difficult or impossible to enact in Texas, but understanding these states' laws may provide some guidance.

### 1. COLORADO

Water rights in Colorado are governed by the Water Right Determination and Administration Act of 1969.<sup>129</sup> The 1969 Act declared that the public owns, and has

123 30 TEX. ADMIN. CODE § 297.47 (2010).

124 *Edwards Aquifer Authority v. Day*, 274 S.W.3d 742-756 (Tex.App.—San Antonio 2008, pet. granted).

125 KAISER, *supra* note 20.

126 See U.S. Geological Survey, *Summary of Estimated Water Use in the United States in 2005* (Oct. 2009), <http://pubs.usgs.gov/fs/2009/3098/pdf/2009-3098.pdf> (data converted from millions of gallons per day).

127 KAISER, *supra* note 20.

128 Brief for the Petitioners, *supra* note 91, at 8.

129 COLO. REV. STAT. ANN. § 37-92-101 *et. seq.* (West 2010).

always owned, “all water in or tributary to natural surface streams.”<sup>130</sup> Thus, where groundwater is tributary to surface water, it is treated as surface water for purposes of “appropriation, use, and administration.”<sup>131</sup> This integration is part of the state’s policy “to maximize the beneficial use of all of the waters of this state.”<sup>132</sup> Furthermore, Colorado actually has a presumption that groundwater is tributary.<sup>133</sup>

The 1969 Act divided the state into seven water districts and appointed a court, a clerk, and an engineer for each district.<sup>134</sup> Colorado is the only western state where water-rights adjudication is purely court-based.<sup>135</sup> Critics of the state’s program say that it is cumbersome and discourages public involvement.<sup>136</sup> The disjointed system also fails to integrate quality and quantity issues and stymies long-term statewide planning.<sup>137</sup>

Colorado’s treatment of tributary groundwater as surface water is different from Texas in that, unlike Colorado, essentially none of the groundwater in Texas is treated as tributary groundwater. But as previously stated, Texas cannot simply declare groundwater to be state water.

## 2. NEW MEXICO

New Mexico is like Texas in that it retains the surface-water/groundwater distinction, but in New Mexico all water has been declared public. Surface waters, or “natural waters,” “belong to the public and are subject to appropriation for beneficial use.”<sup>138</sup> Underground water is separately “declared to belong to the public and is subject to appropriation.”<sup>139</sup> Underground water is appropriated based on whether it has ascertainable boundaries as determined by the state engineer. If it does, appropriators must submit a well-permit application to the state engineer.<sup>140</sup> If the water does not have ascertainable boundaries, it may be appropriated for in-state use without a permit.<sup>141</sup>

New Mexico is also like Texas in that it provides protection for existing rights holders. In this case, existing rights are defined as those in existence before March 19, 1907.<sup>142</sup> These rights, although protected, are still subject to “regulation, adjudication and forfeiture for nonuse.”<sup>143</sup> New Mexico laws demonstrate that a state can regulate all of its water without disturbing vested rights.

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130 *Id.* § 37-92-102(1)(a).

131 *Id.*

132 *Id.*

133 See *Town of Genoa v. Westfall*, 349 P.2d 370, 378 (Colo. 1960).

134 Justice Gregory J. Hobbs, Jr., *Colorado’s 1969 Adjudication and Administration Act: Settling In*, 3 U. DENV. WATER L. REV. 1, 14 (1999).

135 Melinda Kassen, *A Critical Analysis of Colorado’s Water Right Determination and Administration Act of 1969*, 3 U. DENV. WATER L. REV. 58, 59 (1999).

136 *Id.* at 60.

137 *Id.* at 61.

138 N.M. STAT. ANN. § 72-1-1 (West 2010).

139 *Id.* § 72-12-1.

140 *Id.* § 72-12-1.1.

141 *Id.* § 72-12-20.

142 *Id.* § 72-9-1.

143 *Id.*



### 3. WASHINGTON

In many of its river basins, Washington provides for regulation of groundwater that has a “significant hydraulic continuity” with the surface.<sup>144</sup> “If department investigations determine that there is significant hydraulic continuity between surface water and the proposed ground water source, any water right permit or certificate issued shall be subject to the same conditions as affected surface waters.”<sup>145</sup> This system is the sort of conjunctive regulatory system that Texas should consider implementing. Texas cannot subject groundwater to the same regulatory authority as surface water, but it can come close. Groundwater districts have the authority to regulate groundwater pumping. Perhaps Texas should give the TCEQ oversight of groundwater districts.

### 4. OREGON

Oregon regulations call for restrictions on groundwater pumping in areas that the Oregon Water Resources Department deems critical.<sup>146</sup> Once the Department deems an area to be critical, further groundwater appropriation is forbidden within one mile of a watercourse.<sup>147</sup> This system is similar to the State of Washington’s system in that hydrologists can make certain findings that subject water sources to more stringent regulation.

### 5. ARIZONA

Arizona has four different categories of water supply: Colorado River water, other surface water, groundwater, and effluent.<sup>148</sup> Each of these sources has a unique system of management.<sup>149</sup> Arizona combats the complexity of this system by facilitating substitutions and exchanges between sources.<sup>150</sup> For example, a holder of a surface-water permit that decides to obtain some of the permitted water from groundwater sources does not risk forfeiture of his surface-water right.<sup>151</sup> In Texas, by contrast, a surface-water-right holder who substituted groundwater for ten years would risk losing the unused portion of his surface right.<sup>152</sup>

## D. THE LESSON OF OTHER STATE SYSTEMS

Some western states, like New Mexico, have unified their water law systems. Other states, like Arizona, have classifications that are more numerous and complicated than even those in Texas. What these states have in common is that they have provisions in place to conjunctively manage water. Generally speaking, water is managed conjunctively when surface water and groundwater are connected. Some states presume such a connection while other states require an affirmative finding. Hydrogeologists in Texas

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144 WASH. ADMIN. CODE §§ 173-501-060, 173-549-060 (2010).

145 *Id.*

146 OREGON ADMIN. R. § 690-009-0050 (2010).

147 *Id.*

148 Adam Schempp, *Western Water in the 21st Century: Policies and Programs That Stretch Supplies in a Prior Appropriation World*, 40 ENVTL. L. REP. 10394, 10405 (2010).

149 *Id.*

150 *Id.*

151 *Id.*

152 TEX. WATER CODE ANN. § 11.172 (Vernon 2009).

have determined that all groundwater is connected to surface water. The State should therefore follow the lead of other western states and begin integrating its two systems.

Already some interaction occurs between surface water and groundwater authorities in Texas. Groundwater conservation districts must coordinate with surface-water management entities in the development of comprehensive management plans.<sup>153</sup> Applicants for surface permits for projects that will affect groundwater, such as storage in an aquifer, must coordinate with groundwater districts.<sup>154</sup> And, as mentioned before, the TCEQ must consider the effects on groundwater of certain surface-water permit applications.<sup>155</sup> These regulations demonstrate that surface-water and groundwater authorities can work together.

Because the current Texas Water Code does not allow for the taking of vested groundwater rights, integration should focus on surface-water rights. A permit applicant should be required to disclose any existing groundwater use or capacity. Conjunctive use should become a condition of new permit grants. Private appropriators do not have a vested right to new surface-water permits, so conditioning future permits on more stringent groundwater management will not constitute a taking. Holders of both surface-water and groundwater rights should be required to subject all of their rights to a single authority, the TCEQ, or risk losing surface rights. The TCEQ, for its part, should continue to integrate its actions with those of local groundwater conservation districts.

#### **E. OTHER IMPROVEMENTS TO THE TEXAS SYSTEM**

Two other improvements to the Texas system are also advisable: first, the State should amend the Texas Water Code to make clear the relationship between surface water and groundwater and eliminate the sort of litigation in *Edwards Aquifer Authority v. Day*; second, Texas should begin enforcing its cancellation policy in order to free up unused water rights and encourage responsible use.

As one author has pointed out, many of Texas's conservation efforts provide incentives by eliminating the possibility of cancellation, but these incentives are worthless if Texas does not actually cancel unused permits.<sup>156</sup> For example, new and certain existing rights holders in Texas are required to complete conservation plans.<sup>157</sup> Water saved under these plans is not subject to forfeiture by cancellation.<sup>158</sup> If rights holders know the chances of cancellation are slight, they do not have any incentive to conserve. This problem can be remedied by actively pursuing cancellations.

### **V. CONCLUSION**

Justice Hecht's prediction of "fair, effective, and comprehensive regulation of water use" seems optimistic given the state of Texas water law today. Texas may never be able to unify its system or reverse the absolute groundwater ownership policy estab-

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153 *Id.* § 36.1071.

154 *Id.* § 11.154.

155 30 TEXAS ADMIN. CODE § 297.47 (2010).

156 Schempp, *supra* note 148, at 10407.

157 *Id.* at 10397.

158 *Id.*

lished in the *East* case. What it can do is move towards truly conjunctive management. New permits and permit modifications must mandate conjunctive use. The numerous water authorities in Texas must continue their integration and cooperation. Texas also must amend the Texas Water Code to remove certain ambiguities and discourage litigation like that in *Edwards Aquifer Authority v. Day*. With these changes, Texas water management will be no less complicated, but it may be more effective.

*Adrian Shelley is a native Texan from the City of Houston. He earned a bachelor's degree in English and Philosophy from Trinity University in San Antonio. His Juris Doctorate is from The University of Texas School of Law. During and after law school, Mr. Shelley interned for the Save Our Springs Alliance, the Department of Justice's Environment and Natural Resources Division, and Air Alliance Houston. He is a two-time recipient of the Texas Legal Fellowship, a recipient of the Joe R. and Teresa L. Long Legal Fellowship, and a recipient of the University Co-op Public Interest Award for Graduating Students.*

*Mr. Shelley is currently the Environmental Director and Counsel for Texas State Representative Jessica Farrar.*

# THE STATE OF CO<sub>2</sub> SEQUESTRATION IN THE STATE OF TEXAS

BY RUSSELL W. MURDOCK

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## I. INTRODUCTION

The burning of fossil fuels over the past 200 years has led to an accumulation of greenhouse gases in the Earth's atmosphere.<sup>1</sup> In the United States, energy-related activities account for three-quarters of man-made greenhouse gas emissions.<sup>2</sup> The rising price of energy hampers governmental efforts to control greenhouse gas emissions that contribute to combat climate change. Renewable and clean-burning energy sources continue to cost significantly more than coal, which remains the least expensive energy source on the market even though it is a major contributor to greenhouse gas emissions.<sup>3</sup>

One possible solution to reduce greenhouse gas emissions while using inexpensive energy sources is carbon sequestration. Carbon sequestration is the process by which carbon dioxide is separated and collected, and then injected into the ground for stor-

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1 ENVTL. PROT. AGENCY, *Climate Change: Basic Information*, <http://www.epa.gov/climatechange/basicinfo.html> (last visited Oct. 31, 2010).

2 *Id.*

3 DEP'T OF ENERGY, U.S. ENERGY INFO. ADMIN., DOE/EIA-0226, *ELECTRIC POWER MONTHLY* NOV. 2009, 68 (2009).

age, thus preventing it from escaping into the atmosphere.<sup>4</sup> Several scientific and legal questions remain regarding the permanent storage of carbon. During the 81<sup>st</sup> Legislative Session, the Texas Legislature enacted three bills aimed at helping facilitate the propagation of carbon sequestration processes within the state.<sup>5</sup> While the bills were a step in the right direction, they failed to address several important questions regarding property interests and the potential liabilities associated with the sequestered gas. Neither these bills nor Texas common law give a definite answer to issue of whether the owner of the minerals or the owner of the surface owns the right to inject carbon dioxide into the ground.<sup>6</sup>

The State of Texas must do more. Texas needs to provide further legal guidance before widespread commercial development of carbon sequestration operations will occur within its borders. When paired with the scientific uncertainty regarding carbon sequestration, the legal ambiguity in Texas will prove too much for most potential operators. Part II of this note discusses the history and process of sequestration, including where carbon dioxide can be sequestered and the limits of the process. Part III explores Texas carbon sequestration law and analyzes gaps in the law. Part IV reviews recent developments in the area of carbon sequestration. This note concludes with a discussion of where Texas falls short and what must be done to entice businesses to enter the state to participate in the process.

## **II. PROCESS OF SEQUESTRATION**

Any analysis of the legal issues regarding carbon sequestration requires an understanding of the science behind the process. This part of this note explores the science and history of the process. With this background, this note then analyzes the scientific and economic barriers to carbon sequestration becoming a viable solution to the problem of carbon dioxide release.

### **A. WHAT IS CARBON SEQUESTRATION?**

#### **1. OVERVIEW/HISTORY**

About one-third of the United States' carbon emissions come from power plants and other large-point sources.<sup>7</sup> Federal environmental standards for carbon emissions would put pressure on the operators of these point sources to reduce the level of their carbon emissions.<sup>8</sup> One method to reduce carbon emissions is carbon sequestration. Carbon sequestration places carbon dioxide into a repository in such a way that it will

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4 Dep't of Energy, *Carbon Capture and Storage R&D Overview*, <http://www.fossil.energy.gov/programs/sequestration/overview.html> (last visited Oct. 31, 2010).

5 Tom Weber, *Cases and Carbon Sequestration*, TEXAS LAWYER, May 18, 2009, available at <http://www.law.com/jsp/tx/PubArticleTX.jsp?id=1202430704242&slreturn=1&hblogin=1>.

6 See Owen Anderson, *Geologic Carbon Sequestration; Who Owns the Pore Space?*, 9 WYO. L. REV. 97, 99.

7 *Carbon Capture and Storage R&D Overview*, *supra* note 4.

8 See 40 C.F.R. §§ 51, 52, 70, and 71.

remain permanently sequestered.<sup>9</sup> Before the carbon can be sequestered, however, it must be captured.<sup>10</sup>

Carbon capture refers to the separation and removal of carbon dioxide from both emissions point sources and the atmosphere.<sup>11</sup> Carbon dioxide is isolated from the emissions stream, compressed, and transported to an injection site where it can be stored permanently.<sup>12</sup> The capture of carbon dioxide thus minimizes its impact as a greenhouse gas.<sup>13</sup> For practical purposes, candidates for utilizing carbon capture are mostly stationary power sources such as fossil-fuel-fired power plants and industrial facilities.<sup>14</sup> Although carbon capture principles apply to natural-gas-fired power plants and industrial facilities, research tends to focus on coal-fired power plants, the largest stationary source of carbon dioxide in the United States.<sup>15</sup>

The history behind the injection of carbon dioxide into geologic formations illustrates both the process itself and why certain industries are supportive of the process. Energy companies injected carbon dioxide and water into the ground for the purpose of enhanced oil recovery long before they appreciated the environmental benefits of injecting carbon dioxide into the ground.<sup>16</sup> Enhanced oil recovery is a technique used by companies to increase recovery of oil in depleted or high-viscosity oil fields.<sup>17</sup> Carbon dioxide is flooded into an oil field through several injection wells drilled around the producing oil well.<sup>18</sup> When injected at the proper pressure, the carbon dioxide and the oil mix together and form a liquid that flows to the production well more easily.<sup>19</sup> In 2006, enhanced oil recovery projects of all types produced a total of 650,000 gallons of oil per day, or almost 13 percent of the total national production of oil.<sup>20</sup> Enhanced oil recovery using carbon dioxide is estimated to account for 37 percent of all enhanced oil recovery in the United States.<sup>21</sup> The United States is the world leader in the use of carbon dioxide for enhanced oil recovery, accounting for approximately 96 percent of worldwide use.<sup>22</sup> In 2006, more than 48 million metric tons of carbon

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9 THE ENERGY LAB, DEP'T. OF ENERGY, *What is Carbon Sequestration?*, [http://www.netl.doe.gov/technologies/carbon\\_seq/FAQs/carbon-seq.html](http://www.netl.doe.gov/technologies/carbon_seq/FAQs/carbon-seq.html) (last visited Oct. 31, 2010).

10 See THE ENERGY LAB, DEP'T OF ENERGY, *What is Carbon Capture?*, [http://www.netl.doe.gov/technologies/carbon\\_seq/FAQs/carbon-capture.html](http://www.netl.doe.gov/technologies/carbon_seq/FAQs/carbon-capture.html) (last visited Oct. 31, 2010).

11 *Id.*

12 *Carbon Capture and Storage R&D Overview*, *supra* note 4.

13 See *What is Carbon Capture?*, *supra* note 10.

14 *Id.*

15 *Id.*

16 See NATIONAL ENERGY TECH. LAB., DEP'T OF ENERGY, OFFICE OF FOSSIL ENERGY, *Carbon Sequestration Through Enhanced Oil Recovery*, 1 (April 2008), <http://www.netl.doe.gov/publications/factsheets/program/Prog053.pdf>.

17 *Id.*

18 *Id.*

19 *Id.*

20 *Id.*

21 *Id.*

22 See *Carbon Sequestration Through Enhanced Oil Recovery*, *supra* note 16.

dioxide were used for enhanced oil recovery in the United States of which about one-quarter was derived from carbon dioxide produced by human activities.<sup>23</sup>

Although the oil and gas industry has used carbon dioxide for enhanced oil recovery for almost forty years, its potential for carbon sequestration remains in an investigatory stage.<sup>24</sup> Initially, the only motivation behind injection was increasing oil recovery. Now both industry and government actors recognize the potential of carbon sequestration to prevent atmospheric carbon emissions.<sup>25</sup> The Department of Energy estimates that depleted oil and gas wells in the United States and Canada have the potential to sequester 138 billion metric tons of carbon dioxide.<sup>26</sup> If the companies performing enhanced oil recovery operations were able to combine the environmental benefits of sequestration with the economic benefits of recovering oil, then they could bring about a new, more economically viable method for carbon sequestration.<sup>27</sup>

Carbon sequestration through enhanced oil recovery is an attractive option for many carbon emitters. The entities that inject carbon into the earth for enhanced oil recovery are often the same entities emitting the carbon that produces the greenhouse effect. Should federal or state governments implement regulations on carbon emissions, oil producers using enhanced oil recovery could earn sequestration credits in addition to oil revenues.<sup>28</sup> The potential double benefit for carbon emitters may explain the current push for carbon sequestration.

## 2. WHERE CAN CARBON BE SEQUESTERED?

Sequestration efforts focus on geologic formations and terrestrial ecosystems as the chief repositories of carbon.<sup>29</sup> Each type of repository has its own advantages and disadvantages. The Department of Energy hopes to use both types of carbon sequestration to minimize the amount of carbon that enters the atmosphere.<sup>30</sup>

### A. GEOLOGIC CARBON SEQUESTRATION

Geologic carbon sequestration involves the storage of captured carbon in deep underground formations.<sup>31</sup> Research on geologic carbon sequestration focuses on five types of geologic formations: oil and gas reservoirs, deep saline formations, unmineable coal seams, organic shales, and basalts.<sup>32</sup> Among these five types of formations,

23 NAT'L ENERGY TECH. LAB, DEP'T OF ENERGY, *Carbon Sequestration Atlas of the United States and Canada*, 12 (Mar. 2007), <http://www.climatechange.com/climate-change-maps/ATLAS.pdf>.

24 See *Carbon Sequestration Through Enhanced Oil Recovery*, *supra* note 16.

25 See *id.*

26 DEP'T OF ENERGY, THE ENERGY LAB, *2008 Carbon Sequestration Atlas II of the United States and Canada - Second Edition* 18 (2008), [http://www.netl.doe.gov/technologies/carbon\\_seq/ref-shelf/atlasII/atlasII.pdf](http://www.netl.doe.gov/technologies/carbon_seq/ref-shelf/atlasII/atlasII.pdf).

27 See *Carbon Sequestration Through Enhanced Oil Recovery*, *supra* note 16.

28 See Andrew Leach et al., *Co-optimization of Enhanced Oil Recovery and Carbon Sequestration* (Nat'l Bureau of Econ. Research, Working Paper No. 15035, 2009).

29 *What is Carbon Sequestration?*, *supra* note 9.

30 See *2008 Carbon Sequestration Atlas II of the United States and Canada - Second Edition*, *supra* note 26, at 6.

31 *Id.*

32 *What is Carbon Sequestration?*, *supra* note 9.

oil and gas reservoirs, deep saline formations, and unmineable coal seams currently receive the most attention.<sup>33</sup>

Mature oil and gas reservoirs have held crude oil and natural gas for millions of years.<sup>34</sup> Reservoirs consist of a layer of permeable rock and another layer of non-permeable caprock that traps oil and gas in place.<sup>35</sup> The dual layers of rock within the reservoir can also hold carbon dioxide in place.<sup>36</sup> One benefit to sequestering carbon dioxide inside of reservoirs is that the addition of foreign carbon dioxide into the rock brings about the process of enhanced oil recovery.<sup>37</sup> While not all reservoirs have been examined, the Department of Energy's most recent review of the United States and Canada documented the location of 138 billion metric tons of geologic carbon dioxide storage potential in the reservoirs of the two countries.<sup>38</sup>

Saline formations offer another promising geologic formation for carbon sequestration. Saline formations are layers of porous rock saturated with brine and capped with extensive impermeable rock formations.<sup>39</sup> These formations have higher carbon dioxide storage potential and are more common than oil and gas reservoirs or coal seams.<sup>40</sup> However, much less is known about saline formations, because industry lacks the experience it acquired through resource recovery from the other two formations.<sup>41</sup> The Department of Energy estimates that the United States contains saline formations with anywhere from 3 trillion to 12 trillion metric tons of geologic carbon dioxide storage potential.<sup>42</sup>

A third category of geologic formation that is of interest for carbon sequestration is unmineable coal seams. Unmineable coal seams are mines that are either too deep or too thin to be economically mined.<sup>43</sup> Most coal contains absorbed methane.<sup>44</sup> When carbon dioxide is introduced to coal, the coal desorbs, or releases, methane through pores while absorbing carbon dioxide.<sup>45</sup> Thus, the injection of carbon dioxide into unmineable coal seams also releases profitable methane for recovery.<sup>46</sup> The methane can offset some of the cost of sequestering the carbon within the coal seams. The Department of Energy's most recent review of the United States and Canada docu-

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33 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 15; see also U.S. ENVTL. PROT. AGENCY, *Carbon Sequestration in Agriculture and Forestry: Frequent Questions*, <http://www.epa.gov/sequestration/faq.html> (last visited Feb. 27, 2010).

34 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 15, 18.

35 *Id.*

36 *Id.*

37 *Id.* at 18.

38 *Id.*

39 *What is Carbon Sequestration?*, *supra* note 9.

40 *Id.*

41 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 20.

42 *Id.*

43 *Id.* at 19.

44 *Id.*

45 *What is Carbon Sequestration?*, *supra* note 9.

46 See *id.*



mented the location of between 157 billion and 178 billion metric tons of geologic carbon dioxide storage potential in the unmineable coal seams of the two countries.<sup>47</sup>

Researchers are also beginning to study shale's potential to sequester carbon.<sup>48</sup> Shale is the most common type of sedimentary rock, characterized by thin horizontal layers with low vertical permeability.<sup>49</sup> Many shale strata contain a small percentage of organic material that will absorb injected carbon dioxide.<sup>50</sup> Current research is focused on finding an economically efficient method to inject carbon dioxide into the almost impermeable shale.<sup>51</sup> The Department of Energy has not issued a recent estimate of the geologic carbon dioxide storage potential in organic shale strata.<sup>52</sup>

The final geologic formations under wide consideration for sequestration are basalt formations.<sup>53</sup> Basalt formations are made of solidified lava.<sup>54</sup> The research regarding carbon sequestration in basalt is in its infancy.<sup>55</sup> Basalt formations interest researchers because their unique chemical make-up could potentially transform the carbon dioxide into a solidified form, thus enabling the permanent separation of carbon dioxide from the atmosphere.<sup>56</sup> The Department of Energy is working to develop a storage-capacity methodology for basalt formations.<sup>57</sup>

## B. TERRESTRIAL CARBON SEQUESTRATION

Geologic carbon sequestration is primarily a man-made venture whereas terrestrial carbon sequestration occurs as a result of natural processes. Terrestrial carbon sequestration involves the net removal of carbon dioxide from the atmosphere by plants, trees, and crops through photosynthesis and the carbon's fixation in vegetable biomass and in the soil.<sup>58</sup> Terrestrial sequestration can occur both on land and in aquatic environments such as wetlands and tidal marshes.<sup>59</sup> Natural carbon-storage "sinks," as they are called, absorb about 2 billion tons of carbon annually.<sup>60</sup> Efforts to increase terrestrial sequestration include planting trees, no-till farming, and wetland

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47 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 19.

