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ENVIRONMENTAL AND NATURAL RESOURCES LAW SECTION

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Who Owns the Rain? Diffused Surface Water, State Water, and Rainwater Harvesting in Texas[1]

by Ross Crow

1 This article was originally presented at the State Bar of Texas conference, Changing Face of Water Rights, 2017, Feb. 23–24, 2017 in San Antonio under the same title. This version of the article includes certain additions and modifications.

I. INTRODUCTION

State law in Texas, as a matter of policy, now expressly encourages political subdivisions to promote rainwater harvesting. The City of Austin (the City), for example, plans to promote a significantly increased amount of rainwater harvesting as part of its long-range water plan.[2] In the recent 2016 regional water plan for Region K, the City has indicated that it plans for approximately 16,500 acre-feet per year of its water demand to be met or offset by rainwater harvesting by the year 2070.[3] As use of this resource increases, the question of who or what entity has the right to use the water and to what extent has become perennial. This article asks—who owns the rain and its runoff, often called diffused surface water? When does rain and its runoff belong to the property owner where it falls, flows, and collects, and when does it become state water subject to permitting? Further, this article explores the extent of this ownership right in rainwater, including the property owner's right to use or distribute harvested rainwater.

Despite a reference to rainwater in the statutory definition of state water and statements by a few courts that could be a source of confusion, an extensive analysis herein of legislation, court holdings, and interpretation by the state agency charged with water rights permitting conclusively supports the common understanding that rainwater in the form of diffused surface water is owned by the property owner where that diffused surface water flows or collects, and is not state water until it enters a watercourse. This analysis also concludes that the property owner that collects diffused surface water, as the owner of that water, can use and transfer that water without a permit from the state.

II. ANALYSIS

In Texas, rainwater is not confined to either private or public ownership, but can form the diffused surface water belonging to a property owner or contribute to the flow of state water in a watercourse. This article begins with key holdings from court opinions regarding ownership of rainwater that falls on one's property, followed by an overview of court opinions regarding ownership of diffused surface water and state water. These, along with an in-depth analysis of statutory enactments defining state water, provide essential context regarding the ownership rights in rainwater. This article then takes a closer look at the facts and analyses in key cases concerning a property owner's rights in rainwater in the form of diffused surface water. From this groundwork, this article then addresses questions raised by the Texas Supreme Court's 1936 decision in *Turner v. Big Lake Oil Co.*[4] In this opinion, concerning whether a statute defining state water affected private ownership of diffused surface water, the court held the statute inapplicable to properties granted by the sovereign prior to the 1921 statutory adoption.[5] As the case did not involve property granted subsequent to the statute's adoption, the court did not rule

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2 The views expressed in these materials do not necessarily represent those of the City of Austin.

3 LOWER COLO. REG'L WATER PLANNING GRP., 2016 REGION K WATER PLAN 5-61 (2015).

4 *Id.*

5 Turner v. Big Lake Oil Co., 96 S.W.2d 221 (Tex. 1936).

with regard to these properties.[6] This article, through a detailed review of court opinions, legislative enactments, and state agency interpretation, seeks to address outstanding questions regarding ownership of rainwater and its runoff and concludes that a property owner's ownership rights in diffused surface water and the rain that falls upon one's property is a well-settled matter, regardless of the date the underlying property was granted by the sovereign.

A. Rainwater

1. *Ownership*

The Texas Water Code defines by statute what water belongs to the state.[7] Upon preliminary examination, state ownership of water seemingly includes ownership of the rainwater on every watershed in the state without limitation.[8] As mentioned, the analysis herein concludes otherwise. Specifically, Texas Water Code section 11.021(a) states:

> (a) The water of the 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 is the property of the state*.[9]

Although the definition is so broad any rainwater falling on any watershed seems to be property of the state, in the 1930s, the Texas Supreme Court addressed the issue declaring that:

> [G]enerally it may be said that the rainwater *which falls on lands is*, so long as it remains on the land, the *property of the owner, to do with as he pleases*, in the absence of some prescriptive or contractual right.[10]

A few years later, the Texas Supreme Court directly addressed the reference to rainwater in this statute defining state water.[11] The 1921 statute, later codified into Texas Water Code section 11.021, similarly provided that, "rain waters of every . . . watershed, within the State of Texas, are hereby declared to be the property of the State . . . ."[12] In its analysis of this provision, the court concluded that this law:

> must be interpreted, however, in the light of the Constitution and of the common law and Mexican civil law under which lands have been granted in this State. Under both the common law and the Mexican civil law, *the owners of the soil on which rains may fall and surface waters gather are the proprietors of the water* so long as it remains on their land, and *prior to its passage into a natural water course* to which riparian rights may attach.[13]

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6 *Id.* at 228.
7 *Id.*
8 Tex. Water Code Ann. § 11.021.
9 *Id.*
10 *Id.* (emphasis added).
11 Miller v. Letzerich, 49 S.W.2d 404, 408 (Tex. 1932) (emphasis added).
12 Tex. Water Code Ann. § 11.021.
13 Act of March 31, 1921, 37th Leg., R.S., ch. 124, § 2, 1921 Tex. Gen. Laws 233.

The court, analyzing the statute in this broader context, determined that the property owner, and not the state, owns the rainwater that falls on their property.[14] In this regard, the Texas Supreme Court in 1936 declared:

> No citation of authority is necessary to demonstrate that the right of a landowner to the rainwater which falls on his land is a property right which vested in him when the grant was made. Being a property right, the Legislature is without power to take it from him or to declare it public property and subject by appropriation or otherwise to the use of another.[15]

This article examines these two key decisions by the Texas Supreme Court, along with others related to the topic, in greater detail below.

2. RIGHT TO COLLECT RAINWATER ON "LAND"

The Texas Supreme Court refers to the right of a landowner to the rainwater that falls on his "land."[16] Similarly, the Texas Commission on Environmental Quality (TCEQ)[17] defines diffused surface water as "[w]ater on the surface of the *land* in places other than watercourses."[18] Particularly with regard to the Texas Legislature's emphasis on rainwater harvesting (discussed below), which is very often accomplished through roof collections systems, the term "land" is best read in these contexts to include the improvements on the land, such as buildings with rooftops. There are instances, for example, in which the Texas Supreme Court has stated that title to "land" includes buildings, as one opinion provided that "[w]here the fee simple absolute title to *land* has been acquired the condemnor acquires all appurtenances thereto, buildings thereon, minerals lying beneath the surface, [and] waters thereon . . . ."[19]

Land can also be read to mean real property. Note, for example, that Texas Water Code section 36.002 (relating to ownership of groundwater) refers in the same section to groundwater rights both "below the surface of the landowner's land" and "below the surface of real property."[20] Statutes have defined "real property" to include improve-

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14 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (1936) (emphasis added) (citations omitted).

15 *Id.*

16 *Id.* (emphasis added); Act of March 31, 1921, 37th Leg., R.S., ch. 124, § 3, 1921 Tex. Gen. Laws 234 (also stating "[p]rovided that nothing in this Act shall prejudice vested private rights."). *See* TEX. WATER CODE ANN. §11.001(a) (containing similar language).

17 *Turner*, 96 S.W.2d 221, 228 (Tex. 1936).

18 The TCEQ is the "agency of the state" for implementing laws on natural resources and has general jurisdiction over water and water rights. TEX. WATER CODE ANN. §§ 5.012, 5.013(a)(1).

19 30 TEX. ADMIN. CODE § 297.1(16) (2018) (Tex. Comm'n on Envtl. Quality, Water Rights, Substantive) (emphasis added).

20 Brunson v. State, 418 S.W.2d 504, 506 (Tex. 1967) (emphasis added). In this particular case, the State Highway Commission condemned an easement across the property at issue, but not the fee simple title. As the condemnation judgment did not specifically include the improvements, the court held the condemnation judgment did not award the state title to the improvements located on the land about which the judgment is silent. *Id.* at 507. In its analysis, the court also referred to, "the ownership of the landowner in improvements *which*

ments.[21] For example, Texas Tax Code section 1.04 defines real property as "(A) land; (B) an improvement; . . ." and "(3) 'Improvement' means: (A) a building, structure, fixture, or fence erected on or affixed to land . . . ."[22] Thus, under this definition, rainwater that falls on a property owner's rooftop falls on the owner's real property. In light of legislation promoting rainwater harvesting that assumes property owners' rights in this water, usage of the term "land" should be understood as including its improvements. TCEQ also classifies rainwater falling on a roof as diffused surface water and hence belonging to the property owner where it falls.[23]

3. Legislature Implicitly Recognizes Rights in Rainwater

In addition to the courts' pronouncements on property owners' rights in rainwater that falls on their land, the Texas Legislature has adopted numerous laws that promote rainwater harvesting.[24] These laws appear to be consistent with the understanding that a property owner owns the rain that falls on their property and can collect that rainwater and use it as they please without necessitating any state permit.[25] The legislature, for example, has specifically urged cities to promote rainwater harvesting:

> Each municipality and county is encouraged to promote rainwater harvesting at residential, commercial, and industrial facilities through incentives such as the provision at a discount of rain barrels or rebates for water storage facilities.[26]

In adopting this policy, the legislature certainly does not contemplate residential users with rain barrels obtaining a state water right permit for that use. This same statute requires the Texas Water Development Board (TWDB) to ensure that rainwater harvesting training is available at least quarterly for members of municipal and county permitting staff.[27] In addition, these entities may not deny a building permit solely because the facility will implement rainwater harvesting.[28] The Texas Water Code also declares rainwater harvesting a public policy of the state:

> It is the public policy of the state to provide for the conservation and development of the state's natural resources, including . . .
> (8) the promotion of rainwater harvesting for potable and nonpotable purposes at public and private facilities in this state, including residential, commercial, and industrial buildings.[29]

It is critical to note that the legislative policy statement promotes rainwater harvesting at private facilities, including residential and commercial.[30] This assumes the private

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are a part of the realty," again supporting the understanding that term "land" includes the buildings and rooftops on it. *Id.* (emphasis added).

21 Tex. Water Code Ann. §§ 36.002(a), (b)(1).
22 *Id.*
23 Tex. Tax Code Ann. § 1.04.
24 Interview with Legal Counsel, Tex. Comm'n on Envtl. Quality (Dec. 28, 2016).
25 Tex. Local Gov't Code Ann. § 580.004.
26 *Id.*
27 *Id.*
28 *Id.*
29 *Id.*
30 Tex. Water Code Ann. § 1.003(8).

property owner has ownership rights to the rain that falls on their property that allows them to harvest the rainwater. Another example of legislation that appears to rely on this assumption is a provision in the Texas Finance Code that reads, "[f]inancial institutions may consider making loans for developments that will use harvested rainwater as the sole source of water supply."[31] The legislative authorization to make a significant financial investment relying on the right to harvest rain indicates implicit legislative recognition of private landowner rights in rainwater. In *Domel v. City of Georgetown*, the court recognized certain rights as being implicit in several Texas Water Code provisions, stating that, "[t]he State's right to use its watercourses to transport water is *implicit* in several sections of a comprehensive statewide water plan passed by the legislature in 1997."[32] Statutes on rainwater harvesting appear to implicitly understand that a private property owner has a right to collect and use the rainwater that falls on their property.

A property owner's rights in rainwater and in diffused surface water (discussed in next section) are highly interrelated, as typically the rainwater that falls on property becomes diffused surface water and can remain as such unless it enters a watercourse where it becomes state water.[33] The next section discusses a property owner's rights in diffused surface water, followed by a discussion of state ownership of water.

B. DIFFUSED SURFACE WATER[34]

1. *OWNERSHIP*

Commentators have noted that under Texas law, water exists in three states: groundwater, water in a watercourse (referred to as "surface," "public," or "state" water), and diffused surface water.[35] Although diffused surface water is least often in the spotlight, the Texas Supreme Court has nonetheless underscored the importance of diffused surface water:

> The scientific fact is that [diffused] surface waters are the source of all life on this planet, as essential to its continuance as light, air, and soil. Moreover, these waters, flowing in their natural diffused state over the earth's surface, are gentle in their movements, passing into and becoming a part of the soil, carrying and distributing organic matter for the enrichment in turn of the estates over which they flow, and furnishing the source of supply of all ground water from which wells, springs, streams, and rivers draw their sustenance.[36]

Courts have defined "diffused surface water" as water "which is diffused over the ground from falling rains or melting snows, and [it] continues to be such until it reaches

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31 *Id.*

32 TEX. FIN. CODE ANN. § 59.012.

33 Domel v. City of Georgetown, 6 S.W.3d 349, 359 (Tex. App.—Austin 1999, pet. denied).

34 *See id.* at 353.

35 Note that courts use both the terms "diffuse" and "diffused" when referring to diffused surface water. The term "diffused" is most often used in this article, as this is the form used in TCEQ rules when defining the term "diffused surface water." 30 TEX. ADMIN. CODE § 297.1(16). Note as well that the bracketed term "[diffused]" is often added before the term "surface water" in this article for clarity.

36 TIMOTHY L. BROWN, A PRIMER FOR UNDERSTANDING TEXAS WATER LAW 1 (2006).

some bed or channel in which water is accustomed to flow."[37] Consistent with various court opinions, the TCEQ's rules include a more comprehensive definition of diffused surface water:

> "Diffused surface water"—Water on the surface of the land in places other than watercourses. Diffused water may flow vagrantly over broad areas coming to rest in natural depressions, playa lakes, bogs, or marshes. (An essential characteristic of diffused water is that its flow is short-lived.)[38]

The TCEQ rule provides two simple criteria that broadly define diffused surface water as water that is: (1) on the surface of the land,[39] and (2) in places other than watercourses.[40] Note that the name "diffused surface water" can be somewhat of a misnomer, as it is recognized that the waters can collect and still fall under the definition.[41] The rule does not place any apparent restriction on the source of the water, which may include groundwater. [42] That diffused surface water may be sourced from groundwater is confirmed in the facts in the Texas Supreme Court's opinion in *Turner*.[43]

With regard to surface water, courts distinguish between diffused surface water and water in a watercourse, and contrast the ownership of these by explaining that:

> Texas law categorizes surface water into one or two general types: diffuse surface water and water in a watercourse. Diffuse surface water belongs to the owner of the land on which it gathers, so long as it remains on that land and prior to its passage into a natural watercourse. In contrast, water in a watercourse is the property of the State, held in trust for the public. . . .[44]

Courts have sought to describe the point at which a property owner's diffused surface water becomes state water in a watercourse and recognize that if the water is captured prior to entering a watercourse, it remains the landowner's property, observing:

> Diffused surface water (belonging to the land owner) becomes a natural watercourse (belonging to the State) at the point where it begins to form a reasonably well-defined channel, with bed and banks, or sides and current, although the stream itself may be very small and the water may not flow continuously. International–Great N.R.R. Co. v. Reagan, 121 Tex. 233, 49 S.W.2d 414, 418–19 (1932). However, if the land owner can capture or impound "casual and va-

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37 Miller v. Letzerich, 49 S.W.2d 404, 411 (Tex. 1932) (rejecting a New Jersey court's decision citing surface waters as the "common enemy" by noting that, "[t]he New Jersey court, in saying that such surface waters were a 'common enemy,' spoke not only without any judicial support, but without any support in nature itself" by erroneously extending a common law right related to sea water to surface water).

38 Dietrich v. Goodman, 123 S.W.3d 413, 419 (Tex. App.—Houston [14th Dist.] 2003, no pet.).

39 30 TEX. ADMIN. CODE § 297.1(16).

40 Again, as discussed above, surface of the "land" should be considered to include improvements on the land such as buildings and their rooftops.

41 30 TEX. ADMIN. CODE § 297.1(16).

42 *Id*.

43 Interview with Legal Counsel, Tex. Comm'n on Envtl. Quality (December 28, 2016).

44 *See* Turner v. Big Lake Oil Co., 96 S.W.2d 221, 227–28 (Tex. 1936) (discussing the connection between the polluted water in the case with underground wells).

> grant" waters before they coalesce into a natural gully, stream, or other watercourse, they remain his property. Hoefs, 190 S.W. at 806.[45]

In line with the court's description of a watercourse, the TCEQ rules define watercourse as "[a] definite channel of a stream in which water flows within a defined bed and banks, originating from a definite source or sources. (The water may flow continuously or intermittently, and if the latter with some degree of regularity, depending on the characteristics of the sources.)"[46]

Texas courts have also made the distinction between diffused surface water and storm and flood water, as used in the Texas Constitution.[47] In *Motl v. Boyd*, the Texas Supreme Court observed in analyzing the 1917 conservation amendment to the Texas Constitution:

> The phrase 'its storm and flood water,' as used in this amendment is not to be construed as applying to waters which flow on the ordinary superficial surface of the land, *for these waters, until they reach the natural streamways are, and have always been, the property of the person on whose lands they fall.*[48]

In addition, one court found that, "a distinguishing feature of '[diffused] surface water' is that it is never found in a natural watercourse."[49] The TCEQ's definition of stormwater or floodwater, which states simply, "[w]ater flowing *in a watercourse* as the result of recent rainfall,"[50] is consistent with the Texas Supreme Court's explanation of these state constitutional terms in *Motl v. Boyd*.[51]

2. Similarities in Diffused Surface Water and Groundwater Rights

Courts have classified ownership rights in groundwater and in diffused surface water as similarly belonging to the owner of the land:

> It was well established early in the twentieth century that waters which "ooze through the soil" (percolating ground water) and waters which "diffuse or squander themselves over the surface, following no definite course" (diffused surface water) belong to the owner of the land.[52]

This same opinion, as quoted further above, also refers to landowners' right to "capture" these waters on the surface of their land (which, as discussed, should be understood

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

46 Watts v. State, 140 S.W.3d 860, 865 (Tex. App.—Houston [14th Dist.] 2004, pet. ref'd) (citing Hoefs v. Short, 190 S.W. 802 (Tex. Civ. App. – El Paso 1916)).

47 30 TEX. ADMIN. CODE § 297.1(60).

48 *E.g.*, Tex. Woman's Univ. v. The Methodist Hosp., 221 S.W.3d 267, 279 (Tex. App.—Houston [1st Dist.] 2006, no pet.).

49 Motl v. Boyd, 286 S.W. 458, 473 (Tex. 1926) (disapproved on other grounds related to riparian rights on Spanish and Mexican land grants by Valmont Plantations v. State, 355 S.W.2d 502 (Tex. 1962)) (emphasis added).

50 Dietrich v. Goodman, 123 S.W.3d 413, 418 (Tex. App.—Houston [14th Dist.] 2003, no pet.).

51 30 TEX. ADMIN. CODE § 297.1(52) (emphasis added).

52 *Motl*, 286 S.W. at 478.

to also include roof catchment).[53] In addition, other courts have recognized the right to collect and use this water without liability to others, declaring that, "[a] landowner has the right to collect and appropriate to his own use all [diffused] surface water upon his property without liability to other owners upon whose property it would flow if not so appropriated."[54] Note that, regarding groundwater, the Texas Supreme Court has held that, "[t]he rule of capture . . . provides that, absent malice or willful waste, landowners have the right to take all the water they can capture under their land and do with it what they please, and they will not be liable to neighbors even if in so doing they deprive their neighbors of the water's use."[55] Regarding the limitation in the *Turner* and *Miller* decisions on ownership of diffused surface water "so long as it remains on their land," when diffused surface water flows on to another's property, similar to groundwater, it no longer remains the property of the owner of the land from which it has passed.[56] However, in *Collins*, the court recognized that diffused surface water, when captured by the property owners, could then be used by the property owners as they please, including transferring it to others for use elsewhere.[57]

3. Diffused Surface Water Collected, Used and Transferred

Despite its name, diffused surface water can gather, be collected in impoundments, and be used or transferred. The TCEQ, in its rule definition quoted above, recognizes that diffused surface water can gather or collect in various instances and still fall under the definition of diffused surface water rather than be classified as state water. [58] Similarly, court opinions have also recognized that "[d]iffuse surface water belongs to the owner of the land on which it *gathers* . . . ."[59]

As discussed in more detail below, in the *Collins* case, the property owner's own use of the surface water from the surface tank involved not only the property owner's use on his own property, but also his agreement to provide water to another property owner, who in turn sold that water to others.[60] Also, as detailed below, an appeals court sided with the TCEQ in an opinion in which the court held that significant amounts of diffused surface water could be captured in a detention channel and diverted from the channel for use without any permit from the state.[61] Although the *flow* of diffused surface water may be short-lived, according to the TCEQ's rule, the residency time of the

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53 *Watts*, 140 S.W.3d at 865 (citing Hoefs v. Short, 190 S.W. 802 (Tex. Civ. App.—El Paso 1916), *aff'd*, 273 S.W. 785 (Tex. 1925)).

54 *Id.*

55 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 102 (Tex. Civ. App.—Eastland 1931, writ dism'd w.o.j.).

56 Edwards Aquifer Auth. v. Day, 369 S.W.3d 814, 827-28 (Tex. 2012) (quoting Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75 (Tex. 1999)).

57 *See id.* at 832-33 (references to ownership of oil, gas, and groundwater "in place beneath his land.").

58 A full comparison of the ownership rights in groundwater and diffused surface water is beyond the scope of this article.

59 *See* 30 Tex. Admin. Code § 297.1.

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

61 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 101–102 (Tex. Civ. App.—Eastland 1931, writ dism'd w.o.j.).

diffused surface water in a natural depression, playa lake, bog, or marsh is not limited by the TCEQ's rule defining diffused surface water.[62]

4. Overflow Cases Under Texas Water Code Section 11.086

Many of the cases that draw the distinction between diffused surface water and state water result from litigation under Texas Water Code section 11.086 concerning the harmful diversion of "surface" water onto neighboring property.[63] As one court explained:

Section 11.086(a) of the Texas Water Code prohibits a person from diverting or impounding the natural flow of "surface water" in a manner that damages the property of another by the overflow of the water diverted or impounded.[64]

The court further explained that "today the term 'surface water,' as used in Section 11.086 of the Texas Water Code, means only 'diffused surface water,'"[65] and thus courts in these cases have at times engaged in considerable analysis of the distinction between diffused surface water and state water. That analysis focuses on whether the water at issue has formed or entered into a watercourse.[66]

5. Distinguishing Rainwater and Diffused Surface Water

Rainwater and diffused surface water overlap significantly, but also have distinctions. Both belong to the property owner prior to entering a watercourse.[67] Rainwater, however, can enter into a watercourse and, under the terms of Texas Water Code section 11.021, still be regarded as rainwater, whereas diffused surface water loses its identity when it enters a watercourse and becomes state water.[68]

The rainwater that can be harvested by a property owner without any permit from the state essentially is diffused surface water and not rainwater in a watercourse. The law discussed herein about ownership of rainwater is in essence about the ownership of diffused surface water. Although addressing rainwater directly, the *Turner* opinion is, for example, as much about diffused surface water as it is about rainwater.[69]

Rainwater is a common source of diffused surface water, although other sources, such as groundwater brought to the surface and flowing in a diffused manner across property before reaching a watercourse, would be considered diffused surface water under the

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62 Citizens Against Landfill Location v. Texas Comm'n on Envtl. Quality, 169 S.W.3d 258, 274 (Tex. App.—Austin 2005, pet. denied).

63 30 TEX. ADMIN. CODE § 297.1(16). Although limited in its application to the specific subchapter in which it appears, a TCEQ rule in a separate chapter provides some insight into the meaning of "playa lake." *See* 30 TEX. ADMIN. CODE § 210.52 ("Playa lake—A shallow (generally less than one meter deep), isolated, naturally ephemeral approximately circular lake located in an enclosed basin in the High Plains and West Central Plains areas of the state.").

64 *See*, *e.g.*, TEX. WATER CODE ANN. § 11.086(a).

65 Dietrich v. Goodman, 123 S.W.3d 413, 417 (Tex. App.—Houston [14th Dist.] 2003, no pet.).

66 *Id.* at 418.

67 *See*, *e.g.*, *id.* at 419-20.

68 *See id.* at 419.

69 *Id.* at 418.

TCEQ's definition.[70] In fact, the water at issue in *Turner* was not directly from rainfall but instead was brackish groundwater from oil wells stored in surface ponds that escaped.[71] In addition, the TCEQ in its definition of state water expressly excludes both "diffuse surface rainfall runoff" and "groundwater seepage" from the definition, providing that, "[s]tate water does not include percolating groundwater; nor does it include diffuse surface rainfall runoff, groundwater seepage, or springwater before it reaches a watercourse."[72]

It is well established that the defining line between a property owner's ownership in diffused surface water (including rainwater in that form) and state ownership of water is when the water enters into or forms a watercourse. The following examines the statutory definition of state water, which should be considered in context to the many judicial opinions holding that water in a watercourse is state water.

C. State Water

1. *Statutory Evolution of Definition*

Current Definition and Overview

The current definition of state water in the Texas Water Code is provided in two subsections:

> § 11.021. State Water
> (a) The water of the 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 is the property of the state.
> (b) Water imported from any source outside the boundaries of the state for use in the state and which is transported through the beds and banks of any navigable stream within the state or by utilizing any facilities owned or operated by the state is the property of the state.[73]

The focus of this article is on the portion of the definition found in subsection (a). Starting more than a century ago, this legislative definition of state water underwent considerable evolution over a period of more than 30 years. It is helpful in understanding the intent of the legislature in defining state water to consider the various statutory modifications made over the years. Also, in terms of issues raised by the Texas Supreme Court in *Turner* (quoted above and discussed in more detail below) regarding the inter-

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70 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 227 (Tex. 1936).

71 30 Tex. Admin. Code § 297.1(16).

72 *See Turner*, 96 S.W.2d at 221.

73 30 Tex. Admin. Code § 297.1(51). *See also* 23 Tex. Reg. 10,308 (1998) (codified at 30 Tex. Admin. Code § 297.1) (proposed October 9, 1998) (Tex. Nat. Res. Cons. Comm'n) (explanation of the proposed rule's additional language by the Commission: "[t]he definition for 'state water' is also proposed to be amended to clarify that percolating groundwater and diffuse surface runoff before it reaches a state watercourse is not state water. This includes springwater before it reaches a watercourse, as determined by the court in A.H. Denis, III, *et al.* v. Kickapoo Land Co., *et al.*, 771 S.W.2d 235 (Tex. App.—Austin 1989, writ denied).").

action between legislative claims to state ownership of water and private-property vested rights in certain waters, it is beneficial to understand that the legislature did not make an unqualified claim of ownership to most types of surface waters until 1921.

Beginning with the Irrigation Act of 1889, and until the Texas Legislature's 1921 declaration of state ownership of certain types of surface water, "public" or "state" ownership of water had various qualifications on that ownership. Those qualifications decreased with each iteration of the statute from 1889, 1895, 1913, 1917 and 1921. This evolution took place during a period in Texas that included the severe drought from 1908 to 1912,[74] the development of an appropriative water rights system through a series of legislative enactments, and the adoption of a state constitutional amendment in 1917 for conserving state natural resources.[75]

In 1971, the legislature codified numerous water statutes into the Texas Water Code, including the 1921 definition of state water without substantive revision into Texas Water Code section 5.021.[76] In 1977, the legislature renumbered this provision, placing it in its current location in Texas Water Code section 11.021.[77] The following tracks the evolution of the definition of state water, which is helpful in understanding how some terms that may at first appear to overlap with or include diffused surface water do not. This analysis also helps to provide context to the court's analysis of this statute in *Turner* and subsequent court opinions, as discussed in more detail below. The development of the statute also shows a legislative intent to define state water as water in a stream or watercourse.

Irrigation Act of 1889

For the Irrigation Act of 1889, the legislature indicated in its title that it was "[a]n Act to encourage irrigation . . . in the arid districts of Texas."[78] Terms in section 2 of the 1889 Irrigation Act contained limitations on the definition of "public" water in declaring the "unappropriated waters . . . within the arid portions of the state . . . to be the property of the public" stating:

> That the *unappropriated waters of every river or natural stream within the arid portions of the state*, as described in the preceding section of this act, are hereby *declared to be the property of the public*, and may be acquired by appropriation for the uses and purposes as hereinafter provided.[79]

Importantly, this initial act of the legislature declared as public property only the waters of "every river or natural stream," reflecting a legislative intent from the beginning that public water (later termed state water) included only those waters in a watercourse.[80] In addition, section 1 of the 1889 Act provided that this water "may be

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74 TEX. WATER CODE ANN. § 11.021.