48 See THE ENERGY LAB, DEP'T OF ENERGY, *Carbon Sequestration Storage*, [http://www.netl.doe.gov/technologies/carbon\\_seq/core\\_rd/storage.html](http://www.netl.doe.gov/technologies/carbon_seq/core_rd/storage.html) (last visited Feb. 27, 2010).

49 *What is Carbon Sequestration?*, *supra* note 9.

50 *Id.*

51 *Id.*

52 See 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 21.

53 *Carbon Sequestration Storage*, *supra* note 48.

54 *What is Carbon Sequestration?*, *supra* note 9.

55 *Id.*

56 *Id.*

57 See 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 21.

58 U.S. ENVTL PROT. AGENCY, *Carbon Sequestration in Agriculture and Forestry: Frequent Questions*, <http://www.epa.gov/sequestration/faq.html> (last visited Feb. 27, 2010).

59 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 22.

60 DEP'T OF ENERGY, *Terrestrial Sequestration Research*, <http://www.fossil.energy.gov/programs/sequestration/terrestrial/index.html> (last visited Oct. 31, 2010).

restoration.<sup>61</sup> Some scientists are engaging in more advanced research, including the development of fast-growing trees and grass.<sup>62</sup> The Regional Carbon Sequestration Partnerships are implementing eleven terrestrial field projects on abandoned mine lands, wetlands, agricultural fields, prairie lands, and forests to increase the efficacy of these carbon sinks.<sup>63</sup>

## B. LIMITATIONS OF CARBON SEQUESTRATION

Although carbon sequestration has the potential to play an important role in combating global climate change, several challenges confront the wide-scale deployment of carbon capture and sequestration technologies. Putting aside for a moment the regulatory and legal challenges the technologies face, two major issues emerge: first, the process of carbon capture and sequestration is still cost-prohibitive; second, measures must be put into place to monitor and limit the amount of carbon dioxide lost during capture and sequestration.

Carbon capture and sequestration technologies currently would add a large component to the cost of electricity. The Department of Energy estimates implementing today's carbon capture and sequestration technologies would add an estimated 75 percent to the price of electricity for a new pulverized-coal power plant, and about 35 percent to the price of electricity for a new advanced gasification-based plant.<sup>64</sup> Reuters reported in October 2009 that carbon capture and sequestration technologies would increase the price of producing electricity at an existing coal-fired power plant by as much as 78 percent.<sup>65</sup> The Department of Energy aims to reduce the cost of sequestration such that the use of the technologies would add 35 percent to the price of electricity for a new pulverized-coal power plant, and 10 percent for a new gasification-based plant.<sup>66</sup> Still, given the pre-existing trend toward increasing energy prices, it may be too much to require consumers to absorb this cost.

Not enough is known about how long sequestered carbon dioxide remains trapped in the geologic formations or in terrestrial ecosystems. Currently the data on industry carbon capture rates is limited to estimates.<sup>67</sup> The company behind a recently announced coal-gasification plant in Texas estimates that it will have an "industry-leading" 90-percent capture rate.<sup>68</sup> A proposed federally subsidized project is aiming to

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61 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 22.

62 *Carbon Sequestration Storage*, *supra* note 48.

63 2008 *Carbon Sequestration Atlas II of the United States and Canada – Second Edition*, *supra* note 26, at 22.

64 *Carbon Capture and Storage R&D Overview*, *supra* note 4.

65 Michael Perry, *Audit finds high risk of CO<sub>2</sub> capture project failure*, REUTERS, Oct. 28, 2009, <http://in.reuters.com/article/worldNews/idINIndia-43489020091028>.

66 *Carbon Capture and Storage R&D Overview*, *supra* note 4.

67 See OFFICE OF FOSSIL ENERGY, DEP'T OF ENERGY, *Stored CO<sub>2</sub> and Methane Leakage Risk Assessment and Monitoring Tool Development: CO<sub>2</sub> Capture Project Phase 2*, <http://www.netl.doe.gov/publications/factsheets/project/Proj392.pdf> (last visited Oct. 31, 2010).

68 *Summit Power and Blue Source Announce Agreement On CO<sub>2</sub> Management for One of the World's Largest Carbon Capture and Storage Projects*, REUTERS, Oct. 26, 2009, <http://www.reuters.com/article/pressRelease/idUS133519+26-Oct-2009+BW20091026> [hereinafter *Summit Power and Blue Source Announce Agreement*].

have a nearly 100-percent capture rate.<sup>69</sup> But, these numbers are self-serving estimates. Future research and study is needed to gain an accurate idea of current capture rates.

### **III. TEXAS LAW AND CARBON SEQUESTRATION**

The process of carbon sequestration creates many novel legal issues, as does the introduction of any new technology. The Texas Legislature passed three bills during its 81<sup>st</sup> Legislative Session to encourage sequestration operations and answer legal questions.<sup>70</sup> The Texas Legislature did not go far enough. Texas common law is insufficient to answer several key legal questions regarding carbon sequestration. Operators of sequestration facilities in Texas do not know their potential liabilities, including what causes of action may be brought against them. The State has likewise failed to give a definitive answer regarding whether the surface or the mineral estate possesses an ownership interest in the pore space in which the carbon would be stored.<sup>71</sup> The current state of the law in Texas and unanswered legal questions regarding sequestration deserve further scrutiny.

#### **A. STATUTORY LAW**

In 2009, the 81<sup>st</sup> Texas Legislature enacted three separate bills concerning carbon sequestration. Senate Bill 1387 and House Bill 1796 addressed the regulatory process whereby sequestration operations will be regulated, and House Bill 469 established tax incentives for operators of carbon-sequestration operations that move to Texas and meet certain standards.<sup>72</sup> Although the bills are steps toward an understandable regulatory regime, they fall far short of providing carbon-sequestration operators with a comprehensive idea of their legal responsibilities and liabilities.

Senate Bill 1387 gives the Texas Railroad Commission (“Railroad Commission”) jurisdiction over the injection of carbon dioxide into most geologic formations previously used to drill for oil, gas, or other geothermal resources.<sup>73</sup> The legislation prohibits the drilling or operation of a carbon dioxide injection well for geologic storage without a permit from the Railroad Commission.<sup>74</sup> It further requires the Texas Commission on Environmental Quality (TCEQ) to work with the Railroad Commission to examine records regarding the properties on which proposed sequestration operations could occur.<sup>75</sup>

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69 DEP’T OF ENERGY, *FutureGen Clean Coal Project*, <http://www.fossil.energy.gov/programs/power-systems/futuregen/index.html> (last visited Feb. 27, 2010).

70 See Weber, *supra* note 5.

71 See *id.*

72 See S.B. 1387, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/SB01387F.pdf>; see also H.B. 1796, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/HB01796F.pdf>; see also H.B. 469, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/HB00469F.pdf>.

73 S.B. 1387, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/SB01387F.pdf>.

74 *Id.* at 4.

75 See *id.*; see also LEGISLATIVE BUDGET BOARD, FISCAL NOTE, SB 1387, available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/SB01387H.pdf>.

House Bill 1796 requires the Texas Land Commissioner to contract with the University of Texas Bureau of Economic Geology to conduct a study of state-owned offshore submerged land to identify potential locations for a carbon-dioxide repository.<sup>76</sup> This piece of legislation also requires the TCEQ to develop standards and rules for the offshore sequestration of carbon dioxide that is subject to any standards that the United States Environmental Protection Agency creates.<sup>77</sup> The bill's statement of intent notes that the unique and heavily researched geology of Texas makes it a first-rate candidate for the storage of carbon dioxide in brine aquifers along the Gulf Coast.<sup>78</sup> The Texas brine aquifers are a type of saline formation discussed previously.<sup>79</sup>

House Bill 469 provides a franchise-tax credit for up to three clean energy projects certified by the Railroad Commission that the University of Texas Bureau of Economic Geology determines will sequester at least 70 percent of the carbon dioxide from these electric-generating projects.<sup>80</sup> The total amount of the franchise tax credit is the lesser of 10 percent of the total capital cost of the project or \$100 million.<sup>81</sup> The bill's statement of intent points to the benefits of enhanced oil recovery as an additional incentive for the passage of the bill.<sup>82</sup> Finally, the legislation applies the same reduced tax rate given to the operators of enhanced oil-recovery facilities to the operators of carbon-sequestration facilities for 30 years.<sup>83</sup>

A bill passed in 2007 offers some insight into what the State may require of carbon sequestration sites in the future.<sup>84</sup> Now codified in the Texas Tax Code, the bill enacted a severance-tax exemption for oil and gas operators of enhanced oil-recovery projects using carbon dioxide for which it can be demonstrated that 99 percent of the stored carbon will stay sequestered for 1,000 years.<sup>85</sup> This exemption could also be available to the operators of carbon-sequestration projects as long as they meet the

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76 See H.B. 1796, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/HB01796F.pdf>; see also LEGISLATIVE BUDGET BOARD, FISCAL NOTE, HB 1796 (May 30, 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/HB01796F.pdf>.

77 See H.B. 1796, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/HB01796F.pdf>; see also LEGISLATIVE BUDGET BOARD, FISCAL NOTE, HB 1796 (May 30, 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/fiscalnotes/pdf/HB01796F.pdf>.

78 SENATE RESEARCH CENTER, BILL ANALYSIS, H.B. 1796 (May 15, 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/analysis/pdf/HB01796E.pdf>.

79 See Mark Holtz et al, *Geologic Sequestration in Saline Formations Frio Brine Storage Pilot Project, Gulf Coast Texas*, <http://www.netl.doe.gov/publications/proceedings/05/carbon-seq/Tech%20Session%20Paper%20240.pdf> (last visited Oct. 31, 2010).

80 See H.B. 469, 2009 Leg., 81<sup>st</sup> Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/HB00469F.pdf> at 2.

81 *Id.*

82 See *id.*; see also SENATE RESEARCH CENTER, BILL ANALYSIS, HB 469 (May 25, 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/analysis/pdf/HB00469S.pdf> at 1.

83 *Id.*

84 See H.B. 3732, 2007 Leg., 80<sup>th</sup> Sess. (Tex. 2007), available at <http://www.legis.state.tx.us/tlodocs/80R/billtext/pdf/HB03732F.pdf>.

85 See TEX TAX CODE ANN. § 202.0545(d)(1) (Vernon Supp. 2007).

criteria articulated in House Bill 469 above.<sup>86</sup> Although the law does not mandate compliance by operators of the sequestration facilities, it does offer a strong incentive for them to ensure that the carbon dioxide does not escape.<sup>87</sup>

Senate Bill 1387 and House Bill 469 are important first steps for the State of Texas's regulatory regime. By assigning the Railroad Commission and the TCEQ specific regulatory responsibilities, the State is laying the groundwork for the future. But, Texas wants operators to begin construction on facilities now. Although the federal government's failure to implement a regulatory framework or legal guidelines for sequestration facilities puts Texas in a difficult situation, state legislators should not avoid responsibility due to federal inaction.<sup>88</sup> Texas should treat the federal government's inaction as an opportunity rather than an obstacle. Unfortunately, neither the legislature nor the courts have provided clear guidance for sequestration facilities in Texas.

## B. TEXAS CASE LAW

Texas courts have not yet addressed the operation of carbon sequestration directly. Operators have been left to piece together a workable framework of liabilities and legal responsibilities themselves. Several central questions remain: first, who owns the pore space on a severed piece of property? Second, is the operator of a carbon-sequestration facility subject to a trespass action if carbon dioxide moves into an adjacent landowner's property? Third, how will long-term legal responsibility be assigned to a leak of carbon dioxide out of a sequestration facility and into the atmosphere?

### 1. PORE SPACE OWNERSHIP

Texas law remains unsettled with regard to whether the owner of the surface estate or the owner of the mineral estate owns the subsurface pore space. Carbon sequestration involves the injection of carbon dioxide into the pore space of the ground, thus requiring the operator to have control of the pore space.<sup>89</sup> In Texas, a landowner may sever the mineral rights to his property and create two separate estates with separate rights.<sup>90</sup> The mineral estate is considered the dominant estate and the owner of such has an implied grant of free use over as much of the surface estate as is reasonably necessary to exercise control of the minerals.<sup>91</sup> Beyond these fundamental conclusions, the case law produces inconsistent results.

When the United States Court of Claims interpreted Texas property law in *Emeny v. United States*, it held that the surface estate included the underground storage facilities and that the mineral estate included only the actual oil and gas deposits.<sup>92</sup> The

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86 See *id.*; See also H.B. 469, 2009 Leg., 81st Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/HB00469F.pdf>.

87 See TEX TAX CODE ANN. § 202.0545(d)(1) (Vernon Supp. 2007); see also H.B. 469, 2009 Leg., 81st Sess. (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/HB00469F.pdf>.

88 See *What is Carbon Capture?*, *supra* note 10.

89 See Anderson, *supra* note 6, at 99.

90 *Humphreys-Mexia Co. v. Gammon*, 254 S.W. 296, 299 (Tex. 1923).

91 *Sun Oil Co. v. Whitaker*, 483 S.W.2d 808, 810-11 (Tex. 1972).

92 *Emeny v. United States*, 412 F.2d 1319, 1323-1324 (Ct. Cl. 1969).

court further held that the mineral-estate owners did not have any right to use the underground storage for oil or gas that originated in a different location.<sup>93</sup> In *MAPCO Inc. v. Carter*, on the other hand, a Texas state appellate court indicated that the mineral-estate owner holds an interest in more than just the actual deposits themselves, and would retain a property interest in an underground storage facility that is created.<sup>94</sup>

In *Mallon Oil Co.*, the U.S. Department of the Interior Board of Land Appeals stated that the general rule in American law is that a mineral-estate owner loses his or her property interest once the minerals are removed.<sup>95</sup> Although the case does not have a direct effect on Texas law, it does offer insight into how the federal government views the dispute in ownership.

In separate articles, Thomas Weber and Owen Anderson argue that despite the apparent contradictions in the law in Texas, surface owners have the stronger argument for ownership of pore space.<sup>96</sup> Such an important issue should not be left unanswered. When possible, operators should sidestep the issue by obtaining both mineral and property rights in the land in which they operate carbon-sequestration facilities. In Texas, the property interest of land on which potential repositories rest is often split. Therefore, clarification is needed regarding who controls the pore space under Texas law.

## 2. TRESPASS ACTION

Uncertainty remains regarding the extent to which an operator of a carbon-sequestration facility would be liable for a trespass action if carbon dioxide from the facility moved from under the operator's property and into an adjacent landowner's underground property. Two opinions from the Texas Supreme Court provide operators with some clues with respect to potential liability under a cause of action of trespass. In the end, however, operators are left with nothing more than a guess.

The plaintiff in *R.R. Comm'n of Tex. v. Manziel* sought to invalidate a Railroad Commission order authorizing an adjacent landowner to drill a nearby well for purposes of enhanced oil recovery.<sup>97</sup> The Texas Supreme Court stated that even if the water injected for purposes of enhanced oil recovery would move across the property lines, the rule of trespass does not have any place in determining the validity of an order of the Railroad Commission.<sup>98</sup> The Supreme Court supported its ruling by pointing to the benefit to the public that is gained through enhanced oil recovery.<sup>99</sup> However, the court's decision was not about damages, and it did not address whether

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93 *Id.*

94 *MAPCO, Inc. v. Carter*, 808 S. W.2d 262, 274 (Tex. Civ. App.—Beaumont 1991), *rev'd in part on other grounds*, 817 S.W.2d 686 (Tex. 1991).

95 *Mallon Oil Co.*, 104 IBLA 145, 150 (1988).

96 See Thomas M. Weber, *Assessing the Liability Associated with Geologic Carbon Sequestration: Analyzing Texas Oil & Gas Law related to EOR Operations, Waste Disposal and Natural Gas Storage*, Presented Before the Carbon and Climate Change Conference, University of Texas at Austin (April 24-25, 2008), available at [http://www.utcle.org/eLibrary/preview.php?asset\\_file\\_id=15833](http://www.utcle.org/eLibrary/preview.php?asset_file_id=15833); see also Anderson, *supra* note 6, at 106.

97 See *R.R. Common'n of Tex. v. Manziel*, 361 S.W.2d 560, 561 (Tex. 1962).

98 *Id.* at 568-569.

99 See *id.*

a Railroad Commission order would throw a “protective cloak” over the adjacent landowner in a private action for damages.<sup>100</sup>

In the 2008 case *Coastal Oil & Gas Corp. v. Garza Energy Trust*, the Texas Supreme Court affirmed the public policy considerations used in *Manziel* when it held that subsurface hydraulic fracturing that crossed property lines was not an actionable trespass because of the rule of capture.<sup>101</sup> The court stated that trespass injury should not be inferred when the trespass occurs miles beneath the surface.<sup>102</sup> It reasoned that the *ad coelum* doctrine does not have any place in the modern world.<sup>103</sup> Therefore, the mere movement of something miles beneath a property owner’s land is not prima facie evidence of a trespass.<sup>104</sup> The court’s decision relied most heavily on public policy when it refused to allow the law of trespass to supplant the Railroad Commission’s vested responsibility to regulate hydraulic fracturing within the state.<sup>105</sup>

The Texas Supreme Court’s rulings on trespass should be good news for potential operators of carbon-sequestration facilities in Texas. Both cases indicate a hesitancy to extend the action of trespass to encroachments that occur miles under the ground and without any evidence of actual harm.<sup>106</sup> Also, both cases indicate a willingness on the part of the court to consider the public benefit of enhanced oil recovery when determining whether an action of trespass should succeed. With the important role carbon sequestration can play in combating global climate change, operators of carbon sequestration should also benefit from the consideration of public policy. On the other hand, neither the case law nor any applicable statute directly addresses the potential liability of an operator of a carbon-sequestration facility.<sup>107</sup> This uncertainty will inherently concern potential operators of these facilities and may prevent some from developing their operations in Texas.

### 3. METHOD OF ASSIGNING RESPONSIBILITY FOR LONG-TERM LIABILITY

Another cause for concern for the operators of sequestration facilities is the long-term liability they could face for any problems that occur after the closing of the facility, such as a carbon dioxide leak. Much of this determination will depend on federal rather than state law. Applying severe levels of liability on operators and future landowners would likely have a chilling effect on the development of sequestration facilities. The assignment of federal liabilities is outside of the power of the State of Texas, but these additional levels of liability need to be considered when analyzing the viability of carbon sequestration in Texas and beyond.

### C. LAWS OF OTHER STATES

Texas is not alone in lacking the answers to many important legal questions regarding carbon sequestration. A brief review of the laws in several other states finds that

100 See *id.* at 566-567.

101 See *Coastal Oil & Gas Corp. v. Garza Energy Trust*, 268 S.W.3d 1, 34-35 (Tex. 2008).

102 *Id.* at 11.

103 *Id.*

104 See *id.*

105 *Id.* at 15-16.

106 See *Manziel*, 361 S.W.2d at 561; See *Coastal Oil*, 268 S.W.3d at 34-35.

107 See *id.*

most have not yet created an understandable legal framework for operators of carbon-sequestration facilities either.

Wyoming has taken statutory steps to provide guidance for operators of carbon-sequestration facilities. The Wyoming Legislature enacted a statute specifying that pore space ownership is vested in the owner of the surface estate.<sup>108</sup> The Wyoming Legislature likely felt the need to codify this rule because Wyoming contains a large amount of coal, suggesting that carbon-sequestration operators would have a high interest in establishing facilities within Wyoming's borders.<sup>109</sup> The Kansas Legislature recently passed legislation granting the power to regulate carbon-dioxide sequestration to the Kansas Corporation Commission.<sup>110</sup> The Kansas Legislature also specified areas which those regulations must cover.<sup>111</sup>

Rather than enacting legislation, several other states have relied on their courts to enumerate standards from existing law. Cases from Louisiana, Michigan, New York, and West Virginia suggest a preference for the surface estate owner to hold an ownership interest in the pore space.<sup>112</sup> Although variation exists between the various state standards, it appears that most states have a preference for the surface estate owner to hold an ownership interest in the pore space. However, like Texas, other states have insufficient legal standards in place for the operation of sequestration facilities.

#### **IV. RECENT DEVELOPMENTS & FUTURE OF CARBON SEQUESTRATION**

After exploring the current state of the law and science with regard to carbon sequestration, this note now turns to current carbon-sequestration activity in Texas and beyond.

##### **A. RECENT DEVELOPMENTS**

In 2007, the Texas Legislature enacted legislation to provide franchise-tax incentives in a failed attempt to attract the federally sponsored FutureGen project to Texas.<sup>113</sup> The FutureGen project would have been a partnership between the federal gov-

<sup>108</sup> WYO. STAT. ANN. § 34-1-152 (2008).

<sup>109</sup> See Sheila McNulty, *Coal: The big challenge for US CO<sub>2</sub> emissions*, FINANCIAL TIMES ENERGY SOURCE, Nov. 3, 2009, <http://blogs.ft.com/energy-source/2009/11/03/us-coal-issue-illustrates-obama-unwillingness-to-change-system>.

<sup>110</sup> KAN. STAT. ANN. § 55-1637 (2008).

<sup>111</sup> KAN. STAT. ANN. § 55-1637(b) (2008) (dictates that the rules and regulations adopted by the state corporation commission must include: "(1) Site selection criteria; (2) design and development criteria; (3) operation criteria; (4) casing requirements; (5) monitoring and measurement requirements; (6) safety requirements, including public notification; (7) closure and abandonment requirements, including the financial requirements of subsection (e); and (8) long-term monitoring.").

<sup>112</sup> See *United States v. 43.42 Acres of Land*, 520 F. Supp. 1042, 1045-6 (W.D. La. 1981); see also *Dep't. of Transp. v. Goike*, 560 N.W.2d 365, 366 (Mich. App. 1996); see also *Miles v. Home Gas Co.*, 316 N.Y.Supp.2d 908-910 (N.Y. Sup. Ct. App. Div. 1970); see also *Tate v. United States Fuel Gas Co.*, 71 S.E.2d 65, 71-72 (W. Va. 1952).

<sup>113</sup> HOUSE RESEARCH ORGANIZATION, BILL ANALYSIS, HB 469 (May 4, 2009), available at <http://www.hro.house.state.tx.us/pdf/ba81r/hb0469.pdf>.



ernment and private industry to build the first near-zero emissions coal-fueled power plant.<sup>114</sup> The plant was intended to demonstrate that a coal-fueled power plant could eliminate its emissions through carbon-sequestration technology in an economically feasible manner.<sup>115</sup> The success of the demonstration was of monumental importance to the federal government because coal is the cheapest and most abundant natural resource for energy in the United States.<sup>116</sup>

The federal government awarded the FutureGen project to Illinois in 2008.<sup>117</sup> However, the project has not materialized, due to costs that the Department of Energy has deemed to be too high.<sup>118</sup> FutureGen's cost complications are a blow not only to the project itself, but to all proponents of carbon sequestration as an economically feasible response to global climate change. The ultimate fate of the FutureGen project is in the hands of the Department of Energy, and the Secretary of Energy has expressed optimism that the project will continue.<sup>119</sup> To support the viability of the FutureGen project, members of the Illinois Legislature have proposed legislation that would allow the State to purchase its energy solely from the project's output.<sup>120</sup> The Illinois Finance Authority approved a resolution in January 2010 that encourages Illinois lawmakers to make such a deal.<sup>121</sup> Any official legislation, however, appears to be on hold until the Department of Energy gives a final verdict on FutureGen.<sup>122</sup>

Texas's initial failure to secure the FutureGen project may be to its benefit in the long term. A company by the name of Summit Power Group secured the proposed FutureGen site in Odessa, Texas.<sup>123</sup> Unlike the federal project, Summit Power Group is continuing to move forward with its clean-coal-gasification power plant.<sup>124</sup> In early December 2009, the Department of Energy announced that Summit Power Group would receive a grant worth \$350 million.<sup>125</sup> Summit Power Group estimates that its

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114 *Id.*

115 *Id.*

116 See *FutureGen Clean Coal Project*, *supra* note 69.

117 HOUSE RESEARCH ORGANIZATION, BILL ANALYSIS, HB 469 (May 4, 2009), available at <http://www.hro.house.state.tx.us/pdf/ba81r/hb0469.pdf>.