75 Terrence Henry, *A History of Drought and Extreme Weather in Texas*, N.P.R.: STATEIMPACT (Nov. 29, 2011), https://stateimpact.npr.org/texas/2011/11/29/a-history-of-drought-and-extreme-weather-in-texas/.

76 Sipriano v. Great Spring Waters of Am., Inc., 1 S.W.3d 75, 77 (Tex. 1999).

77 Act of 1921, 37th Leg., R.S., ch. 124, 1921 Tex. Gen. Laws 233.

78 *See* TEX. WATER CODE ANN. § 11.021.

79 Act of Mar. 19, 1889, 21st Leg., R.S., ch. 88, 1889 Tex. Gen. Laws 100.

80 *Id.* § 2 (emphasis added).

diverted from its *natural channel* for irrigation, domestic, and other beneficial uses."[81] The reference to diversion from a natural channel, which in this initial statute refered only to a river or natural stream, also indicates the intent of the legislature to indicate that natural channel refers to a watercourse and that this public water resided in a watercourse.[82] Significantly, this reference to diversion of the public or state water from "its natural channel" has appeared in every iteration of the statute, including the current Texas Water Code section 11.022, and serves as a continuing expression of the legislative intent.[83] As discussed below, in 1921 the legislature integrated the term "natural channel" into the statute in such a manner that made it clear that all types of water referenced in the definition of state water resided in a natural channel.

Irrigation Act of 1895

The Irrigation Act of 1895 similarly limited a declaration of "public" ownership of various types of surface water to "unappropriated waters" in portions of the state in which irrigation is beneficial to agriculture due to insufficient rainfall.[84] The 1895 Act begins to take on more of the characteristics of the modern law, providing in Section 1 of the Act in more elaborated detail:

> That the *unappropriated waters* of the ordinary flow or underflow of every running or flowing river or natural stream, and the storm or rain waters of every river or natural stream, canyon, ravine, depression or watershed *within those portions of the State of Texas in which by reason of the insufficient rainfall* or by reason of the irregularity of the rainfall, *irrigation is beneficial* for agricultural purposes, *are hereby declared to be the property of the public*, and may be acquired by appropriation for the uses and purposes and in the manner as hereinafter provided.[85]

Note that in the 1895 version of the Irrigation Act, the term "rain waters" first appears in the text.[86] The reference to water being "diverted from its natural channel" is included in Section 3 of the 1895, which relates to the "ordinary flow or underflow of the running water of every natural river or stream . . . ."[87] Section 2, which relates to storm, flood, or rain waters being held by dams or diverted by canals, does not include the reference to diversion from a natural channel.[88] This pattern of referring to the natural channel in just one of two sections like these is maintained in the 1913 and 1917 iterations of the law. However, in 1921, as discussed further below, the term "natural channel" was integrated into the definitional section of the statute itself,[89] thereby referring to all types of water included in the definition.

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81 *Id.*
82 *Id.* § 1 (emphasis added).
83 *Id.* § 2.
84 *Id.* § 1. *See also* Tex. Water Code Ann. § 11.022.
85 Act of Mar. 9, 1895, 24th Leg., R.S., ch. 21, § 1, 1895 Tex. Gen. Laws 21.
86 *Id.* (emphasis added).
87 *Id.*
88 *Id.* § 3.
89 *Id.* § 2.

IRRIGATION ACT OF 1913

The 1913 Irrigation Act shifts from the earlier pronouncements that certain waters are property of the "public" to a declaration that certain waters are "property of the State."[90] The limitation to arid areas or areas of insufficient rainfall is dropped from the statute, although the "unappropriated waters" qualifier remains.[91]

> § 1. *Certain Waters* declared State property.—The *unappropriated waters* of the ordinary flow and underflow and tides of every flowing river or natural stream, of all lakes, bays or arms of the Gulf of Mexico, collections of still water, and of the storm, flood or rain waters of every river or natural stream, canyon, ravine, depression or watershed, within the State of Texas, the title to which has not already passed from the State, are hereby declared to be the property of the State, and the right to the use thereof may be acquired by appropriation in the manner and for the uses and purposes hereinafter provided.[92]

The term "collections of still water" appeared in the definition of state water in 1913, but was removed in the 1921 iteration.[93] The later removal of this term appears to be an indicator of legislative intent not to include diffused surface water in the definition of state water.

IRRIGATION ACT OF 1917

The 1917 Irrigation Act adjusted the qualification on the waters declared to be property of the State, declaring state ownership to "[t]he unowned and unappropriated waters . . ." stating in section 1 of the Act:

> The *unowned and unappropriated waters* of the ordinary flow and underflow and tides of every flowing river or natural stream, of all lakes, bays or arms of the Gulf of Mexico, collections of still water, and of the storm, flood or rain waters of every river or natural stream, canyon, ravine, depression or water shed, within the State of Texas, *are hereby declared to be the property of the State*, and the right to the use thereof may be acquired by appropriation in the manner and for the uses and purposes hereinafter provided.[94]

This 1917 iteration, approved by the legislature on March 19, 1917, preceded the conservation amendment to the Texas Constitution, which was adopted by statewide vote on August 21, 1917.[95] In the portion of the statute relating to fees for applications, besides the base fee, an additional fee was required for every application "for storage of water,"[96] and additional fees were required based on the volume of the reservoir.[97] The statute, however, excepted surface water from the storage fee payment requirement with

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90 Act of Mar. 31, 1921, 37th Leg., R.S., ch. 124, § 2, 1921 Tex. Gen. Laws 233.
91 Act of Mar. 29, 1913, 33rd Leg., R.S., ch. 171, § 1, 1913 Tex. Gen. Laws 358.
92 *Id.* § 15.
93 *Id.* § 1 (emphasis added).
94 *Id.*; Act of Mar. 31, 1921, 37th Leg., R.S., ch. 124, § 2, 1921 Tex. Gen. Laws 233.
95 Act of Mar. 19, 1917, 35th Leg., R.S., ch. 88, § 1, 1917 Tex. Gen. Laws 211 (emphasis added).
96 TEX. CONST. art. XVI, § 59(a).
97 Act of Mar. 19, 1917, 35th Leg., R.S., ch. 88, §1, 1917 Tex. Gen. Laws 211.

the phrase "except surface water."[98] The *Hoefs* appeals court decision in 1916 treats the terms "diffused surface water" and "surface water" as interchangeable terms, reflecting the common usage of the term surface water to mean *diffused* surface water.[99] By stating in the statute "except surface water," the legislature provided that surface water would not be counted in either the base fee for water storage, nor would it be counted in the reservoir volume used as the basis for calculating increases in the storage fee.[100] In this manner, the legislature distinguished surface water, indicating a legislative intent to distinguish it from state water and not apply the requirements it would apply to state water.[101] Perhaps most notably, by use of the term "surface water," the legislature indicated its awareness of this classification and it did not include the term "surface water" in the definition of state water.[102]

Again, adoption of the 1917 statute occurred shortly after the 1916 *Hoefs* appeals court decision, so this decision would likely have influenced the legislature. As discussed below, in 1916 the appeals court in *Hoefs* quoted at length from authorities that concluded that appropriative and other water rights could not "attach" to diffused surface water.[103]

1917 Texas Constitutional Amendment

In February 1917, the Texas Legislature adopted legislation putting a proposed constitutional amendment on the statewide ballot related to conserving and developing natural resources, particularly water.[104] This landmark amendment, section 59 in Article XVI, was approved by Texas voters, added to the Texas Constitution on August 21, 1917, and is commonly referred to as the "conservation amendment."[105] The conservation amendment, directing the legislature to adopt laws as may be appropriate for the conservation and development of natural resources including water,[106] serves as the foundation of a significant amount of the Texas water law adopted subsequently.

The following language excerpted from the original proposed amendment in 1917 remains the same today, except for the addition in the current version of "and development of parks and recreational facilities" after the first comma in Section 59 (a):

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98 *Id.*

99 *Id.* § 41.

100 *See, e.g.*, Hoefs v. Short, 190 S.W. 802, 806 (Tex. Civ. App.—El Paso 1916), *writ granted*, 273 S.W. 785 (Tex. 1925).

101 Act of Mar. 19, 1917, 35th Leg., R.S., ch. 88, § 1, 1917 Tex. Gen. Laws 211.

102 Act of June 18, 1920, 36th Leg., 3d C.S. ch. 46, § 1, 1920 Tex. Gen. Laws 87 (applying a $6,000 limit to water-related permit application fees and repealing all laws in conflict in the 1917 Act that would have exceeded the $6,000 fee limit, which thus repealed this storage fee provision). *See also* Tex. Civ. Stats., Vol. 2, Art. 5001ff, at 1,388–89 (Supp. 1922).

103 *See* Dietrich v. Goodman, 123 S.W.3d 413, 418 (Tex. App.—Houston [14th Dist.] 2003, no pet.) (equating the term "surface water" as used in Texas Water Code §11.086 with "diffused surface water"). *But see* Tex. Water Code Ann. §§ 11.1501, 11.151, 11.1271 (demonstrating modern usage of "surface water" to indicate state water).

104 *Hoefs,* 190 S.W. at 806.

105 Tex. Const. art. XVI, § 59.

106 *See, e.g.*, Motl v. Boyd, 286 S.W. 458, 463 (Tex. 1926).

> Sec. 59. (a) The conservation and development of all of the natural resources of this State, including the control, storing, preservation and distribution of its storm and flood waters, the waters of its rivers and streams . . . are each and all hereby declared public rights and duties; and the Legislature shall pass all such laws as may be appropriate thereto.[107]

Regarding the 1917 conservation amendment, the Texas Supreme Court in *Motl v. Boyd* stated that:

> It is noted that the amendment, after declaring that the conservation and development of the natural resources of the state were public rights and duties, included within these resources *the waters of the state*, dividing them, however, plainly into two classes: First, 'its *storm and flood waters*'; *and*, second, 'the waters of its *rivers and streams*.'[108]

The court's statement—made not long after the adoption of the state constitutional amendment—that it divided the waters of the state into these two classes evidences a judicial understanding of the legislative intent to limit state water to these types of water, which did not include diffused surface water. As storm and flood waters might be read to include both the flood waters of streams and diffused surface water, to avoid any confusion on this point, the court expressly further explained that diffused surface waters were not included in the storm and flood waters by following the above statement immediately with the clarification that:

> The phrase 'its storm and flood water,' as used in this amendment is not to be construed as applying to waters which flow on the ordinary superficial surface of the land, for these waters, until they reach the natural streamways are, and have always been, the property of the person on whose lands they fall.[109]

Despite aspects of the law that have changed since the *Motl* opinion, the statements regarding ownership of state water and diffused surface water highlighted in this discussion remain consistent with how these terms are interpreted today.

1921 AMENDMENT

After the conservation amendment was adopted in 1917 declaring, "[t]he conservation and development of all of the natural resources of this State . . . are each and all hereby declared public rights and duties . . . ." and requiring that, "the Legislature shall pass all such laws as may be appropriate thereto,"[110] the 1921 legislature adopted amendments to the Irrigation Act of 1917. The title of the legislation indicates the 1921 law is to make effective Article XVI, section 59 "so as to more specifically define the public waters of the State of Texas."[111]

These amendments eliminated the limitation on state ownership to ownership of unowned and unappropriated waters. [112] Also, the legislature indicated that these state

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107 TEX. CONST. art. XVI, § 59(a).
108 *Id.*
109 *Motl*, 286 S.W. at 473 (emphasis added).
110 *Id.*
111 TEX. CONST. art. XVI, § 59(a).
112 Act of 1921, 37th Leg., R.S., ch. 124, § 1, 1921 Tex. Gen. Laws 233. The Act provides that is was "[e]ffective 90 days after adjournment. A 1922 Vernon's collection of statutes,

waters resided in a natural channel by incorporating this term into the definitional portion of the statute.[113] The 1921 version is quoted by the Texas Supreme Court in *Turner*:

> Art. 7467. Property of the State.- The waters of the ordinary flow and underflow and tides of every flowing river or natural stream, of all lakes, bays or arms of the Gulf of Mexico, and the storm, flood or rain waters of every river or natural stream, canyon, ravine, depression or watershed, within the State of Texas, as, are hereby declared to be the property of the State, and the right to the use thereof may be acquired by appropriation in the manner and for the uses and purposes hereinafter provided, and *may be taken or diverted from its natural channel* for any of the purposes expressed in this chapter.[114]

As an appropriative right authorizes state water to be diverted from its natural channel, the legislature expressed its intention in 1921 that the various waters included in the definition are those that reside in or have entered into a natural channel. As discussed in detail below, this same legislative intent is reflected in the requirements of the Water Rights Adjudication Act adopted in 1967.[115] Over many years, Texas courts have determined that diffused surface water becomes state water only upon entering the watercourse, which appears to have defined the scope of the definition of state water for the legislature to mean water in a watercourse.

Relevant also to ownership rights in rainwater and diffused surface water, section 3 of the 1921 statute states, "[p]rovided that nothing in this Act shall prejudice vested private rights."[116] The provision is clearer and appears more supportive of vested rights than a provision in the 1917 Act that would neither validate or invalidate a vested right, stating, "[n]othing in this Act contained shall be held or construed to alter, affect, impair, increase, destroy, validate or invalidate any existing or vested right of property existing at the date when this Act shall go into effect."[117] What appears to be clearer support of vested rights may also have been influenced by the 1916 appeals court decision in *Hoefs*, which included discussion of vested rights in diffused surface water.[118]

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after Section 1 of the 1921 Act states further that it, "[t]ook effect 90 days after March 12, 1921, date of adjournment." Supplement to Vernon's Texas Civil and Criminal Statutes, Vol. 2, Art. 4991, at 1386-87 (1922).

113 Act of 1921, 37th Leg., R.S., ch. 124, § 1, 1921 Tex. Gen. Laws 233 (amended 1999) (current version at TEX. CONST. § 59(a)).

114 *Id.*

115 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (1936) (emphasis added, court emphasis omitted).

116 Tex. Water Code Ann. §§ 11.301-.341.

117 Act of 1921, 37th Leg., R.S., ch. 3, § 3, 1921 Tex. Gen. Laws 3 (amended 1977) (current version in TEX. WATER CODE ANN. § 11.001) (similarly provides in subsection (a), "[n]othing in this code affects vested private rights to the use of water, except to the extent that provisions of Subchapter G [Water Rights Adjudication Act § 11.301 et seq.] of this chapter 1 might affect these rights.").

118 Act of 1917, 35th Leg., R.S., ch. 88 § 137, 1917 Tex. Gen. Laws 243.

1971 CODIFICATION

Texas Water Code section 1.001, adopted in 1971 along with a substantial codification of the state's water law statutes into the Texas Water Code, explains that the intent of the codification process is not to make substantive changes to the law:

> This code is enacted as a part of the state's continuing statutory revision program, begun by the Texas Legislative Council in 1963 as directed by the legislature in Chapter 448, Acts of the 58th Legislature, Regular Session, 1963 (Article 5429b-1, Vernon's Texas Civil Statutes). The program contemplates a topic-by-topic *revision* of the state's general and permanent statute law *without substantive change*.[119]

The following shows the non-substantive changes made to the definition:

> ~~Art. 7467.Property of the State.~~ §5.021 [later moved to §11.021] State Water. The waters of the ordinary flow, ~~and~~ underflow, and tides of every flowing river, ~~or~~ natural stream, ~~of all~~ and lakes, and of every bays or arms of the Gulf of Mexico, and the storm water, floodwater, ~~or~~and rainwater ~~rain waters~~ of every river, ~~or~~ natural stream, canyon, ravine, depression, ~~or~~and watershed~~, within the State of Texas, as, are hereby declared to be~~ in the state is the property of the S~~s~~tate~~, and the right to the use thereof may be acquired by appropriation in the manner and for the uses and purposes hereinafter provided, and may be taken or diverted from its natural channel for any of the purposes expressed in this chapter~~.[120]

The last portion the statute (shown above with strikethrough) was put in a separate statute, which was ultimately moved to section 11.022 of the Texas Water Code.[121] Significantly, the reference to state water being diverted from its natural channel is retained in the current code, which provides in the section titled "Acquisition of Right to Use State Water":

> The right to the use of state water may be acquired by appropriation in the manner and for the purposes provided in this chapter. When *the right to use state water* is lawfully acquired, it may be taken or diverted *from its natural channel*.[122]

Again, the definition of state water in section 11.021 needs to be read in context with the legislative pronouncement in section 11.022 that if a right to state water is acquired, such water may be taken from its natural channel.[123] Note that the court in *Domel* expressly cites Texas Water Code section 11.021(a) as support for the conclusion that "water in a watercourse is the property of the State, held in trust for the public."[124] Also, the TCEQ's regulatory definition of diffused surface water provides some interpretation of the legislative intent expressed in section 11.021 to include just water in a watercourse, stating "[w]ater on the surface of the land in places other than water-

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119 Hoefs v. Short, 190 S.W. 802, 807 (Tex. Civ. App.—El Paso 1916), *writ granted*, 273 S.W. 785 (Tex. 1925).

120 TEX. WATER CODE ANN. § 1.001 (emphasis added).

121 *See id.* § 5.021.

122 *Id.* § 11.022.

123 *Id.* (emphasis added).

124 *Id.*

courses."[125] The rule, in effect, draws a bright line between diffused surface water, which appears to encompass all water on the surface that is found in places other than watercourses, and state water found in watercourses. Under this definition, watercourses, which are state water, could not include diffused surface water. Further, the TCEQ's own definition of state water makes some significant deviations from the statutory definition that, in effect, clarifies that various types of water included in the definition refer to water in a watercourse.[126] The TCEQ's definition excises out the terms, "canyon, ravine, depression and watershed" and replaces these terms with the single term "watercourse."[127] This has the effect, among other things, of removing from the definition of state water the parsed phrase "rainwater on every . . . watershed in the state," which was the source of the controversy in the *Turner* opinion.[128] In the TCEQ's rule, this phrase instead becomes "rainwater of every river, natural stream, and watercourse in the state."[129] The TCEQ definition of state water in the first sentence is a streamlined version of the statutory definition providing:

> The water of the 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 stormwater, floodwater, and rainwater of every river, natural stream, and watercourse in the state.[130]

The TCEQ's rule thus makes clear that the agency intends to interpret state water to include only rainwater in a watercourse under the definition of state water, and not simply any and all rainwater that falls on a watershed. The rule adds the further clarification in this regard that, "[s]tate water does not include percolating groundwater; nor does it include diffuse surface rainfall runoff, groundwater seepage, or springwater before it reaches a watercourse."[131]

2. Water Rights Adjudication Act Informs Definition of State Water

The evolution of the statute supports interpreting the legislative intent as defining state water as water in a watercourse, particularly the reference to diverting this state water from its natural channel.[132] Through requirements of the Water Rights Adjudication Act, Texas Water Code section 11.301 *et seq.* (hereinafter "Adjudication Act"), the legislature further clarified what it considered to be state water. Read in conjunction with section 11.021 and section 11.022, the Adjudication Act should be considered as additional authority on what constitutes state water, as its very purpose has been to adjudicate or settle water rights claims to state water. [133] The Adjudication Act expressly states that water rights claims for state water are for water in a stream or watercourse, which, as discussed above and in more detail below, would not include "rainwater . . . on

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125 Domel v. City of Georgetown, 6 S.W.3d 346, 353 (Tex. App. – Austin 1999, pet. denied).
126 *See* 30 Tex. Admin. Code § 297.1(16).
127 *See id.* § 297.1(51).
128 *Id.*
129 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936).
130 30 Tex. Admin. Code. § 297.1(51).
131 *Id.*
132 *Id.*
133 Tex. Water Code Ann. § 11.022.

every watershed" when in the form of diffused surface water or harvested rainwater before entering a watercourse.[134]

The Adjudication Act repeatedly states that the state water rights being adjudicated are in a *stream* or segment of a stream. For example, the Act states, "[t]he water rights in *any stream or segment of a stream* may be adjudicated as provided in this subchapter . . ."[135] and "[e]very person claiming a water right of any nature, except for domestic or livestock purposes, *from the stream or segment under adjudication* shall file a sworn claim with the commission . . . ."[136] In addition, for all water rights claims except permits or certified filings, the claimant must file with the commission a statement setting forth "the *stream or watercourse* . . . in which the right is claimed."[137] Permits and certified filings claims are processed under the provisions cited above and others referring to adjudicating claims in a stream or stream segment.[138] It is noteworthy as well that the Adjudication Act uses the term "stream," as the TCEQ rules define streamflow as "[t]he water flowing within a watercourse."[139]

3. COURT OPINIONS AID INTERPRETATION OF STATUTES

Regarding the requirement in the Adjudication Act to identify the stream or watercourse in which the right to state water is claimed, the Texas Supreme Court in *Turner* referred to "streams and water courses" as synonymous with "public waters"—for example, when the court held that "[t]he Court of Civil Appeals quite correctly determined that the rules of law applicable to the pollution of *streams and water courses or public waters* were not applicable here . . . ."[140] Other courts have held in this regard, "it is a well established rule in Texas that waters of public streams belong to the sovereign."[141] Also, the landmark 1925 Texas Supreme Court opinion *Hoefs v. Short* analyzed the term "stream," which provided the definition for a natural watercourse in Texas, supports the conclusion that "stream" in the Adjudication Act refers to a natural watercourse containing state water and not diffused surface water.[142]

The *Hoefs* court held that the waters at issue were "not [diffused] surface waters, but are the *waters of a stream*," and as a result, "water rights attach to it."[143] The court clarified that these water rights attaching to the stream included appropriative water

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134 *Id.* § 11.302 (emphasis added) (The Adjudication Act in its "Declaration of Policy" recognizes its purpose as, "[t]he conservation and best utilization of the *water resources of this state* . . . ").

135 *Id.* §§ 11.301-.341.

136 *Id.* § 11.304 (emphasis added).

137 *Id.* § 11.307(a) (emphasis added).

138 *Id.* § 11.303(c) (emphasis added).

139 *See, e.g.*, TEX. WATER CODE ANN. § 11.307(a) ("Every person claiming a water right . . . from the stream or segment under adjudication shall file sworn claim with the commission . . . ").

140 30 TEX. ADMIN. CODE § 297.1(53).

141 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 222 (Tex. 1936) (emphasis added).

142 South Tex. Water Co. v. Bieri, 247 S.W.2d 268, 272 (Tex. Civ. App.—Galveston 1952, writ ref'd n.r.e.).

143 *See* Hoefs v. Short, 273 S.W. 785, 786 (Tex. 1925) (holding that where waters are not diffused over the surface of the ground but flow in a well-defined channel with permanent existence, the waters are a stream such that water rights attach to it).

rights.[144] The fact that appropriative water rights for state water attach to the water of a stream, of course, confirm its status as state water. With regard to use of the term "natural channel" in section 11.022, the *Hoefs* court links the term "channel" with "stream" as used in the Adjudication Act, observing that the water in the creek at issue was "accustomed to flow in *a well-defined channel, in a stream*, which, though intermittent as to flow, has a well-defined and permanent existence."[145] This indicates that by using the term "stream" in the Adjudication Act, the legislature intended the term to mean water in a watercourse and not diffused surface water (just like in the definitive Texas Supreme Court opinion on what constitutes a stream). Thus, in this manner, the legislature indicated in the Adjudication Act that the state water included in the definition in section 11.021 is water in a watercourse.[146] In addition, recent statutes promoting rainwater harvesting reflect an implicit assumption by the legislature that the rainwater and resulting diffused surface water is privately owned.

In a careful and detailed review of legislative enactments and court opinions, this article concludes that the state water under section 11.021 and section 11.022 that may be diverted from a natural channel would not include rainwater or diffused surface water on private property not in watercourse.[147] This is despite the potentially confusing language in section 11.021(a), which, without reference to the "natural channel" language in section 11.022 and other legislative enactments and court decisions, might appear to include "rainwater of every . . . watershed," without limitation, in the definition of state water.[148] This conclusion is also despite some confusing statements by one appeals court on the matter discussed in more detail below. This discussion begins with a more detailed look at the key cases concerning private ownership of rainwater and diffused surface water.

III. Key Cases: A Closer Look

A. *Miller*: Basis for Vested Right in Rainwater (Diffused Surface Water)

The Texas Supreme Court's decision in *Miller v. Letzerich* recognizing certain vested rights related to diffused surface water set the stage for further analysis and pronouncements on a property owner's ownership rights in rainwater and diffused surface water by the court in *Turner*.[149] For the purposes of providing context to the decision in *Turner*, the *Miller* decision is examined here first.

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144 *Id.* (emphasis added).

145 *Id.* at 788.

146 *Id.* at 786 (emphasis added).

147 Besides the statutory definition of state water, courts have recognized state ownership of water in navigable streams, holding that, "Texas holds the title to the waters in a navigable stream in trust for the public." *In re* Adjudication of the Water Rights of Upper Guadalupe Segment of Guadalupe River Basin, 642 S.W.2d 438, 444 (Tex. 1982) [hereinafter *Upper Guadalupe*].

148 Tex. Water Code Ann. § 11.022.

149 *Id.* §§ 11.021(a), 11.022.

In *Miller*, the trial court enjoined the plaintiffs in error (defendants in original suit in trial court—the property owner and a tenant, Miller) from repairing an existing levee and ditch and extending it so as to divert the natural flow of surface water on to the adjacent land of defendants in error (plaintiffs in original suit).[150] The court of appeals affirmed this judgment, as did the Texas Supreme Court, based on a statute adopted in 1915 prohibiting the diversion of the natural flow of surface waters in such a manner that damages the property of another.[151] The plaintiffs in error argued they had a vested right in the existence and use of the levee and ditch constructed before 1915.[152] After considerable analysis, the court rejected this assertion.[153]

The court concluded that the 1915 statute essentially adopted the Mexican civil law rule.[154] This rule allowed for water to pass from a higher to a lower estate, "so long as the surface water from the dominant estate reaches the borders of the servient one untouched and undirected by the hands of man."[155] For properties granted under the Mexican civil law, the court concluded that the property owners had a vested right in the rule regarding diffused surface waters, but the civil law simply had the same prohibitions as the 1915 statute that the owners of the ditch could not cast surface waters onto their neighbor's property.[156] Further, as "the English common-law rule as to surface waters is substantially the same as that of the civil law,"[157] both had the same requirements regarding diffused surface waters as the 1915 statute. The court concluded that the 1915 overflow statute "applied to all lands of the state, whether granted under the civil or under the common law."[158]

This, however, did not entirely settle the matter. The original defendants argued that a different rule termed the "common enemy doctrine" had been adopted as the common law, under which "surface waters are a 'common enemy' and may be fought off in any way in which the landowner can best get rid of them, even though their diversion may injure the adjacent landowner."[159] The *Miller* court declared that Texas courts had previously "adopted the 'common enemy doctrine' under the mistaken view that it was the common-law rule," but the doctrine, "in fact had no foundation under the common law."[160] Regardless, "[n]o easement or servitude of any character was created or intended by the so-called common-law rule," and property owners thus had "no vested right in the rule."[161] The rule, which permitted owners to "use their own property in a certain way" even though doing so might injure adjacent properties, allowed for no cause of action.[162] As the property owner had no vested right in the rule, "[t]he act of 1915 changed the

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150 Miller v. Letzerich, 49 S.W.2d 404, 414 (Tex. 1932).
151 *Id.* at 406 (emphasis added).
152 *Id.* at 414.
153 *Id.* at 407.
154 *Id.*
155 *Id.* at 409.
156 *Id.* at 408.
157 *Id.*
158 *Id.* at 409.
159 *Id.* at 414.
160 *Id.* at 409.
161 *Id.*
162 *Id.* at 412.

rule and gave a cause of action."[163] As the court explained, "[i]t is elementary that the rules of the common law governing the use of property may be changed and a cause of action prescribed where none existed before."[164] As the defendants in the original action had concentrated waters in a ditch "in a manner well calculated to inflict injury" on the neighboring property, "their acts are prohibited, not only by the civil law and the statute under examination, but are condemned with equal emphasis by the so-called 'common law rule' or 'common enemy doctrine.'"[165]

Again, the *Miller* opinion is important to the subject of this article in that the Texas Supreme Court in its analysis discussed property owner rights related to diffused surface water or rainwater, which the court concluded are vested rights.[166] The *Miller* court's recognition of such civil and common law rules helped form the basis for the Texas Supreme Court's opinion four years later in *Turner* that a landowner has a vested property right to rainwater that falls on his land.[167]

The *Miller* court's analysis started by addressing the civil and common law concerning diffused surface water in separate discussions, taking up first the Mexican civil law, which the court recognized as a continuation of the Spanish civil law. [168] The court recognized two aspects of the civil law, the first of which concerned ownership of the diffused surface water; the second concerned the right to let this water flow from a higher estate onto a lower one.[169] Regarding the first aspect of the civil law, the court explained:

> As to the rights of the owners of coterminous estates under the Mexican civil law, generally it may be said that the rainwater which falls on lands is, so long as it remains on the land, the property of the owner, to do with as he pleases, in the absence of some prescriptive or contractual right.[170]

Regarding the second aspect of the civil law related to diffused surface waters, the court continued:

> The second rule of the civil law is that lands lower than the coterminous estate owe a service to receive the burden of surface waters which may flow from the higher estate onto the lower, so long as the surface water from the dominant estate reaches the borders of the servient one untouched and undirected by the hands of man [except for ordinary uses of the property for farming].[171]

Thus, the first rule recognizes the property owner's right to use diffused surface water as he or she pleases, and the second rule recognizes the right to let diffused surface water flow onto another property. In short, the property owner can keep and use diffused sur-

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163 *Id.*
164 *Id.*
165 *Id.*
166 *Id.* at 414.
167 *Id.* at 408.
168 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936).
169 *Miller*, 49 S.W.2d at 407 (The court found that, "[a]fter the revolution by which Mexico gained her independence, the Spanish civil law prevailed in connection with the decrees and statutes of the supreme government of Mexico.").
170 *Id.* at 408.
171 *Id.*

face water, or let it pass on. Regarding these diffused surface water rights, the court further stated that, "[t]hese rights of the owners of estates under the civil law are appurtenant to and a part of the land itself, and passed to them with the grants."[172]

Regarding the second rule, "[t]he right of the owner of the upper estate to have the surface waters falling thereon to pass in their natural condition on to the lands of the lower estate," the court found that this right, "is a servitude or natural right in the nature of an easement over the lower estate of his neighbor."[173] The court concluded that this right of property, "being a part of the grants made by the sovereign to the owners of the estates, it is a *vested right*, protected by the Constitution."[174]

The *Miller* court not only discussed ownership rights in diffused surface water with regard to the civil law, but also with regard to the common law. In its lengthy discussion of the common law concerning diffused surface waters, the court (in response to cases cited by a court in another jurisdiction allegedly in support of the common enemy doctrine being the common law) declared:

> We have read the cases, and all that was decided in them was that *the owner of lands upon which surface water gathered might divert and use the surface water for his own purposes* without actionable injury to the adjacent landowner who had theretofore received the flow of the surface water and desired to make continued use of it.[175]

This discussion laid the groundwork for the court's holding in *Turner* that ownership rights in rainwater and diffused surface water were conveyed in grants out of the sovereign under both the civil and common law.[176]

The *Miller* court confirmed that "whatever title, rights, and privileges the inhabitants of Texas received by virtue of land grants from the Spanish and Mexican governments, which *were a part of the realty itself* or were easements or servitudes in connection therewith, remained intact, notwithstanding the change in sovereignty."[177] Specifically with regard to the easement over the lower estate, the court concluded that "it is a vested right, protected by the Constitution."[178] The *Miller* court's conclusion that one aspect of a property owner's right in diffused surface waters under civil law is a vested right (lower estate easement) implied that the other aspect of this right (surface water ownership) was a vested right as well.[179] Based on the foundation established in *Miller* and its statement that "English common-law rule as to surface waters is substantially the same as that of the civil law," the court in *Turner* expressly confirmed this ownership right was a vested right, and further confirmed it under both the civil and common law.[180] The *Miller* court's analysis recognizing vested rights related to rainwater and dif-

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172 *Id.*
173 *Id.*
174 *Id.*
175 *Id.* (emphasis added).
176 *Id.* at 410 (emphasis added).
177 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936).
178 *Miller*, 49 S.W.2d at 408 (emphasis added).
179 *Id.*
180 *Id.*

fused surface water set the stage for further pronouncements concerning these vested rights by the court in *Turner*.[181]

B. *Turner*: Vested Rights Further Recognized

Turner v. Big Lake Oil Co. is the principal Texas Supreme Court decision declaring that property owners have the right to the rainwater that falls on their land and the resulting diffused surface water.[182] An examination of the facts, issues and court's analysis helps to shed further light on the underpinnings to a property owner's right to this "rainwater," which the court recognized in law and fact as diffused surface water.[183] The dispute in *Turner* originated from "the escape of salt waters from ponds" constructed and used by the defendant in the operation of their oil wells.[184] Defendant "ran the polluted waters from the [oil] wells," into artificial earthen ponds on defendant's property, which broke and overflowed onto the plaintiffs' property.[185] The escaped pond water traveled for several miles down a draw and came to rest in natural water holes on plaintiffs' property.[186]

The court concluded that there were two issues to resolve in determining whether the defendant had any liability for the release of the polluted waters.[187] First, the court considered whether the defendant could be liable, despite no finding of negligence, under a common law rule of absolute liability.[188] Second, despite the court's conclusion that the spilled water remained diffused surface water in law and fact at all times, the court addressed whether the statutory definition of state water nonetheless made the escaped water at issue public or state water for the purpose of triggering the applicability of state water pollution statutes.[189] Regarding the first issue, the court rejected the notion that, under the facts at issue, the defendant could be liable without proof of negligence.[190]

On the second issue, the plaintiffs argued that the diffused surface waters in Garrison draw were, under the state statute, public waters to which anti-pollution statutes applied.[191] To emphasize this, the court italicized a portion of the 1921 statute defining state water as follows:

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181 *Id.* at 409. *See Turner*, 96 S.W.2d at 228.
182 *Turner*, 96 S.W.2d at 228 (citing *Miller*, 49 S.W.2d at 404).
183 *Id.* at 221.
184 *Id.* at 228.
185 *Id.* at 221.
186 *Id.*
187 *Id.*
188 *Id.*
189 *See id.* at 221-27.
190 *Id.* at 228.
191 *Id.* at 226. (The court's analysis of this issue is of interest for its recognition of the importance to Texas property owners of storing and using water collected on their property. Contrasting the law in England where courts had treated the subject differently, the court drew a strong contrast to the circumstances in Texas, especially arid parts where "storage of water from rainfall" was a necessity, whereas in England, due to the climate, it was not. The storage of water in England, as a result, could be regarded as a dangerous activity with property owners subject to absolute liability for any damage resulting from that water storage. The court commented: "[t]he country is almost without streams; and without the stor-

> The statute in so far as here involved reads: 'Art. 7467. Property of the State. . . . *storm, flood or rain waters of every river or natural stream, canyon, ravine, depression or watershed, within the State of Texas, as, are hereby declared to be the property of the State*, . . . (Italics ours.)[192]

The plaintiffs' contention was that this statutory language transformed the rainfall on the watershed, legally and factually considered diffused surface water, before it has reached a stream, into public or state water, stating:

> The contention here is that this article, particularly the italicized words, makes the water from rainfall while on the watershed, or in ravines and draws, and while it is still regarded in law and fact as surface water, and before it has reached a riparian or public stream, public waters, the pollution of which is prohibited by positive enactment.[193]

In its analysis of the plaintiffs' contention and the statute, the court declared:

> The statute is capable of this construction if it alone were to be looked to for its meaning. It must be interpreted, however, in the light of the Constitution and of the common law and Mexican civil law under which lands have been granted in this State. *Miller v. Letzerich*, 121 Tex. 248, 49 S.W.(2d) 404, 85 A.L.R. 451.[194]

Regarding the second issue, the court concluded that if the 1921 statute defining state water were construed so as to make diffused surface waters into public waters and subject to appropriation, it would be void for violating the state constitution for prejudicing vested rights.[195] The court stated further that in order to sustain the statute's validity, the court would be compelled to say that the statute had no application to lands granted prior to the enactment of the statute in 1921 insofar as it attempts to take from the grantees their rights to diffused surface waters and to make them public waters subject to appropriation.[196]

Although the *Turner* court declined to express an opinion regarding a property owner's rights in diffused surface waters on land based on grants made subsequent to 1921,[197] this article explains in detail that an analysis of legislative enactments and court decisions consistently support the conclusion that a property owner owns the rain that falls on their property and the resulting diffused surface waters that flow and collect there regardless of the date of the grant out of the state. In addition, a significant number of

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age of water from rainfall in basins constructed for the purpose, or to hold waters pumped from the earth, the great livestock industry of West Texas must perish . . . . *With us the storage of water is a natural or necessary and common use of the land, necessarily within the contemplation of the state and its grantees when grants were made . . .* " (emphasis added)).

192 *Id.* at 228.

193 *Id.*

194 *Id.*

195 *Id.* (citing Miller v. Letzerich, 49 S.W.2d 404 (Tex. 1932)).

196 *Id.*

197 *Id.*

land grants in Texas were issued out of the sovereign well before 1921, making the issue moot for a substantial number of properties.[198]

The *Turner* opinion made certain key aspects of the vested rights in diffused surface water clearer than *Miller*.[199] The court clarified there was a vested right not only under the civil law, but also the common law with regard to a property owner's ownership rights in diffused surface water.

> Under *both the common law and the Mexican civil law*, the owners of the soil on which rains may fall and surface waters gather are the proprietors of the water so long as it remains on their land, and prior to its passage into a natural water course to which riparian rights may attach.[200]

The court's holding solidified the understanding that besides Spanish and Mexican land grants, which under the civil law included ownership rights in diffused surface water,[201] grants out of both the Republic of Texas and the State of Texas after the adoption of the common law in 1840 included ownership rights to the diffused surface water.[202]

Miller stated expressly that a property owner with surface water rights subject to Spanish or Mexican civil law in effect at the time of the grant had a vested right in the "right of the owner of the upper estate to have the surface waters falling thereon to pass in their natural condition on to the lands of the lower estate," which the court termed a "natural easement."[203] The *Turner* opinion also made it clear that the ownership rights in diffused surface water (and not just the "natural easement") constituted a vested right regardless of whether the civil or common law were in effect at the time of the grant.[204] The court declared in this regard:

> No citation of authority is necessary to demonstrate that the right of a landowner to the rainwater which falls on his land is a property right which vested in him when the grant was made. Being a property right, the Legislature is without power to take it from him or to declare it public property and subject by appro-

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198 *Id.* ("Whether or not the article [1921 statutory definition] in this respect could be applied under our Constitution to grants made subsequent to the passge [sic] of the law is not before us in this case, and no opinion is expressed relative thereto.").

199 The Texas General Land Office provides that:

> In *Hogue v. Baker* (1898) the Texas Supreme Court declared that there was no more vacant and unappropriated land in Texas. In 1900 an act was passed "to define the permanent school fund of the State of Texas, to partition the public lands between said fund and the State, and to adjust the account between said fund and said state; to set apart and appropriate to said school fund, the residue of the public domain . . . ." Thus all of the remaining unappropriated land was set aside by the legislature for the benefit of public schools.

TEX. GEN. LAND OFFICE, CATEGORIES OF LAND GRANTS IN TEXAS (Jan. 2015), http://www.glo.texas.gov/history/archives/forms/files/categories-of-land-grants.pdf.

200 *Turner*, 96 S.W.2d at 228.

201 *Id.* (emphasis added).

202 *Id.*

203 *Id.*

204 Miller v. Letzerich, 49 S.W.2d 404, 408 (Tex. 1932).

priation or otherwise to the use of another. *This is so regardless of the question as to whether the grant was made by Texas or Mexico*.[205]

These ownership rights in diffused surface water, similar to rights in groundwater, include the right to use and transfer that water to others as borne out by the facts and analysis in the *Collins* opinion, discussed next.[206]

The *Turner* court did not address the question regarding ownership in diffused surface water on properties granted by the state after 1921, and arguably, it was more efficient for the court not to offer an opinion because it would have involved a more detailed analysis of legislative history along the lines of what was undertaken by the court in *Motl v. Boyd*.[207] However, prior opinions and statutory language suggest how the court would have addressed the issue if it had considered it. The court's statements in *Motl* about the limitations of state water to streams and that state water did not include diffused surface water, as well as comments in *Hoefs v. Short* regarding criteria for a natural watercourse to which water rights attach (*i.e.*, state water) that is not inclusive of diffused surface water, give a clear indication of the direction of the court's opinion on the issue.[208] In addition, a careful analysis of the legislative intent similar to that expressed in *Motl* likely would have considered indicators in the statute defining state water, such as the reference to diverting state water from its natural channel[209] and a distinguishing reference to surface water found in the 1917 amendment as discussed.[210] Had the court proceeded to offer an opinion on this issue that was not before it, consistent with its statements in *Motl*[211] and *Hoefs*[212] and language in the statute, it would be expected that the court in *Turner*[213] would have concluded that the Legislature did not intend to include diffused surface waters in the statute defining state water and that ownership of diffused surface water on properties granted after 1921 is the same as ownership on properties after 1921. Regardless of the *Turner* court's decision not to offer an opinion on this,[214] an analysis herein of the legislature's language in the Water Rights Adjudication Act[215] and other legislative enactments adopted subsequent to *Turner*[216] supports this conclusion regarding legislative intent. In addition, courts have treated whether a property owner owns the diffused surface water on the property before it enters a watercourse as a well-settled matter —with no reference to when the property was

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205 *Turner*, 96 S.W.2d at 228.
206 *Id.* (emphasis added).
207 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 102 (Tex. Civ. App.—Eastland 1931, writ dism'd w.o.j.).
208 *See* Motl v. Boyd, 286 S.W. 458, 472–74 (Tex. 1926).
209 *Id.*; Hoefs v. Short, 190 S.W. 802 (Tex. Civ. App.—El Paso 1916), *aff'd*, 273 S.W. 785 (Tex. 1925); Hoefs v. Short 273 S.W. 785, 786–87 (Tex. 1925).
210 TEX. WATER CODE ANN. § 11.022.
211 *See* Act of Mar. 19, 1917, 35th Leg., R.S., ch. 88, § 1, 1917 Tex. Gen. Laws 211.
212 Motl v. Boyd, 286 S.W. 458, 473 (Tex. 1926).
213 *Hoefs*, 190 S.W. at 802.
214 Turner v. Big Lake Oil Co., 96 S.W.2d 221 (Tex. 1936).
215 *Id.*
216 *See Upper Guadalupe*, 642 S.W.2d 438, 439 (Tex. 1982).

granted by the state.[217] The Texas Supreme Court has been petitioned on such cases and has had the opportunity to weigh in to say otherwise.[218]

C. *Collins*: Right to Transfer Diffused Surface Waters

The court in *Republic Prod. Co. v. Collins* affirms that an owner of the surface rights to property owns the surface water on the property and can collect and retain that surface water for the property owner's own use, including the right to sell the diffused surface water to others.[219] In *Collins*, plaintiff and defendant, in a joint effort, completed a surface tank on plaintiff's property for collecting diffused surface water.[220] Plaintiff and defendant entered into an agreement whereby the parties agreed to certain limited uses of the water.[221] Plaintiff, owner of the property with the surface tank, would have use of water for, among other things, irrigation of land adjacent to the tank.[222] Defendant, in consideration of his labor in completing the tank, had the right to use water from the tank in drilling and operating oil and gas wells on the defendant's lease contiguous to the plaintiff's property.[223] Surplus water was to remain in the tank on plaintiff's property for the benefit of the plaintiff's estate.[224]

Despite terms of the agreement, defendant sold water obtained from the surface tank to oil companies with leases contiguous to defendant's lease.[225] The trial court entered a judgment for the plaintiff for half the funds defendant collected from the oil companies for the water, less certain expenses.[226] The appeals court summarized the matter stating:

> In brief, the suit itself involves merely the right to recover the value of surplus surface water collected in a surface tank on the Collins homestead or freehold; the tank having been constructed by the joint efforts of plaintiff and defendant, and the rights of the latter to water therefrom fixed by the specific terms of a special contract pleaded and proved, as aforesaid.[227]

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217 *See Turner*, 96 S.W.2d at 221.

218 Despite the unresolved issues in *Turner* discussed herein, courts nonetheless cite the *Turner* opinion for this conclusion. See, e.g., Domel v. City of Georgetown, 6 S.W. 3d 346, 353 (Tex. App. – Austin 1999, pet. denied) (citing *Turner* for statement that, "[d]iffuse surface water belongs to the owner of the land on which it gathers, so long as it remains on that land and prior to its passage into a natural watercourse.").

219 *See supra* notes 61, 32, and 52 respectively.

220 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 102 (Tex. Civ. App.—Eastland 1931, writ dismissed w.o.j.).

221 *Id.* at 101.

222 *Id.* at 101-02.

223 *Id.* at 101.

224 *Id.* at 102.

225 The tank in the *Collins* case is not a domestic and livestock tank falling under some domestic and livestock exemption. The domestic and livestock exemption is an exemption from state water rights permitting for the impoundment of state water as discussed further below. No state water is involved in the *Collins* case. *See id.* (stating that there was no question as to the ownership of the surface water at issue, as the owner of the soil has the absolute right to the surface water thereon).

226 *Id.*

227 *Id.*

After disposing of appellant's (defendant in trial court) various "propositions of error," the court affirmed the trial court's judgment requiring the defendant to pay the plaintiff.[228]

Regarding the landowner's rights in the diffused surface water, the *Collins* court found that "[i]t is generally held that the owner of the soil has the *absolute right* to the surface water thereon, and he may in the improvement of his lands, or *for his own use*, retain all such water."[229] The court also commented that the same rule is stated in this language: "A landowner has the right to collect and *appropriate to his own use* all surface water upon his property without liability to other owners . . . ."[230] It is clear from the court's disposition of the matter that the court did not consider the landowner's use under this absolute right to be limited only to improvement of his lands and, in interpreting that absolute right, read the phrase "or for his own use" broadly to include exchanging that water with others and transferring it off the property.[231]

The court in *Collins*, in fact, found no objection with the exchange or sale of the surface water to others—either the exchange between plaintiff and defendant or defendant's outright sale of water to oil companies with contiguous leases.[232] The court sought only to assure that the proceeds of this sale were equitably apportioned between plaintiff and defendant per the terms of the agreement.[233] No issue was raised by the court that questioned the ownership interest that allowed for such sale. Besides stating the general principle upon which the property owner's ownership of the water was based (as quoted above in the section on diffused surface water) regarding ownership of the water, the court found that, "[f]urther, an examination of the testimony adduced by the defendant . . . discloses that the plaintiff's ownership of the water, save as affected by the agreement involved in this suit, was not and is not denied."[234]

Further, regarding the contract at issue in the *Collins* case in which the property owner, as an exchange, authorized another person to use the diffused surface water on a separate property, the court recognized that, "[s]uch contracts are common, and no reason can be perceived why the parties were not able to make the same as here alleged."[235] Again, the court's acceptance of this common practice of exchanging or selling diffused surface water thus acknowledged that a key aspect of ownership of surface water is that the property owner is free to utilize or dispose of the water as they choose, including sale or exchange with others.[236]

D. *CITIZENS AGAINST LANDFILL LOCATION*: RIGHT TO USE DIFFUSED SURFACE WATER WITHOUT PERMIT

For determining ownership rights in rainwater or diffused surface water collected on private property, *Citizens Against Landfill Location v. Texas Commission on Environmental*

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228 *Id.*
229 *Id.* at 102, 105.
230 *Id.* at 102 (emphasis added).
231 *Id.* (emphasis added).
232 *Id.*
233 *Id.* at 104.
234 *Id.*
235 *Id.* at 102.
236 *Id.*

Quality merits special consideration and analysis.[237] In this relatively recent decision in terms of water rights litigation, the TCEQ took the position that no water right permit was required to either impound or use a significant amount of rainwater collected on private property in a surface impoundment.[238] In its holdings, the court recognized the property owner's ownership in what the court terms as both "collected rainwater" and "diffuse surface water."[239]

Some background information is helpful in understanding the holding in the *Citizens* opinion. In order to obtain a permit for expanding its landfill, BFI had to demonstrate that it could maintain a run-off management system capable of collecting and controlling, at least, the water volume resulting from a 24-hour, 25 year storm.[240] The landfill designer testified that the total volume of the detention channel surrounding the landfill was 96.7 acre-feet and that the volume of run-off associated with a 24-hour, 25-year storm was 64.2 acre-feet, and thus the channel had sufficient capacity.[241] Although BFI was permitted to discharge run-off into drainage ditches run by the Donna Irrigation District, BFI's practice was to impound water in the detention channel.[242] Evidence showed there had been only one discharge into the drainage ditches during the entire history of the landfill.[243]

The appellants (protestants in administrative hearing referred to collectively in the opinion as "Citizens") contended that the TCEQ ignored BFI's failure to provide evidence of a right to impound run-off water in its detention channel which would also be used for the purposes of dust suppression and irrigation.[244] Citizens argued that a water right permit would be required for the TCEQ to approve the application.[245]

In its analysis, the court reported that, "[t]he record contains evidence that the detention channel is completely manmade and is designed to capture only the surface water that originates onsite; that there is no water flow from outside the site into the detention channel."[246] The court, noting that water in a watercourse is state water and applying the *Hoefs* court's definition of a watercourse, found that, "while it could be argued that the detention channel has defined banks and beds, the evidence in the record is clear that the water in the channel has no defined current and that there is no permanent supply of water feeding the channel. Therefore, we hold that the detention channel is not a watercourse." [247]

Pertinent to the subject of this article, the court described the detention channel as a rainwater collection system, stating, "there is testimony that the *only purpose of the detention channel is to collect rainwater* and not to divert the ordinary flow from any adja-

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237 *Id.*
238 Citizens Against Landfill Location v. Tex. Comm'n on Envtl. Quality, 169 S.W.3d 258 (Tex. App.—Austin 2005, pet. denied).
239 *Id.* at 274.
240 *Id.*
241 *Id.* at 269.
242 *Id.*
243 *Id.*
244 *Id.* at 270.
245 *Id.* at 274.
246 *Id.*
247 *Id.*

cent river, stream, or water course."[248] The court concluded, "BFI *may impound diffuse surface water originating at the landfill without a permit*." [249] The court not only found that a permit was not required for impoundment, but importantly, no permit was required for the *use* of that impounded diffuse surface water.[250] The court summarized its decision, stating:

> We hold that the Commission did not err as a matter of law by determining that BFI was not required to demonstrate that it possessed a permit to collect diffuse surface water in its detention channel to be used later for dust suppression and irrigation.[251]

In sum, the *Citizens* case demonstrates that courts and the TCEQ have recognized that a property owner can: (1) impound a significant sum (*e.g.* 96 acre-feet) of diffused surface water ("rainwater"), (2) use the impounded diffused surface water for uses such as irrigation and dust suppression (not domestic and livestock or other type of exempt use), and (3) not be required to obtain a state water right permit or even any exemption from a state water right permit, since the diffused water is privately owned.[252]

E. *HOEFS V. SHORT*: WATER RIGHTS ATTACH TO WATERCOURSE, NOT DIFFUSED SURFACE WATER

The seminal case establishing the criteria for a natural watercourse is the Texas Supreme Court decision *Hoefs v. Short*.[253] A key issue being decided by the *Hoefs* court was whether the water in a certain creek was, as the defendants contended, only diffused surface water and thus the defendants' private property to impound and use as they wished.[254] Defendants asserted on this basis that they could not be enjoined from building a dam and canals that would take all the water in the creek or be required to pass a

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248 In its analysis, the *Citizens* court summarized the pertinent law stating, "Texas law categorizes surface water into one of two general types: diffuse surface water and water in a water course." *Id.* Further the court recognized that, "[d]iffuse surface water belongs to the owner of the land on which it gathers, so long as it remains on that land prior to its passage into a natural watercourse," and that, "[w]ater in a watercourse is the property of the State." *Id.* The court reiterated the definition of a watercourse from *Hoefs* that, "[a] watercourse has (1) a defined bank and beds, (2) a current of water, and (3) a permanent source of supply." *Id.*

249 *Id.* (emphasis added).

250 *Id.* (emphasis added) The fact that the diffused surface water originated at the landfill may have provided some further assurance that the water was not part of a water course because the origin is known, however, the fact that water originates on adjacent property or comes partially from that source would not alone cause the diffused surface water to meet the definition of a watercourse. That analysis would still have to be done with regard to the facts of a particular case. The diffused surface water in the *Turner* opinion, for example, crossed property boundaries and remained diffused surface water.

251 *Id.*

252 *Id.*

253 *See id.*

254 Hoefs v. Short, 273 S.W. 785, 786 (1925).

certain amount of water by their dam to satisfy the water rights of the plaintiff, a downstream landowner.[255] The court explained:

> The major contention of the defendants is that the waters of Barilla creek are mere surface waters, to which water rights do not attach. It is obvious from the evidence that this defense is untenable. The waters of Barilla creek are not diffused over the surface of the ground, but are accustomed to flow in a well-defined channel, in a stream, which, though intermittent as to flow, has a well defined and permanent existence.[256]

Regarding the definition of a "natural watercourse," the court in *Hoefs* referenced the criteria that, "a stream in order to be a natural water course to which water rights attach must have bed, banks, a current of water, and a permanent source of water supply . . . ."[257] The court made the qualification that, "while the rule as ordinarily expressed is that a water course must have a well-defined channel, bed, and banks, yet there may be instances where these are slight, imperceptible, or absent, and still a water course exist."[258] In addition the court explained that, "a current of water is necessary, yet the flow of water need not be continuous, and the stream may be dry for long periods of time."[259]

In response to the defendants' contention that "the waters of Barilla creek are mere [diffused] surface waters, to which water rights do not attach," the court declared:

> The waters of Barilla creek are not diffused over the surface of the ground, but are accustomed to flow in a well-defined channel, in a stream, which, though intermittent as to flow, has a well-defined and permanent existence. They are therefore not [diffused] surface waters, but are the *waters of a stream*. We are of the opinion also that Barilla creek is a *stream* of such character that *water rights attach* to it.[260]

Importantly, the *Hoefs* court clearly stated that the requirement for water to be in a natural watercourse for water rights to attach applied to both riparian and appropriative rights.[261] In its conclusion, the court declared that:

> We therefore hold that Barilla creek under the undisputed evidence and admitted facts *meets all the requirements of a natural water course to which water rights, whether riparian or by appropriation, attach*.[262]

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255 *Id.*

256 *Id.* at 505. As explained in the 1916 appeals court decision in *Hoefs*, both plaintiff and defendants had an appropriative right from the Board of Water Engineers, which was established by the Texas Legislature in 1913. Hoefs v. Short, 190 S.W. 802, 803 (Tex. Civ. App.—El Paso 1916), *aff'd*, 273 S.W. 785 (1925). The Texas Supreme Court also recognized the property owners along the stream as having riparian rights. *Hoefs*, 273 S.W. at 788.

257 *Hoefs,* 273 S.W. at 786.

258 *Id.* at 786-87.

259 *Id.* at 787.

260 *Id.*

261 *Id.* at 786 (emphasis added) (citations omitted).

262 *Id.* at 788.

The appeals court opinion in *Hoefs*, affirmed by the Texas Supreme Court, provides considerable discussion on prior precedent not supporting any appropriate right in diffused surface water, quoting at length the water treatise by Weil that concluded:

> All the many cases already cited considering whether there was or was not a water course held that, if there was not a water course, but only diffused surface water, neither the law of riparian rights nor the law of permanent rights by priority of appropriation applies.[263]

Quoting yet another authority on the topic, Kinney, the appeals court noted that the same conclusion had been reached:

> If a man collect and impound surface and flood waters from his own land before they reach any natural stream or channel and holds the same on his land and premises, the fact that he may not use it for irrigation or any other commercial purpose does not render it any less his property or authorize any one else to invade his property or appropriate and divert the same. A permit from the state engineer cannot give any sanction to such a procedure. *The state engineer has no right to grant permits to one man to use another man's property*.[264]

It can be deduced from the statements made by both the appeals court and the Texas Supreme Court when they each weighed in on *Hoefs*[265] that to be state water for which a state permit can be granted, the water must be in a watercourse to which appropriative water rights can attach.

Further, regarding the statutory definition of state water as it relates to the source of supply for the creek it determined to be a watercourse, the Texas Supreme Court in *Hoefs* explained that "*rainfall on its watershed* in sufficient quantities will produce a flow of water in this channel."[266] Taken together with statements by the courts regarding watercourses to which water rights attach, the courts concluded that state water rights did not apply to the rainfall on the watershed until it produced a flow of water in a channel, or in other words formed a watercourse.[267] Thus, the term "rainwater of every . . . watershed" in the definitional statute should be interpreted as becoming state water when it coalesces into a watercourse, as it was considered in the *Hoefs* decision.[268]

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263 *Id.* (emphasis added).