118 Tom Kacich, *FutureGen Group Says Project Costs Have Dropped*, THE NEWS GAZETTE, Nov. 14, 2009, available at <http://www.news-gazette.com/news/miscellaneous/2009-11-14/futuregen-group-says-project-costs-have-dropped.html>.

119 *Exelon says it will join Illinois' FutureGen Alliance*, ASSOCIATED PRESS, Jan. 30, 2010, available at <http://www.irstar.com/news/x1103039412/Exelon-says-it-will-join-FutureGen-Alliance>.

120 *Id.*

121 Herb Meeker, *Final FutureGen decision expected by mid-February*, JOURNAL GAZETTE AND TIMES-COURIER, Jan. 21, 2010, available at <http://www.jg-tc.com/articles/2010/01/21/news/doc4b591e2c06897166111566.txt>.

122 See *id.*

123 HOUSE RESEARCH ORGANIZATION, BILL ANALYSIS, HB 469 (May 4, 2009), available at <http://www.hro.house.state.tx.us/pdf/ba81r/hb0469.pdf>.

124 Geoff Folsom, *Power Plant Not Plugged In*, ODESSA AMERICAN, Oct. 24, 2009, available at <http://www.istockanalyst.com/article/viewiStockNews/articleid/3577534>.

125 Jack Z. Smith, *West Texas "clean coal" plant gets \$350 million federal grant*, FORT WORTH STAR-TELEGRAM, Dec. 5, 2009, available at <http://www.istockanalyst.com/article/viewiStockNews/articleid/3689946#>.

power plant will capture an industry-leading 90 percent of the emissions it produces.<sup>126</sup> The plant is estimated to generate a net 245 megawatts of electricity to the power grid, enough to supply electricity to about 245,000 homes.<sup>127</sup> The plant, which is scheduled to begin construction in the second half of 2011, is aimed to capture one of the \$100-million credits offered by the previously described House Bill 469.<sup>128</sup> In exchange for the funding, the Railroad Commission must certify the plant, and the University of Texas Bureau of Economic Geology must verify that the plant will sequester at least 70 percent of the emissions it produces.<sup>129</sup>

In October 2009, Summit Power Group announced that it had reached a deal with Blue Source, a leading emissions-reduction project developer, to market the estimated 3 million tons of carbon dioxide the plant is expected to capture each year.<sup>130</sup> Under the agreement, Blue Source will market the captured carbon dioxide and the resulting greenhouse gas emissions reductions.<sup>131</sup> Blue Source will also oversee the sequestration of the captured carbon dioxide into Texas's Permian Basin oil fields.<sup>132</sup>

Another energy company is in the planning stages of a coal-fired power plant that would be designed to take advantage of carbon capture and enhanced oil recovery.<sup>133</sup> Tenaska Energy is proposing a plant of even larger proportions than the Summit Power Group plant.<sup>134</sup> The plant, which recently received its final air quality permits from the TCEQ, would generate a net 600 megawatts of electricity to the power grid, enough to supply electricity to about 600,000 homes.<sup>135</sup> Tenaska Energy officials stated that the company did not apply for the federal grant awarded to Summit Power Group for its new plant because the proposed plant lacks certain technical design specifics needed to qualify for the grant.<sup>136</sup>

Both Summit Power Group and Tenaska Energy's interest in development in West Texas may be explained by the presence of the Permian Basin's oil reservoirs.<sup>137</sup> It is estimated that 70 percent of the region's oil—or more than 20 billion gallons—remains trapped in reservoirs.<sup>138</sup> Developers of sequestration facilities hope to find an active

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126 Folsom, *supra* note 124.

127 Smith, *supra* note 125.

128 See *Summit Power begins FEED study for Texas IGCC-CCS project*, CARBON CAPTURE JOURNAL, July 22, 2010, available at <http://www.carboncapturejournal.com/displaynews.php?NewsID=603>

129 See *id.*; See also HB 469, 81st Leg., (Tex. 2009), available at <http://www.legis.state.tx.us/tlodocs/81R/billtext/pdf/HB00469F.pdf>.

130 *Summit Power and Blue Source Announce Agreement*, *supra* note 68.

131 *Id.*

132 *Id.*

133 See Smith, *supra* note 125.

134 *Id.*

135 Press Release, Tenaska Trailblazer Energy Center, Trailblazer Energy Center Receives Final Air Quality Permits (Dec. 15, 2010), <http://www.tenaskatrailblazer.com/media/press-101214.html>.

136 Jaime Adame, *Tenaska didn't bid on federal grant because design specifics not set*, ABILENE REPORTER-NEWS, Dec. 7, 2009, available at <http://www.reporternews.com/news/2009/dec/07/lack-of-specifics-hurt-tenaska-bid>.

137 See Betsy Blaney, *Odessa, power company await word on \$350M grant*, ASSOCIATED PRESS, Dec. 2, 2009, <http://abcnews.go.com/Business/wireStory?id=9232249>.

138 See *id.*

market for their business from oil companies that would use the carbon dioxide for enhanced oil recovery in the area.<sup>139</sup>

Despite Summit Power Group's progress to date and the high hopes of Tenaska Energy's facility, not all sequestration efforts are on pace for the same level of projected success. In October 2009, the Global Carbon Capture and Storage Institute released a worldwide audit of carbon capture and sequestration facilities made to reduce carbon dioxide emissions.<sup>140</sup> The report found 213 proposed or planned facilities, with only seven currently operating and capturing carbon dioxide at all stages.<sup>141</sup> The audit also found that carbon capture and sequestration facilities faced a high risk of failure due to the high costs and new technologies.<sup>142</sup> The report concluded that the price of power generation at a coal-fueled power plant rose by as much as 78 percent for power plants that used carbon sequestration.<sup>143</sup>

Recent developments in carbon sequestration provide a mixed outlook on the technology's future in Texas, the United States, and the entire world. Summit Power Group's willingness to move forward with its power plant despite the remaining legal and scientific questions that are unanswered is positive news for the State. Tenaska Energy's plans, although not as far along than those of Summit Power Group, is also positive news. But, these actors' decisions must be viewed in light of the \$100-million credit offered by the State and the potential 20-percent contribution from the Department of Energy. These incentives may be the reason Summit Power Group and Tenaska Energy are risking the unknown standards of liability in Texas. The real question becomes whether these entities would make the same risky determinations without the large subsidies offered.

FutureGen's struggles should also cause concern for would-be operators of carbon-sequestration plants. Even with federal subsidies, the project is considered too costly to succeed in its current form.<sup>144</sup> If subsidized sequestration plants are not economically feasible, then the question becomes whether unsubsidized plants will ever be feasible.

Texas is fortunate that Summit Power Group and Tenaska Energy appear to be moving forward with their power plants. If the State wants more sequestration facilities like those proposed by Summit Power Group and Tenaska Energy to operate within its borders, then it must enact concrete regulations and laws regarding their liability. The scientific and economic hurdles faced by carbon-sequestration facilities are too high for them to overcome when also faced with such legal uncertainty.

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139 See *id.*

140 Perry, *supra* note 65.

141 GLOBAL CCS INSTITUTE, STRATEGIC ANALYSIS OF THE GLOBAL STATUS OF CARBON CAPTURE AND STORAGE (2009), <http://www.globalccsinstitute.com/downloads/Status-of-CCS-WorleyParsons-Report-Synthesis.pdf>.

142 *Id.*

143 *Id.*

144 See Stephen Di Benedetto, *FutureGen's Fate Waits for January*, DENVER NEWS, Nov. 16, 2009, available at <http://www.dennews.com/media/storage/paper309/news/2009/11/16/News/Futuregens.Fate.Waits.For.January-3832953.shtml>; See also Kacich, *supra* note 118.

## **V. CONCLUSION**

Texas lacks the legal framework necessary to provide the operators of carbon sequestration facilities with any real understanding of their short-term or long-term liabilities. Neither the state's courts nor its legislature have clarified what property interests an operator must possess to inject the carbon dioxide into the ground.

Economic and scientific concerns remain as well. The price of carbon sequestration is high, and enhanced oil recovery can only offset a portion of the total cost. Operators of the facilities must also discover how much of the sequestered carbon dioxide remains sequestered and for how long. Further, more research is needed to enable operators to best utilize the various geologic formations and terrestrial ecosystems used to hold the carbon dioxide.

Texas must provide a comprehensive legal framework before it can expect operators of sequestration facilities to enter its borders without monumental state subsidies. The state legislature should work with the Railroad Commission and the TCEQ to create an unambiguous regulatory regime that addresses the potential liabilities of sequestration operators, and gives a definitive answer as to who owns the pore space property rights. Providing this legal framework is key for the State of Texas to move forward as a leader in carbon sequestration.

*Russell Murdock is a water-enforcement attorney with the Environmental Protection Agency, Region 6, in Dallas, Texas. Mr. Murdock works with technical staff to enforce the Clean Water Act and the Safe Drinking Water Act. He graduated from The University of Texas School of Law in 2010.*



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## AIR QUALITY

### **EPA DISAPPROVAL OF TEXAS’S STATE IMPLEMENTATION PLAN REVISIONS – TEXAS QUALIFIED FACILITIES PROGRAM AND TEXAS FLEXIBLE PERMITS PROGRAM**

#### **STATE IMPLEMENTATION PLANS**

The federal Clean Air Act requires each state to develop and submit a state implementation plan (SIP) for approval by the U.S. Environmental Protection Agency (EPA). 42 U.S.C. § 7411(c) (2010). The SIP is a collection of regulations enforceable by both the EPA and the state, and the EPA must approve each SIP and SIP revision. 42 U.S.C. § 7410(a) (2010). The EPA’s regulations require states to show that their SIP is at least as stringent as the corresponding federal program. 42 U.S.C. § 7416 (2010). Upon review for approval, the EPA can request revisions to the SIP or disapprove the SIP in whole or in part if it does not meet these standards. 42 U.S.C. § 7410(a)(3)(B) (2010).

Since 1992, the State of Texas has submitted numerous proposed regulatory changes to its SIP to the EPA for approval, including the provisions that comprise the Qualified Facilities Program and the Flexible Permit Program. *EPA disapproves Texas flexible air permit program*, Jun. 30, 2010, available at <http://panews.com/local/x383289298/EPA-disapproves-Texas-flexible-air-permit-program>. These proposed revisions to the SIP remained pending for a long amount of time without action by the EPA, which created uncertainty for the regulated entities that were faced with a choice between complying with a different set of federal air regulations or operating under an unapproved program that the EPA might ultimately disapprove. Proposed Consent Decree and Proposed Settlement Agreement, Clean Air Act Citizen Suit, 74 Fed. Reg. 38015 (July 30, 2009). In an effort to force the EPA to act on many pending SIP submittals, a group of Texas industries sued the EPA in August 2008. *Id.* Pursuant to the settlement agreement reached in this lawsuit, the EPA was required to announce final actions on the submitted SIP revisions. *Id.* On March 31, 2010, the EPA issued a final decision formally disapproving the Texas Qualified Facilities Program. Mike Lee, *EPA formally rejects Texas’ clean-air rules*, FORT WORTH STAR-TELEGRAM, Mar. 31, 2010, available at <http://www.star-telegram.com/2010/03/31/2081711/epa-formally-rejects-texas->

clean.html. On June 30, 2010, the EPA issued a final decision formally disapproving the Texas Flexible Permit Program. Dave Montgomery, *EPA rejects Texas' flexible permit system*, FORT WORTH STAR-TELEGRAM, Jun. 30, 2010, available at <http://www.star-telegram.com/2010/06/30/2305966/epa-decision-on-air-permit-program.html>.

#### **EPA'S DISAPPROVAL OF TEXAS'S QUALIFIED FACILITIES PROGRAM**

The State of Texas instituted the Texas Qualified Facilities Program through several of the proposed SIP revisions it submitted to the EPA for approval in 1996 and 1998 for inclusion in the federally approved Texas SIP. *EPA disapproves Texas flexible air permit program*, Jun. 30, 2010, available at <http://panews.com/local/x383289298/EPA-disapproves-Texas-flexible-air-permit-program>. The Qualified Facilities Program allowed some facilities to qualify for an exemption from full-fledged permit procedures such as notice and a more detailed official review of a company's plans. Randy Lee Loftis, *EPA kills Texas program that eased environmental scrutiny on small firms*, DALLAS MORNING NEWS, Mar. 31, 2010, available at <http://www.dallasnews.com/health/medicine/20100331-EPA-kills-Texas-program-that-eased-2994.ece>. On March 31, 2010, the EPA issued a final decision formally disapproving the Texas Qualified Facilities rules based on the conclusions that the program did not contain safeguards against misuse by large facilities and could allow major expansions in operation, such as adding a production line and boosting emissions in the process to slip through the complete review that Congress mandated. *Id.* The EPA further determined that this program was not limited to Minor NSR, and therefore, allowed major modifications to occur without a Major NSR permit. *Id.*

In response to this final disapproval by the EPA, on June 14, 2010, Texas Attorney General Greg Abbott filed a petition in the United States Court of Appeals for the Fifth Circuit seeking judicial review of the EPA's decision to deny SIP approval of the Qualified Facilities rules. Morgan Smith, *AG Files Second Legal Action against the EPA*, TEXAS TRIBUNE, Jun. 14, 2010, <http://www.texastribune.org/texas-environmental-news/environmental-problems-and-policies/ag-files-second-legal-action-against-the-epa/>.

#### **EPA'S DISAPPROVAL OF TEXAS'S FLEXIBLE PERMIT PROGRAM**

The State of Texas submitted the Texas Flexible Permit Program to the EPA for approval in 1994 and is provided in Subchapter G of Chapter 116 of the TCEQ's rules. 30 TEX. ADMIN. CODE § 116.710-765 (2010). A flexible permit is a kind of NSR permit that allows plants to meet clean-air requirements based on a plant-wide ceiling for each type of emissions, rather than for each pollutant-producing source, such as a single stack within the facility. Montgomery, *supra*. The TCEQ has been issuing flexible permits through this program since it was established, and as with other SIP revisions that were left alone by the EPA, they were believed for many years to be tacitly approved of by the agency. Loftis, *supra*. The EPA-approved Texas SIP, on the other hand, has never allowed for a flexible permit of any kind and does not define that type of program. *Id.* On September 8, 2009, the EPA announced its proposed disapproval of the Texas Flexible Permit Program pursuant to the aforementioned court-ordered schedule. *Id.* To address the concerns identified in the EPA's proposed disapproval, the TCEQ adopted some changes to its Texas Flexible Permit Program, which it submitted to the EPA for approval on June 16, 2010. R.G. Ratcliffe, *EPA rejects air permits*

of 122 Texas plants, HOUSTON CHRONICLE, Jul. 1, 2010, available at <http://www.chron.com/disp/story.mpl/metropolitan/7087940.html>. The EPA reviewed these proposed changes and nevertheless proceeded to issue a final disapproval, formalizing the agency's position that the existing Flexible Permit Programs do not conform to the Clean Air Act SIP requirements for the New Source Review program authorized in the Clean Air Act and codified in 42 U.S.C. §7411. Loftis, *supra*.

The EPA's grounds for disapproval of the Texas Flexible Permits program are: (1) it is unclear whether it is for a major or minor NSR SIP revision; (2) the program is not approvable as a substitute Major NSR SIP revision; (3) the program is not approvable as a substitute Minor NSR SIP revision; and (4) the TCEQ's definition of "account" does not agree with the EPA's understanding of the term. *Approval and Promulgation of Implementation Plans; Texas; Revisions to the New Source Review (NSR) State Implementation Plan (SIP); Flexible Permits*, 75 Fed. Reg. 41,3329-32 (July 15, 2010) (to be codified at 40 C.F.R. pt. 52). First, in the EPA's view, the TCEQ did not include a limiting provision in the submitted Flexible Permit Program to avoid circumvention of the Major NSR SIP permitting requirements, thereby making it unclear whether this program was a major or minor NSR SIP revision. *Id.* at 41,329. In any event, the EPA concluded, the Flexible Permit Program is not approvable as a Major or Minor NSR SIP revision. *Id.* at 41,329-30. Further, the EPA explained that Texas's definition of "account" was too broad because it included not only a single major stationary source but also multiple major stationary sources; Texas's use of "account" could also encompass a subset of a major stationary source. *Id.* at 41,333. The EPA also refused to approve the program because it did not ensure, through legally enforceable procedures, that the permit application and permitting processes would clearly inform the public, governmental agencies, or courts of which facilities were subject to the permit. *Id.*

Similar to the petition filed after the disapproval of the Qualified Facilities Program, the State of Texas filed a petition to the Fifth Circuit on July 23, 2010 requesting review of this final action disapproving of the Flexible Permit Program. Gabriel Nelson, *Texas Appeals EPA Veto of 'Flexible' Air Pollution Permits*, NEW YORK TIMES, Jul. 28, 2010, available at <http://www.nytimes.com/gwire/2010/07/26/26greenwire-texas-appeals-epa-veto-of-flexible-air-polluti-44641.html>. Challenging the EPA's contentions, the petition asserts that the Flexible Permit Program's Minor NSR program is at least as stringent as the previously approved conventional Minor NSR program, and that the Flexible Permit Program specifically requires compliance with both Nonattainment and PSD NSR as prescribed under the federal Clean Air Act. Brief for the Petitioners at 2, *State of Texas v. U.S. Environmental Protection Agency*, No. 10-60961 (5th Cir. filed Jul. 23, 2010), available at [http://www.eenews.net/assets/2010/07/26/document\\_pm\\_04.pdf](http://www.eenews.net/assets/2010/07/26/document_pm_04.pdf). Many regulated entities, in response to threatened EPA enforcement against their current flexible permits, are opting to convert their flexible permits to Subchapter B permits, another state permit that is valid under the current EPA-approved SIP. Matthew Tresaugue, *EPA's permits threat has industry scrambling*, HOUSTON CHRONICLE, Dec. 31, 2010, available at <http://www.chron.com/disp/story.mpl/business/7361472.html>. Although rhetoric between the EPA, the TCEQ, and regulated entities has been heated and voluminous, as of January 2011 all but three of the seventy-four companies with state-issued flexible permits have pledged to the EPA that they will adopt state-issued permits in compliance with federal law within the



next year, including the thirty largest permit holders that account for over 90% of the emissions released under flexible permits. *Id.*

*John B. Turney is an environmental attorney at Richards, Rodriguez & Skeith, L.L.P.*

*Jessica Achtsam is a second-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## NATURAL RESOURCES

### GEOTHERMAL ENERGY DEVELOPMENT: OPPORTUNITY IN TEXAS

#### FEDERAL INVESTMENT IN GEOTHERMAL ENERGY

The geothermal-energy industry received an important shot in the arm with the announcement last year of a massive \$350-million federal investment in the growing alternative energy sector. U.S. Dept. of Energy, Recovery Act Announcement (May 27, 2009), available at [http://apps1.eere.energy.gov/news/progress\\_alerts.cfm/pa\\_id=173](http://apps1.eere.energy.gov/news/progress_alerts.cfm/pa_id=173). This level of funding for the geothermal industry, which came as part of the American Recovery and Reinvestment Act of 2009, is unprecedented. Dan Jennejohn, U.S. Geothermal Power Production and Development Update - Special NYC Forum Edition, at 20 (Jan. 2010). It is geared toward four areas of geothermal development: geothermal demonstration projects, Enhanced Geothermal Systems (EGS), innovative exploration techniques, and a National Geothermal Data System. *Id.*

One innovative geothermal technique on the developmental agenda is geothermal-energy production from existing oil and gas fields. *Id.* Existing hydrocarbon wells and infrastructure can be utilized for geothermal-energy production either through a collaborative process known as Geothermal Hydrocarbon Coproduction (GHCP), or by reentering inactive wells that have been drilled sufficiently deep to have geothermal potential. *Id.* at 17. Texas is the leading crude-oil- and natural-gas-producing state in the nation. U.S. Energy Info. Admin., State Energy Profiles: Texas, available at [http://www.eia.doe.gov/state/state\\_energy\\_profiles.cfm?sid=TX](http://www.eia.doe.gov/state/state_energy_profiles.cfm?sid=TX). To date, however, Texas has lagged behind many Western states in its development of geothermal-electric-power generation. The highly developed hydrocarbon infrastructure in Texas makes it uniquely well placed to expand its geothermal-resource base and take a leadership position in a growing new sector of the geothermal industry. Dr. Richard J. Erdlac, Jr., Geopowering Texas, at 25 (2007), available at [http://www.seco.cpa.state.tx.us/zzz\\_re/re\\_geopowering2007.pdf](http://www.seco.cpa.state.tx.us/zzz_re/re_geopowering2007.pdf). While state policymakers have recently begun to take some steps to make the most of this opportunity, many legal and policy issues remain.

#### GEOTHERMAL ENERGY

The concept of geothermal energy encompasses any form of energy production that is based on making use of the natural heat energy within the Earth. Texas Renewable Energy Resource Assessment 7-1 (2008), available at <http://www.seco.cpa.state.tx.us/publications/renewenergy/pdf/renewenergyreport.pdf>. The subsurface heat

is stored either in the form of rock or as a fluid. *Id.* Geothermal temperature ranges break down into three categories as either low (<90°C), medium (90°-150°C), or high heat (>150°C), which are unevenly distributed at different depths across the globe. Erdlac, *supra*, at 1. This lack of thermal uniformity is significant, since geothermal-energy applications are temperature dependent, with only the higher temperature ranges being suitable for electrical power generation. *Id.* at 1-2. The Western United States, where geothermal temperatures reach the upper range at depths that are closer to the surface of the Earth, has thus traditionally had an advantage over the rest of the country. *Id.*

Geothermal energy, unlike other alternative energy resources such as wind and solar, is a baseload-capacity energy source. Texas Renewable Energy Resource Assessment, *supra*, at 7-5. Being a baseload energy source means that, once tapped, a geothermal plant can produce a steady flow of power 24 hours a day. Thomas R. Blakeslee, Can Geothermal Replace Coal for Baseload Power? at 1, available at <http://www.clr-light.org/coal.pdf>. This ability could make geothermal energy competitive with other baseload resources, such as coal and natural gas. Texas Renewable Energy Resource Assessment, *supra*, at 7-5.

#### **GEOTHERMAL RESOURCES IN TEXAS**

Texas, like the rest of the country, has large quantities of readily accessible geothermal resources in the low to moderate temperature ranges. Erdlac, *supra*, at 1. These resources have been in use in Texas for decades in residential, commercial, and industrial settings. Texas Renewable Energy Resource Assessment, *supra*, at 7-6. These uses have been limited to small-scale geexchange systems and direct-use activity for which low to moderate geothermal temperatures are sufficient. Erdlac, *supra*, at 1-2.