264 Hoefs v. Short, 190 S.W. 802, 806 (Tex. Civ. App.—El Paso 1916), *aff'd*, 273 S.W. 785 (1925) (quoting SAMUEL C. WEIL, WATER RIGHTS IN THE WESTERN STATES 380 (3d ed. 1911)). The appeals court provided also in this regard that:

> It is stated by Mr. Weil . . . that diffused surface water cannot be appropriated against the landowner on whose land it lies; that its presence and movements are too capricious to found any right upon distinct from the land where it is gathered, and such water is owned by the owner of the land where it happens to lie.

Id.

265 *Hoefs*, 190 S.W. at 806 (quoting CLESSON S. KINNEY, A TREATISE ON THE LAW OF IRRIGATION AND WATER RIGHTS: AND THE ARID REGION DOCTRINE OF APPROPRIATION § 654 (2d ed. 1912)) (empasis added).

266 *Id. See also Hoefs*, 273 S.W. at 286.

267 *Hoefs*, 273 S.W. at 786 (emphasis added).

268 *Id.* at 786-87.

Thus, at a similar time to the adoption of the 1921 statute (both before and after), the courts in *Hoefs* interpreted this statutory language defining state water as not meaning that any rainwater, simply by falling on any watershed, became state water, but rather state appropriative rights attached when it entered into a stream that met the requirements of a natural watercourse.[269] The legislature, after the 1916 appeals court decision in *Hoefs*, took the opportunity to change the definition of state water, but chose not to add any express term regarding diffused surface water or any other type of language that would support the idea that diffused surface water was included in the definition.[270] It must be presumed that the legislature adopted the statutory definition of state water with knowledge of the existing law[271] and knowing that the *Hoefs* 1916 appeals court opinion quoted authorities that declared that if water was not in a watercourse, the law of water rights by prior appropriation did not apply.[272] As the legislature did not make any change to the statute in 1921 that can be interpreted as an attempt to include diffused surface water as state water, the omission of the well-known terms "surface water" or "diffused surface water" in the statutory definition could speak to the legislative intent not to include these in the definition of state water.[273]

A solid understanding of the cases discussed above is helpful in addressing some potential points of confusion regarding a property owner's rights in diffused surface water. Before proceeding to that analysis, it is worthwhile to take a brief moment to consider how exemptions from state permitting for domestic and livestock ponds factor into a property owner's right to collect diffused surface water on their property without a permit.

IV. Addressing Potential Points of Confusion

A. Permit Exemptions Do Not Apply to Diffused Surface Water

The statutory exemptions under Texas Water Code sections 11.142 – 11.1422 are exemptions from state permitting for the impoundment and use of state water for certain purposes.[274] The most common of these is the exemption for domestic and livestock purposes. As the exemptions are from permits for the use of state water, these exemptions do not apply if state water is not being used, such as with the collection and storage of diffused surface water.[275] The Texas Legislature later addressed how rainwater capture was affected by these permitting requirements. The legislature established the Texas Groundwater Protection Committee in 1989 under House Bill 1458 and as codified in

269 *See id.* at 786.
270 *Id.*; *Hoefs*, 190 S.W. at 806.
271 Act of 1921, 37th Leg., R.S., ch. 124, 1921 Tex. Gen. Laws 233.
272 Acker v. Tex. Water Comm'n, 790 S.W.2d 299, 301 (Tex. 1990) (stating that a statute is presumed to have been enacted by the legislature with complete knowledge of the existing law and with reference to it).
273 *Hoefs*, 190 S.W. at 806.
274 Act of March 31, 1921, 37th Leg., R.S., ch. 124, 1921 Tex. Gen. Laws 233.
275 Tex. Water Code Ann. §§ 11.142–11.422.

the Texas Water Code in Sections 26.401-26.408.[276] Chaired by the Executive Director of the TCEQ, and the Executive Director of the TWDB, the Committee made the following statement regarding rainwater collection:

> Some landowners may have concerns about whether the state requires them to obtain a permit to build a reservoir on their property for the use of a stock tank. This falls into the "stock tank exception" that allows landowners to build up to a 200-acre-foot reservoir on their property without receiving permission from the state . . . . *The "stock tank exception" as discussed above does not apply to diffused surface water*. This means that a landowner may harvest the rainwater into the soil, or capture and store drainage water, as long as the water is captured before it reaches a natural water course.[277]

The court in the *Citizens* opinion makes no reference to a need for any permit exemptions for the 96 acre feet of water impounded by the landfill owner in the detention channel.[278] The court expressly recognized that the property owner, in constructing a detention channel to collect rainwater, had private ownership of such impounded diffused surface water.[279] Consequently, the landfill owner was not required to obtain any permit for uses of state water under Texas Water Code section 11.143, which requires the owner of an exempt reservoir under section 11.142 to obtain a permit for uses not described under that section.[280]

B. ADDRESSING CERTAIN CASES

As discussed above in some detail, private ownership of rainwater that falls on one's property and diffused surface waters that reside therein is generally considered a well-settled matter, and this article does not conclude differently. However, there is the potential for confusion due to some terms in the statutory definition of state water, the Texas Supreme Court's opinion on the matter in *Turner v. Big Lake Oil Co.*,[281] and the Texas appellate court's discussion on the matter, which this article seeks to address. In particular, there could be confusion as to whether there is any difference in a property owner's rights in rainwater and diffused surface water on land that was granted out of the state after 1921 when the Texas Legislature adopted the modern definition of state water. This is the question that the court expressly declined to address in *Turner*.[282] An appeals court conducted some analysis related to this question in which it concluded that diffused surface water on a property granted by the state after 1921 is privately

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276 *Id.* § 11.121 (expressly indicates that the subchapter of the water code applies to state water).

277 Texas Groundwater Protection Committee, *Frequently Asked Questions*, WATER IN TEXAS – WHO OWNS IT?, http://tgpc.state.tx.us/POE/FAQs/WaterOwnership_FAQ.pdf (last visited January 31, 2017) (emphasis added).

278 *Id.* (emphasis added).

279 Citizens Against Landfill Location v. Tex. Comm'n on Envtl. Quality, 169 S.W.3d 258, 258 (Tex. App.—Austin 2005, pet. denied).

280 *Id.* at 274.

281 TEX. WATER CODE ANN. §§ 11.142-11.143; *Citizens Against Landfill Location*, 169 S.W.3d at 274.

282 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 266 (Tex. 1936) (declining to express an opinion on certain aspects of this matter that were not before it).

owned.[283] This appeals court opinion is analyzed in detail below and is also considered in the context of an analysis of legislation and case law prior and subsequent to the *Turner* opinion. This analysis concludes that the Legislature did not intend any difference in the rights of property owners in rainwater and diffused surface water depending on the date of initial grant out of the state.[284]

1. *In re Adjudication of Water Rights of Lower Guadalupe River Segment*

A case which can be a source of confusion regarding the subject of this article is *In re Adjudication of Water Rights of Lower Guadalupe River Segment*.[285] In the *Lower Guadalupe* opinion, a property owner appealed the adjudication of water rights of a lake under which appellant owned most of the lakebed.[286] The Texas Water Commission had determined the waters of the lake were owned by the state.[287] The property owner, Indianola, filed exceptions in district court, which affirmed the Commission's ruling.[288] The appeals court affirmed the trial court.[289]

The sole issue on appeal was whether the water in the lake was publicly or privately owned.[290] Indianola contended the waters in the lake were surface waters that they owned, citing the *Turner* and *Collins* decisions.[291] Importantly, the court noted that it was agreed that all waters in the lake originated from rain or from *floodwaters of the Guadalupe River*.[292] Based on this stated fact, it appears the court needed to perform only a simple analysis to conclude that a lake impounding flood waters of a major river was state water, and that any surface water from runoff on the property that entered the lake also became state water. The *Lower Guadalupe* court cited *Bass v. Taylor*, which concluded that the floodplain is part of the stream, "and the waters that flow therein when the stream overflows its banks are still the waters of Wilson creek, and are not surface waters."[293] In addition, the TCEQ adopted definitional rules in 1986, prior to the 1987 *Lower Guadalupe* opinion that, as mentioned above, defined stormwater or floodwater as "[w]ater flowing in a watercourse as the result of recent rainfall."[294]

However, in addressing the question before it, as to whether the water at issue was state water or diffused surface water, rather than proceeding first with the usual analysis for making this determination based on whether the water in question entered a water-

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283 *Id.*

284 *In re* Adjudication of Water Rights of Lower Guadalupe River Seg., 730 S.W.2d 64, 67 (Tex. App.—Corpus Christi 1987, writ ref'd n.r.e.) [hereinafter *Lower Guadalupe*].

285 *Id.* at 64-66 (indicating that although very significant amounts of property in Texas had already been granted out of the sovereign prior to 1921, there have been grants subsequent to 1921).

286 *Id.* at 64.

287 *Id.* at 65.

288 *Id.*

289 *Id.*

290 *Id.*

291 *Id.*

292 *Id.* at 66.

293 *Id.* at 66, n.1 (stating "[i]t is agreed that all water accumulated in Green Lake originates from rain or from floodwaters of the Guadalupe River.").

294 Bass v. Taylor, 90 S.W.2d 811, 815 (Tex. 1936).

course, the court instead attempted to match up waters named in the statutory definition of state water with the water at issue. Although this may have seemed to be a practical approach, it causes confusion. Some of the waters described in the statutory definition of state water—such as the rainwater or floodwater of a "depression" used as the primary statutory term focused on by the *Lower Guadalupe* court—can be either state water or diffused surface water, depending on whether the depression constitutes a watercourse.[295] Both the *Turner* and *Collins* opinions involved water that came to rest in a natural depression (*Turner*)[296] or were collected in a constructed depression (*Collins*),[297] which those courts concluded remained diffused surface waters. The TCEQ's rules expressly recognize diffused surface water may come to rest in natural depressions.[298] The agency also successfully took the position in the *Citizen* opinion that diffused surface water was not state water and, in particular, diffused surface water collected in a detention channel (also apparently a depression) did not constitute state water.[299] As mentioned above, the TCEQ's rules in the definition of state water omit the statutory term "depression" found in Texas Water Code section 11.021, along with others, and substitute the term "watercourse," helping to avoid just this sort of confusion that can be caused by including land features in the definitional terms of state water, which may contain either state water or diffused surface water depending upon the facts, and to focus any analysis of the ownership status of the water on whether it is in a watercourse.[300]

The *Lower Guadalupe* opinion nonetheless concluded that because the waters had entered a depression, they became state waters as a result of being waters identified in

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295 30 TEX. ADMIN. CODE § 297.1(52). *See also* 11 Tex. Reg. 2,327, 2,329 (1986) (codified at 30 TEX. ADMIN. CODE § 297.1) (Tex. Nat. Res. Cons. Comm'n).

296 Although the definitional statute § 11.021 has the term "lake" in it, it is in a series of terms preceded by the term "flowing," and the property owner had argued that since the lake water at issue was not flowing, it did not come under the statute. The court rejected that argument in a cursory and less than convincing manner. It appears that the court still recognized the problematic aspect of relying on the term "lake" and, as a result, the court primarily focused its analysis on the statutory term "depression," describing the waters at issue for example as, "surface waters which were collected by a natural depression to form a lake to which the state claims title." *In re* Adjudication of Water Rights of Lower Guadalupe River Seg., 730 S.W.2d 64, 66 (Tex. App.—Corpus Christi 1987, writ ref'd n.r.e.) [hereinafter *Lower Guadalupe*]. The court also asserted that, "[o]nce surface waters and flood waters come to rest in the natural depression formed by the bed of Green Lake, they become lake waters." *Id.* at 67. The court concluded that the waters came "within the province of 11.021 and its predecessors, whether classified as a 'lake' or as 'the storm water, floodwater, and rainwater of [a]. . . depression.'" *Id.* The court's conclusion whether classified as a lake or depression again showed the court's hesitancy in just relying on the term "lake" and why it repeatedly emphasized that the term depression applied. *Id.* As discussed, whether the depression or lake in *Lower Guadalupe* was a natural watercourse would have been the standard analysis of whether the surface water became state water upon entering the water body.

297 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936).

298 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 105 (Tex. Civ. App.—Eastland 1931, writ dism'd w.o.j.).

299 30 TEX. ADMIN. CODE § 297.1(16).

300 Citizens Against Landfill Location v. Tex. Comm'n on Envtl. Quality, 169 S.W.3d 258, 274 (Tex. App.—Austin 2005, pet. denied).

the statutory definition of state water, without considering (at least in any express manner) whether the depression (the lake) was a watercourse.[301] The *Lower Guadalupe* court's statutory analysis is internally contradicted by its own recognition that in the *Collins* case, water captured in a depression remained diffused surface waters.[302] The court attempted to distinguish that case by explaining that the depression in *Collins* dealt with *artificially* impounded surface water, and not surface waters collected by a *natural* depression to form a lake.[303] The statute makes no distinction between a natural or artificial depression.[304] The distinction pertinent to the court's evaluation was not the artificial or natural aspect of the depression, but whether the depression was a watercourse or not. The surface tank in *Collins* was not a watercourse[305] and the lake in *Lower Guadalupe*, as shown by facts discussed, was.[306]

The *Lower Guadalupe* court's logic is also confounded by the fact that in *Turner*, the water came to rest in *natural* water holes—natural depressions,[307] but the *Turner* court very clearly determined that these waters were both in fact and in law still diffused surface waters.[308] Rather than recognizing that the *Turner* court was addressing different facts and a very different question, as discussed below, the *Lower Guadalupe* court instead attempted to distinguish *Turner* by noting that, unlike in *Lower Guadalupe*, the waters in *Turner* were on lands granted by the state before the enactment of the 1921 statutory definition of state water to which lands and water thereon the statute, the *Turner* court determined, had no application.[309]

The *Lower Guadalupe* court's argument for distinguishing *Turner* based on the date of state property grant is misplaced, however. The *Lower Guadalupe* opinion never reached the question addressed by the court in *Turner* regarding the water in the lake.[310] Thus, the manner in which the *Turner* court addressed that different question based on the date of property grant was not relevant to the analysis of the lake water in the *Lower Guadalupe* case. In *Turner*, because the court had concluded that the water at issue was in fact diffused surface water,[311] it confronted another issue that the *Lower Guadalupe* court did not and could not have confronted: despite the fact that the water at issue was diffused surface water in law and in fact, did the 1921 statute make these waters state water? The *Turner* court's analysis regarding the date of the property grant being prior to the adoption of the statute (thus making the statute inapplicable)[312] was relevant only to this separate question addressed in the *Turner* opinion, and not to the *Turner* court's initial determination that the waters at issue in that case were diffused surface water.

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301 30 TEX. ADMIN. CODE § 297.1(51).
302 *In re* Adjudication of Water Rights of Lower Guadalupe River Seg., 730 S.W.2d 64, 67 (Tex. App.—Corpus Christi 1987, writ ref'd n.r.e.) [hereinafter *Lower Guadalupe*].
303 *Collins*, 41 S.W.2d at 105.
304 *Lower Guadalupe*, 730 S.W.2d at 66.
305 TEX. WATER CODE ANN. § 11.021(a).
306 *Collins*, 41 S.W.2d at 101.
307 *Lower Guadalupe*, 730 S.W.2d at 65.
308 Turner v. Big Lake Oil Co., 96 S.W.2d 221 (Tex. 1936).
309 *Id.* at 228.
310 *Lower Guadalupe*, 730 S.W.2d at 66-67.
311 *Id.*
312 *Turner*, 96 S.W.2d at 228.

As the *Lower Guadalupe* court did not ever determine the waters at issue in the depression were diffused surface water in the first place,[313] it could not reach the next question addressed by the court in *Turner* as to whether the statute identified such diffused surface water as state water. The *Turner* court's analysis regarding the date of the grant of the property by the state which the *Turner* court used to address that second question is simply irrelevant to the *Lower Guadalupe* court's analysis of the lake water that never reached that question. Ultimately, the *Turner* and *Collins* cases could have been easily distinguished by the *Lower Guadalupe* court as inapplicable after a brief analysis concluding the lake waters at issue were simply not diffused surface water as they were in *Turner* and *Collins*, since a lake that impounded floodwaters from a river was a watercourse, and thus state water, along with any diffused surface water that flowed into that state water. Hence, the statutory reference to waters of a depression in the definition of state water[314] did apply *in that instance*.

Significantly, the *Lower Guadalupe* court's approach to identifying state water by reliance on statutory terms also appears further confounded by the fact that, despite the statute's reference to rainwater of every watershed as state water, the *Lower Guadalupe* court recognized the waters on the property at issue *before* they enter the depression or lake as surface water—clearly meaning by this term privately owned diffused surface water.[315] The *Lower Guadalupe* court, by asserting that the surface water lost its character as surface water when it came to rest in a natural depression forming the lake, recognized that until these waters entered the lake, they maintained their character as diffused surface water.[316] By recognizing the water as state water only when it came to rest in the lake,[317] the court implicitly recognized this surface water as privately owned before it entered the lake. The only water at issue in *Lower Guadalupe* is the ownership status of the water *after* it has entered the lake.[318] Because the *Lower Guadalupe* court was well aware of the question from the *Turner* opinion—did the statutory language including rainwater of every watershed in the definition of state water make diffused surface water state water—the *Lower Guadalupe* court, in effect, implicitly concluded that the statutory term "rainwater of every . . . watershed" did not transform these diffused surface waters into state waters before they entered the lake, *despite the fact that the property was granted by the state after 1921*.[319] In this regard, the *Lower Guadalupe* opinion can be seen as answering the question left open in the *Turner* opinion—did diffused surface water on properties granted after 1921 become state waters under the statute? The *Lower Guadalupe* court determined the ownership status of the water on the property based on the statutory definition of state water, and was aware of this question raised and left undecided in the *Turner* opinion for properties granted after the adoption of the 1921 statute. It follows by the *Lower Guadalupe* court's treatment of these diffused surface waters as private water before entering the lake that the court answered in the negative.

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313 *Id.*
314 *Lower Guadalupe*, 730 S.W.2d at 65.
315 *Id.* at 65-66.
316 *Id.* at 67.
317 *Id.*
318 *Id.*
319 *Id.* at 65.

Regarding this question, the *Lower Guadalupe* court stated, "[t]he [*Turner*] Court expressly reserved the question of what effect the law would have on subsequent grants . . . . Had the question been before the Court, we are certain that the opposite result would have been reached."[320] Despite this assertion, as just discussed, the *Lower Guadalupe* court did *not* find an opposite result with regard to the diffused surface water before it reached the lake on the property which it determined was one of the subsequent grants after adoption of the 1921 statute.[321] This assertion then must have been limited to the lake water in the depression at issue. First, the *Turner* court, as any other, would have found the opposite result concerning the water at issue in *Lower Guadalupe* (finding it state water rather than diffused surface water) not because of a difference in the date of the state's grant of the underlying property, but because any ordinary analysis would conclude these were waters in a watercourse, and thus state water.[322] Second, as discussed above, the same question regarding the lake water was not before the *Lower Guadalupe* court as had been before the *Turner* court. Any opposite result in *Lower Guadalupe* is due to answering a different question. The question in *Turner* concerned the effect of the statute on waters already determined to be diffused surface waters.[323] In *Lower Guadalupe*, the waters in the lake were never determined to be diffused surface waters, so the question from *Turner* as to the statutory effect on diffused surface waters was never before the court in *Lower Guadalupe* with regard to the lake water.[324] Thus, the *Lower Guadalupe* court could not and did not give any opposite answer to a question that was not before it. With regard to the diffused surface waters in *Lower Guadalupe* before they reached the lake, the court's opinion actually has the *same* result as in *Turner*—there was no determination that the statute in either case transformed those diffused surface waters into state water.

The lake water at issue in the *Lower Guadalupe* case would be determined to be state water regardless of the grant date of the underlying property being before or after the 1921 adoption of the definition of state water. Ultimately, the *Lower Guadalupe* court's focus on the date of the property grant and discussion of the *Turner* opinion regarding this adds nothing to the *Lower Guadalupe* court's analysis of any value in answering the question before it regarding the status of the water in the depression.[325] The date of the grant is simply irrelevant to the analysis of this lake water altogether. The diffused surface water, once it flowed into the lake, entered into in the watercourse and would still

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320 *Id.* at 65-66.

321 *Id.* at 67.

322 *Id.* at 66-67.

323 *See* Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936) (stating that owners of land onto which rain falls own the rainwater until it passes into the natural watercourse to which riparian rights attach; *Lower Guadalupe*, 730 S.W.2d at 67 (holding that the water at issue in this case became lake water, and thus state water, once it came to rest in the natural depression formed by the bed of the lake).

324 *See id.* at 222 (stating that the law applicable to the pollution of streams and the watercourse or public waters did not apply here, where the water in question escaped from constructed ponds).

325 *See Lower Guadalupe*, 730 S.W.2d at 67 (holding that the water in question was lake water and not surface water).

be concluded to be state water *regardless of the date the state granted the property*, thus making the date of the grant inapplicable to the status of the lake water.

The *Lower Guadalupe* opinion, in the analysis it does rely on—if not expressly then by implication—confirms the well-established understanding concerning private ownership of diffused surface water. Although not using the term or concept of "watercourse" to explain why the surface waters which flowed into the lake at issue became state waters, the *Lower Guadalupe* court cited for support *Bass v. Taylor*, which stated the commonly understood law that, "[w]hen once surface water has found its way to the beds of *well-defined streams*, and has joined their currents, it ceases to possess any of the qualities of surface water."[326] Again, the *Bass* court recognized that water in the flood plain was still part of the water of this well-defined stream, and to the extent the lake at issue in *Lower Guadalupe* captured Lower Guadalupe River floodwater in the flood plain, it captured state water from this stream which remained state water.[327] As discussed in the *Hoefs* opinion, a "well-defined" stream describes a key criteria for a watercourse, and as recognized by Texas courts, water in a watercourse is the property of the State.[328]

In sum, although upon an initial casual reading one might get an impression otherwise, *Lower Guadalupe* cannot and does not stand for the proposition that waters that are diffused surface waters in law and in fact become state water if on a property granted after 1921. Among other reasons, such a conclusion would not be relevant or applicable to the question or facts in that case. The court in *Lower Guadalupe*, in the analysis that it appears to actually rely upon by reference to the opinions the court cites, follows the well-established law on diffused surface water becoming state water upon entering a watercourse. If it was claimed that *Lower Guadalupe* stood for anything else, it would stand out as remarkably inconsistent with over a century of case law precedent from before and after the 1921 adoption of the definition of state water, with other statutory enactments over that same period of time, with the history of civil and common law as noted by the Texas Supreme Court in *Miller* and *Turner*, and with the state agency charged with issuing state water rights in both its rules and positions it has taken in litigation. Further the *Lower Guadalupe* opinion supports the conclusion that for properties granted after adoption of the statutory definition of state water in 1921, such as the property at issue in *Lower Guadalupe*, that like those granted before, the statutory language referring to "rainwater of every . . . watershed"[329] does not transform diffused surface waters on those properties into state water, as it did not with the diffused surface waters in the *Lower Guadalupe* opinion.

2. *Walenta v. Wolter*

Another statement by a Texas court in *Walenta v. Wolter*,[330] cited in the *Lower Guadalupe* opinion, may cause some confusion about when surface water becomes state water and the rights of property owners who collect surface water can use it as they

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326 *Id.* at 66-67.

327 Bass v. Taylor, 90 S.W.2d 811, 815 (Tex. 1936) (emphasis added).

328 *Id.*

329 *See, e.g.*, South Tex. Water Co. v. Bieri, 247 S.W.2d 268, 272 (Tex. Civ. App.—Galveston, 1952, writ ref'd n.r.e.) ("[I]t is a well-established rule in Texas that waters of public streams belong to the sovereign.").

330 TEX. WATER CODE ANN. § 11.021.

please. An analysis of the statement in *Walenta v. Wolter*, however, finds that these do not alter the conclusion that a property owner can harvest rainwater and diffused surface water on their property and use it as they please. In *Walenta v. Wolter*, a Texas Appeals court in 1916 drew the tentative conclusion that "[i]t seems clear that when rainfall is under control, either by ditches, tanks, ponds, or pipes, it is no longer surface water as defined by the decisions.[331]

This over-generalized conclusion is at odds, for example, with the facts and conclusions in the Texas Supreme Court opinion *Turner* (diffused surface water that came to rest in "natural water holes" remained diffused surface water),[332] with the *Collins* opinion in which water in a tank remained diffused surface water,[333] with the more recent opinion in *Citizens Against Landfill Location* (in which TCEQ successfully took the position that diffused surface water which collected in a man-made channel did not become state water),[334] and with TCEQ's definition of diffused surface water in which diffused surface water can come to rest in natural depressions.[335] As quoted in several opinions above, the recognized legal test for when diffused surface water is no longer diffused surface water is when it enters into a watercourse, and not simply whether the water enters a ditch or other confine. The Texas Supreme Court (about ten years after the *Walenta* opinion) in *Hoefs*, defined natural watercourse in a manner that would exclude at least some ditches, tanks, ponds or pipes, as these would not meet the court's definition of a natural watercourse, and therefore water in them, including rainwater from rainwater harvesting, would not be state water.[336]

V. Conclusion

Rainwater and diffused surface water in Texas belongs to the owner of the property on which this water falls, flows in a diffused manner, or gathers before entering a watercourse. The Texas Supreme Court has held these ownership rights conveyed in the original grant of the property by the sovereign under both the civil and common law and are a property right that vested when the grant was made. The matter is well settled among the courts, and supported by the legislative intent of statutes related to state water and rainwater harvesting. Furthermore, it is confirmed by the manner in which the state agency charged with permitting state water has interpreted ownership rights of diffused surface water in litigation on the subject.

This conclusion is drawn despite some potential points of confusion that this article has sought to address in substantial detail, regarding the statute defining state water and a few court opinions. In the landmark 1936 Texas Supreme Court opinion *Turner v. Big Lake Oil Co.*, some landowners attempted unsuccessfully to assert that the statutory defi-

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331 Walenta v. Wolter, 186 S.W. 873, 874 (Tex. Civ. App.—San Antonio 1916, writ ref'd).
332 *Id.*
333 Turner v. Big Lake Oil Co., 96 S.W.2d 221, 228 (Tex. 1936).
334 Republic Prod. Co. v. Collins, 41 S.W.2d 100, 105 (Tex. Civ. App.—Eastland 1931, writ dism'd w.o.j.).
335 Citizens Against Landfill Location v. Tex. Comm'n on Envtl. Quality, 169 S.W.3d 258, 274 (Tex. App.—Austin 2005, pet. denied).
336 30 Tex. Admin. Code § 297.1(16).

nition of state water included diffused surface water.[337] The court concluded that if the statute were construed to make diffused surface waters into public waters subject to appropriation it would be void, and in violation of the state Constitution as the legislature was without power to take these vested property rights and declare them public property.[338] To sustain the validity of the statute, however, the court limited the scope of its decision, declaring the 1921 statute had no application to lands granted prior to its enactment with regard to property owner's rights in diffused surface water.[339] The court had done this in part for practical reasons, as it found no contention that the diffused surface waters at issue were on lands granted by the state after enactment of the statute in 1921.[340] The court, in declining to express an opinion on facts that were not before it, left seemingly unaddressed rights in diffused surface water on lands granted after adoption of the 1921 statute. However, a detailed consideration of legislative enactments both before and after 1921 shows a legislative intent not to include diffused surface water in state water, regardless of whether the diffused surface water is on a property granted prior to or after the enactment of the 1921 statute defining state water. Put simply, this review shows a manifest intent to define state water as water in a watercourse, exclusive of any diffused surface water. Court opinions both prior and subsequent to *Turner* consistently support this conclusion as well.

In particular, the conclusion is supported by the legislature's inclusion in the 1921 statutory definition of state water a reference to the acquiring the right to divert this state water from its "natural channel,"[341] removal of "collections of still water,"[342] which was susceptible of being interpreted to include diffused surface water, and failure over several iterations to include any express language on diffused surface water in the statute. Earlier, the legislature included an exception for "surface water" in the 1917 Act that distinguished it from state water.[343] These speak to a legislative intent to not include diffused surface water in state water and to define state water as water in a watercourse. Further, the adoption of the Water Rights Adjudication Act in 1967, by requiring a claimant to state water to identify the stream or watercourse in which the state water is claimed,[344] further underscores the legislative intent to define state water as water in a watercourse. Also, as discussed, recent statutes promoting rainwater harvesting on private property are indicative of a legislative recognition of a property owner's ownership rights in this water. In addition, TCEQ in its definition of state water, by removing terms such as "depression" and "watershed" and substituting the term "watercourse," seeks to clarify the statutory intent to limit state water to water in a watercourse and not include in state water all rainwater on every watershed.[345]

Prior to *Turner*, the Texas Supreme Court unambiguously declared in 1926 in *Motl v. Boyd* regarding diffused surface waters that "these waters, until they reach the natural

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337 Hoefs v. Short, 273 S.W. 785 (Tex. 1925).
338 Turner v. Big Lake Oil Co., 96 S.W.2d 221 (Tex. 1936).
339 *Id.*
340 *Id.*
341 *Id.*
342 TEX. WATER CODE ANN. § 11.022.
343 *See id.*
344 Act of Mar. 19, 1917, 35th Leg., R.S., ch. 88, § 1, 1917 Tex. Gen. Laws 211.
345 TEX. WATER CODE ANN. §§ 11.301-.341.

steamways are, and have always been, the property of the person on whose lands they fall."[346] The 1916 appeals court opinion in *Hoefs v. Short*, preceding the 1921 version of the statute defining state water, contained substantial discussion of a property owner's rights in diffused surface water, and as discussed, changes implemented by the legislature in 1921 appear consistent with that discussion.[347] The Texas Supreme Court in 1925 affirmed the appeals court decision in *Hoefs v. Short*, holding that the waters at issue were not diffused surface water but waters of a stream to which appropriative water rights attach and further affirmed the *Hoefs* appeals court discussion in *Motl v. Boyd* by declaring unambiguously the private ownership of diffused surface water.[348]

As cited herein, numerous courts over the years subsequent to *Turner* have held that diffused surface water belongs to the owner of the land on which it gathers prior to its passage into a natural watercourse, expressing no limitations on that ownership.[349] More recently, the TCEQ successfully adopted the position in litigation that no state permit was required for a property owner to collect and use diffused surface water, confirming the inapplicability of the statute defining state water to this private water. While Texas courts have continued consistently to hold with unmistakable clarity that diffused surface water belongs to the property owner and not the state until it enters a watercourse, the legislature over at least a century has had an opportunity to adopt changes to the legislation that would otherwise expressly state that diffused surface water is included in state water, but has never done this. One appeals court opinion that may appear at first to be an outlier in some regards, upon closer analysis relies on precedent supporting the common understanding that diffused surface water becomes state water upon entering a watercourse and, very significantly, confirms that a property owner owns the diffused surface water on their property on land granted out of the state *after* the 1921 enactment statute defining state water.

The ownership rights to rainwater and diffused surface water include the right to use that water as the property owner chooses, including the right to transfer that water to others as shown in the *Collins* opinion discussed herein, thereby enhancing its beneficial use and developing the state's natural resources. Policy reasons support this private ownership of rainwater and diffused surface water in Texas. The Texas Supreme Court in *Turner* recognized years ago its essential use in Texas farming and ranching operations.[350] More recently, the legislature has recognized the importance of rainwater harvesting in Texas to promote conservation, particularly of water for domestic uses, which helps make the state's water supply more resilient, especially in times of drought.

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346 *See* 30 TEX. ADMIN. CODE § 297.1.

347 Motl v. Boyd, 286 S.W. 458, 473 (Tex. 1926).

348 *See* Hoefs v. Short, 190 S.W. 802, 806 (Tex. Civ. App.—El Paso 1916, writ granted.) *aff'd*, 273 S.W. 785 (Tex. 1925).

349 *Hoefs*, 273 S.W. 785 (Tex. 1925).

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

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State of Texas v. Bernard Morello: Corporate Officer Liability for Violations of the Texas Water Code

By Craig J. Pritzlaff

"A person's a person"

– Dr. Seuss, Horton Hears a Who! (1954)

I. INTRODUCTION

Fundamental to our system of justice is the principle that no person is above the law.[1] Even when employed by a corporation, individuals remain individuals and retain their general duty to comply with the laws of the State.[2] One does not lose their general obligation to abide by the law simply because they operate under a company's umbrella. This legal canon is crucial in matters involving public health and welfare.[3] Failure to abide by requirements for management of hazardous wastes could potentially cause harm to human health and property, or leave a legacy of contamination.[4] In enforcing its environmental laws, the State seeks to hold accountable and punish those directly responsible for committing violations that present a threat to human health and the environment, and to deter similar conduct.[5] Enforcement of environmental laws suffers if

1 *Rule of Law*, BLACK'S LAW DICTIONARY (10th ed. 2014) ("3. The doctrine that every person is subject to the ordinary law within the jurisdiction; the equal subordination of all citizens and classes to the ordinary law of the land <all persons within the United States are within the American rule of law>.").

2 *See* U.S. v. Ne. Pharm & Chem. Co., 810 F.2d 726, 745 (8th Cir. 1986), *cert. denied*, 484 U.S. 848 (1987) (holding that finding on the corporation liable, "but not those corporate officers and employees who actually make corporate decisions, would be inconsistent with Congress' intent to impose liability upon the persons who are involved in the handling and disposal of hazardous substances.").

3 *Id.*

4 *See, e.g.*, State ex rel. Webster v. Mo. Res. Recovery, Inc., 825 S.W.2d 916, 925–26 (Mo. Ct. App. 1992) ("Generally, imposing individual civil liability for corporate activities upon officers who are directly responsible for statutorily proscribed hazardous waste activity is grounded upon the belief that to do so comports with the expansive construction that courts have given environmental statutes . . . . An individual is no less a menace when his mismanagement practices are carried out while he is serving as a director, officer, or employee of a corporation. The end result of such mismanagement is harm to the public health, a result contrary to what the general assembly intended.").

5 *See* Noël Wise, *Personal Liability Promotes Responsible Conduct: Extending the Responsible Corporate Officer Doctrine to Federal Civil Environmental Enforcement Cases*, 21 STAN. ENVTL. L.J. 283, 285 (2002) ("[M]any state and federal laws not only hold corporations responsible for certain conduct, but also impose punishment on particular individuals within these companies. Typically, these laws target people within corporations who directly engage in wrongful conduct.").

individuals responsible for committing violations escape liability for their actions and pass along the costs of their malfeasance to the public.[6]

Another fundamental principle is that, when the legislature uses a common term, such as "person," without a specific definition, then the Court will interpret the term as it is commonly used and understood—*i.e.*, "person" means "an individual."[7] Application of this common definition of the term "person" is vital to ensure the broad remedial purposes of environmental statutes.[8] The ability to hold each responsible individual accountable for an environmental transgression is vital to ensure compliance, proper deterrence, and consistent enforcement.

On February 23, 2018, the Texas Supreme Court, in its first opinion concerning a state civil environmental enforcement matter in nearly forty years,[9] confirmed these principles.[10] The Court held that a person is a person under the Texas Water Code, even if they are the sole member of a limited liability company.[11] Furthermore, a corporate officer who personally participates in conduct that violates the Texas Water Code may be held individually liable.[12] The holding that corporate officers may not avail themselves of a corporate shield if they personally participate in the wrongful conduct is consistent with prior holdings of the Court under common law[13] and in other statutory contexts, such as under the Texas Deceptive Trade Practices Act.[14] Texas now joins many other state and federal jurisdictions that have issued similar holdings under similar environmental statutes.[15]

When examining whether a corporate officer may be held personally liable for violating a statute, the Court performs a two-step analysis.[16] First, the Court examines the

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6 *Id.* ("Punishment is more likely to have a deterrent effect when an individual such as a corporate officer, as compared to a legal entity like a corporation, is held responsible for violating the law.").

7 TEX. GOV'T CODE § 311.011 (West 1985); Cadena Commercial USA Corp. v. Tex. Alcoholic Beverage Comm'n, 518 S.W.3d 318, 325 (Tex. 2017).

8 *See Ex parte Canady*, 140 S.W.3d 845, 851–52 (Tex. App.—Houston [14th Dist.] 2004, no pet.).

9 *See generally* State v. Texas Pet Foods, Inc., 591 S.W.2d 800 (Tex. 1979).

10 State v. Morello, 547 S.W.3d 881, 885–86 (Tex. 2018), *cert. denied*, Morello v. Texas, 139 S.Ct. 575 (2018).

11 *Morello*, 547 S.W.3d at 886.

12 *Id.* at 888.

13 *See* Leyendecker & Assocs., Inc. v. Wechter, 683 S.W.2d 369, 375 (Tex. 1984) ("A corporation's employee is personally liable for tortious acts which he directs or participates in during his employment").

14 *See* Miller v. Keyser, 90 S.W.3d 712, 716 (Tex. 2002) (holding individual corporate agent liable under Texas Deceptive Trade Practices Act, which allows for suits to be brought against "any person").

15 *See, e.g.*, Riverside Mkt. Dev. Corp. v. Int'l Bldg. Prods., Inc., 931 F.2d 327, 330 (5th Cir. 1991) (concluding that the federal act in question "prevents individuals from hiding behind the corporate shield when . . . they themselves actually participate in the wrongful conduct"); U.S. v. Ne. Pharm. & Chem. Co., 810 F.2d 726, 745 (8th Cir. 1986).

16 Not to be confused with the Texas Two-Step, which is a dance floor routine for couples that "may be danced to any four-count music and may be danced in forward line of dance direction, sideward, or in place." BETTY CASEY, DANCE ACROSS TEXAS 106 (1985).

statute at issue to determine whether it includes or is intended to include a corporate officer or employee.[17] Second, the Court examines the conduct of the individual to determine whether they were actively and personally involved in conduct that violates the statute (this is the "personal participation doctrine").[18] This Article follows that same approach. After providing background on the enforcement action leading up to the Supreme Court's decision, this article examines the relevant statutory provisions, the evolution of the personal participation doctrine in Texas and elsewhere, and its culmination for environmental matters in the landmark holding of *State v. Morello*.

II. THE ENFORCEMENT ACTION AGAINST BERNARD MORELLO

A. ENVIRONMENTAL OBLIGATIONS ASSOCIATED WITH THE SITE

For many decades, various companies operated a pipe manufacturing facility in Rosenberg, Fort Bend County, Texas (the "Site"). Hazardous wastes were generated by the facility and deposited into five surface impoundments on the Site. Ultimately, the hazardous wastes in the impoundments were covered and the units were closed in accordance with federal and state laws.[19] The waste pits were subject to a post-closure care permit ("Permit") from the Texas Commission on Environmental Quality (TCEQ)—Texas' environmental enforcement agency.[20] The Permit was the TCEQ's means for specifically applying federal and state post-closure care requirements to the hazardous waste impoundments at the Site.[21] The permit addressed the long-term integrity of the closed hazardous waste units and required monitoring of groundwater beneath the pits to detect any leaks.[22]

Because the waste pits leaked acids, metals, and other contaminants into groundwater, the Site was also subject to a Compliance Plan issued by the TCEQ.[23] The Compliance Plan is a means for the TCEQ to specifically implement state and federal requirements regarding groundwater monitoring and cleanup at the Site.[24] The Compliance Plan addressed long-term management of the contaminated groundwater plume at

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17 *See, e.g.*, State v. Morello, 547 S.W.3d 881 (Tex. 2018); *Miller*, 90 S.W.3d at 712; Liberty Mutual Ins. Co. v. Garrison Contractors, Inc., 966 S.W.2d 482 (Tex. 1998).

18 *See, e.g.*, *Morello*, 547 S.W.3d at 881; *Miller*, 90 S.W.3d at 712; *Liberty Mutual Ins. Co.*, 966 S.W.2d at 482.

19 *See, e.g.*, RESOURCE CONSERVATION AND RECOVERY ACT ("RCRA"), 42 U.S.C. §§ 6901 *et seq.*; 40 C.F.R. § 264 (2018); TEX. HEALTH & SAFETY CODE § 361; 30 TEX. ADMIN. CODE §§ 305.401, 335.157, 335.166–.67.

20 The TCEQ was formerly known as the Texas Water Commission and Texas Natural Resource Conservation Commission. The Commission's name was changed effective Sept. 1, 2002, as directed by House Bill 2912. *See* 27 TEX. REG. 8,227, 8,340 (Aug. 20, 2002).

21 *See* 42 U.S.C. §§ 6924–6925; 40 C.F.R. §§ 264.117–.120, 264.145, 264.228; TEX. HEALTH & SAFETY CODE § 361.061; 30 TEX. ADMIN. CODE chs. 305 and 335.

22 *See* 42 U.S.C. §§ 6924–6925; 40 C.F.R. §§ 264.117–.120, 264.145, 264.228; TEX. HEALTH & SAFETY CODE § 361.061; 30 TEX. ADMIN. CODE chs. 305 and 335.

23 *Morello*, 547 S.W.3d at 882.

24 *See* 42 U.S.C. § 6924(p); 40 C.F.R. pt. 264, subpart F; 30 TEX. ADMIN. CODE §§ 305.401, 335.157(a)(3), 335.167.

the Site, including the installation and maintenance of a groundwater monitoring, recovery, and treatment system to monitor, control, and reduce the concentrations of contaminants.[25] The corrective action system was designed to ensure compliance with environmental and health-based limits for groundwater.[26] The corrective action system was required to be guaranteed with a financial assurance mechanism.[27]

B. Morello Purchased the Site and Actively Thwarted Compliance with the Compliance Plan

In 2004, Bernard Morello purchased the Site from the former owner, who went into bankruptcy.[28] Morello initially agreed to purchase the Site for $650,000, but after learning of the significant environmental obligations accompanying the Site, he negotiated a reduction in the purchase price to $150,000.[29] Morello formed White Lion Holdings, L.L.C. ("White Lion") to hold title to the Site and assigned all his rights, duties, and obligations associated with the Site to the company.[30] Morello was the sole member, manager, employee, and decision maker of White Lion. Morello requested that the Permit and Compliance Plan be transferred from the prior owner to White Lion and, on July 23, 2004, the TCEQ approved the transfer.[31] Thereafter, Morello actively thwarted compliance with the Compliance Plan by failing to perform a groundwater monitoring program, failing to comply with reporting requirements, failing to provide financial assurances to fulfill the requirements of the Compliance Plan, and personally removing or directing to be removed groundwater monitoring wells, groundwater recovery wells, and the treatment system.[32]

C. The State's Enforcement Action Against White Lion and Morello

The TCEQ initiated an administrative enforcement action against White Lion in December 2004.[33] The company continued its noncompliance and the Attorney General filed suit in April 2006.[34] Morello was added as a defendant a year later.[35] The State

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25 *See also* U.S. Envtl. Protection Agency v. Envtl. Waste Control, Inc., 710 F. Supp. 1172, 1222 (N.D. Ind. 1989), *aff'd*, 917 F.2d 327 (7th Cir. 1990) ("The purpose of a hazardous waste landfill's groundwater monitoring system is to detect immediately the migration of hazardous waste or hazardous waste constituents from the waste management area into the environment so that any necessary corrective or remedial action can be taken. Among the major threats a hazardous waste landfill may pose to public health and the environment is the potential that hazardous constituents may escape and contaminate the groundwater beneath the facility.").

26 30 Tex. Admin. Code §§ 335.166(1), 335.158, 335.160.

27 *Id.* § 335.167(b). The criteria for determining the type and amount of financial assurance is set forth in 30 Tex. Admin. Code ch. 37, subchs. B and P.

28 *Morello*, 547 S.W.3d at 883.

29 *Id.*

30 *Id.*

31 *Id.*

32 *Id.* at 883–84.

33 *Id.* at 883.

34 *Id.*

35 *Id.*

alleged that both White Lion and Morello were required and failed to comply with the Compliance Plan and provide financial assurances to fulfill it.[36] The case against Morello rested on the theory that he was personally liable for his actions removing the entire system installed to monitor, recover, and treat contaminated groundwater, all violations of Texas' environmental statutes, rules, and the facility's post-closure care Permit and Compliance Plan.[37] The State's pleadings explained that it was neither piercing the corporate veil nor accusing Morello of committing a tort, but rather seeking civil penalties authorized by the Texas Water Code against persons committing environmental violations.[38]

Morello asserted that third parties were to blame.[39] Morello also argued that he could not be held personally liable for any of White Lion's compliance failures because his actions were undertaken in his capacity as an agent of White Lion.[40]

After obtaining summary judgment against White Lion in 2013,[41] the State obtained a summary judgment against Morello in 2015.[42] The trial court levied civil penalties against Morello in the amount of $367,250, based on the amount of $50 per day for each day the statute was violated.[43] Morello appealed, claiming that as a member of a limited liability company, he could not be held liable under either the derivative liability doctrine (applicable when the corporate veil is pierced to reach a corporate officer) or personal participation doctrine (applicable when an officer commits a tort or fraud).[44] The appellate court agreed; it recognized the doctrine of personal liability, but held that it did not apply to Morello because the State did not plead or prove that Morello committed a tort or fraud.[45] The State appealed and the Supreme Court reversed,[46] holding that the proper analysis of liability was under the Texas Water Code rather than the Texas Business Organizations Code, and, because the Texas Water Code applies broadly to any person and does not exclude corporate officers, that Morello was liable under the personal participation doctrine.[47]

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36 *Id*.
37 *Id*.
38 TEX. WATER CODE §§ 7.101–7.102; *Morello*, 547 S.W.3d at 884–85.
39 *Morello*, 547 S.W.3d at 884.
40 *Id*.
41 White Lion Holdings, L.L.C. v. State, No. 01-14-00104-CV, 2015 WL 5626564 (Tex. App.—Houston [1st Dist.] Sept. 24, 2015, pet. denied) (affirming the trial court assessment of civil penalties, attorneys' fees, and unpaid hazardous waste fees against White Lion).
42 *Morello*, 547 S.W.3d at 884.
43 TEX. WATER CODE § 7.102.
44 TEX. BUS. ORGS. CODE § 101.114. The State had stipulated to the minimum penalty ($50/day), which removed any fact issue on the appropriate daily penalty to assess for each daily violation. *See* State v. City of Greenville, 726 S.W.2d 162, 169-171 (Tex. App.—Dallas 1986, writ ref'd n.r.e.) (when the legislature prescribes a minimum amount for civil penalties, the Court does not have discretion to award a penalty below that minimum).
45 Morello v. State, 539 S.W.3d 330, 340 (Tex. App.—Austin 2016, pet. granted).
46 *Morello*, 547 S.W.3d at 890.
47 *Id*. at 888.

III. Analysis of Corporate Officer Liability Under the Texas Business Organizations Code and the Texas Water Code

A. Officer Liability Under the Texas Business Organizations Code is Derivative of the Company's Liability

A basic purpose for creating a corporate entity is to create a distinct legal entity apart from the individuals that created it, own it, or are employed by it.[48] The structure of a corporation or limited liability company is intended to shield its members from the liabilities and obligations of the company.[49] The shield exists to protect a member's decisions to take risks and to experiment with new ideas and inventions on behalf of the enterprise. The actions of the members and officers on behalf of the company are imputed to the company, and any liability arising from such actions is, therefore, derivative of the company.[50]

Holding a corporate officer derivatively liable for malfeasance of the company may be done by piercing the corporate veil or by otherwise pleading and establishing alter ego liability.[51] Piercing the corporate shield to hold a corporate officer derivatively liable for a company's liabilities is different from holding an officer responsible for their own wrongful conduct and actions.[52] When piercing, a party is reaching through a company's corporate shield to reach an individual and hold him or her liable for the *company's* actions.

But the corporate shield does not color individual wrongdoing and illegal conduct. The active participation of the officer in causing the violations negates whatever shield from personal liability the officer might otherwise enjoy.[53] Indeed, as discussed in more detail in Section V, the general rule in Texas is that an individual corporate officer is personally liable for fraudulent or wrongful acts that he directs, participates in, or had

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48 Willis v. Donnelly, 199 S.W.3d 262, 271 (Tex. 2006) ("A bedrock principle of corporate law is that an individual can incorporate a business and thereby normally shield himself from personal liability for the corporation's contractual obligations.").

49 *See* Tex. Bus. Orgs. Code § 101.114 ("Liability for Obligations. Except as to the extent the company agreement specifically provides otherwise, a member or manager is not liable for a debt, obligation, or liability of a limited liability company, including a debt, obligation, or liability under a judgment, decree, or order of a court.").

50 *See, e.g.*, SSP Partners v. Gladstrong Investments (USA) Corp., 275 S.W.3d 444 (Tex. 2008); Castleberry v. Branscum, 721 S.W.2d 270 (Tex. 1986).

51 *See* Tex. Bus. Orgs. Code § 21.223; Tryco Enters., Inc. v. Robinson, 390 S.W.3d 497 (Tex. App.—Houston [14th Dist.] 2012, rev. dismissed) ("However, the corporate veil may be pierced on an alter ego theory "where a corporation is organized and operated as a mere tool or business conduit of another.").

52 *See* Sanchez v. Mulvaney, 274 S.W.3d 708, 712 (Tex. App.—San Antonio 2008, no pet.) (a member of a limited liability company can be held personally liable for his own fraudulent or wrongful acts and the corporate veil is not required to be pierced).

53 *See id. See also In re* White-Robinson, 777 F.3d 792, 799 (5th Cir. 2015) (confirming that Tex. Bus. Orgs. Code § 101.114 "only protects members from being held liable for the *LLC's* obligations, not their own obligations.") (emphasis in original).

knowledge of and assented to during his employment.[54] So, while the corporate entity is obligated to comply with the laws of the State, so too are its members.[55] The creation of a corporate entity does not make its owners and officers indistinct non-entities free to violate the law at will.[56]

Regarding the State's case against Bernard Morello, the Texas Supreme Court recognized the case was not a derivative liability case, thus making the corporate shield inapplicable.[57] What mattered was whether the enforcement provisions upon which the State's case was based applied to corporate officers, and if so, whether facts supported holding Morello personally liable for his own conduct.

B. Liability Under Chapter 7 of the Texas Water Code is Based on Individual Conduct of Companies and Individuals and Corporate Officers are Not Excluded

1. *Purpose and Policy of the Enforcement Provisions of the Texas Water Code*

The Texas Legislature enacted the State's environmental laws to protect the public and the State's waters, lands, and other resources from the perils of mismanaged industrial wastes, among other things.[58] Texas' environmental laws prohibit certain activities that threaten human health and the environment.[59] State enforcement of these laws is critical given the immediate and long-term risks mismanagement of wastes poses to human health and the environment. As noted by the U.S. Supreme Court, such laws "touch phases of the lives and health of people which, in the circumstances of modern industrialism, are largely beyond self-protection."[60]

The enforcement for many of the State's environmental statutes has been consolidated and codified in chapter 7 of the Texas Water Code, which provides civil and

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54 *See* Leyendecker & Assocs., Inc. v. Wechter, 683 S.W.2d 369, 375 (Tex. 1984); Nwokedi v. Unlimited Restoration Specialists, Inc., 428 S.W.3d 191, 201, 210 (Tex. App.—Houston [1st Dist.] 2014, rev. denied).

55 A corporation is a person too. *See, e.g.*, Metro Life Ins. Co. v. Ward, 470 U.S. 869, 881 n.9 (1985) ("It is well established that a corporation is a 'person' within the meaning of the Fourteenth Amendment."); Port Arthur Trust Co. v. Muldrow, 291 S.W.2d 312, 315 (Tex. 1956) (the term person when used in a statute includes corporations); Vaughan and Sons, Inc. v. State, 737 S.W.2d 805 (Tex. Crim. App.—Texarkana 1987) (corporations are persons that can be tried for criminal offenses).

56 Schneider v. Esperanza Transmission Co., 744 S.W.2d 595, 596–97 (Tex. 1987) (corporate officer involved in traffic accident while driving within the scope of his employment is personally liable for his own negligent conduct because he has an independent duty to not drive negligently).

57 State v. Morello, 547 S.W.3d 881, 885 (Tex. 2018).

58 *See, e.g.*, TEX. HEALTH & SAFETY CODE §§ 361.002, 382.002 (stating waste management policy and air quality policy respectively); TEX. WATER CODE § 26.003 (stating water quality policy).

59 *See* TEX. HEALTH & SAFETY CODE §§ 361.002, 382.002 (stating waste management policy and air quality policy respectively); TEX. WATER CODE § 26.003 (stating water quality policy).

60 United States. v. Dotterweich, 320 U.S. 277, 280 (1943).

criminal causes of action to the State for enforcement.[61] For civil actions, the Texas Water Code authorizes civil penalties and injunctive relief to be assessed against persons that violate the environmental laws.[62] The goal of environmental laws is like the policy behind torts: to hold accountable all who commit wrongs harmful to others, to deter similar types of conduct, and to punish each of those directly responsible for committing violations that present a threat to human health and the environment. But unlike how the intermediate appellate court examined the State's claims in initial appeal of the Morello matter, these causes of action are not torts. These wrongs are statutorily established by the Texas Legislature. Traditional enforcement of the State's environmental laws "emphasizes compliance to protect our citizens from harm, coupled with swift, sure and firm enforcement for those who do not comply."[63]

2. *Persons Liable for Violation of Texas Environmental Laws Include Individuals, Including Corporate Officers*

Notably, the Legislature broadly defined who may be subject to an enforcement action for not complying with the State's environmental laws. Section 7.101 of the Texas Water Code provides "[a] person may not cause, suffer, allow, or permit a violation of a statute within the commission's jurisdiction or a rule adopted or an order or permit issued under such a statute."[64]

Civil penalties may be assessed under section 7.102 of the Texas Water Code, which provides:

> A person who causes, suffers, allows, or permits a violation of a statute, rule, order, or permit relating to any other matter within the commission's jurisdiction to enforce . . . shall be assessed for each violation a civil penalty not less than $50 nor greater than $25,000 for each day of each violation as the court or jury considers proper. Each day of a continuing violation is a separate violation.[65]

The term "person" is not defined in Chapter 7 of the Texas Water Code.[66] Thus, under general principles of statutory construction, the Court read the term within its context in the statute and according to its common usage to mean: "an individual."[67] Furthermore, in the Texas Solid Waste Disposal Act,[68] upon which the State's claims were based, a "person" is defined to include an "individual."[69] "Thus, because there is no

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61 *See generally* Tex. Water Code §§ 7.102–7.360.

62 *See id.* §§ 7.102, 7.032.

63 Tex. S. Interim Comm. on Natural Resources, Interim Rep. to the 76th Leg., Implementation of SB 1876 and SB 1591 5–6 (Oct. 1998).

64 Tex. Water Code § 7.101.

65 *Id.* § 7.102.

66 *See id.* § 7.101.

67 State v. Morello, 547 S.W.3d 881, 886 (Tex. 2018) (citing Black's Law Dictionary 1324 (10th ed. 2014), defining "person" as "[a] human being").

68 Tex. Health & Safety Code § 361.003(23) ("This chapter may be cited as the Solid Waste Disposal Act.").

69 *Id.* § 361.003(23). In 1997, when the legislature codified Chapter 7 of the Texas Water Code, it consolidated, superseded, and replaced several enforcement provisions from other environmental statutes, including the enforcement provisions of the Texas Solid Waste

statutory definition excluding individuals from the definition of person," the Court interpreted the term as it is commonly understood—"to include individuals."[70] A person is a person, even if they work for a company.

3. *Holding Corporate Officers Individually Liable is Consistent with How Federal Environmental Laws, Upon Which Texas' Laws are Based, are Interpreted*

This interpretation is not unlike how courts have interpreted similarly worded statutes. For example, the definition of "person" included in the federal Solid Waste Disposal Act (which, as amended, is often called the Resource Conservation and Recovery Act, or RCRA) includes individuals and corporations.[71] The Eighth Circuit examined whether RCRA's definition of "person" includes corporate officers in enforcement actions brought under that statute.[72] The court affirmed, holding various corporate officers personally liable for environmental violations together with their company, and noted that "Congress could have limited the RCRA definition of 'person' [to exclude corporate officers] but did not do so."[73] After finding that RCRA did not exclude corporate officers from liability, the court found the officers liable under the statute based upon their personal involvement and conduct in committing the violations.[74]

Looking at how federal courts have interpreted RCRA is logical, because like Texas' law,[75] RCRA includes comprehensive civil enforcement provisions that seek to hold every person responsible.[76] Furthermore, Texas' solid waste laws have been amended to

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Disposal Act. *See* Act of September 1, 1989, 71st Leg., R.S., ch 678, § 1, 1989 TEX. HEALTH & SAFETY CODE § 361.223, *repealed by* Act of September 1, 1997, 75th Leg., R.S. ch. 1072, § 60(b)(2), 1997 TEX. HEALTH & SAFETY CODE § 361.003.