Researchers and commentators in the field have noted that, while Texas is certainly not as geologically active as California or Nevada, its vast fields of developed oil and gas wells could provide access to the kinds of temperatures necessary for large-scale electrical-power generation. Erdlac, *supra*, at 20. As Dr. Richard J. Erdlac Jr., a research scientist at the University of Texas of the Permian Basin, puts it in his report to the Texas State Energy Conservation Office, “while Texas does not have sufficiently hot shallow geothermal resources of the type mentioned above, it does have literally tens of thousands of oil and gas wells that have drilled sufficiently deep to reach temperatures of over 200, 300, and sometimes 400°F within well bores.” *Id.* Dr. Erdlac notes that the geothermal resources encountered during oil and gas exploration and recovery activity—in the form of hydrothermal waters and geopressed brine—is generally considered to be waste and a nuisance in the oil and gas industry. *Id.* This “waste,” however, could instead be a valuable renewable energy resource. As another commentator has observed, “If the entire volume of processed water arising from existing hydrocarbon production were run through a heat exchanger, we estimate that the combined geothermal electrical power of the seven states nearest the Texas Gulf Coast Plain would be about 1,000-5,000 MW.” Jason R. McKenna et al., *CO<sub>2</sub> Injection & Sequestration*, OIL & GAS J. 38-39 (Sept. 5, 2005).

The list of recipients for stimulus-grant funding recently released by the United States Department of Energy (DOE) reflects and helps lay the foundation for the early rumblings of activity in geothermal electrical-power-generation projects in Texas. Uni-

versal GeoPower LLC, a Houston-based company, was awarded a \$1.49 million grant to produce power from abandoned oil and gas wells along the Texas gulf coast in Liberty County. Technical Demonstration and Economic Validation of Geothermally-Produced Electricity from Coproduced Water at existing Oil/Gas Wells in Texas, Dept. of Energy Geothermal Technologies Program, *available at* <http://apps1.eere.energy.gov/geothermal/projects/projects.cfm/ProjectID=181>. The DOE describes the project as “representative of a technical addressable market (defined as including all marginal or unproductive O/G wells with sufficient geothermal water temperature and flow rate to produce 200 kW of electrical power) containing over 37,500 sites in Texas and the neighboring Gulf Region states.” *Id.* In other words, the demonstration project at the Liberty County site is intended to be a model that will later be “rapidly replicated” at tens of thousands of other sites along the Gulf Coast. *Id.*

### LEGAL AND POLICY ISSUES

The geothermal industry has a demonstrated responsiveness to public investment and favorable tax policy. According to one study:

[T]he major source of the geothermal industry’s 46 percent growth in confirmed new power projects over the past year and 33 percent increase in employment was the American Recovery and Reinvestment Act (ARRA) of 2009, which expanded tax credits for new projects to include a 30 percent investment credit and a ‘cash grant’ alternative.

Environmental Leader, Geothermal Power Projects Grow (Jan. 27, 2010), *available at* <http://www.environmentalleader.com/2010/01/27/geothermal-power-projects-grow-46-in-2009/>.

In 2009, the Texas Legislature also provided incentives with the passage of H.B. 4433. This bill “amends the Tax Code to exempt oil and gas incidentally produced in association with the production of geothermal energy from the oil severance tax and the gas severance tax, respectively.” H.B. 4433, 81st Leg., Reg. Sess. (Tx. 2009). It is vital to have such geothermal incentives in place when demonstration projects such as the one in Liberty County, Texas, start to go on-line and attract attention.

In addition to these policy considerations, another important issue that will need to be addressed is the relationship between existing oil and gas leases and geothermal-energy production. Erdlac, *supra*, at 41. The Universal GeoPower Demonstration Project in Liberty County is a noncontroversial case, as the company has all the geothermal and mineral rights to the oil and gas site. Geothermal Power Projects Grow, *supra*. However, as the oil and gas and geothermal industries begin collaborating on future GHCP projects, legal conflicts may arise from a lack of clarity regarding what types of energy projects require new geothermal mineral leases as distinct from the oil and gas leases. Some commentators have proposed grandfathering into existing oil and gas leases the right to coproduce geothermal energy. Erdlac, *supra*, at 41-42. Unless similar clarifications are made, a host of conflicts may arise in situations in which geothermal rights and hydrocarbon rights are split between two business entities on the same site. *Id.* In this situation, could the owner of the geothermal rights sue the oil and gas operator for wasting geothermal resources, which, to the oil and gas operator, are a

mere byproduct requiring disposal? Many similar legal questions lie on the horizon as groundbreaking geothermal-energy-generation projects begin to be developed and go on-line in Texas.

*Aileen M. Hooks is a partner at Baker Botts, L.L.P. The focus of her practice is environmental, health, and safety compliance and permitting, commercial real estate transactions, strategic relationships, and outsourcing.*

*Maxim Farberov is a second-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## SOLID WASTE

### **DISTRICT COURTS ASSESSING ARRANGERS AND LIABILITY POST-UPDATE ON *BURLINGTON NORTHERN & SANTA FE RAILROADS V. UNITED STATES***

In May 2009, the United States Supreme Court decided the case of *Burlington Northern and Santa Fe Railway v. U.S.* with a holding that altered the case law of who can be found responsible for and for what portion of remediation costs under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). *Burlington Northern v. U.S.*, 129 S. Ct. 1870, 1872 (2009); 42 U.S.C. § 9601 - 9675. Already, many district and appellate courts have addressed the way this decision has narrowed the scope of the applicable law.

In *Burlington*, Brown & Bryant, Inc. (B&B) was operating an agricultural business that employed Shell Oil Company (“Shell”) as one of their suppliers of pesticides. *Burlington Northern*, 129 S. Ct. at 1872. B&B stored and distributed hazardous chemicals on their property, part of which was a parcel of land jointly owned by the Burlington Northern and Santa Fe Railroad Company. *Id.* During the course of their 28 years of business, Shell would arrange for common carriers to deliver and transfer bulk D-D, a pesticide, to B&B’s storage tank. *Id.* at 1875. During these transfers, D-D would regularly spill onto the ground. Eventually, these unsafe practices led to “significant contamination of soil and ground water,” which cost the government \$8 million to remediate. *Id.* at 1875-76. The government sued the property owners and Shell for damages under CERCLA. *Id.* at 1877-78.

The first main legal question in *Burlington* was whether Shell was a potential responsible party (PRP) under CERCLA. *Burlington Northern*, 129 S. Ct. at 1880. The statute imposes strict liability on PRPs who arrange for the disposal of hazardous waste (the “arranger”). *Id.* at 1881. The Ninth Circuit both held that Shell was an arranger because they “to some degree dictated, the transfer arrangements; knew that some leakage was likely in the transfer process; and provided advice and supervision concerning safe transfer and storage.” *U.S. v. Burlington Northern & Santa Fe Ry. Co.*, 520 F.3d 918, 950 (9th Cir. 2009). The Supreme Court reversed, holding that under the statute, for Shell to be considered an arranger, the record must contain evidence that Shell took intentional steps to dispose of the substances, not simply anticipated that

some spills may occur during the process of transferring. *Burlington Northern*, 129 S. Ct. at 1878. Because the government could not show that Shell intended to dispose of any of the D-D and only knew about possible spills, the Court held they were not an arranger, and, therefore, could not be held liable as a PRP. *Id.*

Under CERCLA, the arranger category states that “any person who by contract, agreement, or otherwise arranged for the disposal or treatment or arranged with a transporter for transport for disposal or treatment” could be held strictly liable for spills. 42 U.S.C. §9607(a). The issue is that CERCLA defines “disposal” to include the “discharge, deposit, injection, dumping, spilling, leaking . . . so that such solid waste . . . may enter the environment.” 42 U.S.C. § 6903(3). Yet in *Burlington*, the Court read arranging “disposal” to mean only the act of intentional disposal of the materials, such as one would if they were contracted to do so, and excluded unintentional spills. *Burlington Northern*, 129 S. Ct. at 1879. This distinction prevents manufacturers and suppliers who are involved in the transportation of hazardous waste that result in spills or leaks later, but not in the process of disposing of the waste, from being held strictly liable as arrangers under CERCLA. *Id.* at 1880.

Since the decision, a few courts have grappled with the outcome of *Burlington*. The federal district court in New Jersey addressed the issue in a case in which Woodmont Builders removed contaminated soil from a site, mixed the contaminated soil with other soil that was then stockpiled and re-spread on the site after the construction of residential homes, resulting in an environmental hazard. *Bonnieview Homeowners v. Woodmont*, 655 F. Supp. 2d 473, 476 (D.N.J. 2009). While the court did hold that this activity qualified as “disposal,” because the builders had not known at the time that the soil was contaminated, the court held the builders could not be arrangers because they had not acted with knowledge of the hazard when they re-spread the soil. *Id.* The *Burlington* reading of intent excluded Woodmont Builders from being PRPs as arrangers. *Id.* at 477.

In another case, however, the court did not find the scope of arranger so narrow. The federal district court of Maine denied a motion to dismiss in *Frontier* because the court determined the defendants could be found to be arrangers despite *Burlington*. *Frontier Commc’ns Corp. v. Barrett Paving Materials, Inc.*, 631 F.Supp.2d 110, 114 (D. Me. 2009). In *Frontier*, the defendants operated a railed yard for over 100 years on which multiple spills of tar and poly-aromatic hydrocarbon reached a nearby cove and entered certain sewers and rivers without treatment. *Id.* at 112. The defendants claimed these spills occurred accidentally or out of negligence and attempted to use *Burlington* to suggest the knowledge of possible spills is not enough to make them arrangers, but the court was not convinced. *Id.* at 114. Referencing *Burlington*, the court found that negligent disposal via spills and sewer lines “exceed the ‘mere knowledge that spills and leaks continued to occur.’” *Id.*; *Burlington Northern*, 129 S. Ct. at 1880. The court stated that the *Burlington* court had acknowledged that the question of who qualifies as a PRP is “fact intensive and case specific” and found enough factual allegations for a possible finding that the defendants a PRP under CERCLA. *Id.*

Judging from the outcome of these two cases, it seems the extent of the knowledge of the contaminants and the degree to which they are spilled will continue to rule ar-

ranger liability despite *Burlington's* added aspect of intentional disposal to the test of who can be found a PRP.

In addition to narrowing the strict liability as applied to arrangers, the Supreme Court in *Burlington* also determined that the record contained sufficient evidence to apportion the harm for the owners of the property as opposed to holding them jointly and severally liable. *Burlington Northern*, 129 S. Ct. at 1885-86. Even though neither party argued the damages were divisible, the district court in *U.S. v. Atchison, Topeka & Santa Fe Ry. Co.* took on the task of apportioning harm because the defendants claimed they were not responsible while the plaintiffs claimed the harm was indivisible. *U.S. v. Atchison, Topeka & Santa Fe Ry. Co.*, Nos. CV-F-92-5068 OWW, CV-F-96-6226 OWW, CV-F-96-6228 OWW, 2003 WL 25518046 (E.D. Cal. July 15, 2003). Because the Railroads owned only part of the contaminated land and only some of the chemicals that were spilled on their land that required remediation, the district court determined the Railroads to be responsible for nine percent of the harm. *Id.* at \*91. They calculated this percentage using figures based on the portion of land the Railroad owned, the duration of B&B's business operations divided by the term of their lease with Railroads, and the estimated portion of remediation costs from the primary contaminants spilled on the Railroads' parcel. *Id.*

On appeal, the Ninth Circuit reversed the apportionment, stating the district court lacked supporting evidence to establish apportioned damages and held the defendants jointly and severally liable. *United States v. Burlington N. & Santa Fe Ry. Co.*, 520 F.3d 918, 952 (9th Cir. 2008). The Supreme Court, however, determined that the data was appropriate for the nine-percent apportionment and reversed the Ninth Circuit decision. *Burlington N.*, 129 S. Ct. at 1884. The Supreme Court agreed with the district court that this case was a "a classic divisible in terms of degree case." *Id.* at 1882 (citing district court). The Supreme Court did state that the district court erred in referencing equitable considerations, which, according to the Supreme Court, "play no role in apportionment analysis." *Id.* at 1882 n.9. Instead, the court determined that apportionment is appropriate "when there is a reasonable basis for determining the contribution of each cause to a single harm." *Id.* at 1881.

In a recent case heard by the federal district court for the southern district of Texas, Halliburton Energy Services sued Georgia-Pacific Corporation for cost-recovery and contribution claims under CERCLA, among other claims. *Halliburton Energy Serv.'s v. NL Industries*, 648 F.Supp.2d 840 (S.D. Tex. 2009). Halliburton sought to recover money spent on "investigating and remediating environmental contamination" on land that Georgia-Pacific had previously owned. *Id.* at 843. Georgia-Pacific sought partial summary judgment, claiming it was not liable because it did not participate in the contamination and was only a landlord. *Id.* at 842. The court looked to the liability argument in *Burlington* when the court discussed equitable considerations. *Id.* at 875. While the Supreme Court stated that equitable factors did not play any role in apportionment, the court in this case found that comparative fault was appropriate, holding that "equitable factors addressing comparative fault do not clearly establish, as a matter of law, the Georgia-Pacific should be allotted zero responsibility," and denied the motion to dismiss. *Id.* at 875.

While *Burlington* narrowed the scope of arranger and widened that of fault, the few cases that have followed it since the May 2009 decision do not suggest that the standards have prevented the district courts from finding defendants jointly and severally liable or outside the scope of being a PRP as arranger.

*Ali Abazari is a senior counsel in the regulatory and legislative section of Jackson Walker, L.L.P. Mr. Abazari specializes in solid waste, remediation, surface mining, and industrial waste water permitting and compliance counseling. He previously served as a regulatory specialist at URS Corporation and as an attorney in the Litigation Division of the Texas Commission on Environmental Quality.*

*Rachel Stone is a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

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## THE ENVIRONMENTAL PROTECTION AGENCY'S PROPOSED REGULATION OF COAL ASH

### BACKGROUND

In December 2008, an impoundment at a coal-burning Tennessee Valley Authority power plant malfunctioned, releasing 5.4 million cubic yards of coal combustion residuals (CCRs) across 300 acres, and into the Emory River and a nearby neighborhood. The Associated Press, *In Aftermath of Ash Spill, a New Round of Challenges*, N.Y. TIMES, Mar. 6, 2010 at A24. The incident has been described as one of the worst environmental disasters in U.S history. *Id.* This disaster, at least in part, prompted the Environmental Protection Agency (EPA) to revisit its earlier determination that federal hazardous-waste regulation of coal ash was unnecessary. Hazardous and Solid Waste Management System; Identification and Listing of Special Wastes; Disposal of Coal Combustion Residuals From Electric Utilities, 75 Fed. Reg. 35128, 35132 (proposed Jun. 21, 2010) (to be codified at 40 C.F.R. pt. 257, 261, 264, 265, 268, 271, and 302). On May 4, 2010, the EPA proposed the first-ever national rules to regulate the disposal and management of coal-combustion residuals. Press Release, U.S. Environmental Protection Agency, EPA Announces Plans to Regulate Coal Ash, (May 4, 2010), available at <http://www.epa.gov/newsroom/newsreleases.htm#subject> (follow "Hazardous Waste" hyperlink; then follow "5/4/2010 EPA Announces Plans to Regulate Coal Ash" hyperlink).

Commonly referred to as coal ash, these residuals are by-products generated from the combustion of coal in power plants. In a draft rule published in the *Federal Register* on June 21, 2010, the EPA proposes to regulate this waste material using one of two options. Under option 1, the EPA would classify coal ash as "special waste" and regulate the substance under Subtitle C of the Resource Conservation and Recovery Act (RCRA). Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. at 35133. Subtitle C is the hazardous waste subtitle of RCRA. In the alternative, the EPA proposes to regulate coal ash under Subtitle D of the RCRA, which would allow

the Agency to establish national minimum standards for the disposal of coal ash in landfills or surface impoundments. *Id.*

The EPA has not proposed to regulate the beneficial use of coal ash under either option. *Id.* at 35129. The EPA also has deferred proposing regulations regarding the use of CCRs in minefilling. *Id.* At a later date, the U.S. Department of Interior's Office of Surface Mining will propose these rules, in conjunction with the EPA. *Id.*

#### **OPTION 1: REGULATION UNDER SUBTITLE C:**

Under Subtitle C of RCRA, the EPA may regulate solid waste if the substance exhibits hazardous characteristics or if the Agency has specifically listed the substance as hazardous. *See* 42 U.S.C. § 6921(a). In its May 2000 Bevill Regulatory Determinations regarding coal ash generated at electric utilities and independent power producers, the EPA came to the conclusion that coal ash did not warrant regulation under Subtitle C of RCRA as a hazardous waste. Regulatory Determination on Wastes from the Combustion of Fossil Fuels: Final Rule, 65 Fed. Reg. 32214, 32214 (May 22, 2000) (to be codified at 40 C.F.R. pt. 261). As a result, to regulate the disposal of coal ash under Subtitle C, the EPA would have to revise the May 2000 determination. Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. at 35148. A Subtitle C regulation would require the EPA to list coal ash designated to be disposed in a landfill or surface impoundment as special waste. *Id.* The waste would be regulated under the Subtitle C rules, with minor modifications, from the time it is created to its final disposition, including during and after the closure of any disposal unit. *Id.* The implications of this requirement is that persons involved in the generation, transportation, treatment, storage, or disposal of coal ash would be subject to the requirements of the Subtitle C waste management standards. *Id.*; *see requirements at* 40 C.F.R. pts. 260-268, 270-279, & 124. Another component of the EPA's proposal is that all existing disposal units that have not yet closed consistent with the provisions of the proposal by the effective date of the final rule would be subject to the requirements of Subtitle C. Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. at 35148. Additionally, those facilities that dispose of, treat, or in many cases, store coal ash would have to procure necessary permits to continue to operate. *Id.* Facilities managing coal ash would need to conform to existing Subtitle C waste management requirements related to siting, liners (with modifications), run-on and run-off controls, groundwater monitoring, fugitive-dust controls, financial assurance, corrective action, closure of units, and post-closure care (with certain modifications). *Id.* The EPA is also considering and seeking comments on a modification that would permit existing surface impoundments to continue to operate for the remainder of their useful life without needing to install the composite liners that would be required of all new surface impoundments. *Id.* To prevent incidents similar to the spill at the Tennessee Valley Authority, the EPA will set out requirements for dam safety and stability for impoundments that, by the effective date of the final rule, have not closed consistent with the requirements. *Id.* In the same vein, the EPA also proposes land-disposal restrictions and treatment standards for coal ash, and intends to prohibit the disposal of treated coal ash below the natural water table. *Id.* Finally, the proposed rule's regulatory requirements would reach the disposal of coal ash in sand and gravel pits, quarries, and other large fill operations, as the EPA, in this proposal, has deter-



mined that disposal in such sites is effectively equivalent to disposal in landfills and not a beneficial use. *Id.*

#### **OPTION II: REGULATION UNDER SUBTITLE D:**

Under Subtitle D, solid wastes need not be listed or display hazardous characteristics in order to be subject to EPA regulations. *Id.* at 35136. Regulation of coal ash under Subtitle D of RCRA would allow the EPA to leave its May 2000 Beville recommendations intact. *Id.* at 35148. The EPA would establish minimum national standards for the disposal of coal ash in surface impoundments and landfills. *Id.* at 35136.

Among the requirements that surface impoundments and landfills would be expected to meet include: location standards, groundwater monitoring and corrective action for releases from the unit standards, closure and post-closure care requirements, requirements to address the stability of surface impoundments, and composite liner requirements for new disposal units. *Id.* at 35148. In its current form, the proposed rule would require that existing surface impoundments without liners would have to retrofit within five years or stop receiving coal ash and close. *Id.* However, the EPA is requesting comments on “the D prime” option, an alternative approach under which existing surface impoundments would be allowed to continue operating without requiring the units to be retrofitted to install a composite liner to stay open for the duration of their useful life. *Id.* at 35149.

Unlike the “cradle-to-grave” proposed regulations of Subtitle C, under Subtitle D, the EPA could regulate disposal but not the handling of coal ash at the generation, storage, or treatment stages of the waste material. *Id.* at 35148. Furthermore, due to the limited scope of its Subtitle D authority, the EPA would not be able to require that facilities obtain permits, nor would the Agency be able to enforce the requirements of the rule and would leave enforcement of the requirements to the states or to citizens under RCRA citizen suit authority. *Id.* The EPA regulation of coal ash using Subtitle D would also allow the states to enforce any state regulation under their independent state-enforcement authority. *Id.*

#### **BENEFICIAL USE**

The EPA states that the proposed regulatory scheme is not designed to place any unnecessary barriers to the beneficial use of coal ash as an alternative to its disposal. Disposal of Coal Combustion Residuals from Electric Utilities, 75 Fed. Reg. at 35160. In its May 2000 Regulatory Determination, the Agency concluded that federal regulation of “beneficial use” was not necessary because it had not identified any beneficial uses that were likely to place human health and the environment at significant risk and also it had not found any documented cases of harm to human health or the environment. *Id.* The identified beneficial uses of coal ash, according to the EPA, result in significant economic and environmental benefits that should be encouraged. *Id.* at 35160, 35162. The benefits include reducing the landfill capacity necessary for disposal, reducing the need to obtain other natural resources, and often providing a functional benefit, such as the tendency of coal to increase the durability of concrete. *Id.* at 35162. The EPA is seeking comments on certain issues related to the beneficial use of coal ash. *See Id.* at 35148.

The EPA is also seeking comment on possibly narrowing or expanding the scope of what constitutes such beneficial use. *Id.* at 35162. The EPA has stated that large

fill operations in quarries or gravel pits, or re-grading landscape with CCR, will be classified as a disposal and would therefore be subject to the proposed regulations. *Id.* Towards this end, the EPA has also set out some criteria to be used in defining beneficial use. *Id.* These criteria include a requirement that the material in question provide a functional benefit or, as part of the EPA's goal of encouraging beneficial uses, waste that contains beneficially used coal ash would not be subject to the proposed regulations. *Id.*

*Ali Abazari is a senior counsel in the regulatory and legislative section of Jackson Walker, L.L.P. Mr. Abazari specializes in solid waste, remediation, surface mining, and industrial waste water permitting and compliance counseling. He previously served as a regulatory specialist at URS Corporation and as an attorney in the Litigation Division of the Texas Commission on Environmental Quality.*

*Chinwe Agbu is a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## WATER QUALITY AND UTILITIES

### APPELLATE DECISIONS: PRACTICE BEFORE THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Three recent appellate cases have addressed a variety of issues of interest to lawyers practicing before the Texas Commission on Environmental Quality (TCEQ): (1) whether the TCEQ has exclusive jurisdiction over challenges to the water rates that municipalities charge; (2) the limitations period for challenging the TCEQ's decisions; and (3) the types of facts that need to be pleaded to demonstrate the TCEQ's waiver of governmental immunity in challenges to TCEQ' orders.

#### **GATESCO, INC. LTD. V. CITY OF ROSENBERG**

In *Gatesco*, the Fourteenth Court of Appeals in Houston held that the TCEQ did not have exclusive or primary jurisdiction over challenges to water rates that municipalities charge and that "governmental immunity will not defeat a claim for declaratory or injunctive relief seeking the refund of illegally collected taxes or fees. . ." *Gatesco, Inc. Ltd. v. City of Rosenberg*, 312 S.W.3d 140, 143-44 (Tex. App. —Houston [14 Dist.] 2010, no pet.). *Gatesco, Inc. Ltd.*, who consists of commercial landowners, discovered that the City of Rosenberg had charged them eight times the minimum rate for their monthly water and sewer service. *Id.* at 142. *Gatesco* filed suit to obtain reimbursement for the overcharges and to recover interest, costs, and attorney's fees. *Id.*

#### **PRIMARY OR EXCLUSIVE JURISDICTION**

At trial, Rosenberg challenged the court's subject matter jurisdiction, arguing that the TCEQ possessed primary or exclusive jurisdiction over *Gatesco's* water and sewer rate claims. *Id.* at 143. The trial court agreed. However, the Fourteenth Court of Appeals reversed, concluding that the Texas Water Code does not grant the TCEQ exclusive or primary jurisdiction. *Id.* at 143-44 (citing *Tara Partners, Ltd. v. City of S.*

*Houston*, 282 S.W.3d 564, 571-75 (Tex. App.—Houston [14th Dist.] 2009, pet. denied, which held that the TCEQ does not have exclusive appellate jurisdiction under Section 13.042(d) of the Texas Water Code over challenges to water rates that municipalities charge.).

**GOVERNMENTAL IMMUNITY AND FRAUD, MUTUAL MISTAKE OF FACT, OR DURESS**

Rosenberg also asserted that governmental immunity barred Gatesco from filing suit and that Gatesco had not adequately pleaded its claims to establish the degree of fraud, mutual mistake of fact, or duress to prevent its claims from being barred by governmental immunity. *Id.* at 144, 145. The court of appeals confirmed that governmental immunity does not apply in this case in which the “payments were made as a result of fraud, mutual mistake of fact, or duress . . . .” *Id.* (quoting *Tara Partners*, 282 S.W.3d at 576). Therefore, the court held that Gatesco should be permitted to amend its pleadings to better plead the facts concerning whether the payments were made as a result of fraud, mutual mistake of fact, or duress. *Id.* at 145.

**CITY OF AUSTIN V. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

The Third Court of Appeals in Austin recently decided the meaning of “effective date,” as used in the Section 5.351(b) of the Texas Water Code, which prescribes the deadline to appeal decisions of the TCEQ. See TEX. WATER CODE ANN. § 5.351(b) (West 2008) (stating “[a] person affected by a ruling, order, decision, or other act of the [TCEQ] must file his petition [for judicial review] within 30 days after the effective date of the ruling, order, or decision”). In this case, KBDJ, L.P. sought to construct a limestone quarry pit and submitted a water pollution abatement plan to the TCEQ for approval. *City of Austin v. Texas Comm’n on Envtl Quality*, 303 S.W.3d 379, 381 (Tex. App.—Austin 2009, no pet.). The Executive Director (ED) of the TCEQ approved the abatement plan on October 28, 2005, and on November 21, 2005, the City of Austin filed a motion to overturn the ED’s decision. *Id.* The TCEQ denied the motion to overturn on February 3, 2006, a little over three months after the ED’s approval of the abatement plan. *Id.* Twenty days after the denial of the motion to overturn, and approximately four months after the ED approved the abatement plan, the City of Austin filed an appeal of the TCEQ’s approval of the abatement plan. *Id.* On appeal, the Third Court of Appeals held that the City failed to file suit within the required 30-day period. *Id.* at 384.

The City of Austin argued that the decision was not “effective” until the TCEQ overruled its motion to overturn on February 3, 2006. *Id.* at 382. Accordingly, Austin argued that it filed suit well within the 30-day statute of limitations when it filed its suit on February 23, 2006. *Id.* The court of appeals disagreed and held that, under Section 5.351 of the Texas Water Code, “when a decision is issued by the executive director . . . a petition for judicial review contesting that decision [must] be filed within 30 days of the *date of issuance of that decision*, unless TCEQ expressly stays the effective date of the decision.” *Id.* at 384 (emphasis added). Thus, the effective date of the decision was October 28, 2005, the date that the ED of the TCEQ signed the approval. Because Austin filed suit on February 23, 2006, more than 30 days after the ED’s approval, the court of appeals dismissed the City of Austin’s suit for want of jurisdiction. *Id.* at 385.

Austin argued that even if the decision was effective on the date that the ED issued it, the City still complied with the 30-day requirement because it sought judicial review of the TCEQ's denial of its motion to overturn. *Id.* The City contended that, since it filed suit within 30 days of the TCEQ's denial of its motion, the district court had jurisdiction under Section 5.351 of the Water Code. *Id.* at 384. The court of appeals followed Texas Supreme Court precedent providing that "administrative orders are generally final and appealable if they impose an obligation, deny a right, or fix some legal relationship as a consummation of the administrative process." *Id.* at 384 (quoting *Texas-New Mexico Power Co. v. Texas Indus. Energy Consumers*, 806 S.W.2d 230, 232 (Tex.1991) (emphasis in original) (citations omitted)). The TCEQ's denial of the City's motion to overturn did not establish any rights or obligations and was "merely a refusal to overturn or otherwise modify the decision that *did* establish KBDJ's rights and obligations." *Id.* at 385 (emphasis in original). Thus, the TCEQ's denial of the motion to overturn was not a final and appealable order subject to judicial review under Section 5.351 of the Texas Water Code. *Id.*

#### **CREEDMOOR-MAHA WATER SUPPLY CORPORATION V. TEXAS COMMISSION ON ENVIRONMENTAL QUALITY**

##### **BACKGROUND**

Carma Easton, Inc. ("Carma") sought to develop a 1,960-acre community located mostly within the boundaries of Creedmoor-Maha Water Supply Corporation's ("Creedmoor") Certificate of Convenience and Necessity (CCN) for water service. *Creedmoor-Maha Water Supply Corp. v. Texas Comm'n on Envtl. Quality*, 307 S.W.3d 505, 509-10, 511-12 (Tex. App. —Austin 2010, no pet.). See TEX. WATER CODE ANN. § 13.242(a) (West 2008)(mandating that a water-supply corporation or other retail public utility must obtain approval from the TCEQ before it installs, operates, or extends its service and it must obtain a CCN). Carma filed a petition with the TCEQ for "expedited release" from Creedmoor's CCN under Section 13.254(a-1) of the Texas Water Code. *Creedmoor-Maha*, 307 S.W.3d at 512. See TEX. WATER CODE ANN. § 13.254(a-1)(stating that an "owner of a tract of land that is at least 50 acres . . . actually receiving water or sewer service" may petition for "expedited release . . . so that the area may receive service from another retail public utility"). The TCEQ's Executive Director granted Carma's petition and released the area at issue from Creedmoor's CCN. *Creedmoor-Maha*, 307 S.W.3d at 512.

Creedmoor filed suit in district court and sought a declaration under the Uniform Declaratory Judgments Act (UDJA) that the TCEQ order was invalid. *Id.* Creedmoor also sought an injunction to enjoin the enforcement of TCEQ's order. *Id.*

The TCEQ and Carma challenged the district court's jurisdiction by asserting that Creedmoor's claim was barred by sovereign immunity. See *Id.* at 513. Creedmoor asserted that it properly invoked the district court's jurisdiction because it sought declarations as to the construction and validity of Section 13.254(a-1) through (a-4) of the Texas Water Code and because the UDJA waives sovereign immunity as to claims made pursuant to its authority. *Id.* at 513-14. Creedmoor also argued that it alleged ultra vires conduct by a state official and that the Texas Water Code was unconstitutional as applied the TCEQ was applying it. *Id.* at 513.

#### SOVEREIGN IMMUNITY ARGUMENT

Creedmoor argued that the declaratory relief it sought did not implicate sovereign immunity because it sought declarations as to the validity of a statute and because the UDJA waives sovereign immunity on that claim. *Id.* at 513-14. The appellate court held that “[t]he UDJA is not a general waiver of sovereign immunity.” *Id.* at 515. Thus, “an otherwise proper UDJA claim seeking to construe or invalidate a statute is nonetheless barred by sovereign immunity if the remedy would have the effect of establishing a right to relief against the State that implicates sovereign immunity. . . .” *Id.* The court also stated that “[t]his principle extends to UDJA actions that seek declaratory or injunctive relief against agency orders from which the legislature has not granted a right of judicial review and thereby waived sovereign immunity.” *Id.* Although Creedmoor sought relief under the UDJA, sovereign immunity barred the district court from granting the relief requested because it would effectively invalidate the TCEQ’s order, which was not subject to judicial review. *Id.* Additionally, “the fact that Creedmoor does not seek monetary relief . . . is not dispositive because its claims would equally implicate sovereign immunity if the effect of the remedy sought was to control state action.” *Id.* To invoke the court’s jurisdiction properly, Creedmoor would have to allege unconstitutional or ultra vires action. *Id.*

#### ULTRA VIRES ARGUMENT

Creedmoor failed to properly allege an ultra vires claim. To assert an ultra vires claim properly, Creedmoor “must not complain of a government officer’s exercise of discretions, but rather must allege, and ultimately prove, that the officer acted without legal authority or failed to perform a purely ministerial act.” *Id.* at 515 (quoting *City of El Paso v. Heinrich*, 284 S.W.3d 366, 372 (Tex. 2009)). Creedmoor’s factual allegations complained of the merits of the decision that the TCEQ made on Carma’s petition and did not allege any acts of the TCEQ that were beyond its statutory authority. *Id.* at 517-18. Creedmoor alleged that the TCEQ reached an incorrect result and not that it exceeded its authority. *Id.* Such allegations failed to invoke the district court’s inherent jurisdiction to remedy ultra vires agency actions. *Id.*

#### CONSTITUTIONAL ARGUMENT

Creedmoor also argued that the Texas Water Code and its implementing rules violated the Supremacy Clause of the U.S. Constitution because they violated a federal statute, 7 U.S.C. § 1926(b) (West 1999). *Id.* at 518. Section 1926(b) was established to aid associations such as water supply corporations (WSC) in developing and operating water distribution and sewer service facilities in rural areas, which are secured by the associations’ assets. *Id.* at 518. Section 1926(b) restricts competition in areas served by indebted associations. *Id.* The Fifth Circuit has determined that this section prevents local governments from encroaching upon the service area and customers of federally indebted water associations. *Id.* (citing *North Alamo Water Supply Corp. v. City of San Juan*, 90 F.3d 910, 915 (5th Cir.1996) (per curiam)). To invoke the protection of Section 1926(b), the utility (1) must be an “association,” (2) have a qualifying federal loan outstanding, and (3) “‘have provided or made [service] available’ to the disputed area.” *Id.* at 519 (citing *Chesapeake Ranch Water Co. v. Bd. Of Comm’rs*, 401 F.3d 274, 278 (4th Cir. 2005) (citations omitted)). The appellate court held that, while the first two elements were undisputed, the parties disagreed as to whether Creedmoor “suf-

ficiently pleaded facts demonstrating that it ‘provided or made service available’” to the disputed area. *Id.* Creedmoor argued that, because its CCN encompassed the area at issue, and it had a legal duty under the CCN to provide service to the area, it had established, as a matter of law, that it had made service available to the area. *Id.* The appellate court held that the phrase “provided or made service available” should be interpreted according to its ordinary meaning, which is the “actual provision of service or physical capacity and readiness to provide service.” *Id.* at 522. Creedmoor had not pleaded any facts demonstrating that it provided or made service available, and its pleadings actually refuted that it provided or made service available to the disputed area. *Id.* at 523. Thus, Creedmoor failed to prove that “it either presently was serving the area or at least presently had the physical means to do so.” *Id.*

Creedmoor also argued that Section 13.254(a-4) of the Texas Water Code violated the Texas Constitution’s Open Courts provision specifying that “all courts shall be open, and every person for an injury done to him . . . shall have remedy by due course of law.” TEX. CONST. art. I, § 13. Section 13.254(a-4) of the Texas Water Code provides that an order issued by the TCEQ under Section 13.254(a-1) is final and may not be appealed. Thus, Creedmoor argued that Section 13.254(a-4) deprived it of due process, and that it had a common-law trespass claim for deprivation of its rights under its CCN. *Id.* at 524-25. The appellate court, in rejecting Creedmoor’s argument, first noted that a common-law cause of action for the judicial review of an agency’s administrative act does not exist. *Id.* at 524. (quoting *City of Port Arthur v. Southwestern Bell Tel. Co.*, 13 S.W.3d 841, 845 (Tex. App.—Austin 2000, no pet.). The court held that the rights under Creedmoor’s CCN were not common-law rights; instead, they were rights given to Creedmoor by statute and “CCNs expressly do not confer property rights.” *Id.* at 525. See 30 TEX. ADMIN. CODE § 291.116 (2009)(stating that a CCN “shall not be construed to vest exclusive service or property rights in and to the area certified”).

Finally, Creedmoor asserted a due process claim by alleging that it had a property interest in the CCN and that the Texas Water Code rendered this interest useless while preventing it from contesting its case. *Id.* at 525. The appellate court rejected Creedmoor’s due process claim on the basis that Creedmoor had failed to allege facts that would demonstrate a violation of its due process rights and the CCN claimed by Creedmoor as the “property interest” implicating due process is not a vested property right. *Id.* at 525-226.

*Emily Rogers is a partner practicing environmental law and water and wastewater utility law at Bickerstaff Heath Delgado Acosta LLP in Austin. Ms. Rogers is a graduate of the University of Houston Law Center and formerly served as an attorney for the Texas Natural Resource Conservation Commission.*

*Jack Oberstein is a second-year student at The University of Texas at Austin School of Law and a staff member of the Texas Environmental Law Journal.*

**WATER RIGHTS****USING SCIENCE TO ESTABLISH SUSTAINABLE FLOW REGIMES****INTRODUCTION**

In 2007, the Texas Legislature passed Senate Bill 3 (S.B. 3) that emphasized the importance of establishing science and policy-based environmental-flow regimes through a stakeholder process. TEX. COMM'N OF ENVTL. QUALITY, Instream Uses Program, *available at* [http://www.tceq.state.tx.us/permitting/water\\_supply/water\\_rights/instreamusesprogram.html](http://www.tceq.state.tx.us/permitting/water_supply/water_rights/instreamusesprogram.html) (last visited Feb. 22, 2011). An environmental-flow regime is “a schedule of flow quantities that reflects seasonal and yearly fluctuations that typically would vary geographically . . . and that are shown to be adequate to support a sound ecological environment and to maintain the productivity, extent, and persistence of key aquatic habitats.” TEX. WATER CODE ANN. §11.002(16) (Vernon 2008). In addition to establishing a bay/basin stakeholder group and expert team for each of the State’s river basins, S.B. 3 established the Texas Environmental Flows Science Advisory Committee (Advisory Committee). *See* Instream Uses Program, *supra*. The Advisory Committee serves “as an objective scientific body to advise and make recommendations . . . on issues relating to the science of environmental flow protection.” TEX. WATER CODE ANN. §11.02361(e)(1) (Vernon 2008). The Texas Committee on Environmental Quality (TCEQ) uses these guidelines to establish environmental-flow standards for each basin area; these standards could diminish prospective appropriators’ access to water rights if their appropriation would violate these TCEQ standards.

**THE ADVISORY COMMITTEE’S BIOLOGICAL OVERLAY GUIDANCE**

The Advisory Committee has published several reports to help further S.B. 3’s purpose of establishing environmental-flow standards. The Advisory Committee distributes these reports to the Basin and Bay Expert Science Teams (BBESTs), and the TCEQ makes them available on its website. TEX. COMM'N OF ENVTL. QUALITY, Environmental Flows Science Advisory Committee Guidance, *available at* [http://www.tceq.state.tx.us/permitting/water\\_supply/water\\_rights/eflows/resources.html](http://www.tceq.state.tx.us/permitting/water_supply/water_rights/eflows/resources.html) (last visited Mar. 24, 2011). The most recent guidance focuses on the importance of utilizing available biological information and data in establishing environmental-flow regimes and the methodology to do so. TEX. COMM'N OF ENVTL. QUALITY, Essential Steps for Biological Overlays in Developing Senate Bill 3 Instream Flow Recommendations, *available at* [http://www.tceq.state.tx.us/permitting/water\\_supply/water\\_rights/eflows/resources.html](http://www.tceq.state.tx.us/permitting/water_supply/water_rights/eflows/resources.html) (last visited Mar. 24, 2011). While the Advisory Committee “does not directly believe that sufficient biological data exist to directly prescribe an environmental flow regime,” the Committee suggests that employing this information can still be useful for making short-term decisions. Essential Steps, *supra* at 1.

This report advocates that, without ample data to quantify the relationship between flow and aquatic biological systems, the tendency is to maintain “historical hydrologic period characteristics of an aquatic system.” *Id.* at 71. Trusting the traditional flow levels might not be the most effective method to establish new guidelines, and doing so runs counter to the spirit of S.B. 3’s standards of “continual review, validation, and refinement.” *Id.* Taking the vitality of biological systems into account could affect

new flow-regime guidelines in the seven basins. If the BBESTs incorporate this data in establishing their guidelines, this process will ultimately impact the water rights of potential appropriators seeking to divert water from the basins. While some areas might be able to support increased diversion and continue to sustain their aquatic systems, others might require increased flow over the historical levels.

How would the BBESTs use biological data to establish new guidelines for instream-flow regimes effectively? The Advisory Committee's report offers several solutions. First, the BBESTs should examine existing data and attempt to quantify biology-based flow parameters. Essential Steps, *supra* at 74. This step includes identifying focal biological species in the affected region, and determining which flow rates will sustain their habitats. *Id.* Accomplishing this step offers the BBESTs valuable insight into the range of flow rates that will enable their basin to remain biologically sustainable. Second, the Advisory Committee recommends identifying causal connections between flow rates and their impact on the local biological system. *Id.* Tackling this task through conceptual models can help the BBESTs identify the strength of these preexisting relationships, as well as locating the "key uncertainties and information gaps in flow-ecology relationships." *Id.* Third, the BBESTs should turn to any existing data that links regimes with biological data. *Id.* It is not necessary to have the results of a comprehensive study; the Advisory Committee recommends using any available information that helps the BBESTs better understand the flow-ecology relationship. *Id.* Fourth, in addition to sustaining biological systems, flow regimes should fall within water-quality standards. Essential Steps, *supra* at 74. Fifth, the BBESTs should identify suitable base flows that support the "survival, growth, and reproduction of aquatic organisms." *Id.* at 75. The base flow would be the lowest acceptable flow rate, and a critical threshold of when to curtail diversion if the flow got too low. Sixth, the Advisory Committee discusses high-flow pulses. *Id.* These pulses are important in maintaining "water quality, physical processes, connectivity, and biological processes." *Id.* BBESTs should review any existing information regarding relationships between high flow pulses and biological sustainability, and apply this knowledge in establishing its new guidelines. *Id.* Seventh, the BBESTs should encourage healthy overbanking through their guidelines. *Id.* Overbanking occurs when water rushes over its confines and onto the floodplain; this process "maintain[s] the balance and diversity of riparian areas," in addition to encouraging geomorphic processes and enabling lateral connectivity. Essential Steps, *supra* at 75.

#### **HOW USING THE BIOLOGICAL OVERLAY WILL AFFECT WATER RIGHTS**

In assessing whether utilizing a biological overlay will affect allocation of water rights, it is important to keep the most recent drought in mind. The drought began in September 2007, and "dried up waterways, forced more than 340 public water systems to restrict water use and killed hundreds of thousands of trees." John McFarland, *Recent Rain Helps Ease Texas Drought Conditions*, USA TODAY, Sept. 19, 2009, available at [http://www.usatoday.com/weather/drought/2009-09-17-texas-drought\\_N.htm?obref=obinsite](http://www.usatoday.com/weather/drought/2009-09-17-texas-drought_N.htm?obref=obinsite). The summer of 2009 was a particularly brutal one in Texas. San Antonio experienced fifty-nine days of over 100°F while Austin had sixty-eight days that surpassed the century mark. *Id.* The heat wave continued to wreak havoc on water levels; even after some sustained rainfall, sixteen percent of the state was listed under the two most extreme drought categories. *Id.*



Even though rainfall increased throughout the fall and winter months, it has taken a significant amount of time to overcome the two-year water deficit. *Id.* Several Advisory Committee recommendations urged the BBESTs to engage in scientific studies to better understand the relationship between flow levels and biological systems. See *Essential Steps*, *supra* at 66-70. These tests strive to determine ideal flow levels, an otherwise impossible task until the water levels in the basins reached a sustainable range. Even though flow regimes have returned to historically normal levels, it may take years of extensive testing before the BBESTs collect enough information about the flow-ecology relationship to apply their knowledge through new guidelines. Another drought could interrupt testing before enough information is gathered; Texas is always precariously close to a new water-shortage situation. Further, when the time it will take to implement these guidelines is taken into account, it could be quite some time before the biological overlay will impact the scope of water rights in Texas.

*Robin Smith is an Attorney for the Texas Commission on Environmental Quality.*

*Corey Pemberton is a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

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## **THE ARANSAS PROJECT V. SHAW, NO. CIV.A. C-10-75 (S.D. TEX. 2010)**

### **INTRODUCTION**

On March 10, 2010, Plaintiff-Appellee, The Aransas Project (TAP), a group of business, tourism, and environmental organizations, filed a complaint in the United States District Court for the Southern District of Texas, Corpus Christi Division. The plaintiff is seeking declaratory and injunctive relief under the Endangered Species Act (ESA), against five State of Texas officials (“State Defendants”), including among them the three commissioners of the Texas Commission of Environmental Quality (TCEQ). TAP alleges that through both action and inaction, the State Defendants in their official capacity of managing freshwater and surface-water uses and flows on the Guadalupe and San Antonio Rivers during the winter of 2008-2009, caused harm, harassment, and a “take” of endangered whooping cranes, in violation of Section 9 of the ESA. The State Defendants filed Motions to Abstain and to Dismiss, and on July 14, 2010, Judge Janis Graham Jack denied the Motions to Dismiss and Abstain, allowing TAP to move forward with its complaint.

### **PETITION**

The stated goal of TAP is “ensuring Guadalupe River flows from the Hill Country to the Coast.” The Aransas Project, *available at* <http://thearansasproject.org> (last visited Aug. 6, 2010). TAP is a Section 501(c)(3)-nonprofit organization comprised of local and national environmental organizations, local businesses, and local government entities. See *id.* The nonprofits represented by TAP include bird and nature conservation

organizations, such as local chapters of the Audubon Society, in addition to statewide organizations like Texas Environment and the Texas Conservation Alliance. *See id.*

Representing the plaintiff, TAP, in this litigation is Jim Blackburn, of Blackburn and Carter. The U.S. Attorney General's office represents the defendants: the three commissioners of the TCEQ, the Executive Director of the TCEQ, and the TCEQ's Watermaster for the Guadalupe River. Original Complaint For Declaratory and Injunctive Relief at ¶ 4, *Aransas Project v. Shaw*, 2010 WL 2003720 (Mar. 10, 2010) (No. 2:10-cv-00075).

The petition filed by TAP on March 10, 2010, labels the large white birds with a distinctive call a "flagship species for the North American wildlife conservation movement." *Id.* at ¶ 52. TAP alleges that the reason an injunction is necessary is "to eliminate, or at least to reduce significantly, immense threats to the very existence of Whooping Cranes." *Id.* at ¶ 1. According to the complaint, the only remaining natural, self-sustaining flock of whooping cranes breeds in Wood Buffalo National Park in the Northwest Territories, Canada and migrates a relatively narrow (80- to 300-kilometer-wide) corridor each fall and spring to winter in Aransas National Wildlife Refuge in Texas. *Id.* at ¶¶ 35 & 60.

#### PROCEDURAL HISTORY

On March 10, 2010, TAP filed an Original Complaint for Injunctive Relief against Bryan Shaw and the other TCEQ commissioners and officials in the United States District Court for the Southern District of Texas, Corpus Christi Division. *See* Original Complaint For Declaratory and Injunctive Relief, *Aransas Project v. Shaw* (Mar. 10, 2010) (No. 2:10-cv-00075), 2010 WL 2003720.

On April 22, 2010, the Guadalupe-Blanco River Authority (GBRA) filed a Motion to Intervene in the litigation, and the court granted it the following day. *See Aransas Project v. Shaw*, No. C-10-75, 2010 WL 1644645 (S.D. Tex. Apr. 23, 2010) (order granting motion to intervene). The Texas Chemical Council (TCC), Union Carbide Corporation, Texas Farm Bureau and American Farm Bureau Federation, San Antonio Water System, and CPS Energy also filed Motions to Intervene, but Judge Jack granted only TCC's motion. *See Aransas Project v. Shaw*, No. C-10-75, 2010 WL 25224150 (S.D. Tex. June 17, 2010) (order granting and denying motions to intervene). The Texas Farm Bureau and American Farm Bureau Federation filed a joint motion to stay proceedings during their appeal, which the court denied. *See Aransas Project v. Shaw*, No. C-10-75, 2010 WL 2787832 (S.D. Tex. July 14, 2010) (order denying motion for stay).