70 *Morello*, 547 S.W.3d at 886. *See also* TEX. GOV'T CODE § 311.005(2) (defining "person" as including companies and "any other legal entity."). The phrase "any other legal entity" has been interpreted to include "natural persons" such as corporate officers. *See* State v. Malone Service Co., 853 S.W.2d 82, 84 (Tex. App.—Houston [14th Dist.] 1993, writ denied); White Lion Holdings, L.L.C. v. State, No. 01-14-00104-CV, 2015 WL 5626564, *3 (Tex. App.—Houston [1st Dist.] Sept. 24, 2015, pet. denied) ("Statutes providing for liability of any 'person' in violation allow courts to render judgments against both corporate entities and their agents."); Ex parte Canady, 140 S.W.3d 845, 850–51 (Tex. App.—Houston [14th Dist.] 2004, no pet.) (holding that corporate officer was a person under the Water Code and could be held independently liable for criminal violations of the law even after his company was assessed administrative penalties for the same violations). *See also* Liberty Mutual Ins. Co. v. Garrison Contractors, Inc., 966 S.W.2d 482, 486 (Tex. 1998) (interpreting the definition of person under section 2(a) of Article 21.21 of the Insurance Code, which includes the term "individuals," to include corporate employees and agents).

71 42 U.S.C. § 6903(15) (2018).

72 U.S. v. Ne. Pharm. & Chem. Co., 810 F.2d 726, 745 (8th Cir. 1986).

73 *Id.*

74 *Id.* at 745–46.

75 *Ex parte Canady*, 140 S.W.3d at 851–52 ("It is clear the legislators intended the Water Code to impose more stringent standards when dealing with hazardous waste disposal and to assure that each person be accountable for his actions that violate a provision of the code.").

76 42 U.S.C. § 6928(g); H.R. REP. NO. 94-1491(I), at 1, 30–31 (1976), *reprinted in* 1976 U.S.C.C.A.N. 6238, 6268–69.

be consistent with the federal program.[77] This allows Texas to implement the federal law in lieu of the U.S. Environmental Protection Agency (EPA).[78]

4. Status as a Landowner or Permit Holder Does Not Govern Individual Liability

In his appeal, Morello asserted that he had no obligation to comply with the requirements of the Compliance Plan because White Lion held the permit and owned the property.[79] On review, the Texas Supreme Court disagreed and noted that "nothing in the language of the Water Code (1) limits the number of persons to whom its penalties apply, (2) provides that only one penalty may be assessed per occurrence or per violation, or (3) permits an enforcement proceeding only against a landowner or the permit holder."[80] According to the Court, "[t]he language is broad and applies to 'a' person who causes or allows the violation of a permit, not 'the' person holding the permit."[81] Corporate officers, like all citizens, have a duty to comply with the law. And the cornerstone prerequisite to liability is action, not status as a permit holder or landowner.[82]

IV. The Personal Participation Doctrine Applies to Corporate Officers When the Statute Contemplates Suits Against Individuals

A. Application of Personal Participation Doctrine

Once a court determines an enforcement statute permits liability assessment against a corporate officer, courts will then look to the actions and conduct of the officer.[83] It is the general rule in Texas that an individual corporate officer is personally liable for fraudulent or wrongful acts that he directs, participates in, or has knowledge of and assented to during his employment.[84] This corporate "personal participation doctrine"

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77 *See* Tex. Health & Safety Code § 361.003 ("'Class I nonhazardous industrial solid waste' means any Class I industrial solid waste that has not been identified or listed as a hazardous waste by the administrator of the United States Environmental Protection Agency under the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (42 U.S.C. § 6901, et seq.").

78 *See* 42 U.S.C. §§ 6926(b), (c), (g) (2018) (setting the requirements for obtaining and maintaining federal authorization); 40 C.F.R. §§ 271.1, 271.3, 271.4, 271.21; Decision on Final Authorization of State Hazardous Waste Management Program, 49 Fed. Reg. 48,300 (Dec. 12, 1984) (to be codified at 40 C.F.R. pt. 271) (establishing federal authorization from the EPA for the hazardous waste program of the TCEQ); Tex. Health & Safety Code § 361.003.

79 State v. Morello, 547 S.W.3d 881, 886 (Tex. 2018).

80 *Id.*

81 *Id.*

82 *See* State v. Malone Service Co., 853 S.W.2d 82, 84–85 (Tex. App.—Houston [14th Dist.] 1993, writ denied) (rejecting argument that only corporate permit holder could be held liable for violations of the permit).

83 *See, e.g.*, *Morello*, 547 S.W.3d at 881; Miller v. Keyser, 90 S.W.3d 712 (Tex. 2002); Liberty Mutual Ins. Co. v. Garrison Contractors, Inc., 966 S.W.2d 482 (Tex. 1998).

84 *See* Leyendecker & Assocs., Inc. v. Wechter, 683 S.W.2d 369, 375 (Tex. 1984).

applies equally to corporations as well as limited liability companies.[85] The doctrine applies in tort and in statutory contexts, if the statute permits liability against an individual.[86]

Indeed, in 1993, an intermediate appellate court in Houston held that a president and plant manager of a company could be held individually liable for violations of a hazardous waste permit held by the company.[87] For years, *Malone* had been the lodestar decision confirming that corporate officers could be held liable and be assessed civil penalties for their own conduct in causing an environmental violation. The appellate court in *Malone* relied upon the personal participation doctrine and the body of federal environmental cases applying its principles to corporate officers.[88] In *Malone*, under the direction of the corporate officers, hazardous wastes were deposited into on-site waste pits, despite an order prohibiting such activity.[89] This personal conduct and involvement was sufficient to warrant individual liability under the personal participation doctrine.[90]

During the intermediate appeal of the Morello case, despite clear evidence of Morello's involvement in tearing out a groundwater remediation system and his actions causing his company to cease monitoring groundwater at the Site, the appellate court refused to extend the personal participation doctrine to the Water Code.[91] The court held the doctrine only applied to those matters involving tortious or fraudulent acts.[92] In so holding, the appellate court failed to grasp the nature of environmental law, which is designed to prevent harm to human health and the environment—a policy no different than that embodied in common law torts and consumer protection statutes like the Deceptive Trade Practices Act (DTPA). It also failed to grasp the central tenet of cases holding corporate officers personally liable, which is to hold accountable those truly responsible for violating the law.[93] The Texas Supreme Court corrected these issues and

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85 *See* Nwokedi v. Unlimited Restoration Specialists, Inc., 428 S.W.3d 191, 201, 210 (Tex. App.—Houston [1st Dist.] 2014, rev. denied) (affirming judgment against president of an LLC in tort action based on knowing participation in wrongful acts); Sanchez v. Mulvaney, 274 S.W.3d 708, 712 (Tex. App.—San Antonio 2008, no pet.) (a member of a limited liability company can be held personally liable for his own fraudulent or wrongful acts and the corporate veil is not required to be pierced).

86 *See* Citronelle-Mobile Gathering, Inc. v. Herrington, 826 F.2d 16, 25 (Temp. Emer. Ct. App. 1987) (concluding there is a "parallel between conduct which violates general principles of tort law, and conduct which infringes rights secured by statutes"). For example, the personal participation doctrine has been applied to corporate officer violations of the Texas Deceptive Trade Practices Act ("DTPA"), which includes a liability provision permitting claims to be brought against any "person." *See Miller*, 90 S.W.3d at 715 (applying the definition of person as set forth in the DTPA to corporate officers that participated in the violations). The DTPA is codified at Chapter 17 of the Texas Business and Commerce Code. The DTPA defines "person" to include "an individual, partnership, corporation, association, or other group, however organized." TEX. BUS. & COM. CODE § 17.45(3).

87 *Malone Service Co.*, 853 S.W.2d at 85.

88 *Id.*

89 *Id.* at 84.

90 *Id.* at 85.

91 *Id.*

92 Morello v. State, 539 S.W.3d 330, 340 (Tex. App.—Austin 2016, pet. granted).

93 State v. Morello, 547 S.W.3d 881, 887–88 (Tex. 2018).

properly applied the personal participation doctrine to Chapter 7 of the Texas Water Code.[94]

B. The Personal Participation Doctrine has been Applied by State and Federal Courts Across the Nation Under Statutes Like the Texas Water Code

The Texas Supreme Court's decision is consistent with how other courts have handled personal liability of a corporate officer in the context of statutory violations. Many courts have stressed personal participation as the basis for holding liable those corporate officers who violate environmental and other public health and welfare statutes.[95] These courts borrow from the general principles of tort liability—the officer will be found personally liable if the officer was personally involved in the violations or otherwise made the decisions to cause the violations.[96]

For example, the Fifth Circuit held that a majority shareholder and officer of a company that improperly disposed of hazardous wastes could be found individually liable under a federal law passed to address legacy hazardous waste sites: the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).[97] In *Riverside*, the Fifth Circuit held:

> CERCLA prevents individuals from hiding behind the corporate shield when, as "operators," they themselves actually participate in the wrongful conduct prohibited by the Act. . . . In such cases, a defendant can be held individually liable for his wrongful conduct. "[T]his personal liability is distinct from the derivative liability that results from 'piercing the corporate veil'" where we would hold the owners of a less than bona fide corporation responsible for corporate acts.[98]

Although the Fifth Circuit ultimately determined the corporate officer in that case did not personally participate in the violative conduct or make decisions directing such conduct, the court fully endorsed applying the tort-based personal participation doctrine to violations of environmental statutes.[99]

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94 *Id.*

95 *See, e.g.*, Riverside Mkt. Dev. Corp. v. Int'l Bldg. Prods., Inc., 931 F.2d 327, 330 (5th Cir. 1991); U.S. v. Ne. Pharm. & Chem. Co., 810 F.2d 726, 744 (8th Cir. 1986), *cert denied*, 484 U.S. 848 (1987); T.V. Spano Bldg. Corp. v. Dep't of Nat. Res. & Entv'l. Control, 628 A.2d 53, 61 (Del. 1993).

96 *See, e.g.*, *Riverside Mkt. Dev. Corp.*, 931 F.2d at 330; *Ne. Pharm. & Chem. Co.*, 810 F.2d at 744; *T.V. Spano Bldg. Corp.*, 628 A.2d at 61.

97 *Riverside Mkt. Dev. Corp.*, 931 F.2d at 327. CERCLA is codified at 42 U.S.C. §§ 9601 *et seq.* (2018).

98 *Riverside Mkt. Dev. Corp.*, 931 F.2d at 330 (quoting Ne. Pharm. & Chem. Co., 810 F.2d at 744).

99 *Id. See also* Hegglund v. United States, 100 F.2d 68, 69 (5th Cir. 1938) (affirming fine against the master of a tanker that discharged oil into the Calcasieu River under the Oil Pollution Act of 1924, which included a liability provision very similar to § 7.102 of the Texas Water Code). The liability provision of the 1924 act was as follows:

> It shall be unlawful for *any person* to discharge . . . oil . . . into or upon the coastal navigable waters of the United States from any vessel using oil as fuel . . . or . . .

The personal participation doctrine discussed by the Fifth Circuit has also been applied across the spectrum of major environmental federal environmental legislation, including RCRA.[100] With respect to hazardous waste violations, individual officer liability is consistent with the policies and intent of hazardous waste laws to hold each person responsible for violating such laws.[101] Other state courts have also recognized the personal participation doctrine as a basis for holding corporate actors personally liable for their own environmental misconduct.[102] Even courts that do not find a corporate officer liable under the personal participation doctrine do so not because the personal participation doctrine is called into question, but because the record in that case did not support holding that officer personally responsible.[103] Such holdings are necessary to prevent a corporate officer from hiding behind the corporate form and escaping liability that an unincorporated person would be unable to avoid.

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carrying or having oil thereon in excess of that necessary for its lubricating requirements . . . or *suffer, or permit the discharge of oil by any method, means, or manner*.

Id. (emphasis added).

100 *See, e.g.*, *Ne. Pharm. & Chem. Co.*, 810 F.2d at 745; United States v. Prod. Plated Plastics, Inc., 742 F. Supp. 956 (W.D. Mich. 1990) (aff'd 955 F.2d 45 (6th Cir. 1992)); United States v. Pollution Abatement Servs. of Oswego, Inc., 763 F.2d 133, 134-135 (2d Cir. 1985) (holding corporate officers liable for civil violations of the River and Harbors Act, including illegal dumping and chemical storage, because the officers were responsible for the company's "day-to-day operations, and for its illegal dumping and storage activities").

101 *Ne. Pharm. & Chem. Co.*, 810 F.2d at 745.

102 *See, e.g.*, State ex rel. Webster v. Mo. Res. Recovery, Inc., 825 S.W.2d at 925–26 (Mo. Ct. App. 1992); Attorney Gen. v. Richmond Sanitary Landfill, Inc., 2002 WL 31058346 (Mich. Ct. App. Sept. 13, 2002) (holding president of landfill company liable because he was "aware of the environmental issues and was actively involved in supervision and decision-making that controlled the landfill's response to those issues"); People ex rel. Madigan v. J.T. Einoder, Inc., 28 N.E.3d 758, 767 (Ill. 2015) ("To impose individual liability on a corporate officer, however, it must be shown that the corporate officer was personally involved and actively participated in the violation of the Act, not simply that the individual had personal involvement or active participation in the company's management.") (emphases omitted). *See also* State ex rel. Cordray v. Evergreen Land Dev., Ltd., Nos. 15MA0115, 15MA0116, 2016 WL 5408651 (Ohio Ct. App. Sept. 27, 2016) (holding LLC members personally liable for violations of state environmental law worded nearly identically to the Texas Water Code, because the officers personally participated in the violations, knew of their ongoing occurrence, and failed to take any action to stop them).

103 *See, e.g.*, State ex rel. DeWine v. Marietta Indus. Enter., Inc., No. 15CA33, 2016 WL 6875425 (Ohio Ct. App. Nov. 10, 2016) (reversing summary judgment because there was a genuine issue of material fact as to whether the officer personally participated in causing the violations).

C. The Personal Participation Doctrine has been Applied in Other Jurisdictions and in Other Non-Environmental Statutes

The personal participation doctrine has also been applied to non-environmental statutes. For example, the Fifth Circuit acknowledged the doctrine's applicability to trademark infringement cases.[104] As stated by the Fifth Circuit:

> There can be no doubt but that a trademark, like a patent, can be infringed by an individual. It is infringed when an individual performs the act or does the things that the patent or trademark law protects against. The fact that the persons thus acting are acting for a corporation also, of course, may make the corporation liable under the doctrine of respondeat superior. It does not relieve the individuals of their responsibility.[105]

In that case, the Fifth Circuit remanded the case to ascertain which of the named officers caused the infringement.[106]

In *Morello*, the Texas Supreme Court recognized the weight of precedent across the nation holding corporate officers liable for statutory violations and correctly applied the doctrine to the Texas Water Code. In discussing the breadth and diversity of cases, the Court held:

> While these cases involved different statutes than the one at issue here, our view accords with theirs that under an environmental regulation applicable to a "person," an individual cannot use the corporate form as a shield when he or she has personally participated in conduct that violates the statute. And Morello was not held liable for a debt, obligation, or liability of White Lion as he asserts is prohibited by the Business Organizations Code . . . . Rather, he was held individually liable based on his individual, personal actions. We disagree with the court of appeals' conclusion otherwise.[107]

V. Another Doctrine—The Responsible Corporate Officer Doctrine—Also Permits Corporate Officers to be Held Liable for Violations of Public Welfare Statutes

A parallel doctrine has developed across federal and state courts, now commonly called the "responsible corporate officer" doctrine.[108] This doctrine does not require ex-

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104 Mead Johnson & Co. v. Baby's Formula Serv., Inc., 402 F.2d 19, 23 (5th Cir. 1968) (rejecting that corporate officers could only be derivatively liable for the acts of the company if the corporate veil was pierced).

105 *Id.* at 23.

106 *Id. See also* Eng'g Dynamics, Inc. v. Structural Software, Inc., 26 F.3d 1335, 1349–50 (5th Cir. 1994) (reversing dismissal of corporate officer in copyright infringement case because the lower court improperly rejected the personal participation doctrine).

107 State v. Morello, 547 S.W.3d 881, 888 (Tex. 2018).

108 *See* Randy J. Sutton, *"Responsible Corporate Officer" Doctrine or "Responsible Relationship" of Corporate Officer to Corporate Violation of Law*, 119 A.L.R.5th 205 (orig. pub. 2004). Other statutory frameworks, such as consumer protection laws, may call the doctrine the "guiding

press evidence of personal participation by a corporate officer, but such conduct may be inferred from the officer's position.[109] In other words, no one else could prevent the violations or cause them. Thus, in jurisdictions that have adopted the responsible corporate officer doctrine, corporate officers may be held liable for violations of environmental and public health laws by their actions, their position of responsibility within the company, and their resulting authority to influence or control corporate actions constituting the violations.[110]

As noted by the U.S. Supreme Court in its seminal opinion concerning this doctrine, public welfare laws "touch phases of the lives and health of people which, in the circumstances of modern industrialism, are largely beyond self-protection."[111] Therefore, "all who . . . have such a responsible share in the furtherance of the transaction which the statute outlaws" may be held liable.[112] Thirty years later, when revisiting the doctrine, the Court noted that public welfare laws impose duties on those required to comply:

> the [Food, Drug and Cosmetic] 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 that violations will not occur. The requirements of foresight and vigilance imposed on responsible corporate agents are beyond question demanding, and perhaps onerous, but they are no more stringent than the public has a right to expect of those who voluntarily assume positions of authority in business enterprises whose services and products affect the health and wellbeing of the public that supports them.[113]

State and federal hazardous waste laws undeniably fall into the category of public welfare laws described by the U.S. Supreme Court and undeniably impose affirmative duties on those persons that purchase, manage, and operate hazardous waste sites.[114]

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spirit" or "central figure" doctrine." *See, e.g.*, Texas v. Am. Blastfax, Inc., 164 F. Supp. 2d 892, 898 (W.D. Tex. 2001); Ennis v. Loiseau, 164 S.W.3d 698, 707–08 (Tex. App.—Austin 2005, no pet.) (citing Mozingo v. Correct Mfg. Corp., 752 F.2d 168, 174 (5th Cir. 1985) ("[a] corporate officer may not escape liability where he had a direct, personal participation in the wrongdoing, as to be the 'guiding spirit' behind the wrongful conduct or the 'central figure' in the challenged corporate activity).

109 *Id.*

110 *See, e.g.*, Matter of Dougherty, 482 N.W.2d 485, 489–90 (Minn. Ct. App. 1992) (finding insufficient evidence to hold a corporate officer liable for his personal participation in committing violations of hazardous waste laws, but sufficient evidence to hold the officer liable as a responsible corporate officer); Celentano v. Rocque, 923 A.2d 709 (Conn. 2007); Comm'r. Dep't of Envtl. Mgmt. v. RLG, Inc., 755 N.E.2d 556 (Ind. 2001); People v. Roscoe, 169 Cal. App. 4th 829 (2008); State Dep't. of Ecology v. Lundgren, 971 P.2d 948 (Wash. Ct. App. 1999).

111 *See* United States. v. Dotterweich, 320 U.S. 277, 280 (1943).

112 *Id.* at 284.

113 United States v. Park, 421 U.S. 658, 672 (1975) (applying the doctrine to violations of federal Food, Drug, and Cosmetic Act).

114 *See* United States v. Johnson & Towers, Inc., 741 F.2d 662, 667 (3d Cir. 1984) ("We conclude that in RCRA, no less than in the Food and Drugs Act, Congress endeavored to control hazards that, 'in the circumstances of modern industrialism, are largely beyond self-protection.'" *quoting Dotterweich*, 320 U.S. at 280).

For the responsible corporate officer doctrine to apply, the U.S. Supreme Court holds there must be a responsible relationship between the officer and the violations. As described by the Court,

> the liability of managerial officers did not depend on their knowledge of, or personal participation in, the act made criminal by the statute. Rather, where the statute under which they were prosecuted dispensed with 'consciousness of wrongdoing,' an omission or failure to act was deemed a sufficient basis for a responsible corporate agent's liability. It was enough in such cases that, by virtue of the relationship he bore to the corporation, the agent had the power to prevent the act complained of.[115]

Thus, it does not apply to every officer, only those that have authority and power to prevent the violations of environmental laws from occurring. The responsible corporate officer doctrine is most applicable to managers who have the sole and exclusive authority to make decisions concerning environmental compliance and, therefore, have an obligation to assist—not thwart—their company's compliance. When these managers affirmatively and actively direct their company to fail to comply and otherwise personally participate in committing the violations, they themselves are liable.

The doctrine, originally developed in the context of criminal prosecutions, has expanded to encompass civil enforcement of federal and state environmental statutes.[116] As stated by the Sixth Circuit,

> the rationale for holding corporate officers criminally responsible for acts of the corporation, which could lead to incarceration, is even more persuasive where only civil liability is involved, which at most would result in a monetary penalty. The fact that a corporate officer could be subjected to criminal punishment upon a showing of a responsible relationship to the acts of a corporation that violate health and safety statutes renders *civil* liability appropriate as well.[117]

Reviewing the *Morello* case, the Texas Supreme Court did not need to rely upon the responsible corporate officer doctrine to hold Morello liable—there was sufficient evidence of his personal involvement and conduct.[118] However, Morello met the criteria of the doctrine and, though the Court did not opine upon the doctrine, it did cite to at

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115 *Park*, 421 U.S. at 670–71.

116 *See, e.g.*, T.V. Spano Bldg. Corp. v. Dep't of Nat. Res., 628 A.2d 53, 62 (Del. 1993) (applying responsible corporate officer doctrine for violations of state hazardous waste laws similar to federal laws, but finding insufficient evidence to apply the doctrine to the corporate official who did not "direct, control, approve, consent to, or ratify the decision to dispose of the construction waste."). *But see* United States v. Sexton Cove Estates, Inc., 526 F.2d 1293, 1300–1301 (5th Cir. 1976) (neglecting to follow *United States v. Park* without substantive discussion in an action against a corporate officer for payment of restoration costs under the River and Harbors Act; but in *Sexton Cove*, the officer's liability for the restoration costs was based on derivative rather than personal liability).

117 United States v. Hodges X-Ray, Inc., 759 F.2d 557, 561 (6th Cir. 1985) (affirming civil liability of corporate officer for violations of Radiation Control for Health and Safety Act).

118 State v. Morello, 547 S.W.3d 881, 888 (Tex. 2018).

least one case holding an officer liable under that doctrine.[119] Perhaps a future case will test whether the Court will expressly uphold the responsible corporate officer doctrine in Texas.

VI. CORPORATE OFFICERS MIGHT ALSO BE HELD LIABLE AS AN OPERATOR OF A FACILITY

Another theory for an officer to be held personally liable is as an operator of the facility. Under Texas hazardous waste regulations, an operator includes the "person responsible for the overall operation of a facility."[120] Although not addressed by the Texas Supreme Court in *Morello*, several courts have applied this theory to hold a corporate officer liable for environmental violations.[121]

In 1991, the Wisconsin Supreme Court interpreted and applied a regulatory definition of operator that is identical to Texas' definition and the federal definition.[122] The Wisconsin court considered whether a company president (Rollfink) had sufficient ownership and control of a company to be held liable as an operator of the facility and was, therefore, liable for his company's violations of hazardous waste laws.[123] The Court observed that the president was at the facility every day, made all decisions concerning the facility's operation (including environmental compliance decisions), and had ultimate control of the facility.[124] The Court found Rollfink was an operator and was individually liable for his company's violations.[125]

Many courts blend theories. For example, in *United States v. Conservation Chem. Co. of Ill.*, the EPA asserted claims against a corporation, the company's president, and principal stockholder for violations of the State hazardous waste laws concerning a facility located in Gary, Indiana.[126] The facility failed to properly maintain and operate hazardous waste impoundments at the site, including failing to submit adequate closure plans for the units, failing to implement a groundwater monitoring system around the im-

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119 *Id.* (citing T.V. Spano Bldg. Corp., 628 A.2d at 61, holding that the State could hold liable a corporate officer who "directed, ordered, ratified, approved, or consented to the" violative conduct).

120 30 TEX. ADMIN. CODE § 335.1(114). The State definition mirrors that in federal hazardous waste regulations at 40 C.F.R. § 260.10 (2018).

121 *See* United States v. Gulf Park Water Co., 972 F. Supp. 1056, 1064 (S.D. Miss. 1997) (granting summary judgment against corporate officer in federal Clean Water Act enforcement action where officer personally participated in violations and operated the non-complying facility); United States v. Envtl. Waste Control, Inc., 710 F. Supp. 1172, 1204, 1242–45, 1249 (assessing civil penalties under RCRA against operators, including an officer who was held to also be a "person" and an "operator" of the facility, for, among other things, failure to implement groundwater monitoring protocols and failure to maintain financial assurance).

122 State v. Rollfink, 475 N.W.2d 575, 577 (Wis. 1991).

123 *Id.*

124 *Id.* at 580–81.

125 *Id.* at 582.

126 United States v. Conservation Chem. Co. of Ill., 733 F. Supp. 1215 (N.D. Ind. 1989).

poundments, and failing to maintain proper financial assurance.[127] The company president, as the controlling and managing officer of the company, was "ultimately responsible for environmental compliance."[128] The court found the president personally liable for the violations due to his active involvement in the decisions and activities that caused each violation.[129] The court also noted that the president was liable as an "operator" under Indiana law, the definition for which is similar to that in RCRA and Texas law.[130] The court granted summary judgment and assessed civil penalties against the company and the president.[131]

Operator theory has not arisen in a reported decision in Texas in the context of an environmental enforcement action against a corporate officer. However, it remains a viable liability theory in addition to the personal participation doctrine and responsible corporate officer doctrine.

VII. Conclusion

Corporate officers, including those in limited liability companies, have a duty to act in compliance with the law. Corporate officers do not lose their status as individuals and are not above the law simply because they are officers of a company. And when a corporate officer flagrantly and deliberately acts to violate an environmental law, that officer may not hide behind the veil of a company to avoid personal liability. Indeed, as discussed, environmental laws impose affirmative duties for businesses and their officers to comply. Most corporate officers understand their obligations to ensure systems are in place within their companies to maintain compliance. It is only a select few bad actors that actively and deliberately participate in disregarding environmental laws. Although it took decades for this issue to reach the highest court in Texas, the issues and doctrines applied by the Texas Supreme Court are not new, and are grounded in decades of prior precedent in other jurisdictions.

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127 *Id.* at 1220.
128 *Id.* at 1222.
129 *Id.*
130 *Id.*
131 *Id.* at 1231.

Fairness and Justice: Discrepancies in Eminent Domain for Oil and Natural Gas Pipelines

By Valerie L. Chartier-Hogancamp

I. INTRODUCTION

The Dakota Access Pipeline,[1] an interstate crude oil pipeline proposed in 2014,[2] held a prominent spotlight in the national news from the time it was proposed until it was placed in service three years later.[3] The pipeline gained so much national attention that the protests against construction of it spawned their own hashtag on social media—#NoDAPL.[4] Similarly, the Sabal Trail Transmission Pipeline, an interstate natural gas pipeline proposed a year prior,[5] gained significant media attention in the southeast United States[6] during the same timeframe.[7] But the average American who has read the news headlines featuring these pipeline projects may not know that the former is an interstate *crude oil* pipeline (spanning 1,172 miles across North Dakota, South Dakota, Illinois, and Iowa),[8] while the latter is an interstate *natural gas* pipeline (spanning 515 miles across Alabama, Florida, and Georgia).[9] This distinction is significant in terms of regulation, especially on the issue of eminent domain—that is, the government's "power

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1 The Dakota Access Pipeline is also sometimes referred to in the news and case law as the Bakken pipeline, but the Bakken Pipeline System consists of two pipelines—the 1,172-mile Dakota Access Pipeline and the 788-mile Energy Transfer Crude Oil Pipeline. CANADA NAT'L ENERGY BD., *Pipeline Profiles: Enbridge Bakken*, https://www.neb-one.gc.ca/nrg/ntgrtd/pplnprtl/pplnprfls/crdl/nbrdgbkkn-eng.html (last updated Sept. 2018).

2 Energy Transfer Partners, L.P., *Energy Transfer Announces Crude Oil Pipeline Project Connecting Bakken Supplies to Patoka, Illinois and to Gulf Coast Markets*, BUSINESS WIRE (Jun. 25, 2014), https://www.businesswire.com/news/home/20140625006184/en/Energy-Transfer-Announces-Crude-Oil-Pipeline-Project.

3 *See, e.g.*, Julie Turkewitz, *Army Approves Construction of Dakota Access Pipeline*, N.Y. TIMES, Feb. 7, 2017; Steven Mufson, *Why Hollywood, environmentalists and Native Americans have converged on North Dakota*, WASH. POST, Oct. 28, 2016; Kris Maher & Alison Sider, *U.S. Agencies Order Dakota Access Pipeline Work Halted After Judge Rules It Can Proceed*, WALL ST. J., Sept. 9, 2016).

4 Rachel Dicker, *A Lot of People Aren't Fans of This Pipeline in North Dakota*, U.S. NEWS & WORLD REP., Sept. 8, 2016.

5 Ben Lefebvre, *Pipeline to Bring Natural Gas to Florida Utilities*, WALL ST. J., Jul. 26, 2013.

6 Primarily in those states where the pipeline route is proposed—Florida, Georgia, and Alabama. *Mapping*, SABAL TRAIL TRANSMISSION, http://www.sabaltrailtransmission.com/mapping (last visited Nov. 16, 2018).

7 Kristina Torres, *Court orders new environmental review for Sabal Trail Pipeline*, ATLANTA JOURNAL CONSTITUTION, Aug. 22, 2017; Beth Kassab & Kevin Spear, *Gas pipeline across Central Florida brings cheap energy and protests*, ORLANDO SENTINEL, Apr. 1, 2017; Assoc. Press, *Environmental groups sue to stop 516 mile Alabama to Florida gas pipeline*, BIRMINGHAM NEWS, Aug. 18, 2016.

8 *The Dakota Access Pipeline Route Was Created Through a Careful and Collaborative Process*, DAKOTA ACCESS PIPELINE FACTS, https://daplpipelinefacts.com/route/ (last visited Nov. 16, 2018).

9 *Mapping*, *supra* note 6. This is not to say that Americans do not have differing perceptions of oil and natural gas as energy sources. For two interesting polls on how Americans perceive oil and natural gas differently, *see* EY, EY OIL AND GAS US PERCEPTIONS STUDY (2017); *Energy*, GALLOP NEWS, http://news.gallup.com/poll/2167/energy.aspx (last visited Nov. 16, 2018) (noting that forty-one to forty-six percent of those surveyed believed that more emphasis should be placed on oil as a domestic energy source, and fifty-five to sixty-

to appropriate private property without the consent of the owner,"[10] which is also called a "taking."[11]

This Note explores the differences in the regulatory framework for the construction of oil pipelines and the construction of natural gas pipelines. Specifically, this Note focuses on the fact that a private entity constructing an *oil* pipeline does not have access to federal eminent domain authority,[12] whereas the same private entity constructing a *natural gas* pipeline does.[13] In analyzing this difference, this Note asks whether this difference is justified. Further, it addresses how federal eminent domain authority for gas pipelines affects compensation of landowners whose property has been condemned, compared to circumstances where state eminent domain authority is exercised or acquisition is accomplished without condemnation.

I suggest that this inconsistency is unfair and unjust.[14] This disconnect may result in disproportionate compensation paid to landowners whose property is condemned for construction of these two types of pipelines.[15] I advance this argument by analyzing litigation from the two recent—and highly publicized—interstate pipelines mentioned at the outset of this Note: the Dakota Access crude oil pipeline and the Sabal Trail Transmission natural gas pipeline.

Sections II and III of this Note lay the groundwork for examining this argument. Section II provides some basic background about oil and natural gas pipelines in the United States. Section III discusses the statutory framework that regulates construction of oil pipelines (the Interstate Commerce Act of 1887[16] and the Hepburn Act of 1906[17])

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five percent of those surveyed believed that more emphasis should be placed on natural gas as a domestic energy source).

10 Wm. Ronald Hulen, *Abusive Exercises of the Power of Eminent Domain—Taking a Look at What the Taker Took*, 44 WASH. L. REV. 200, 200 (1968).

11 Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1057 n.23 (1992) (referring to the phrase in the Fifth Amendment as the "Takings Clause").

12 However, a private entity constructing an oil pipeline will sometimes be granted the ability to exercise state eminent domain authority for pipeline construction. *See infra* Section III.C.

13 *See infra* Section III.C; *see also* Public Utilities Act, 220 ILL. COMP. STAT. 5/15-401(a) (2017).

14 Notions of fairness and justice may appear facially vague—probably because they are. But "fairness and justice" are explicitly what the Supreme Court pointed to when enforcing the just compensation portion of the Takings Clause. Armstrong v. United States, 364 U.S. 40, 49 (1960) ("The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all *fairness and justice*, should be borne by the public as a whole." (emphasis added)). Since *Armstrong*, the Supreme Court has quoted this language on numerous occasions. *See* Donna M. Nakagiri, *Takings Provisions in State Constitutions: Do They Provide Greater Protections of Private Property than the Federal Takings Clause?*, MICH. ST. U. KING SCHOLAR SENIOR SEMINAR PAPERS 1, 2 n.2 (1999) (citing ten Supreme Court cases that quote this language).

15 *See generally* Natalie M. Jensen, *Eminent Domain and Oil Pipelines: A Slippery Path for Federal Regulation*, 29 FORDHAM ENVTL L. REV. 320, 328–331.

16 Interstate Commerce Act of 1887, 49 U.S.C. § 9 (1887).

17 Hepburn Act of 1906, 34 Stat. 584 (1906).

and natural gas pipelines (the Natural Gas Act of 1938).[18] This section also explores the origins of federal and state eminent domain laws generally and how these laws play a role in each of the statutes pertaining to oil and natural gas pipelines. Section IV introduces the Dakota Access crude oil pipeline and Sabal Trail Transmission natural gas pipeline projects and describes the eminent domain process associated with each of these projects to highlight how the statutes regulating construction have caused very different litigation outcomes. Section V then asks whether there is a valid justification for the inconsistency in the eminent domain provisions of these laws. Section V also examines how this discrepancy in eminent domain laws can play a significant role in determining the compensation paid to landowners of property crossed by a pipeline. Finally, Section VI investigates potential statutory solutions for correcting the existing discrepancy in the law regarding eminent domain use for construction of oil and natural gas pipelines and the resulting compensation paid to landowners whose property is being condemned.

II. ORIGINS AND BASIC CONCEPTS OF OIL AND NATURAL GAS PIPELINES

Prior to examining issues pertaining to oil and natural gas laws,[19] it is important to understand the types of resources carried by each of these pipelines, which is slightly less intuitive than just distinguishing between "oil" and "natural gas."[20] It is also helpful to address the nature of current oil and natural gas pipeline infrastructure in the United States, as this partially informs the discussion about whether eminent domain laws have acted in the past as a conduit or obstacle to construction of these pipelines.[21]

A. OIL PIPELINES

Many cite Edwin Drake's oil well in Pennsylvania in 1859 as the first discovery of oil,[22] but some energy law scholars argue that "oil's utility and potential economic value" was well known long before Drake's discovery.[23] The first successful oil pipeline

18 Natural Gas Act, ch. 556, 15 U.S.C. § 717 *et seq.* (1938).

19 This Note only addresses issues related to eminent domain authority for construction of oil and natural gas pipelines and not regulation of these pipelines during or after construction, which varies drastically between the two types.; *see* Jeff D. Makholm & Laura T. W. Olive, *The Politics of U.S. Oil Pipelines: The First Born Struggles to Learn from the Clever Younger Sibling*, 37 ENERGY L. J. 409 (2016) (providing a discussion on the evolution of the regulation of both industries).

20 U.S. Energy Information Ass'n, *Frequently Asked Questions*, https://www.eia.gov/tools/faqs/faq.php?id=40&t=6 (last visited March 3, 2019).

21 *See* Jensen, *supra* note 15, at 335–39.

22 *See, e.g.*, Richard C. Ausness, *"Fasten Your Seat Belt, Orville!": Exploring the Relationship Between State- of-the-Art, Technological and Commercial Feasibility, and the Restatement's Reasonable Alternative Design Requirement*, 45 IND. L. REV. 669, 705 (2012); George L. Priest, *Panel III: The Emergence of Law & Economics As An Academic Discipline: Henry Manne and the Market Measure of Intellectual Influence*, 50 CASE W. RES. L. REV. 325, 326 (1999).

23 Alexandra B. Klass & Danielle Meinhardt, *Transporting Oil and Gas: U.S. Infrastructure Challenges*, 100 IOWA L. REV. 947, 953–954 (2014).

began operation shortly after Drake's well in 1865.[24] As of 2014, 60,911 miles of crude oil pipeline[25] and 63,532 miles of refined petroleum products pipeline[26] crisscross the United States. Crude oil pipelines transport "unrefined petroleum" (i.e., oil in the natural form that it takes when removed from the ground)[27] from production locations to refineries.[28] Refined petroleum products pipelines carry refined oil liquids such as "gasoline, diesel, [and] jet fuel"[29] from refineries to regional holding areas known as "tank farms."[30] The oil development process[31] as most consumers know it[32] is completed when trucks transport gasoline and diesel fuel to service stations for consumer use.[33] Throughout this Note, both of these types of pipelines (crude oil pipelines and refined petroleum products pipelines) are referred to as "oil pipelines" because the distinctions between the two are not important for purposes of this Note.

B. Natural Gas Pipelines

While the first use of natural gas as an energy source in the United States pre-dates the use of oil for energy by approximately four decades,[34] the first commercial natural gas pipeline was not built until 1931.[35] "Natural gas" is the term used to refer to the "natu-

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24 Matthew Craig & D. Larry Crumbley, *Pipelines and the Oil Industry: A Primer*, 65(1) Oil, Gas & Energy Q. ch. 3.1 (2016) ("In 1865, what is considered the first major successful pipeline was built by Samuel Van Syckel.").

25 Association of Oil Pipelines, U.S. Liquids Pipeline Usage & Mileage Report 7 (Oct. 2014).

26 *Id.*

27 *See Crude Oil*, Schlumberger: Oilfield Glossary, http://www.glossary.oilfield.slb.com/Terms/c/crude_oil.aspx (last visited Oct. 17, 2017) (defining "crude oil" as "[a] general term for unrefined petroleum or liquid petroleum").

28 Association of Oil Pipelines, *supra* note 25, at 8.

29 *Id.* at 7.

30 *Id.* at 8.

31 The oil development process is typically broken into three stages—upstream, midstream, and downstream. Upstream refers to the extraction of oil from the ground, midstream pertains to the movement of oil products in the pipelines, and downstream consists of the refining, marketing, and consumption of oil products. *See id.* This Note focuses only on the midstream portion of the production process.

32 *What are petroleum products, and what is petroleum used for?*, U.S. Energy Info. Admin., https://www.eia.gov/tools/faqs/faq.php (last updated Apr. 6, 2018) ("Of the approximately 7.21 billion barrels of total [United States'] petroleum consumption in 2016, 47% was motor gasoline (includes ethanol), 20% was distillate fuel (heating oil and diesel fuel), and 8% was jet fuel.").

33 *See* Association of Oil Pipelines, *supra* note 25, at 8.

34 *A Brief History of Natural Gas*, American Public Gas Association, http://www.apga.org/apgamainsite/aboutus/facts/history-of-natural-gas (last visited Oct. 29, 2017). It was eventually commercialized in 1836 by the City of Philadelphia (explaining that natural gas was first discovered in the United States around 1626, but it was not until the 1820s to 1830s that natural gas was purposefully withdrawn from the ground and used as a source of energy). *Id.*

35 Reggie L. Medley, *Wellhead Natural Gas Marketing*, 34 Rocky Mtn. Min. L. Inst. § 22.01 (1988) ("[T]he first big inch pipeline was completed in 1931 by Continental Construction Company, originating in the Texas Panhandle and terminating in the Chicago area.").

rally occurring mixture of hydrocarbon gases" that is extracted from the ground.[36] Most natural gas is comprised principally of methane, with lesser amounts of other hydrocarbons.[37]

The components of this mixture that are naturally liquid aboveground are called "natural gas liquids" and include "propane, butane, pentane, hexane and heptane, but not methane and ethane, since these hydrocarbons need refrigeration to be liquefied."[38] The portions of the mixture that are gaseous at normal aboveground temperatures, including methane and ethane, are called "dry gas."[39] Dry gas that has been "liquefied at cryogenic temperatures" for transport purposes is called "liquefied natural gas."[40] The volume of methane is reduced by approximately six hundred times when liquefied, making this an efficient process for transport.[41] Currently, the network of natural gas pipelines in the United States covers nearly 306,000 miles.[42] Throughout this Note, the term "natural gas pipelines" refers to all pipelines that carry any form or component of natural gas.

III. CONSTITUTIONAL AND STATUTORY FOUNDATIONS OF OIL AND NATURAL GAS PIPELINE REGULATION

To understand *why* oil pipelines and natural gas pipelines are regulated so differently and whether these differences are "fair"—especially when construction of these pipelines often involves the taking of private property—we must look to the laws that form the foundation of the regulatory scheme for each of these industries. That foundation lies in both the U.S. Constitution as well as federal and state statutes. The Constitution's Fifth Amendment protects against the "taking" of private property by the government unless certain conditions are met.[43] The Natural Gas Act permits such taking of private property for construction of natural gas pipelines.[44] However, the Hepburn Amendment[45] to

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36 *Natural Gas*, SCHLUMBERGER: OILFIELD GLOSSARY, http://www.glossary.oilfield.slb.com/en/Terms/n/natural_gas.aspx (last visited Nov. 16, 2018).

37 *Id.*

38 *Natural Gas Liquids*, SCHLUMBERGER: OILFIELD GLOSSARY, http://www.glossary.oilfield.slb.com/Terms/n/natural_gas_liquids.aspx (last visited Nov. 16, 2018).

39 *Dry Gas*, SCHLUMBERGER: OILFIELD GLOSSARY, http://www.glossary.oilfield.slb.com/Terms/d/dry_gas.aspx (last visited Nov. 16, 2018).

40 *Liquefied Natural Gas*, SCHLUMBERGER: OILFIELD GLOSSARY, http://www.glossary.oilfield.slb.com/Terms/l/liquefied_natural_gas.aspx (last visited Nov. 16, 2018).

41 *What is LNG?*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/index.cfm?page=natural_gas_lng (last accessed Nov. 16, 2018).

42 *Estimated Natural Gas Pipeline Mileage in the Lower 48 States, Close of 2008*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/naturalgas/archive/analysis_publications/ngpipeline/mileage.html (last accessed Nov. 16, 2018). Of this total, 62,742 miles of pipeline is used to transport natural gas liquids. Association of Oil Pipelines, *supra* note 25, at 7.

43 U.S. CONST. amend. V, cl. 4 ("nor shall private property be taken for public use, without just compensation.").

44 Natural Gas Act, ch. 556, § 7, 15 U.S.C. § 717f(h) (1938) ("Right of eminent domain for construction of pipelines, etc. . . . [A pipeline company] may acquire [land] by the exercise

the Interstate Commerce Act,[46] which pertains to construction of oil pipelines, does not allow such a taking, at least not through the eminent domain authority of the federal government.[47]

A. Oil Pipeline Laws

Oil pipelines were unregulated in the United States for more than four decades,[48] and the "[p]atchwork"[49] legal framework regulating construction of oil pipelines in the United States is founded upon "a long and tortured story."[50]

This story began with the Interstate Commerce Act of 1887.[51] The original purpose of the Interstate Commerce Act, as one would likely expect, was "to regulate commerce."[52] But the Interstate Commerce Act was only designed to regulate the railroad industry.[53] It was not until 1906 that Congress expanded the scope of the Interstate Commerce Act to include regulatory power over oil pipelines with the "Hepburn Amendment."[54] The Hepburn Amendment was aimed specifically at regulating oil pipelines and expressly excluded from its scope regulation of other types of pipelines, such as "natural or artificial gas."[55] The Hepburn Amendment makes no mention of public use for oil pipelines, nor eminent domain. Therefore, for construction of oil pipelines, companies must appeal to the states for eminent domain authority, which may or may not be granted. And even where states may grant eminent domain authority to a pipeline company, that grant varies drastically from state to state and is often limited, as discussed in

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of the right of eminent domain in the district court of the United States for the district in which such property may be located, or in the State courts.").

45 Hepburn Act of 1906, ch. 3591, 34 Stat. 584 (1906).

46 Interstate Commerce Act of 1887, ch. 104, 49 U.S.C. § 1 *et seq.* (1887).

47 However, a private entity constructing an oil pipeline will sometimes be granted the ability to exercise state eminent domain authority for pipeline construction. *See infra* Section III.C.

48 Judith M. Matlock, *Federal Oil and Gas Pipeline Regulation: An Overview*, Rocky Mtn. Min. L. Inst. 4-1 (2011) ("Congress did not exercise its authority under the Commerce Clause to regulate pipelines transporting crude oil, liquids and refined petroleum products until the Hepburn Amendment in 1906 extended the Interstate Commerce Act . . . to such pipelines.").

49 Colin P. O'Rourke, *Oil Pipeline Regulation: The Current Patchwork Model and an Improved National Solution*, La. St. U. J. Energy L. & Res. Currents *1, *1 (Feb. 2, 2016), https://jelr.law.lsu.edu/files/2016/02/Colin-P.-ORourke_Oil-Pipeline-Regulation.pdf.

50 Makholm & Olive, *supra* note 19, at 410.

51 Interstate Commerce Act of 1887, ch. 104, 49 U.S.C. § 1 *et seq.* (1887).

52 Tex. & Pac. Ry. Co. v. Interstate Commerce Comm'n, 162 U.S. 197, 211 (1896).

53 O'Rourke, *supra* note 49, at *2.

54 Makholm & Olive, *supra* note 19, at 410 (citing Hepburn Act of 1906, ch. 3591, 34 Stat. 584 (1906)). Makholm and Olive credit a single junior U.S. senator for this exclusion. *Id.* at 415 ("[Senator Joseph P.] Foraker [from Ohio] was more effective in preventing the Hepburn Act from applying to gas pipelines. In dozens of debates on the Senate floor, Foraker outlasted his opponents and they passed an amendment to the bill excluding gas pipelines on May 4, 1906 - the day in history when U.S. oil and gas pipelines embarked on separate evolutionary paths.").

55 Hepburn Act of 1906, ch. 3591 § 1, 34 Stat. 584 (1906).

Section III.C, *infra*.[56] In all other cases, an oil company must negotiate to purchase the pipeline right-of-way as a commercial endeavor.

B. Natural Gas Pipeline Laws

Unlike oil pipelines, which were unregulated in the United States for several decades, comprehensive regulation of natural gas pipelines came only seven years after construction of the first commercial natural gas pipeline[57] when Congress passed the Natural Gas Act of 1938.[58] The purpose of the Natural Gas Act was to create a comprehensive framework to regulate the industry and "protect consumers from price exploitation."[59] As part of this broad regulatory scheme,[60] Congress declared natural gas pipelines to be a "public interest"[61] and granted the use of federal eminent domain authority for their construction.[62] The Natural Gas Act conditions the exercise of federal eminent domain for construction of natural gas pipelines on acquisition of a "certificate of public convenience and necessity" (CCN).[63] The responsibility for review of new natural gas pipelines and issuance of CCNs falls on the Federal Energy Regulatory Commission (FERC).[64] Once FERC reviews a proposed natural gas pipeline project and issues a CCN, the pipeline company may exercise the federal eminent domain authority to take land needed for pipeline construction by filing suit in federal court.[65] This federal

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56 *See infra* Section III.C.

57 Medley, *supra* note 35, § 22.01 (noting that the first commercial natural gas pipeline was constructed in 1931.).

58 Natural Gas Act, ch. 556, 15 U.S.C. § 717 *et seq.* (1938).

59 Valerie Chartier-Hogancamp, Note, *Analysis of Indirect and Cumulative Impacts: Do the Sierra Club v. FERC Opinions Signal a Limitation of NEPA's Reach?*, 32 J. LAND USE & ENVTL. L. 599, 602 (2016) (citing Panhandle E. Pipe Line Co. v. Pub. Serv. Comm'n, 332 U.S. 507, 520 (1947)).

60 *See, e.g.*, Sierra Club v. Fed. Energy Reg. Comm'n, 827 F.3d 36, 40 (D.C. Cir. 2016) (describing the regulatory framework of the Natural Gas Act, which has been called "a tangled web of regulatory processes" by the courts.). This Note only deals with the eminent domain provision of the Act.

61 15 U.S.C. § 717(a) (2012) ("[I]t is declared that the business of transporting and selling natural gas for ultimate distribution to the public is affected with a public interest, and that Federal regulation in matters relating to the transportation of natural gas and the sale thereof in interstate and foreign commerce is necessary in the public interest.").

62 *Id.* § 717f(h) ("Right of eminent domain for construction of pipelines, etc.— . . . [A pipeline company] may acquire [land] by the exercise of the right of eminent domain in the district court of the United States for the district in which such property may be located, or in the State courts.").

63 *Id.*

64 *Natural Gas Pipelines*, FERC, https://www.ferc.gov/industries/gas/indus-act/pipelines.asp (last updated Feb. 5, 2018). The Natural Gas Act placed original authority for regulation of natural gas pipelines with the Federal Power Comm'n. 15 U.S.C. § 717(c) (2012). The Department of Energy Organization Act abolished the Federal Power Commission in 1977 and created the United States Department of Energy. 42 U.S.C. § 7172(a) (2018). The same Act created the FERC and transferred most of the former Federal Power Commission's responsibilities under the Natural Gas Act to the newly created FERC. *Id.* § 7171.

65 *See* FED. ENERGY REG. COMM'N, AN INTERSTATE NATURAL GAS FACILITY ON MY LAND? WHAT DO I NEED TO KNOW? 18 (Dec. 8, 2017) ("In accordance with the Natural Gas Act

power of eminent domain, and the distinctions between federal and state eminent domain authority, are discussed in more detail in the following section.

C. Federal and State Eminent Domain Laws

Property rights have long been recognized in the United States as fundamental to individual liberty.[66] "Arthur Lee, a Virginia delegate to the Continental Congress, once declared that '[t]he right of property . . . is the guardian of every other right, and to deprive a people of this, is in fact to deprive them of liberty.'"[67] In light of this recognition, the right to one's property holds a prominent place in the U.S. Constitution. Both the Fifth and Fourteenth Amendments prohibit deprivation of "life, liberty, or property, without due process of law,"[68] placing the right to property on equal footing with a person's right to life and liberty. More specifically, the Fifth Amendment prohibits the taking of private property "for public use, without just compensation."[69] This provision is well-known as the "Takings Clause" of the Constitution.[70]

The government's power of eminent domain—the right of a "sovereign[71] to take property for 'public use' without the owner's consent"[72]—is inherent in the careful phrasing of the Takings Clause. While couched in the deceptively unassuming terms of "public use" and "just compensation," this grant of power to the government is a formidable one.[73] One state supreme court justice, calling the power of eminent domain "the most awesome grant of power under the law of the land," likened it to the government's ability to institute a military draft[74]—a power that has not been exercised by the U.S. government since 1973.[75] Yet this immense power is limited by only two provisions: "public use" and "just compensation."[76]

. . . , the FERC certificate gives the company the right to ask a state or federal court to award the needed property rights to the company where voluntary good faith negotiation has failed.").

66 For example, in 1972, the Supreme Court stated that, "the dichotomy between personal liberties and property rights is a false one. Property does not have rights. People have rights[, such as t]he right to enjoy property without unlawful deprivation . . . . That rights in property are basic civil rights has long been recognized." Sabal Trail Transmission, LLC v. Real Estate, No. 1:16-cv-063-MW-GRJ, 2017 U.S. Dist. LEXIS 99370, at *18 (N.D. Fla. June 27, 2017) (quoting Lynch v. Household Fin. Corp., 405 U.S. 538, 552 (1972)).

67 *Id.* (quoting James W. Ely Jr., The Guardian of Every Other Right: A Constitutional History of Property Rights 26 (2d ed. 1998)).

68 U.S. Const. amend. V; *Id.* at amend. XIV, § 1.

69 *Id.* at amend. V, cl. 4.

70 Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1057 n.23 (1992).

71 Wm. Ronald Hulen, *Abusive Exercises of the Power of Eminent Domain—Taking a Look at What the Taker Took*, 44 Wash. L. Rev. 200, 200 (1968) ("Only Congress and the state legislatures are sovereigns within the meaning of the sovereign power theory.").

72 Nichols on Eminent Domain § 1.11 (Matthew Bender ed., 3d ed. 2017).

73 Winger v. Aires, 371 Pa. 242, 244 (1952).

74 *Id.*

75 William A. Kamens, *Selective Disservice: The Indefensible Discrimination of Draft Registration*, 52 Am. U. L. Rev. 703, 760 (2003).

76 *E.g.*, U.S. v. Miller, 317 U.S. 369, 373 (1943).

A mountain of scholarship and court cases[77] debate the meaning of "public use" and "just compensation," but for the purposes of application of eminent domain law to construction of oil and natural gas pipelines, much of the controversy has been resolved.[78] As elaborated upon in the Section III.B, *supra*, federal eminent domain authority is expressly granted to natural gas pipeline companies granted a CCN because of the public interest statement in the Natural Gas Act of 1938.[79] No such public interest clause is included in the statutes that govern construction of oil pipelines; therefore, federal eminent domain authority is not available for construction of these pipelines and these companies must turn to the states for relief.[80]

"Just compensation" for a taking under the Fifth Amendment is well-settled and defined as "fair market value," which is the amount that "fairly may be believed that a purchaser in fair market conditions would have given."[81] Moreover, a landowner does not have a constitutional right to a jury in a federal eminent domain proceeding.[82] Federal Rule of Civil Procedure 71.1(h) dictates that the amount of compensation due in eminent domain actions is to be determined "by a jury when a party demands one."[83] However, a judge may opt to appoint a three-person commission to determine compensation if the condemnation action is so necessarily complex as to require such.[84] According to the "American Rule," the compensation due to a landowner whose property is being condemned ordinarily does not include attorney's fees.[85]

All but two states have adopted constitutional protections associated with takings.[86] Additionally, every state has enacted statutory eminent domain laws,[87] which may or may not be available for construction of oil pipelines, as discussed in Section III.A, *supra*. Generally, as observed by energy law scholars Alexandra Klass and Danielle Meinhardt,

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77 A search for "public use" and "just compensation" on Lexis results in over ten thousand cases and nearly that many secondary sources. LEXIS, https://advance.lexis.com/ (search for "'public use' and 'just compensation'") (last visited Nov. 17, 2018).

78 *See* Natural Gas Act, 15 U.S.C. § 717 *et seq.* (2018).

79 *Id.* § 1(a).

80 *See* Interstate Commerce Act of 1887, ch. 104, 49 U.S.C. § 1 *et seq.* (1887); Hepburn Act of 1906, ch. 3591, 34 Stat. 584 (1906).

81 *Miller*, 317 U.S. at 374.

82 Bauman v. Ross, 167 U.S. 548, 593 (1987) ("By the Constitution of the United States, the estimate of the just compensation for property taken for the public use, under the right of eminent domain, is not required to be made by a jury, but may be intrusted by congress to commissioners appointed by a court or by the executive, or to an inquest consisting of more or fewer men than an ordinary jury.").

83 FED. R. CIV. P. 71.1(h)(1)(B).

84 *Id.* at 71.1(h)(2)(A) ("If a party has demanded a jury, the court may instead appoint a three-person commission to determine compensation because of the character, location, or quantity of the property to be condemned or for other just reasons.").

85 Hardt v. Reliance Std. Life Ins. Co., 560 U.S. 242, 252–53 (2010). ("'Our basic point of reference' when considering the award of attorney's fees is the bedrock principle known as the 'American Rule': Each litigant pays his own attorney's fees, win or lose, unless a statute or contract provides otherwise.").

86 Nakagiri, *supra* note 14, at 18 (recognizing that every state constitution except those of Kansas and North Carolina include an express takings provision).