On July 28, 2010, Judge Jack held a Motions Hearing to address Motions to Dismiss and Motions to Abstain. The Judge denied all motions, as explained below.

Several parties that were denied intervention appealed the denial in the Fifth Circuit Court of Appeals. *See* Joint Mot. for Stay, *Aransas Project v. Shaw*, No. 10-40610, Doc. 00511184532 (5th Cir. July 23, 2010). The State Defendants argued that the drought conditions that caused the low-water flow during the 2008-2009 winter have relented, "eliminating the complained-of conditions and mitigating any potential harm of a stay of district court proceedings." Joint Mot. for Stay 18. On August 12, 2010, the Fifth Circuit granted the denied intervenors' Motions to Stay the Trial Proceedings while considering the appeal of the trial court's denial of their motions to intervene. *See Aransas Project v. Shaw*, No. 10-40610, 2:10-cv-00075 (5th Cir. Aug. 12, 2010) (order granting motion for stay).

**SENATE BILL 3**

The context and timing of the TAP litigation is particularly important given the recent attention that has been given to statewide water-flow management legislation. House Bill 3 and Senate Bill 3 (S.B. 3), approved by the Texas Legislature in 2007, require an exhaustive expert and stakeholder process, followed by a requirement for the TCEQ to develop by rule appropriate environmental-flow standards for river and bay systems statewide. S.B. 3, 80th Leg., R.S. (Tex. 2007). According to S.B. 3, the TCEQ must develop flow standards for several of the rivers and bay systems, and “the advisory group shall give priority in descending order” to a list of “river basin and bay systems of the state for the purpose of developing environmental flow regime recommendations and adopting environmental flow standards.” S.B. 3 at § 11.02362(b). S.B. 3 requires that flow standards must be adopted for the first of these river basins and bays, Sabine and Neches Rivers and Sabine Lake Bay, and the Trinity and San Jacinto Rivers and Galveston Bay, by June 1, 2011. S.B. 3 at § 11.02362(b)(1). To comply with this S.B. 3 requirement, “TCEQ staff is proposing the creation of new 30 Texas Administrative Code Chapter 298, Environmental Flows, Subchapter A, Sabine and Neches Rivers and Sabine Lake Bay; and Subchapter B, Trinity and San Jacinto Rivers and Galveston Bay.” TCEQ, Environmental Flows Rulemaking, *available at* [http://www.tceq.state.tx.us/permitting/water\\_supply/water\\_rights/eflows/rulemaking](http://www.tceq.state.tx.us/permitting/water_supply/water_rights/eflows/rulemaking) (last visited Mar. 24, 2011). Under S.B. 3, the cranes’ affected area, the river basin and bay system consisting of the Guadalupe, San Antonio, Mission, and Aransas Rivers and Mission, Copano, Aransas, and San Antonio Bays, is listed second in priority after the first group of basins and bay systems. S.B. 3 at § 11.02362(b)(2). According to the TCEQ’s current rulemaking schedule, by September 2012, the TCEQ is scheduled to begin adopting rules for this second group. *See* TCEQ, S.B.3/H.B.3 Revised Schedule, *available at* [http://www.tceq.state.tx.us/assets/public/permitting/watersupply/water\\_rights/eflows/20100527efag\\_eflowschedule.pdf](http://www.tceq.state.tx.us/assets/public/permitting/watersupply/water_rights/eflows/20100527efag_eflowschedule.pdf) (last visited Mar. 24, 2011).

In spite of the process that is underway, TAP argues that rules promulgated for the Guadalupe and San Antonio systems under S.B. 3 still will not be able to protect the cranes from the impacts caused by *past* low freshwater flows. Original Compl. at ¶ 161. TAP argues that the enabling legislation for S.B. 3 specifically prohibits the TCEQ from imposing the new standards on existing diversions and uses of water, whether permitted or exempt. *Id.* (citing Section 1.27 of Acts 2007, 80th Leg., ch. 1430). Ultimately, the plaintiff argues that no existing state process will redress the injuries or remedy the harm, harassment, and takes of the cranes that have already allegedly occurred. Original Compl. at ¶ 166.

**STATUTORY BACKGROUND: THE ENDANGERED SPECIES ACT**

TAP alleges in this litigation that the State Defendants, in their official capacity to regulate surface-water flows and uses in Aransas County, Texas, harmed, harassed, and caused a “take” of the endangered whooping cranes during the winter of 2008-2009, in violation of Section 9 of the Endangered Species Act. Original Compl. at ¶ 4.

Under Section 9 of the ESA, the taking of a listed, endangered species is forbidden. 16 U.S.C. § 1538(a)(1)(B). Under Section 9, a court must issue an injunction if a plaintiff establishes, by a preponderance of the evidence, a “reasonably certain threat of imminent harm to a protected species.” *Id.* In 1992, the U.S. Supreme Court held

that a dead animal is not necessary to enforce Section 9 of the ESA, however, an act must be discerned that leads to the consequential take and that is not speculative. See *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). Subsequently, the 9<sup>th</sup> Circuit concluded that the actual injury requirement could be satisfied if direct evidence in the form of scientific studies demonstrated that the act was reasonably certain to injure the species by impairing essential behavior patterns. See *Defenders of Wildlife v. Bernal*, 204 F.3d 920, 925 (9th Cir. 2000).

## **MOTIONS TO ABSTAIN AND TO DISMISS**

### **ELEVENTH AMENDMENT IMMUNITY**

The State Defendants began their arguments on July 28, 2010 with a focus on the “State’s authority to abridge previously-issued water rights” and Eleventh Amendment immunity. Transcript of Motions Hearing/Dismiss Abstain at 4, *Aransas Project v. Shaw*, CA-C-10-075 (S.D. Tex., Corpus Christi Div. 2010) [hereinafter Mot. Hr’g Tr.]. The State Defendants argued “the Plaintiff would like to see bay and estuary in-flows being given a super priority . . . over other preexisting property right permits.” *Id.* at 6. Although *Ex parte Young* permits the federal government to enjoin state officials from violating federal law, the defendants argued that *Ex parte Young* did not extend to requests for relief that are retroactive. Mot. Hr’g Tr. 4; see also *Ex parte Young*, 209 U.S. 123 (1908); see also *Edelman v. Jordan*, 415 U.S. 651 (1974).

The plaintiff cited a case with a similar fact pattern to the TAP litigation, *Sierra Club v. City of San Antonio*, and quoted the court in that case by stating “as a general proposition a State should not be able to create a regulatory scheme and claim that federal regulation of the same subject matter does not apply.” Mot. Hr’g Tr. 8 (citing *Sierra Club v. City of San Antonio*, 112 F.3d 789 (1997)). The defendants maintained “Congress didn’t intend to expose regulators to liability for regulatory conduct,” and that the plaintiff’s theory of liability was “a stretch.” Mot. Hr’g Tr. 13.

### **FAILURE TO STATE A CLAIM FOR RELIEF**

The State Defendants argued that the litigation should be dismissed because, the ESA’s “structure militates against acceptance of the leading, but mistaken, regulator-as-causer case, *Strahan v. Coxe*.” State Official Def.s’ Reply in Support of Rule 12(b) Mot. and *Burford* Abstention Mot., *Aransas Project v. Shaw*, No. C-2:10-cv-00075, Doc. 173 at 5 (S.D. Tex., Corpus Christi Div. 2010) [hereinafter State Official Def.s’ Reply]. They further argued that the many appeals courts that had followed *Strahan* had erred, including the Eleventh Circuit, which used to be a part of the Fifth Circuit before the Fifth Circuit was split in 1981. *Id.*

### **BURFORD ABSTENTION**

The State Defendants argued that the court should abstain from hearing the case under the *Burford* abstention doctrine. State Official Def.s’ Reply at 2-3; see also *Burford v. Sun Oil Co.*, 319 U.S. 315 (1943). In *Burford*, the U.S. Supreme Court considered the complexity and importance of uniformity in oil-field regulation and held that broad discretion should be given to state law, and that the federal court should “stay its hand” when federal intervention would cause needless conflict or confusion. *Id.* at 334. The State Defendants argued that the court in this case should reject the accelerated hearing of TAP and abstain from ruling on the TAP litigation until the TCEQ

adopts environmental flow standards for the affected areas. State Official Def.s' Reply at 2-3.

#### STANDING

The State Defendants also argued that the plaintiff had not met Article III standing requirements. *See* U.S. CONST. Art. III, § 2. In oral arguments at the Motion Hearing, the defense argued that the injury-in-fact is not particularized, but that the Original Complaint only contains general conclusions. Mot. Hr'g Tr. 43. The defendants also argued that the injury is not imminent, and that an Section 9 "take" requires a death or an injury. Mot. Hr'g Tr. 46. In this case, the defendants alleged that the economic interests of the plaintiff had not been injured. *Id.*

#### COURT RULING ON MOTIONS

Ruling from the bench, on July 28, 2010, Judge Jack denied each of the motions brought by the defendants and intervenors to dismiss or abstain from hearing the case. *See* Mot. Hr'g Tr. 19.

Judge Jack rejected the State Defendants' Eleventh Amendment argument, without providing much reasoning on the transcript. Judge Jack also denied the Motions to Dismiss based on TAP's failure to state a claim. The Judge stated that she found support for her denial of the 12(b) motions using the Eleventh Circuit and *Strahan* rationales. *Id.* The First Circuit Court's reliance in *Strahan* on precedence set by the Fifth Circuit may have also proved compelling enough to Judge Jack to allow the TAP litigation to move forward. Judge Jack also rejected the use of the *Burford* abstention doctrine. Judge Jack supported the plaintiff's argument that the Edwards Aquifer Authority Act in *City of San Antonio* specifically mentioned in that law the protection of endangered species, while S.B. 3 does not. Mot. Hr'g Tr. 26. Finally, Judge Jack also rejected the standing arguments of the State Defendants, without providing her reasoning in the transcript.

Judge Jack ultimately found that the case was in its "early days" and denied all of the motions because she did not "think this is the time to do this right now." Mot. Hr'g Tr. 62.

#### CONCLUSION

The case was set for trial on March 2, 2011. According to the schedule outlined by H.B. 3/S.B. 3, by June 1, 2011, the TCEQ must develop flow standards for the bays and rivers implicated by this litigation, and the TCEQ must adopt all state water-flow management rules by September 1, 2012. For now, the TAP litigation moves forward to trial simultaneously as H.B. 3/S.B. 3 pushes the schedule forward. Whether these two movements will collide will be a question for future motions and the court.

*Robin Smith is an attorney for the Texas Commission of Environmental Quality.*

*Shannon Sims was a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## CASENOTES: FEDERAL

**COEUR ALASKA, INC. V. SOUTHEAST ALASKA CONSERVATION COUNCIL, 557 U.S. \_\_\_\_\_. 129 S. CT. 2458 (2009)****FACTUAL HISTORY**

The United States Supreme Court recently reversed a Ninth Circuit decision and found that the United States Army Corps of Engineers (“Corps”), and not the Environmental Protection Agency (EPA), had the power to grant a permit to Coeur Alaska, Inc., a mining company, concerning the disposal of mining by-products. Coeur Alaska and the State of Alaska both appealed the Ninth Circuit’s decision that Southeast Alaska Conservation Council (SEACC) was correct with the argument that under the Clean Water Act (CWA), the EPA, and not the Corps, had the power to grant such permits. *Coeur Alaska, Inc. v. Se. Ala. Conservation Council*, 557 U.S. \_\_\_\_, 129 S. Ct. 2458 (2009); *Se. Ala. Conservation Council v. U.S. Army Corps of Engineers*, 486 F.3d 638 (9th Cir. 2007). In its opinion, the Supreme Court addressed the power and legality of the Corp’s decision to grant Coeur Alaska the permit. The Supreme Court held that the CWA gave authority to the Corps, not the EPA, to issue the permit for the disposal of slurry, the mining by-product, into a lake near a mine. In addition, the Court held that the Corps’ granting of the permit was lawful.

Coeur Alaska intended to reopen the Kensington Gold Mine in Alaska. *Coeur Alaska*, 129 S. Ct. at 2463. In doing so, Coeur Alaska planned on implementing a mining technique called “froth flotation.” *Id.* at 2464. This process allows gold-bearing minerals to float to the surface of frothing waters in which a mine’s crushed rocks are being churned, producing a mixture called slurry, which is a combination of water, wet sand, and rock. *Id.* Rather than dispose of the slurry in the traditional way, using a separate pond, Coeur Alaska proposed to use the Lower Slate Lake, a small but deep navigable lake near the mine, for discharge. *Id.* Coeur Alaska’s proposed procedure would increase the acreage of the lake and would isolate the lake by damming the downstream shore. *Id.* Both Coeur Alaska and the environmental agencies involved in the suit agree that putting any water into the lake must be done only as permitted by the Clean Water Act (CWA). *Id.* at 2463. The parties disagree about the proper authority for granting such a permit and if the granted permit was lawful. *Id.*

At the request of Coeur Alaska, the Corps considered the request for a permit by analyzing the environmental issues under Section 404(b) of the CWA and by issuing a permit for Coeur Alaska to pump slurry into the lake as requested. *Id.* at 203. The Corps based its decision to grant the permit on the fact that the environmental damage would not be long term “[a]nd during the temporary disruption Coeur Alaska will divert waters around the lake through pipelines built for the purpose.” *Id.* at 204. The Corps also concluded that following the project, the reclamation of the land planned by Coeur Alaska would have positive environmental results. *Id.* In addition, the other available option, placing the tailings above ground in wetlands, would cause a permanent loss to the wetlands. *Id.*

### POWER TO ISSUE THE PERMITS

The first issue the Court addressed in its decision is the power of the Corps to permit the discharge of the slurry. The Court noted that “section 402 gives the EPA authority to issue ‘permit[s] for the discharge of any pollutant,’ with one important exception: the EPA may not issue permits for fill material that fall under the Corps’ § 404 permitting authority.” *Id.* at 2467. The EPA is not powerless in such situations and may make guidelines for the Corps to follow when choosing to permit the fill-material discharge, and the EPA may prohibit a particular disposable site permit. *Id.* The EPA’s own regulations state that “discharge of dredged or fill material into the waters of the United States which are regulated under [Section] 404 of the CWA do not require [Section 402] permits from the EPA.” *Id.* (citing 40 CFR § 122.3) (internal citations omitted). Both the Corps and the EPA agree that slurry is fill material as defined in the regulations. *Coeur Alaska*, 129 S. Ct. at 2468.

According to the Court, Section 404(a) of the CWA gives the Corps power to issue permits for the discharge of fill materials, but the EPA has authority to decide the issues of pollutants discharge. *Id.* at 2468. In this case, the slurry that Coeur wanted to discharge was found to be “fill material.” *Id.* (citing 40 CFR 232.2). Therefore, according to the Court, the permit was properly obtained from the Corps under Section 404. *Id.*

Although the Supreme Court found that the Corps had the power to give the permit, the Court stated that the EPA did have some power in the decision-making process and could object under certain circumstances. But in this case, “[b]y declining to exercise its veto, the EPA in effect deferred to the judgment of the Corps on this point.” *Id.*

The Court rejected the environmental groups’ reading that Section 404 had an exception for material that was “subject to an EPA new source performance standard.” *Id.* at 2469.

### LEGALITY OF THE PERMIT

SEACC also claimed that, issues of power aside, the permit was not in accordance with the law. In the eyes of SEACC, the slurry discharge into the lake must meet certain new EPA standards for froth-flotation mining, and in this case, those standards “would allow no discharge of process wastewater from the mine.” *Id.* at 2470. (citing 40 CFR § 440.104(b)(1)) (internal citations omitted).

The Ninth Circuit Court of Appeals found that the EPA’s new source-performance standard did apply to the discharge from the mill to the lake. *Se. Ala. Conservation Corps*, 486 F.3d at 645. *Id.* The Supreme Court reversed this decision and ruled that the EPA standard under Section 306 (e) of the CWA did not apply with regards to the discharge of the slurry into the lake. *Coeur Alaska*, 129 S. Ct. at 2470.

To reach its conclusion, the Court looked to the text of the CWA, the regulations, and the EPA’s interpretations. *Id.* at 2469. The Court stated that based on the statutory language and regulations, Congress had not made a direct decision that was sufficient enough reach a conclusion on the language of the CWA. *Id.* at 2469-70. In its decision, the Court relies on an internal EPA memorandum explaining that its performance standards do not apply to discharges of fill material. *Id.* Because the Court did not find any “clearly erroneous” contradictions to the regulations, the Court accepted it as true. *Id.* at 2470.

When looking to the statutory text, the Court focused in part on the Congressional omission of Section 306 from Section 404 of the CWA. *Id.* at 2472. Although Sec-

tion 306 just states that a discharge that violates the new regulations standard is “unlawful,” Section 404 gives control to the Corps with regards to fill discharge without mentioning Section 306 restrictions. *Id.* The Court felt that the “failure to mention [Section] 306 or the EPA new source performance standards does offer some indication that these are not relevant to the [Section] 404 permit, though the argument falls short of being conclusive.” *Id.* at 2472.

In its discussion of the regulations that pertain to the statutes, the Court once again did not find any direct statement linking Section 306 and Section 404 together. *Id.* The Court stated that the regulations’ conclusions were not sufficient enough to make a decision. *Id.*

In reaching their decision, the Court found agency interpretation to be instructive and looked to a memorandum written in May 2004 by Diane Regas and Randy Smith. *Id.* at 2473. Regas was Director of the EPA’s Office of Wetlands, Oceans, and Watersheds, and Smith was a Director of the EPA’s Regional Office of Water with responsibility over the mine at the time the memorandum was written. *Id.* This memorandum cites 40 C.F.R. §122.3, the regulation the Court found to be ambiguous. *Id.* The Court quoted the memorandum, which stated that “as a result [of the fact that the discharge is regulated under Section 404], the regulatory regime applicable to discharges under section 402 . . . do not apply to the placement of tailings.” *Id.* (quoting Regas Memorandum, available at [http://www.vnf.com/assets/attachments/EPAs\\_2004\\_Regas\\_Memo.pdf](http://www.vnf.com/assets/attachments/EPAs_2004_Regas_Memo.pdf)). The Court relied on this memorandum for a variety of reasons, including that they found it not to be inconsistent with the regulations and because it seems to cover the situation in question. *Id.* The Court explained that:

the memorandum preserves a role for the EPA’s performance standards; it guards against the possibility of evasion of those standards; it employs the Corps’ expertise in evaluating the effects of fill material on the aquatic environment it does not allow toxic pollutants to be discharged; and we have been offered no better way to harmonize the regulations.

*Id.* at 2474.

The Court rejected all of SEACC’s remaining objections to the Court’s deference to the memorandum. *Id.* at 2474-75.

After determining that the Corps had the power to grant the permit and the permit itself was valid, the case was remanded to the Ninth Circuit, who in turn remanded it to the district court. *Se. Ala. Conservation Council v. United States Army Corps of Eng’rs*, 580 F.3d 873 (9th Cir. 2009).

*David J. Klein, is a member of the Lloyd Gosselink Rochelle & Townsend, P.C.’s Water and Districts Practice Groups in Austin, where he focuses on representing water utilities, municipalities, water districts, water authorities and landowners with their water supply, water quality, and water and sewer utility service interests. Mr. Klein earned his J.D. from The John Marshall Law School in Chicago, Illinois.*

*Andrea Tindall is a third-year student at The University of Texas School of Law and is the Recent Development Editor of the Texas Environmental Law Journal*



## CASE NOTES: STATE

**MCDONALD V. CITY OF THE COLONY, No. 2-08-263-CV, 2009  
TEX. APP. LEXIS 4861**

The Texas Court of Appeals, Second District, Fort Worth, recently examined a decision involving how the City of the Colony, Texas ("City") operates its wastewater-collection system. *McDonald v. City of the Colony*, No. 2-08-263 CV, 2009 Lexis 4861 (Tex.App.-Fort Worth June 25, 2009, no pet. hist.)(mem. op.). John and Cheryl McDonald brought this action, individually and as next-friend-for-minor Patrick Tucker McDonald, against the City of the Colony, Texas. *McDonald*, 2009 Lexis 4861, at \*1.

**FACT SUMMARY**

The City leased a tract of land to Club Fore Sports for the construction and operation of a golf driving range and public-recreation facility ("Golf Center"). *Id.* at \*2-3. Mr. McDonald subsequently purchased the Golf Center and leased the land. *Id.* at \*3. On a portion of the leased premises is a wastewater-lift station that the City owns and operates as part of its wastewater-collection system. *Id.* at \*3. The lift station uses motor-driven equipment to pump raw sewage uphill to another part of the sewage system located on adjacent land that the City owns. *Id.* The lift station has an influent box that requires a mechanical bar screen for the reasonable and safe use of the pumps. *Id.* at \*4. However, due to frequent mechanical and maintenance problems with the mechanical screen, the City removed it, leaving the influent box, the underground motors, and the pumps exposed. *McDonald*, 2009 Lexis 4861, at \*4. The City covered the opening with a metal cover in an attempt to prevent malodorous gases from escaping. *Id.*

In September 2006, Mr. McDonald contacted the Texas Commission on Environmental Quality (TCEQ) complaining of headaches, nausea, dizziness, eye and throat irritation, and corneal opacity. *Id.* The TCEQ took air-quality samples from the lift station and found hydrogen sulfide gas concentrations that were within range to cause the symptoms Mr. McDonald was experiencing. *Id.* at \*4-5. The TCEQ issued a report stating that some of the samples taken were well above the residential, recreational, business, or commercial regulation and it strongly recommended that actions be taken to reduce exposure to the gas. *Id.* Additional independent air-quality tests also revealed that the lift station was emitting gas in excess of nationally prescribed reporting limits. *McDonald*, 2009 Lexis 4861, at \*5.

Mr. McDonald closed the Golf Center due to the harmful gas emission and subsequently filed suit against the City. *Id.* The McDonalds asserted claims for nuisance, breach of contract, inverse condemnation, breach of warranty, negligence, gross negligence, negligence per se, premises defect, and fraud, and sought injunctive relief. *Id.* at \*5-6.

The City filed a plea to the jurisdiction, asserting that it was immune from suit. *Id.* at \*6. The trial court granted the City's plea to the jurisdiction with regard to each of the McDonalds' negligence claims and their causes of action for nuisance, breach of warranty, premises defect, and pure takings. *Id.* at \*7. The trial court denied the plea with regard to the McDonald's breach of contract and inverse condemnation

claims. *Id.* The McDonalds appealed and argued the trial court erred in granting the City's plea to the jurisdiction on their negligence claims, premises defect, nuisance, and breach of warranty; and that the trial court ignored the undisputed evidence in granting the City's plea to the jurisdiction on the grounds challenged in their first issue. *Id.* at \*10.

#### **GOVERNMENTAL IMMUNITY**

A Texas municipality engaged in a function defined by the Texas Legislature to be "governmental" is entitled to governmental immunity provided that the Legislature has not otherwise authorized a waiver of this immunity. *City of Houston v. Clear Channel Outdoor, Inc.*, 161 S.W.3d 3, 6 (Tex.App.–Houston [14th Dist.] Jan. 15, 2004, pet. filed). The Legislature gave such consent and granted a limited waiver of immunity in the Texas Tort Claims Act (TTCA), which permits suits to be brought against governmental units in certain narrowly defined circumstances. *Texas Dept. of Criminal Justice v. Miller*, 51 S.W.3d 583, 588 (Tex. 2001). The TTCA provides that a governmental unit is liable for:

- (1) property damages, personal injury, and death proximately caused by the wrongful act or omission or the negligence of an employee acting within his scope of employment if:
  - (A) the property damage, personal injury, or death arises from the operation or use of a motor-driven vehicle or motor-driven equipment; and
  - (B) the employee would be personally liable to the claimant according to Texas Law; and
- (2) personal injury and death so caused by a condition or use of tangible or real property if the governmental unit would, were it a private person, be liable to the claimant according to Texas Law.

TEX. CIV. PRAC. & REM. CODE ANN. §101.021 (West 2011).

In this case, the City's operation of its wastewater collection is a governmental function and is thus entitled to governmental immunity. *McDonald*, 2009 Lexis 4861, at \*13. The Legislature has statutorily included garbage and solid-waste removal, collection and disposal, and water and sewer services in a nonexclusive list of governmental functions. TEX. CIV. PRAC. & REM. CODE ANN §101.0215(a)(6), (32) (West 2011). For the McDonald's' claims to succeed, they had to prove facts sufficient to invoke a waiver of governmental immunity under the TTCA. *McDonald*, 2009 Lexis 4861, at \*13.

#### **NEGLIGENCE CLAIMS FOR USE OF MOTOR-DRIVEN EQUIPMENT**

The McDonald's argued for the waiver of the City's governmental immunity by relying in part on the TTCA's use of the motor-driven-equipment exception to support their negligence claims. *Id.* at \*15. The McDonalds alleged that the lift-station pumps were motor-driven equipment that the City negligently used by operating them over capacity and without a mechanical bar screen, and that this use produced harmful gas that caused property damage and personal injury to the McDonalds. *Id.* However, the City argued that the McDonald's claims involve the City's non-use of the mechanical bar screen and that this non-use does not fall within the TTCA's waiver of immunity. *Id.* The City also contends that the McDonalds have not pleaded or provided a causal

link between the operation of the motor-driven equipment and their damages. *McDonald*, 2009 Lexis 4861, at \*15.

The Court found that the McDonalds established that the pumps were motor-driven equipment within the scope of the TTCA, because the lift station used motor pumps to pump raw sewage uphill. *Id.* at \*17. The Court also found that the McDonalds alleged more than mere non-use of the mechanical bar and that the pleadings and evidence established use of motor-driven equipment sufficient to fall within the TTCA's waiver of immunity. *Id.* at \*19. The McDonalds' pleadings alleged that the lift station's motor-driven equipment had not been properly serviced, maintained, and/or operated and had been negligently used over the time periods relevant to this suit; that the City continued its intentional, negligent, and harmful operation of this motor-driven equipment after having actual knowledge that the lift station had been operating outside of its operation limits and capacities; and because the lift station was operating beyond its designed and intended capacity, the lift station was emitting illegal and harmful levels of gas. *Id.* at \*18-19. The evidence that the McDonalds submitted also established one or both of the operable pumps did not meet TCEQ design standards and that even after the TCEQ recommended immediate action be taken to reduce the gas levels, the City continued using the same pumps at the lift station. *Id.* at \*19.

The TTCA also required the McDonalds to show that their injuries were proximately caused by the operation or use of the motor-driven equipment. *McDonald*, 2009 Lexis 4861, at \*19-20. The McDonalds alleged that the way the lift station was used and operated constituted negligence because it emitted toxic fumes and illegal levels of gas that are known to cause injury to humans. *Id.* at \*20. The McDonalds also alleged that Mr. McDonald and his son experienced health problems and physical injuries as a result of their exposure to the gas and that they had to cease operations of the Golf Center due to these emissions. *Id.* The TCEQ report also confirmed that the emissions around the lift station exceeded the statutory maximum and were capable of causing the symptoms of which the Mr. McDonald complained. *Id.* at 21.

After considering the pleadings and the relevant jurisdictional evidence, the court of appeals found that the pleadings and the evidence sufficiently invoked a waiver of the City's governmental immunity regarding the McDonalds' negligence claim for use of motor-driven equipment. *Id.* Thus, the trial court erred in granting the City's plea to the jurisdiction on their negligence, gross negligence, and negligence per se claims to the extent that the McDonalds asserted a waiver of governmental immunity based on use of motor-driven equipment, as opposed to a waiver based on the non-use of the mechanical bar screen. *Id.* at \*21-22.

#### **PREMISES DEFECT CLAIM**

The McDonalds also brought a premises defect claim under the TTCA based on the malfunctioning and/or misused equipment of the lift station. *McDonald*, 2009 Lexis 4861, at \*24. Because a premises defect arises from a condition existing on real property, a governmental unit's liability for a premises defect is implied under the TTCA. *Id.*; see TEX. CIV. PRAC. & REM. CODE ANN §101.021 (West 2011). The City contended that the McDonalds did not have a viable cause of action for premises defect because the alleged injury did not occur within the fenced-in area of the lift station; it occurred off-site. *McDonald*, 2009 Lexis 4861, at \*29. However, the court of appeals

found that the pleadings and jurisdictional evidence established that the McDonalds' claim for premises defect was sufficient to waive the City's governmental immunity. *Id.* at \*29-30. The City had the right to control that portion of the leased premises from which harmful gases were being emitted and it is argued this emission of harmful gases onto the leased premises caused the McDonalds' injuries. *Id.* at \*29. The court of appeals thus held that the trial court erred in granting the City's plea to the jurisdiction concerning the McDonalds' defect claim. *Id.* at \*30.

#### **NEGLIGENCE CLAIMS FOR USE OF TANGIBLE PERSONAL PROPERTY**

The McDonalds also attempted to rely on the TTCA's use of tangible-personal-property exception to support their negligence claims. *Id.* The McDonalds needed to allege that usage of the personal property itself caused the injury suffered; mere involvement of the property would be insufficient. *Id.* at \*31; *Miller*, 51 S.W.3d at 588. The McDonalds pleaded that the City's employees negligently used a meter device to test and monitor the gas levels at the lift station and that this use caused their damages. *McDonald*, 2009 Lexis 4861, at \*30. However, the court of appeals held that the McDonalds did not allege sufficient facts to establish a waiver of the City's use of tangible personal property. *Id.* at \*33. The McDonalds' complaint centered on the misuse or non-use of the information from the testing of gas levels, rather than the personal property itself, which does not fall within the TTCA's waiver of immunity. *Id.* at \*32. Also, prior to the City's employee testing, the TCEQ had already tested the gas levels and Mr. McDonald had already experienced his symptoms, so the testing device could not have proximately caused the McDonald's injuries. *Id.* The court of appeals found that the trial court did not err in granting the City's plea to jurisdiction on the McDonald' negligence claim for use of tangible personal property. *Id.* at \*33.

#### **NUISANCE**

Nuisance liability of a governmental entity arises only when the nuisance rises to the level of a constitutional taking. *City of Dallas v. Jennings*, 142 S.W.3d 310, 316 (Tex. 2004). The McDonalds needed to show that the City intentionally performed certain acts, which resulted in a "taking" of property for public use. *McDonald*, 2009 Lexis 4861, at \*34; *Steele v. City of Houston*, 603 S.W.2d 786, 788-92 (Tex. 1980). The court of appeals found that the McDonalds' allegations included the elements of a "taking" and "public use." *McDonald*, 2009 Lexis 4861, at \*36. Also, the court found as to the intent element that the pleadings alleged and the jurisdictional evidence demonstrated that, at a minimum, the City knew as early as September 2006, based on the TCEQ reports, that the lift station was emitting harmful gases at a level sufficient to cause the McDonalds injury and property damage, yet did not take any action to reduce these emissions. *Id.* at \*38-39. Thus, the court of appeals held that the trial court erred in granting the City's plea to the jurisdiction on the McDonalds' nuisance claim. *Id.* at \*40.

#### **BREACH OF IMPLIED WARRANTY**

The McDonalds also brought a claim for breach of the implied warranty of suitability for intended commercial purposes. *Id.* at \*40-41. Implied warranty means that at the inception of the lease that the facilities that are vital to the use of the premises for their intended commercial purposes do not have any latent defects and that these

essential facilities will remain in suitable condition. *Davidow v. Inwood North Professional Group-Phase 1*, 747 S.W.2d 373, 377 (Tex. 1988). In this case, the McDonalds did not allege that the lift station was not emitting harmful emission of gas at the inception of the lease, that the defect was undiscoverable by a reasonable prudent inspection at the time, or that the emission rendered the leased premises unsuitable. *McDonald*, 2009 Lexis 4861, at \*43-44. The McDonalds did not establish a latent defect in existence when they assumed the lease and thus the court of appeals held that the pleadings and evidence did not establish a cause of action for breach of the implied warranty of suitability for intended commercial purposes and the trial court did not err in granting the City's plea to the jurisdiction on this issue. *Id.* at \*44-45.

#### CONCLUSION

The court of appeals affirmed the trial court's order granting the City's plea to the jurisdiction as to the McDonalds' claim for negligence alleging use of tangible personal property and the use of the motor-driven vehicles and for breach of warranty. The Court reversed the trial court's order granting the City's plea to the jurisdiction as to the McDonalds' claims for negligence alleging use of motor-driven equipment, for premises defect, and for nuisance, and remanded these claims to the trial court for further proceedings.

*Howard S. Slobodin received his B.A. from the University of Oregon in 1998 (cum laude) and his J.D. from The University of Texas School of Law in 2001 (with honors). Mr. Slobodin is the Staff Attorney of the Trinity River Authority of Texas in Arlington.*

*Alyssa Nava is a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

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#### **STATE V. HEARTS BLUFF GAME RANCH, INC., 313 S.W.3D 479 (TEX. APP.—AUSTIN 2010, PET. FILED)**

In *State v. Hearts Bluff Game Ranch, Inc.*, the Texas Court of Appeals, Third District, Austin, determined that a plaintiff could not allege a viable regulatory takings claim when the State of Texas (State) and the Texas Water Development Board (Board) did not possess the regulatory power that caused the alleged taking. *State v. Hearts Bluff Game Ranch, Inc.* 313 S.W.3d 479 (Tex. App.—Austin 2010, pet. filed). The court of appeals dismissed the case for lack of subject matter jurisdiction, reversing the trial court's denial of the State's plea that Hearts Bluff Game Ranch (Hearts Bluff), appellee, "failed to plead a claim for which sovereign immunity was waived." *Id.* at 484.

In 2004, Hearts Bluff purchased about 4,000 acres of Titus County bottomland with the intent to create a mitigation bank—a wetland preserved in perpetuity under federal law "to compensate for unavoidable losses to similar wetland areas elsewhere." *Id.* at 481. A creator of a mitigation bank stands to profit by selling federal "mitigation-banking credits" to developers of wetland areas elsewhere in the same ecological area.

*Id.* The U.S. Army Corps of Engineers (“Corps”), the federal-regulating agency that manages these banks and their credits, conducts an extensive permitting process. See 33 C.F.R. pts. 320-330. Hearts Bluff complied with all technical requirements. *Hearts Bluff*, 313 S.W.3d at 481. In September 2004, the Corps sent notice of Hearts Bluff’s application to the Board and other interested parties and “solicited public comment.” *Id.* at 482. The Board was concerned that the proposed Hearts Bluff mitigation bank was located within the boundary of the potential Marvin Nichols Reservoir site, and it conveyed to the Corps that granting the Hearts Bluff permit would interfere with regional water management. *Id.* Although Hearts Bluff knew about the potential reservoir, it claimed it proceeded with its application because it thought construction of the reservoir unlikely and because the Corps’ assured it that mitigation banks are often found within the footprint of potential reservoirs. *Id.*

The Board continued to take affirmative steps to block the Corps’ approval of Hearts Bluff’s permit. It included the reservoir in the 2006 State Water Plan, even though the host planning region, Region D, refused to support the reservoir and allegedly tried to “kill” the potential reservoir. *Id.* at 483. The Board’s 2006 plan also successfully requested that the Texas Legislature designate the land as a unique reservoir site. TEX. WATER CODE ANN. § 16.051(g-1) (West 2008). Because of these actions, the Corps first delayed the permit and then, on July 13, 2006, denied Hearts Bluff’s permit application, relying on “the Board’s opposition and the fact that Texas’s long-term water needs appeared to conflict” with the creation of Hearts Bluff’s mitigation bank. *Hearts Bluff*, 313 S.W.3d at 483. The Corps also denied Hearts Bluff’s appeal to create a “limited-term mitigation bank.” *Id.* Hearts Bluff sued the Board and the State, alleging a regulatory taking occurred under the Texas and federal constitutions on the grounds that the Board’s actions were the sole reason the Corps denied its permit, and thus deprived Hearts Bluff’s land of “all economically viable uses.” *Id.* at 484.

The appellants pled that Hearts Bluff failed to state a proper regulatory takings claim for which sovereign immunity was waived. *Id.* at 485. The court of appeals reviewed the jurisdictional facts and determined that the facts alleged by Heart’s Bluff not only failed to advance a proper takings claim, but in fact “affirmatively negate[d] the existence of jurisdiction.” *Id.* (citing *Texas Dep’t of Parks & Wildlife v. Miranda*, 133 S.W.3d 217, 226-27 (Tex. 2001)). The court of appeals observed that a regulatory taking occurs “when the government ‘impose[s] restrictions that either (1) deny landowners of all economically viable use of their property, or (2) unreasonable interfere with landowners’ rights to use and enjoy their property.” *Id.* at 485 (citing *Mayhew v. Town of Sunnyvale*, 964 S.W.2d 922, 935 (Tex. 1998)). It also found that an inverse condemnation occurs when “(1) the governmental entity intentionally performed an act in the exercise of its lawful authority; (2) that resulted in the taking, damaging, or destruction of the party’s property; (3) for public use.” *Bluff*, 313 S.W.3d at 486 (citing *City of Midlothian v. Black*, 271 S.W.3d 791, 799 (Tex. App.—Waco 2008, no pet.)).

The State and Board asserted that, because neither had regulatory authority over mitigation-bank permits, Hearts Bluff did not plead facts that supported the second element, the “cause in fact” of the alleged taking. *Id.* The court of appeals agreed, noting that while the Board’s actions were, according to the appellee’s pleading, the “but-for” cause of Hearts Bluff’s permit being denied, an inverse condemnation requires more. *Id.* at 487. The court stated:

implicit in the test for inverse condemnation are two understood requirements: (1) the governmental entity against who the claim is brought must possess . . . the regulatory power that effected the taking, and (2) the governmental entity's exercise of its own regulatory power must have imposed the current, direct restriction that gave rise to the taking.

*Id.*

The court observed that while the appellants did possess regulatory powers, they did not possess the specific authority to regulate mitigation bank permits. *Id.* at 488. The court analogized to *San Antonio River Auth. v. Garrett Bros.*, in which the plaintiff, a subdivision developer, alleged a regulatory taking after the defendant advised the City of San Antonio that it wanted to build a park on the plaintiff's property. *Id.* at 487 (citing *San Antonio River Auth. v. Garrett Bros.*, 528 S.W.2d 266, 269-71 (Tex. Civ. App.—San Antonio 1975, writ ref'd n.r.e.)). The City of San Antonio then halted the plaintiff's ongoing construction until the defendant decided not to build a park on the plaintiff's property. The San Antonio Court of Appeals affirmed an inverse condemnation judgment against the City in that case but vacated the judgment against the river authority because that latter entity "lack[ed] the authority to regulate the development of subdivisions." *Id.*

The Austin Court of Appeals acknowledged that, although a government agency acting as an agent of the state or federal government might be held liable for a regulatory taking, the Corps is a federal agency that did not act as an agent or under the authority of the State of Texas. *Id.* at 489. The court looked to *B & G Enters. v. United States*, in which a vending-machine company sued the federal government for a regulatory taking. *Id.* at 488 (citing *B & G Enters. v. United States*, 220 F.3d 1318, 1321 (Fed. Cir. 2000)). In *B&G*, California had enacted restrictions on tobacco vending machines to receive federal grant money conditioned on states' "passing and enforcing a law that regulated minors' access to tobacco products." *Id.* (citing 220 F.3d at 1321). The court in that case determined the federal government was not liable because the grant was optional and because California was not acting under federal law or authority. *Id.* (citing 220 F.3d at 1324).

Finally the Austin Court of Appeals focused on the "essence of a regulatory taking," which "requires a court to decide whether, 'in all fairness and justice,' the burdens of any given regulation 'should be borne by the public as a whole' instead of by those property owners affected by the regulation." *Id.* (citing *Lingle v. Chevron U.S.A., Inc.*, 544 U.S. 528, 537 (2005)). The court determined that, in this case, although the appellants had a strong influence on the Corps' decision, it was ultimately the Corps' decision to make "for the benefit of the United States as a whole," and that Texas was not the sole beneficiary of the positive effects that might follow from the establishment of the proposed mitigation bank. *Id.* at 488-89. The court left open the possibility that, in another case, "a non-regulating governmental entity's conduct could cross the threshold from mere advocacy to indirect control" to the point "that courts could impute the exercised regulatory power to that entity." *Id.* The court of appeals reversed the trial court's denial of the State's and Board's plea to the jurisdiction and dismissed the suit.

Hearts Bluff filed a petition for review with the Texas Supreme Court on May 13, 2010. The State and Board initially waived their response to that petition, but the Supreme Court has requested a response to Hearts Bluff's petition from those parties.

*Howard S. Slobodin received his B.A. from the University of Oregon in 1998 (cum laude) and his J.D. from The University of Texas School of Law in 2001 (with honors). Mr. Slobodin is the Staff Attorney of the Trinity River Authority of Texas in Arlington.*

*Olga Goldberg is a second-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## P U B L I C A T I O N S

### **SUZANNE C. LACAMPAGNE & JEFFREY C. MILLER, *SETTLING NRD CLAIMS BY APPROPRIATELY VALUING INJURY AND DAMAGES*, 24 NAT. RESOURCES & ENV'T 6 (SUMMER 2009).**

Under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), potentially responsible parties (PRP) for natural-resource damage are liable for cleanup costs as well as “damages for injury to, destruction of, or loss of natural resources, including the reasonable costs of assessing such injury, destruction, or loss.” 42 U.S.C. § 9607(a)(4)(C). Claims for these natural-resource damages (NRD) can range from thousands to hundreds of millions of dollars. Suzanne C. Lacampagne & Jeffrey C. Miller, *Settling NRD Claims by Appropriately Valuing Injury and Damages*, 24 NAT. RESOURCES & ENV'T 6, 6 (Summer 2009). Suzanne C. Lacampagne and Jeffrey C. Miller explain that one way to successfully settle NRD claims is to find a cost-effective restoration project that will produce the equivalent—or better—of the natural resource that was damaged. *Id.*

CERCLA authorizes the federal government, the states, and the Indian tribes to act as trustees and recover for NRD. 42 U.S.C. § 9607(f)(1). However, the recovered sums must be used only to “restore, replace, or acquire the equivalent of such natural resources.” *Id.* Pursuant to CERCLA, the Department of Interior has promulgated detailed regulations for assessing damages from injuries to natural resources. Lacampagne & Miller, *supra*, at 6. Trustees need not follow the regulations, but doing so creates a rebuttable presumption in favor of the trustees in administrative and judicial proceedings. *Id.* Under the regulations, assessing damages has three steps: (1) injury determination; (2) injury quantification; and (3) damage determination. *Id.*

The first step, injury determination, is a scientific one. Three determinations are involved: whether the resource is a covered natural resource, whether the resource is injured, and what the pathway was or is between the source of the release and the injured natural resource. *Id.* The regulations define “injury” broadly: it includes “any measurable adverse change . . . in the chemical or physical quality” of the resource. *Id.* The regulations include a list of “changes” that must be documented and associated “acceptance criteria.” *Id.* Although the injury determination criteria vary by the type of resource affected, injury is always demonstrated by comparing the resultant state to a baseline condition of the resource. *Id.* at 6-7.



The second step, injury quantification, is also a scientific one. Steps include measuring the extent or scope of the injury, determining the baseline condition, identifying the baseline “services,” determining the recoverability of the resource, and estimating the reduction in “services” attributable to the release. *Id.* at 7. The term “services” in the regulation refers to the functions performed by the resource, including those for human use. *Id.* Lacampagne and Miller use the example of water as providing the services of a habitat for animals and drinking water for humans. *Id.*

Lacampagne and Miller note that it has been disputed whether the third step, damage determination, should reflect the value of the injured resources or the cost to restore or replace them. *Id.* The measure of damages under the regulations is the amount of money required to (1) restore the resource so that it can provide the same level of service it did at baseline; or (2) replace or acquire other natural resources capable of providing the same baseline services. *Id.* In addition to that cost, damages also include the value of the services lost between the time of the release and the full recovery or replacement of the resource. *Id.* This amount is the “compensable value” or “lost use value” component of the damages award. Lacampagne and Miller offer the example of restoring water quality to the baseline level, wherein the trustees may obtain damages for the value of the degraded water quality during the time it takes the liable party to restore it. *Id.*

Habitat Equivalency Analysis (HEA) is a methodology for ensuring that restoration efforts create or restore the same quantity of services that were lost. *Id.* HEA can take into account the natural recovery of the damaged area as well as the fact that a restored area sometimes does not provide the same level of services as the damaged area. *Id.* It also discounts the value of services to be provided in the future to obtain the present value of the project. *Id.*

Lacampagne and Miller use the example of one acre of destroyed eelgrass to illustrate the HEA analysis. *Id.* Their example assumes that it is not feasible to actively restore the eelgrass, but that it will begin to recover one year after the injury, returning to its baseline condition within ten years of the injury. *Id.* The various services provided by the natural resource can be measured in “service-acre years” (SAY). *Id.* In the example, one SAY is lost in the first year, but less than that is lost in each of the subsequent nine years, with the amount lost decreasing each year. *Id.* The HEA analysis would discount services that will be either lost or provided in the future to arrive at a present value measured in “discounted service-acre years” (DSAY). *Id.* That number will reflect the rate of recovery of the eelgrass: if it approaches baseline early, DSAYs will be relatively low. *Id.* If it recovers more quickly at the end, the number will be closer to ten DSAYs. *Id.*

After the DSAY number is calculated, trustees usually assign a dollar value to a DSAY based on the cost of replacing the total number of DSAYs. *Id.* A PRP can then settle by paying its allocated share of the DSAYs or it can perform restoration projects that generate that amount. *Id.* The latter option, according to the writers, is the one that leads to positive settlement opportunities for the PRPs, because “it is often far cheaper for PRPs to perform restoration than it is for the trustees.” *Id.* Therefore, “PRPs may be able to generate DSAYs at a much lower cost than the dollar value assigned to DSAYs by the trustees.” *Id.*

The authors cite the Hylebos Waterway sediment site in Washington as an example of a positive settlement for PRPs. *Id.* The state, federal, and tribal trustees (Trust-

ees) in that case sought damages for injuries that the PRP's contamination of the sediments, soils, and groundwater allegedly caused. *Id.* at 7-8. The Trustees had spent ten years and \$10 million conducting a partial NRD assessment and used an HEA to determine equivalency between the lost and restored resources, ultimately demanding a settlement of \$52,000 per DSAY for a total of \$79.4 million. *Id.* at 8.

In addition to a lump-sum "cash out" settlement, the Trustees also offered the PRPs the option of doing restoration projects that would provide sufficient DSAYs to cover their liability. *Id.* Lacampagne and Miller point out that the Trustees "strongly encouraged the PRPs to do restoration projects . . . because they believed that private parties could use market forces to do good restoration projects more efficiently and cost-effectively than the Trustees could." *Id.*

Some of the PRPs formed a subgroup to negotiate a restoration project that would meet the DSAY figure and the Trustees' goals. *Id.* This group's collective allocated liability, as negotiated with the Trustees, was 258 DSAYs plus \$1.8 million in damage assessment costs. *Id.* The group decided to undertake funding of the restoration project despite the risk of cost overruns exceeding the cash-out dollar amount and the possibility of project failure. *Id.* The project, which the landowner (the county) actually performed, ended up more than covering the 258 DSAYs. *Id.* Although the PRPs funded \$2.3 million of the eventual project's cost and additional oversight costs, they would have owed the Trustees almost \$13.5 million, or about six times the project cost, had they simply "cashed out" the DSAY value. *Id.*

This alternative to a straight cash settlement benefited the Trustees, as well. They did not need to find and complete a project on their own without much government bureaucracy or oversight costs. *Id.* According to Lacampagne and Miller, it is "unlikely that the Trustees could have designed, constructed, and completed such a project" in as short a time as the PRP group. *Id.* The Hylebos Waterway settlement, therefore, highlights a way that creative resolutions to NRD claims can both satisfy trustees and minimize cost to PRPs, while also effectively and efficiently restoring natural resources to their baseline condition.

*Francis Chin is an attorney with Waste Management, Inc. in Houston. Mr. Chin earned his J.D. from Duke University School of Law in 2000.*

*Andrew Chapman is a third-year student at The University of Texas School of Law and is the Managing Editor of the Texas Environmental Law Journal.*

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**CRIMINAL LIABILITY UNDER THE CLEAN WATER ACT:  
KIRK F. MARTY, *CRIMINAL PROSECUTION OF RESPONSIBLE  
CORPORATE OFFICERS AND NEGLIGENT CONDUCT UNDER  
ENVIRONMENTAL LAW*, 23 NAT. RESOURCES & ENV'T 33 (2009).**

**INTRODUCTION**

In his recent article, Kirk F. Marty argues that two key provisions of the Clean Water Act (CWA) allow the federal government to bring criminal prosecutions against corporate entities and their employees for conduct that would not traditionally be viewed as criminal. Kirk F. Marty, *Criminal Prosecution of Responsible Corporate Officers and Negligent Conduct under Environmental Law*, 23 NAT. RESOURCES & ENV'T 33 (2009). First, the CWA explicitly provides criminal penalties for various negligent violations of the statute. 33 U.S.C. § 1319(c)(1)(A). Second, for the purpose of criminal violations, the CWA includes “any responsible corporate officer” in its definition of “person.” 33 U.S.C. § 1319(c)(6). Each of these provisions makes it easier for the government to hold high-level corporate officers criminally liable for violating the CWA without having to prove actual knowledge of the violation(s). Marty, *supra*, at 33.

**NEGLIGENT VIOLATIONS**

The CWA outlines criminal penalties for negligently violating several provisions of the statute. A first conviction is punishable by a fine of not less than \$2,500 and up to \$25,000 per day of the violation and imprisonment for up to a year. 33 U.S.C. § 1319(c)(1)(B).

Marty notes that the statute does not specify which standard of negligence is required—gross negligence or simple negligence. Marty, *supra*, at 36. Although the body of case law on the issue is not large, the federal courts have generally held that the CWA requires proof of simple negligence. Martin Harrell, Joseph J. Lisa & Catherine L. Votaw, *Federal Environmental Crime: A Different Kind of “White Collar” Prosecution*, 23 NAT. RESOURCES & ENV'T 5 (2009). In *United States v. Hanousek*, for instance, the Ninth Circuit rejected the defendant’s contention that the CWA requires a heightened showing of negligence. *United States v. Hanousek*, 176 F.3d 1116, 1121 (9th Cir. 1999), *cert. denied*, 528 U.S. 1102 (2000). The government must show the defendant failed “to exercise the degree of a care that someone of ordinary prudence would have exercised in the same circumstance.” *United States v. Ortiz*, 427 F.3d 1278, 1283 (10th Cir. 2005). Thus, the defendant in a CWA case cannot claim he did not know a violation would occur. He must be able to prove that he *could not* have known the violation would occur. As long as a reasonably prudent person would have taken precautions, the defendant can be held liable.

**THE RESPONSIBLE CORPORATE OFFICER DOCTRINE**

The responsible corporate officer doctrine (RCOD) arose under the Federal Food, Drug, and Cosmetics Act (FFDCA), through two principal cases. In the first, *United States v. Dotterweich*, the U.S. Supreme Court held that the president and general manager of a pharmaceutical company could be found criminally liable for violating the FFDCA, even absent any knowledge of wrongdoing. *United States v. Dotterweich*, 320 U.S. 277, 284 (1943). The Court reasoned that public-welfare statutes, such as the

FFDCA, which do not contain an explicit mens rea requirement, favor public protection over the interests of corporate officers. *Id.* at 284-85.

The Court refined and expanded this reasoning in *United States v. Park*, 421 U.S. 658 (1975). Park, the CEO of a retail food chain, was held criminally liable for violating the FFDCA even though he acted to correct the problem as soon as it was brought to his attention. *Id.* at 677. The Supreme Court held that “the Act imposes not only a positive duty to seek out and remedy violations when they occur but also, and primarily, a duty to implement measures that will insure the violations will not occur.” *Id.* at 672. As long as a defendant has the position and authority to prevent a violation, he can be held criminally liable for failing to do so. *Id.* at 673-74.

Marty argues that the federal government’s attempts to prosecute environmental crimes using the RCOD have met with mixed results because, unlike the FFDCA, most criminal environmental statutes explicitly require proof of a mens rea element. Marty, *supra*, at 34. In *United States v. White*, the court refused to allow the RCOD to stand in for the mens rea requirement of the Resource Conservation and Recovery Act (RCRA) and the Federal Insecticide, Fungicide and Rodenticide Act. *United States v. White*, 766 F. Supp. 873, 895 (E.D. Wash. 1991). Likewise, in *United States v. MacDonald & Watson Waste Oil Co.*, the First Circuit held that a defendant’s position as a corporate officer was not enough, on its own, to prove knowledge under the RCRA. *United States v. MacDonald & Watson Waste Oil Co.*, 933 F.2d 35, 55 (1st Cir. 1991). Still, the court noted, knowledge could be inferred from circumstantial evidence, including a defendant’s position of authority. *Id.*

Under the CWA, which includes “any responsible corporate officer” in its definition of “person,” the federal government has enjoyed more consistent success in employing the RCOD. Marty, *supra*, at 34. In *United States v. Brittain*, for example, the Tenth Circuit affirmed the conviction of a corporate officer who directed his supervisee to violate a permit. *United States v. Brittain*, 931 F.2d 1413, 1418 (10th Cir. 1991). The defendant argued that he could not be held criminally liable for violating a permit as he was not the permittee. *Id.* at 1419. After reviewing *Dotterweich* and *Park*, the court rejected the defendant’s argument. *Id.* The court reasoned that, by incorporating the RCOD into the CWA, Congress intended that the willfulness or negligence requirement of the statute would be imputed to the officer on the basis of his position of authority. *Id.*

Importantly, as Marty points out, a person need not be a formal corporate officer to be found liable under the RCOD. Marty, *supra*, at 35. For example, in *United States v. Hong*, the Fourth Circuit found a defendant liable using the RCOD for negligently violating the CWA because he controlled the violating company’s finances. *United States v. Hong*, 242 F.3d 528, 529 (4th Cir. 2001), *cert. denied*, 524 U.S. 823 (2001). According to the court, the dispositive question is “whether the defendant bore such a relationship to the corporation that it is appropriate to hold him criminally liable for failing to prevent the charged violations of the CWA.” *Id.* at 531. This rather pragmatic interpretation shifts the focus of the RCOD to a defendant’s actual authority and power rather than his formal title. Marty, *supra*, at 35.

#### **CONCLUSION—LOWERING THE BAR**

Marty concludes by reiterating his primary thesis: by incorporating the RCOD and criminal negligence provisions, the CWA lowers the bar for criminal liability for com-

mercial entities and their employees. Marty, *supra*, at 40. The RCOD effectively allows juries to infer knowledge from circumstantial evidence such as a defendant's position of authority and his knowledge of other violations. *Id.* At the same time, the negligence provisions make it possible to hold regulated entities criminally liable for simple negligence—*i.e.*, not exercising the caution of a reasonably prudent individual. *Id.*

*Francis Chin is an attorney with Waste Management, Inc. in Houston. Mr. Chin earned his J.D. from Duke University School of Law in 2000.*

*Nicholas Ybarra is a second-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

## WASHINGTON UPDATE

### EPA REGULATION OF WASTEWATER DISCHARGES FROM POWER PLANTS

A recent news release from the U.S. Environmental Protection Agency (EPA) states that the agency expects to revise its rules for wastewater discharges from power plants. The EPA decided that the current regulations, which were enacted in 1982, “have not kept pace with changes that have occurred in the electric power industry over the last three decades.” ENVTL. PROT. AGENCY, Steam Electric Power Generating (2009), *available at* <http://www.epa.gov/waterscience/guide/steam/>. The EPA came to this conclusion after it conducted a study of power plant wastewater discharges in 2009.

The current guidelines for wastewater discharge for the steam-electric power-generating industry issued by EPA do not appear to be able to regulate the expected increase over the next few years in toxic-weighted pollutant discharges from coal-fired power plants. *Id.* These standards are based on the 1982 rule, which can be found in Title 40, Section 423 of the Code of Federal Regulations. This rule establishes effluent-limitations guidelines (ELGs) “for new and existing discharges from the steam electric power generating industry. *Id.* The ELGs that can be found in this section apply to plants “primarily engaged in the generation of electricity for distribution and sale which results primarily from a process utilizing fossil-type fuel (coal, oil, or gas) or nuclear fuel in conjunction with a thermal cycle employing the steam water system as the thermodynamic medium.” 40 C.F.R. § 423.10 (1982).

The EPA issued a study in August 2008 entitled “Steam Electric Power Generating Point Source Category: 2007/2008 Detailed Study Report.” It includes information on flue-gas-desulfurization systems (FGDs) and ash-sludge wastewater. The EPA believes these sources to be two of the main sources of metals discharged from coal-fired power plants. ENVTL. PROT. AGENCY, Steam Electric Power Generating Point Source Category: 2007/2008 Detailed Study Report 3-1 (2008), *available at* [http://water.epa.gov/lawsregs/lawguidance/cwa/304m/upload/2008\\_09\\_10\\_guide\\_304m\\_2008\\_steam-detailed-200809.pdf](http://water.epa.gov/lawsregs/lawguidance/cwa/304m/upload/2008_09_10_guide_304m_2008_steam-detailed-200809.pdf). Other concerns include coal-pile runoff. *Id.* The EPA states in its report that “limestone is by far the predominant sorbent used in wet FGD systems

(seventy-four percent of generating units), followed by lime (fourteen percent of generating units) and magnesium-enhanced lime (seven percent of generating units).” *Id.* at 3-2.

The level at which the FGD system is controlled varies by plant. *Id.* at 3-3. One thing that can be certain is that the number of wet FGD scrubbers and the wet-scrub capacity, both of which contribute to higher pollution levels, are on the rise. The wet-scrubbed generating capacity has increased significantly since the 1982 promulgation of the current ELGs and is expected to continue to do so into the future. *Id.* at 3-14. The EPA estimates that in 1977 approximately five percent of coal-fired power-plant capacity was scrubbed using wet FGD systems, and by June 2008 that percentage had increased to approximately thirty-two percent. *Id.* The EPA models have predicted that by 2010, more than half of the total coal-fired power-plant capacity will be wet scrubbed. *Id.* The modeling also projected that over sixty percent of coal-fired capacity will be wet scrubbed by 2020, and nearly seventy percent by 2025. *Id.*

Based on the study, the EPA concludes that “most of the plants discharging FGD wastewater use pond-based approaches; however, there are indications that the use of more advanced wastewater treatment systems is increasing.” *Id.* at 3-30. The study in general is somewhat inconclusive. It provides a highly detailed overview of the methods used in wastewater discharges and expected changes that will occur to these systems. Overall, the “EPA has determined that further review of the analytical data recently collected and the collection of additional wastewater treatment and cost data is warranted.” *Id.* at 1-2.

Based on the technical information available from this study, the EPA’s revised guidelines will be focused on new treatment technologies that can be used to remove pollutants before they are discharged to waterways. Env’tl. Prot. Agency, News Releases By Date, *EPA Expects to Revise Rules for Wastewater Discharges from Power Plants*, September 15, 2009, available at <http://yosemite.epa.gov/opa/admpress.nsf/0/CE5C2D398240AF02852576320049A550>. However, a final study and recommendations for wastewater discharge limits are pending. (This article was originally written before the final study had been published. See Author’s Note.) In the meantime, the coal-fired power plant industry may be taking a hit. In September 2009, the EPA held seventy-nine permits to mine coal for further review. *EPA Reviews 79 Mountaintop Removal Coal Permits*, BLOOMBERG at 1 (September 11, 2009), available at <http://www.bloomberg.com/apps/news?pid=20601130&sid=aQNSu8BmNXdY>. The permits for coal mining by removing mountain tops and discarding the debris in neighboring streams are causing the EPA to have concerns about the potential for water pollution. *Id.* Regarding this issue, the EPA stated that efforts to mitigate the impact of filling streams with mining debris “may not be adequate to offset proposed impacts.” *Id.* The EPA’s decision to halt these permits continues the moratorium on Eastern coal mining, which has a widespread effect on the industry as a whole.

**Author’s note:** The EPA has since released its final study, published in October 2009, entitled “Steam Electric Power Generating Point Source Category: Final Detailed Study Report.” See ENVTL. PROT. AGENCY, *Steam Electric Power Generating Point Source Category: Final Detailed Study Report* (2009), available at [http://water.epa.gov/lawsregs/guidance/cwa/304m/archive/upload/2009\\_10\\_26\\_guide\\_steam\\_finalreport.pdf](http://water.epa.gov/lawsregs/guidance/cwa/304m/archive/upload/2009_10_26_guide_steam_finalreport.pdf). The study can be found on the the EPA website’s Wastewater Technology section under Effluent Guidelines for Steam Electric Power Generating. See

[http://water.epa.gov/scitech/wastetech/guide/steam\\_index.cfm](http://water.epa.gov/scitech/wastetech/guide/steam_index.cfm). As promised, the final study focuses on discharges associated with coal ash handling operations and wastewater from FGD pollution control systems. Final Detailed Study Report (2009), *supra*, at xii. The final study is very similar to the 2007/2008 Detailed Report. It officially documents the data and information EPA has collected over the course of the detailed study. *Id* at 1-2.

*Laura LaValle is an attorney who specializes in Clean Air Act matters at Beveridge and Diamond, P.C. in the firm's Austin, Texas office.*

*Madeline Mathews is a third-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

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## **POTENTIAL REFORM OF THE TOXIC SUBSTANCES CONTROL ACT: REFORM POINTS AND INDUSTRY INSIGHTS**

In January 2009, the United States Government Accountability Office (GAO) identified the Toxic Substances Control Act (TSCA or “Act”), along with high-profile subjects such as the U.S. financial regulatory system, as “high-risk” areas of government operations warranting the specific attention of U.S. policymakers. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-09-271, BIENNIAL REP. TO THE CONGRESS: HIGH RISK SERIES; AN UPDATE 22 (2009), *available at* <http://www.chemicalspolicy.org/downloads/GAO-09-271.pdf>. In response to the GAO report and a belief that the 34-year-old TSCA is dated and obsolete, legislation was introduced in the U.S. Senate and House of Representatives to amend and strengthen the Act's provisions. On April 15, 2010, Senator Frank Lautenberg introduced the Safe Chemicals Act of 2010. *See* S. 3209, 111th Cong. (2010), *available at* <http://thomas.loc.gov/cgi-bin/query/z?c111:S.3209>. On July 22, 2010, Congressmen Bobby Rush and Henry Waxman introduced parallel legislation in the House of Representatives, referred to as the Toxic Chemicals Safety Act of 2010. *See* H.R. 5820, 111th Cong. (2010).

### **REFORM POINTS**

The Rush-Waxman bill would amend the TSCA in a number of significant ways. First, the legislation would require that manufacturers submit a minimum data set (MDS) for all chemical substances, both new and existing. H.R. 5820, 111th Cong. § 4(a). Each MDS would require the submission of information on chemical identity; substance characteristics; biological and environmental fate and transport; toxicological properties; volume manufactured, processed, or imported; intended uses of the chemical substance; and effects of exposure to the chemical substance at all stages of the substance's lifecycle. H.R. 5820 § 4(a)(1)(A). The EPA would use this information in conducting safety-standard determinations pursuant to the Act's safety-standard-determination provision. *Id*. The deadlines for submitting the data sets would be staggered for existing chemicals based on when the chemical substance is prioritized

for a safety-standard determination, along with its projected production volume. *Id.* at § 4(a)(2)(A). For new chemical substances, the manufacturer would submit the MDS with a pre-manufacture notice of intent to manufacture or process new chemicals, which itself the manufacturer would submit at least ninety days before the manufacture or processing. *Id.* at § 4(a)(2)(B). An MDS would also be required for certain chemical mixtures. *Id.* at § 4(a)(2). The EPA would be able to require further testing beyond the requirements of the MDS as it deems necessary for making a safety determination. *Id.* at § 4(b)(1). Under current TSCA provisions, an MDS is not required, even for new chemicals. *See* 15 U.S.C. §§ 2601 - 2629 (1976).

Additionally, the Rush-Waxman bill would subject nineteen specific existing chemical substances (including formaldehyde, vinyl chloride, and hexavalent chromium) to safety-standard determinations. H.R. 5820 § 6 (a)(1)(A). After one year, the EPA would increase the number of chemical substances subject to safety-standard determinations to at least 300 substances, and provide justification for each substance's listing. *Id.* at § 6 (a)(1)(B).

The safety standard for chemical substances would also be toughened under the bill. Manufacturers and processors would be required to show a "reasonable certainty that no harm will result" from exposure to a chemical substance, and that "the public welfare is protected." *Id.* at § 6 (b)(1)(A). This standard represents a shift in the burden of proof, which today lies with the EPA, which is required to make a showing of harm before it can regulate a chemical under the Act. Specifically, the EPA must show that the substance presents or will present an "unreasonable risk of injury to health or environment." 15 U.S.C. § 2604 (f)(1). Thus, the new standard not only shifts the burden of proof to manufacturers but also raises the bar they must clear, since the chemical must present a reasonable certainty of *no harm*, as opposed to the mere absence of an "unreasonable" risk of harm. For instance, pursuant to the plain language of the current TSCA, it would seem that a chemical posing a risk of minor or occasional harm would be permitted if prohibition of such substance would be "unreasonable." Under the Rush-Waxman "no harm" standard, in contrast, that substance could be subject to heightened EPA regulation regardless of reasonability. Existing chemical substances or mixtures that do not meet the safety standard could be prohibited from manufacture, processing, use, or distribution. H.R. 5820 § 6 (c)(3)(A).

The Rush-Waxman bill would also increase disclosure requirements on manufacturers and processors of chemical substances. Under the current TSCA, in submitting the required chemical data to the EPA, a manufacturer, processor, or distributor may designate the data that the submitting party believes is entitled to special, confidential treatment. 15 U.S.C. § 2613(c)(1). Data that a submitting party designates as "confidential" is subject to significant disclosure restrictions, potentially denying access to the general public and state or local agencies. *See* 15 U.S.C. § 2613(a).

Rush-Waxman, however, would require manufacturers and processors to substantiate their claims of confidentiality, and the EPA's approval of the claims would be required to trigger confidentiality provisions. H.R. 5820 § 14. Certain types of information would not be eligible for confidentiality protection at all, including the identity of chemical substances and mixtures reviewed pursuant to a safety-standard determination. *Id.* Data that discloses processes used in the manufacturing or processing of a chemical substance or mixture and data disclosing the portion of a mixture comprised by any of the chemical substances therein could still be kept confidential, however.



*Id.* Additionally, state, local, and tribal governments may request disclosure of certain data that would not otherwise be disclosed under current TSCA provisions. *Id.*

The Rush-Waxman bill would impose other less significant requirements. For instance, the EPA would be required to minimize the use of animals in the testing of chemicals by “encouraging and facilitating” the use of existing chemical safety data, the grouping of multiple chemical substances into appropriate categories in which testing of one of the substances would provide reliable data on others in the category, and formation of industry groups to conduct joint testing to avoid unnecessary duplication of tests, among other initiatives. *Id.* at § 34(a)(1). The EPA would also be required to implement an incentive-based program to encourage development of safer alternatives to existing chemical substances. *Id.* at § 35(a). The EPA would also have to identify areas of disproportionately high exposures to toxic chemicals of populations in certain locations and develop an action plan for addressing issues related to such exposure. *Id.* at § 38.

#### INDUSTRY PERSPECTIVES ON TSCA REFORM LEGISLATION

Some representatives of the chemicals industry have expressed concerns about proposed reform of the TSCA and U.S. chemical safety laws generally. However, the chemicals industry has not expressed full-blown opposition to the idea of chemical-safety reform. During congressional hearings on TSCA reform, Charlie Drevna, President of the National Petrochemical & Refiners Association (NPRRA), affirmed that his organization and member companies supported the “reasonable modernization” of chemical-safety laws, but “does not believe that a wholesale rewrite of the statute is warranted.” *Business Perspectives on Reforming U.S. Chemical Safety Laws: Hearing Before the S. Committee on Environment and Public Works*, 111th Cong. 2 (2010) (statement of Charlie Drevna, President, National Petrochemical & Refiners Association). The President and CEO of the American Chemistry Council (ACC), another industry group, echoed that approval of TSCA reform. *Hearing on H.R. 5820 – The Toxic Chemicals Safety Act of 2010 Before the H. Subcomm. On Commerce, Trade, and Consumer Protection*, 111th Cong. 2 (2010) (statement of Calvin M. Dooley, President and CEO of the American Chemistry Council), available at <http://energycommerce.house.gov/documents/20100729/Dooley.Testimony.07.29.2010.pdf>. However, the ACC also expressed its belief that the Rush-Waxman bill “promotes unworkable approaches to chemicals management. It creates . . . burdens that do not contribute to, and in fact, detract from . . . advances in safety, while coming up short with respect to . . . protecting . . . jobs.” *Id.* at 2-3. The aforementioned testimony reflects the chemicals industry’s disagreement with proposed TSCA reform.

As one might expect, the elevated safety standard proposed by Rush-Waxman is of particular concern to industry representatives:

[T]he safety standard established in the bill sets . . . an impossibly high hurdle. . . . [W]hen a chemical or mixture is listed for a safety determination, the manufacturer carries the burden of showing with reasonable certainty not just that the company’s use of the chemical and any resulting exposures from those uses pose no harm, but that **all other aggregated exposures from all other**

**uses** of the chemical pose no harm. It is not clear . . . how any company could actually do that.

*Id.* at 4.

Concerns that the bill's disclosure requirements fail to protect intellectual property rights have also been raised. "Protection of . . . intellectual property is insufficient . . . By disclosing chemical identity and components of a mixture in all health and safety studies, we will simply promote foreign undercutting of our industry." *Hearing on H.R. 5820 – The Toxic Chemicals Safety Act of 2010 Before the H. Subcomm. On Commerce, Trade, and Consumer Protection, 111th Cong. 4 (2010)* (statement of Beth D. Bosley, President of Boron Specialties, on behalf of the Society of Chemical Manufacturers & Affiliates), available at <http://energycommerce.house.gov/documents/20100729/Bosley.Testimony.07.29.2010.pdf>.

#### **PROSPECTS FOR REFORM AND CONCLUSION**

Aside from industry's general distaste for the proposed legislation, prospects for further legislative progress on Rush-Waxman during 2010 were slim, and it did not survive the 111<sup>th</sup> Congress that ended on January 3, 2011. The outcome of the November 2010 congressional elections dimmed hopes on TSCA reform. Representative Waxman told *Environment & Energy Daily* that he "doesn't know yet" if he will introduce the legislation again in 2011. However, Representative Gene Green (D-Texas), a senior member of the Energy and Commerce subcommittee that oversees TSCA, indicated the possibility of reaching a compromise. *Report Highlights Economic Reasons for TSCA Reform*, ENVT. & ENERGY DAILY, Feb. 10, 2011, available at <http://www.eenews.net/EEDaily/2011/02/10/archive/6?terms=Rush-Waxman>.

*Laura LaValle is an attorney who specializes in Clean Air Act matters at Beveridge and Diamond, P.C. in the firm's Austin, Texas office.*

*David Francis is a second-year student at The University of Texas School of Law and a staff member of the Texas Environmental Law Journal.*

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