87 Klass & Meinhardt, *supra* note 23, at 983.

state requirements for the exercise of eminent domain authority for construction of oil pipelines are "not particularly stringent [because] oil is a high-value, international commodity."[88] But oil pipeline companies must still navigate each separate state's process to obtain use of this authority.[89] Klass and Meinhardt provide a thorough summary of these laws for every state, citing each state's laws pertaining to the exercise of eminent domain authority and public use determinations for the construction of oil pipelines.[90]

For the purposes of this Note, I will be exploring only the state eminent domain provisions of the states through which the Dakota Access oil pipeline (North Dakota, South Dakota, Illinois, and Iowa)[91] and Sabal Trail Transmission natural gas pipeline (Alabama, Georgia, and Florida)[92] corridors run. The general theme of the taking protections and eminent domain exceptions in each of these states is as follows: (1) the state constitution protects against taking without compensation; (2) a state statute provides that private companies may use the power of eminent domain to condemn land for construction of pipelines; and (3) the eminent domain authority may only be exercised by the private company after the state has authorized the pipeline route by some type of permitting or approval process (thus vesting the private pipeline as a public use).

1. Dakota Access Oil Pipeline Route States (North Dakota, South Dakota, Iowa, and Illinois)

As established in Section III.A, *supra*, oil pipelines do not have access to federal eminent domain authority to acquire the land needed for construction of an oil pipeline.[93] This means that the Dakota Access pipeline had to obtain the necessary easements either by voluntary consent of the landowners or by a grant of state eminent domain authority.[94] North Dakota, South Dakota, Iowa, and Illinois (the states along the Dakota Access pipeline route)[95] each have different laws pertaining to the process required to obtain use of this power.

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88 *Id.* at 952. It is worth noting that this observation was made by Klass and Meinhardt in early 2015, prior to the significant public criticism aimed at the Dakota Access Pipeline. *Id.*

89 For example, as discussed in *infra* Section IV.B, Dakota Access, LLC, filed applications with four states requesting eminent domain authority (two of which granted such) and had to obtain over 1,000 permits and approvals for construction of the pipeline.

90 Klass & Meinhardt, *supra* note 23, at 1027–53.

91 *Where does the Dakota Access Pipeline Run?*, Dakota Access Pipeline Facts, https://dapipelinefacts.com/dt_articles/where-does-the-dakota-access-pipeline-run/ (last visited Nov. 17, 2018).

92 *Mapping*, *supra* note 6.

93 15 U.S.C. § 717f(c)(1)(A) (2018) ("No natural-gas company . . . upon completion of any proposed construction or extension shall engage in the transportation of shale or natural gas . . . unless there is in force with respect to such natural-gas company a certificate of public convenience and necessity issued by the Commission authorizing such acts or operations.").

94 Jensen, *supra* note 15, at 321 ("To build oil pipelines, oil companies must receive easements from private landowners to build on their land . . . Some landowners refuse to accept the oil pipeline company's compensation for their land and refuse to grant the pipeline company an easement for the pipeline. In most states, the oil company may then use eminent domain to take the land. . . .").

95 *The Dakota Access Pipeline Route Was Created Through a Careful and Collaborative Process*, *supra* note 8.

The North Dakota Constitution provides that "[p]rivate property shall not be taken or damaged for public use without just compensation."[96] Just compensation has been defined by the Supreme Court of North Dakota as "the fair market value of [the] property . . . at the date of the taking[, which is] the highest price for which the property can be sold in the open market by a willing seller to a willing purchaser, neither acting under compulsion and both exercising reasonable judgment."[97] North Dakota gives landowners whose property is being taken by eminent domain the right to a jury trial for determination of what constitutes just compensation.[98] Any jury award that "is within the limits of the damages testified to by the witnesses" will be sustained by the court.[99]

The North Dakota Energy Conversion and Transmission Facility Siting Act allows any common carrier pipeline to exercise "the [state's] right and power of eminent domain."[100] Exercise of federal eminent domain authority by a pipeline company is permitted after "obtain[ing] a certificate of site compatibility or a route permit" from the state's Public Service Commission.[101] The condemnation process used for railroads, including methods for assessment and payment of damages, applies to all pipelines.[102]

The South Dakota Constitution also prohibits the taking of private property unless it is "for public use" and with "just compensation."[103] The Supreme Court of South Dakota has "consistently held" that just compensation is defined as

> the full market value of the property at the time of taking[, which] is the highest price for which property considered at its best and most profitable use can be sold in the open market by a willing seller to a willing buyer, neither acting under compulsion and both exercising reasonable judgment.[104]

Just compensation in South Dakota also includes payment of attorney's fees to the landowner in two limited scenarios: (1) if the eminent domain proceeding is dismissed;[105] or

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96 N.D. CONST. art. I, § 16 (amended 2006).

97 Hultberg v. Hjelle, 286 N.W.2d 448, 452 (N.D. 1979) (citations omitted).

98 N.D. CENT. CODE § 24-01-22.1 (2017) (indicating that a landowner facing a taking of right of way may appeal to the district court and has the option to present his appeal in front of a jury, unless that right has been waived).

99 *Hultberg*, 286 N.W.2d at 452 (citation omitted).

100 N.D. CENT. CODE § 49-19-12 (2017) ("Every common pipeline carrier which shall have filed with the commission its acceptance of the provisions of this chapter has, subject to chapter 32-15, the right and power of eminent domain in the exercise of which it may enter upon and condemn the land, right of way, easements, and property of any person necessary for the construction, maintenance, or authorization of its pipeline.").

101 *Id.* § 49-22-07.1 ("A utility may not begin construction of an electric energy conversion facility or an electric transmission facility in the state without first having obtained a certificate of site compatibility or a route permit from the [North Dakota Public Service C]ommission . . . ."). The statute defines "utility" as "any person engaged in and controlling the electric generation, the transmission of electric energy, or the transmission of water from or to any electric energy conversion facility." *Id.* § 49-22-03.14.

102 *Id.* § 49-19-12. Notably, as discussed in Section III.A, *infra*, federal regulation for construction of oil pipelines is rooted in a statute originally designed to govern railroads.

103 S.D. CONST. art. VI, § 13.

104 Rapid City v. Baron, 88 S.D. 693, 698, 227 N.W.2d 617, 620 (1975).

105 S.D. CODIFIED LAWS § 21-35-22 (2017) ("If any eminent domain proceedings are . . . dismissed with or without prejudice, the plaintiff seeking to be condemnor is liable for and

(2) if the award of just compensation by the court "is twenty percent greater than the plaintiff's final offer [to the landowner]."[106] The landowner is also entitled to a jury trial in condemnation actions.[107]

South Dakota statutes expressly allow for pipeline companies to exercise eminent domain to take private property for construction of pipelines in a manner very similar to that of North Dakota.[108] The only condition for a pipeline company to exercise eminent domain authority is the requirement to obtain a permit from the South Dakota Public Utilities Commission.[109]

Much like North Dakota and South Dakota, Iowa's constitution repeats the federal mandate for takings: "Private property shall not be taken for public use without just compensation . . . ."[110] Just compensation is "[o]rdinarily" defined in Iowa as "market value," but the state supreme court notes that this is not a "universal" rule.[111] The compensation analysis is a fact-specific one that should result in an award that "make[s] the [land]owner whole."[112] Landowners in Iowa are also entitled to attorney's fees when a final condemnation award exceeds 110% of the final offer made prior to proceedings by a condemning party.[113]

Private property in Iowa may be condemned "as may be necessary for *any* public improvement . . . authorized to be undertaken by the state, and for which an available appropriation has been made."[114] Once a permit has been granted to a pipeline company by the state of Iowa for construction of a new pipeline, that company is "vested with the

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shall pay to the defendant all court costs, expenses and fees, including reasonable attorney fees.").

106 *Id.* § 21-35-23. The total award must also exceed seven hundred dollars for attorney's fees to be awarded. *Id.*

107 *Id.* § 21-35-1 ("In all cases where any [entity exercises] the privilege of taking . . . private property for public use, . . . it shall file a petition . . . , praying that the just compensation to be made for such property may be ascertained by a jury.").

108 *Id.* § 49-7-13 ("Any pipeline companies owning a pipeline which is a common carrier as defined by § 49-7-11 may exercise the right of eminent domain in acquiring right-of-way as prescribed by statute."). The definition of a pipeline common carrier is broad—"All pipelines holding themselves out to the general public as engaged in the business of transporting commodities for hire by pipeline are common carriers . . . ." *Id.* § 49-7-11.

109 *Id.* § 49-41B-4 ("No utility may begin construction of a facility in the state on or after July 1, 1979, without first having obtained a permit issued with respect to such facility by the public utilities commission . . . ."). *See also id.* § 49-41B-2.1(2) (defining a "transmission facility" as "[a] gas or liquid transmission line and associated facilities designed for or capable of transporting coal, gas, liquid hydrocarbons, liquid hydrocarbon products, or carbon dioxide.").

110 Iowa Const. art. I, § 18.

111 Aladdin, Inc. v. Black Hawk Cty., 562 N.W.2d 608, 611 (Iowa 1997) (internal citation omitted).

112 *Id.* at 612.

113 Iowa Code § 6B.33 (2018) ("The acquiring agency shall pay . . . reasonable attorney fees and costs, including the reasonable cost of one appraisal, . . . if the award . . . exceeds one hundred ten percent of the final offer of the applicant prior to condemnation.").

114 *Id.* § 6A.1.

right of eminent domain to the extent necessary and as prescribed and approved by the [state]."[115]

Illinois's constitution includes a takings clause identical to the clause in the North Dakota constitution.[116] However, Illinois also provides a constitutional right to a jury trial for determination of compensation.[117] The Illinois Eminent Domain Act echoes the language of the state constitution, allowing the exercise of state eminent domain authority "for public use [and with] just compensation."[118] Just compensation in Illinois is defined as "the fair cash market value of property[, which is] the amount of money that a purchaser, willing, but not obligated, to buy the property, would pay to an owner willing, but not obliged, to sell in a voluntary sale."[119] Attorney's fees and costs can also be awarded in Illinois if the final amount of compensation determined by a jury is greater than or equal to the condemner's last pre-trial settlement offer for the taking.[120]

The Illinois Eminent Domain Act also subjects eminent domain authority to "other limitations and requirements."[121] One of those limitations is set forth in the Illinois Public Utilities Act, which states that an entity may not operate a pipeline as a "common carrier" without "a certificate in good standing."[122] Nor shall that common carrier "begin or continue construction of a pipeline . . . other than the repair or replacement of an existing pipeline . . . [without] a certificate in good standing."[123] Illinois defines additional statutory factors specific to construction of crude oil pipelines, including consideration of environmental impacts, transportation and traffic safety impacts, direct and indirect economic impacts (including property values and employment rates), and effects on energy availability.[124]

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115 *Id.* §479.24; *see also id.* § 479B.4 ("A pipeline company doing business in [Iowa] shall file a verified petition with the board asking for a permit to construct, maintain, and operate a new pipeline along, over, or across the public or private highways, grounds, waters, and streams of any kind in this state."). Chapter 479B of the Iowa Code pertains to "Hazardous Liquid Pipelines and Storage Facilities." *Id.* § 479B. The code defines a "[h]azardous liquid" to mean "crude oil, refined petroleum products, liquefied petroleum gases, [etc.]." *Id.* § 479B.16.

116 *Compare* ILL. CONST. art. I, § 15 ("Private property shall not be taken or damaged for public use without just compensation . . . . "), *with* N.D. CONST. art. I, § 16 (amended 2006) ("Private property shall not be taken or damaged for public use without just compensation . . . . ").

117 ILL. CONST. art. I, § 15 ("Such compensation shall be determined by a jury as provided by law.")

118 Eminent Domain Act, 735 ILL. COMP. STAT. 30/10-5-5(a) (2018).

119 *Id.* at 30/10-5-60. *See also* Chicago v. Anthony, 554 N.E.2d 1381, 1383 (1990) (defining "just compensation" as "the fair cash market value of the subject property at its highest and best use on the date of the filing of the complaint to condemn").

120 Eminent Domain Act, 735 ILL. COMP. STAT. 30/10-5-110(e) (2018). *See also id.* at 30/10-5-110(f) (restricting the calculation of attorney's fees to be based on the difference between the jury award for just compensation and the final settlement offer).

121 Eminent Domain Act, 735 ILL. COMP. STAT. 30/5-5-5(a) (2018).

122 Public Utilities Act, 220 ILL. COMP. STAT. 5/15-401(a) (2018).

123 *Id.*

124 *Id.* at 5/15-401(b)(1)-(9).

2. *Sabal Trail Transmission Natural Gas Pipeline Route States (Alabama, Florida, and Georgia)*

As discussed in Section III.B, *supra*, a natural gas pipeline company has access to federal eminent domain authority to condemn land for construction of a pipeline.[125] Therefore, the Sabal Trail Transmission pipeline did not have to navigate the state processes for eminent domain authority.[126] However, it is important to recognize that there are the laws that an oil pipeline company would have to comply with to secure state eminent domain authority for construction of pipelines.[127] Additionally, as evidenced by the recent Sabal Trail Transmission cases discussed in Section V.B.2, *infra*, the law of these states pertaining to compensation has very much been a pertinent issue.[128]

Alabama's constitution provides protection from takings with the now familiar requirements of "public use" and "just compensation."[129] Alabama also expressly prohibits the taking of "private property . . . for *private* use, . . . other than municipal, without the consent of the owner."[130] A landowner whose property is being condemned has a right to a jury trial for determination of just compensation.[131] The state statutorily defines "just compensation" as "fair market value" or the value "the property would bring when offered for sale by a willing seller who is not forced to sell and which is sought by a willing buyer who is not required to buy."[132] This amount does not include attorney's fees or litigation expenses unless the eminent domain proceeding is dismissed.[133] Condemnation authority in Alabama can be granted to, among other users, "pipeline companies" for the construction, operation, and maintenance of pipelines.[134] A pipeline company must apply to the Alabama Public Service Commission to use this condemnation authority for construction of a new pipeline.[135]

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125 15 U.S.C. § 717f(h) (2017) ("Right of eminent domain for construction of pipelines, etc.— . . . [A pipeline company] may acquire [land] by the exercise of the right of eminent domain in the district court of the United States for the district in which such property may be located, or in the State courts.").

126 *See* discussion *infra* Section IV.A.

127 *Id.*

128 *See* discussion *infra* Section VI.B.2.

129 Ala. Const. art. I, § 23 ("[B]ut private property shall not be taken for, or applied to public use, unless just compensation be first made therefor. . . . ").

130 *Id.*

131 Ala. Code § 18-1A-151 (2017).

132 *Id.* § 18-1A-172.

133 *Id.* § 18-1A-232.

134 *Id.* § 10A-21-2.05 (granting condemnation authority to "pipeline companies . . . for constructing, operating, or maintaining any work of internal improvement or public utility . . . for the construction or installation of facilities, apparatus, or equipment necessary for the operation of such . . . pipelines").

135 *Id.* § 10A-21-2.04(d) ("No proceeding for condemnation of rights-of-way for . . . pipelines . . . shall be instituted until the Alabama Public Service Commission shall have issued a certificate on application, after a public notice not exceeding 30 days as the commission shall prescribe, to the effect that in the opinion of the commission the proposed use would be in furtherance of industrial development by the company or corporation or its privies in

In Georgia, "private property shall not be taken or damaged for public purposes without just and adequate compensation being first paid."[136] Generally, the state reserves "[t]he right of eminent domain" as necessary "for the public good."[137] The exercise must be "for public use."[138] A judge in Georgia is given discretion by statute as to whether compensation should be determined by appointed assessors or a jury.[139] Similar to Alabama, "reasonable costs and expenses, including reasonable attorney, . . . fees" are only available to the landowner if the eminent domain proceeding is abandoned (by the condemning authority) or dismissed.[140]

Prior to 2016, Georgia's latest Eminent Domain Act for petroleum pipelines had been in force since 1995.[141] The 1995 Act permitted the exercise of eminent domain authority for construction of both natural gas and petroleum pipelines, but placed "special procedures and restrictions" on the use of the power for petroleum pipelines.[142] Additionally, a pipeline company was first required to obtain a CCN from the state of Georgia.[143] In 2016, the Georgia General Assembly placed a one-year moratorium on the use of state eminent domain authority by oil pipeline companies to provide the state "time to study the need for any changes to land use controls or restrictions related to pipeline companies seeking to deliver petroleum to residents of [Georgia] or other states."[144] The moratorium was lifted by the Georgia General Assembly in 2017 with the passage of House Bill 413,[145] which grants eminent domain authority to companies for construction of oil pipelines,[146] contingent upon obtaining a CCN.[147]

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this state, the duty and authority being hereby conferred on the commission to hear and set up the application.").

136 GA. CONST. art. I, § III, para. I.

137 GA. CODE ANN. § 22-1-2(a) (2017) ("The right of eminent domain is the right of this state, through its regular organization, to reassert, either temporarily or permanently, its dominion over any portion of the soil of this state on account of public exigency and for the public good.").

138 *Id.* ("Notwithstanding any other provisions of law, except as provided in Code Section 22-1-15, neither this state nor any political subdivision thereof nor any other condemning authority shall use eminent domain unless it is for public use. Public use is a matter of law to be determined by the court and the condemnor bears the burden of proof.").

139 *Id.* § 22-2-135.

140 *Id.* § 22-1-12; Pribeagu v. Gwinnett Cty., 785 S.E.2d 567, 573 (Ga. Ct. App. 2016) (holding that "attorney fees are not included as an element of just and adequate compensation under [the Georgia] Constitution's eminent domain provisions").

141 GA. CODE ANN., § 161, ch. 3, art. 4, (West 1995) (repealed 2017) (governing the state's procedures and restrictions with respect to eminent domain for petroleum pipelines).

142 *Id.* § 2.

143 *Id.* ("Before exercising the right of eminent domain as authorized in this article, a pipeline company shall first obtain from the commissioner of transportation or the commissioner's designee a certificate of public convenience and necessity that such action by the pipeline company is authorized. Such certificate shall not be unreasonably withheld.").

144 GA. CODE ANN. 557 § 1 (West 2016).

145 GA. CODE ANN. 263 (West 2017).

146 *Id.* § 22-3-81.

147 *Id.* § 22-3-83.

Florida's constitution affords greater protection from takings, providing that private property may only be taken by eminent domain "for a public purpose and with *full* compensation."[148] Florida's constitutional measure of compensation differs from other states in that it includes the right to reasonable attorney fees in all cases[149] A landowner in Florida also has a right to a jury trial in eminent domain cases.[150] Oil pipeline companies are granted the right to use Florida's eminent domain authority by statute, "subject only to reasonable regulations."[151]

IV. Case Study—Dakota Access (Crude Oil) Pipeline and Sabal Trail Transmission (Natural Gas) Pipeline

The approval and construction processes for two interstate pipelines both placed into service in the summer of 2017—the Dakota Access crude oil pipeline and the Sabal Trail Transmission natural gas pipeline—demonstrate the inconsistencies in eminent domain provisions for oil and natural gas pipelines. That is, the former did not have access to federal eminent domain authority to acquire lands necessary for construction of the crude oil pipeline, whereas the latter was granted—and used—federal eminent domain authority to condemn lands needed for construction of the natural gas pipeline.[152] Instead, the Dakota Access Pipeline was required to maneuver the eminent domain process for each state that it traversed.[153]

A. Sabal Trail Transmission (Natural Gas) Pipeline

The Sabal Trail Transmission Pipeline is a thirty-six-inch diameter[154] underground natural gas pipeline that spans 515 miles across twenty-six counties in Alabama, Georgia, and Florida.[155] The pipeline, built by Sabal Trail Transmission, LLC,[156] was pro-

148 Fla. Const. art. X, § 6.

149 Joseph B. Doerr Tr. v. Cent. Fla. Expressway Auth., 177 So. 3d 1209, 1215 (Fla. 2015) (holding that it is "fundamentally clear that full compensation under the Florida Constitution includes the right to a reasonable attorney's fee for the property owner").

150 Fla. Stat. § 73.071 (2017) ("[T]he court shall impanel a jury of 12 persons as soon as practical . . . , and giving preference to the trial of eminent domain cases over other civil actions, and submit the issue of compensation to them for determination. . . . (2) The amount of such compensation shall be determined as of the date of trial, or the date upon which title passes, whichever shall occur first. (3) The jury shall determine solely the amount of compensation to be paid").

151 *Id.* § 361.06 ("Any pipeline company which is or which intends to be a common carrier of petroleum and petroleum products and which is duly incorporated for such purpose under the laws of this state, or which is a foreign corporation and is qualified to do business in this state as a common carrier of petroleum and petroleum products shall have all the rights of eminent domain. . . .").

152 *See infra* Section IV.A.

153 *See infra* Section IV.B.

154 Sabal Trail Transmission, http://www.sabaltrailtransmission.com (last visited Nov. 17, 2018) ("Sabal Trail is comprised of 494 miles of 36-inch diameter and 21 miles of 24-inch diameter pipeline.").

155 *Id.*

posed in July 2013.[157] Sabal Trail Transmission submitted an application to FERC for a CCN in November 2014, and FERC issued the CCN in February 2016.[158]

With issuance of the FERC CCN, Sabal Trail Transmission issued a press release stating that the CCN allowed it "to proceed with final preparations to commence construction."[159] This statement could be interpreted to mean proceeding with the filing of eminent domain actions for any parcels that Sabal Trail Transmission had not yet been able to acquire via voluntary easements. "To build the pipeline, Sabal Trail [was required to] acquire easements . . . from 1,582 landowners along the route."[160] In negotiating these easements, the pipeline company stated that

> Sabal Trail does not and will not use the eminent domain authority as a negotiating tool. We will only exercise that right as a means of last resort. Sabal Trail begins each and every easement negotiation with the expectation that a mutual agreement can be reached with the landowner. In the unlikely event that Sabal Trail cannot reach an agreement with a landowner and must obtain the easement interests through the eminent domain process, a court will determine the appropriate compensation in a valuation proceeding.[161]

In fact, by mid-2016, Sabal Trail Transmission had "succeeded in negotiating purchase agreements with 1,248 of the 1,582 landowners affected by the [pipeline]."[162] For the remaining parcels, the pipeline company filed condemnation lawsuits in federal district courts in Alabama, Georgia, and Florida.[163] In each of those cases, the courts held that the pipeline company had a right to condemn the lands necessary to construct the pipeline pursuant to the CCN issued by FERC.[164] Sabal Trail Transmission

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156 *Id.* (explaining that Sabal Trail Transmission, LLC, is a joint venture of Spectra Energy Partners, NextEra Energy, and Duke Energy).

157 Lefebvre, *supra* note 5.

158 *Sabal Trail Transmission, LLC*, 154 F.E.R.C. ¶ 61,080 at P 3, 1 (2016).

159 *Sabal Trail Transmission Project Receives FERC Certificate*, UTILITY DIVE (Feb. 3, 2016), https://www.utilitydive.com/press-release/20160203-sabal-trail-transmission-project-receives-ferc-certificate/.

160 Sabal Trail Transmission, LLC v. 7.72 Acres in Lee Cty., Ala., No. 3:16-cv-173-WKW, 2016 U.S. Dist. LEXIS 77055, at *4 (M.D. Ala. June 3, 2016).

161 *FAQs: Right of Way*, SABAL TRAIL TRANSMISSION, http://www.sabaltrailtransmission.com/faq (last visited Nov. 17, 2018).

162 Sabal Trail Transmission, LLC v. 9.669 Acres of Land in Polk Cty. Fla., No. 8:16-cv-640-T-33AEP, 2016 U.S. Dist. LEXIS 62351, at *6 (M.D. Fla. May 11, 2016).

163 *See, e.g.*, Sabal Trail Transmission, LLC v. Real Estate, No. 4:16-cv-97, 2016 U.S. Dist. LEXIS 75572 (M.D. Ga. June 10, 2016); Sabal Trail Transmission, Inc. v. ± 0.7 Acres of Land in Suwannee Cty. Fla., No. 3:16-cv-300-MMH-PDB, 2016 U.S. Dist. LEXIS 74786 (M.D. Fla. June 8, 2016); Sabal Trail Transmission, LLC v. 7.72 Acres in Lee Cty., Ala., No. 3:16-cv-173-WKW, 2016 U.S. Dist. LEXIS 77055 (M.D. Ala. June 3, 2016); Sabal Trail Transmission, LLC v. Real Estate, No. 1:16cv63, 2016 U.S. Dist. LEXIS 190819 (N.D. Fla. May 10, 2016).

164 *See, e.g.*, *Sabal Trail Transmission, LLC*, 2016 U.S. Dist. LEXIS 75572; *Sabal Trail Transmission, Inc.*, 2016 U.S. Dist. LEXIS 74786; *Sabal Trail Transmission, LLC*, 2016 U.S. Dist. LEXIS 77055; *Sabal Trail Transmission, LLC*, 2016 U.S. Dist. LEXIS 190819.

completed construction of the pipeline and placed it into commercial service in July 2017.[165]

B. Dakota Access (Crude Oil) Pipeline

The Dakota Access Pipeline is a 1,172-mile underground thirty-inch diameter[166] crude oil pipeline[167] that traverses fifty counties in North Dakota, South Dakota, Iowa, and Illinois.[168] The pipeline, which was proposed in June 2014,[169] began transporting "domestically produced light sweet crude oil[170] from the Bakken and Three Forks[171] production areas in North Dakota to terminal facilities in Patoka, Illinois," in June 2017.[172] The pipeline was constructed by Dakota Access, LLC, a company formed by Energy Transfer Partners for the purpose of building the Dakota Access Pipeline.[173]

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165 Sabal Trail Transmission, http://www.sabaltrailtransmission.com (last visited Nov. 17, 2018).

166 Dakota Access, LLC, Dakota Access Pipeline Project, North Dakota Public Service Commission Combined Application for Certificate of Corridor Compatibility and Route Permit 3 (Dec. 2014.) ("The diameter of the pipeline increases incrementally at designated [locations] from 12 inches to 20, 24 and ultimately 30 inches.").

167 *The Dakota Access Pipeline Keeps America Moving Efficiently and in an Environmentally Safe Manner*, Dakota Access Pipeline Facts, https://daplpipelinefacts.com/about-the-dakota-access-pipeline/ (last visited Nov. 17, 2018).

168 *The Route*, Dakota Access Pipeline, http://landowners.daplpipelinefacts.com/about/route.html (last visited Nov. 17, 2018).

169 Energy Transfer Partners, L.P., *supra* note 2.

170 Francis S. Manning & Richard E. Thompson, Oilfield Processing of Petroleum: Crude Oil 145 (1995) (describing the process of "sweetening" oil, which consists of removing most of the hydrogen sulfide and carbon dioxide from the oil. "These components are removed because they can form acidic solutions when they contact water, which will cause corrosion problems in . . . pipelines."). *Sweetening*, Schlumberger: Oilfield Glossary, http://www.glossary.oilfield.slb.com/Terms/s/sweetening.aspx (last visited Nov. 17, 2018). The term "sweet crude oil" refers to "[o]il containing [negligent] amounts of hydrogen sulfide and carbon dioxide." *Sweet Crude Oil*, Schlumberger: Oilfield Glossary, http://www.glossary.oilfield.slb.com/Terms/s/sweet_crude_oil.aspx (last visited Nov. 17, 2018).

171 Stephanie B. Gaswirth et al., U.S. Geological Survey, Fact Sheet 2013–3013, Assessment of Undiscovered Oil Resources in the Bakken and Three Forks Formations, Williston Basin Province, Montana, North Dakota, and South Dakota 1 (2013) (explaining that the Bakken and Three Forks geologic formations underlie parts of Montana, North Dakota, South Dakota, and Canada.). An estimated 7.4 billion barrels of oil and 6.7 trillion cubic feet of natural gas are located in the Bakken and Three Forks formations. *Id.* at 3.

172 *Energy Transfer Announces the Bakken Pipeline is in Service Transporting Domestic Crude Oil from the Bakken/Three Forks Production Areas*, Business Wire (Jun. 1, 2017 8:00 AM EST), https://www.businesswire.com/news/home/20170601005537/en/Energy-Transfer-Announces-Bakken-Pipeline-Service-Transporting.

173 *Who is Dakota Access, LLC?*, Dakota Access Pipeline Facts, https://daplpipelinefacts.com/dt_articles/dakota-access-llc/ (last accessed Nov. 17, 2018).

Dakota Access states that "more than 1,000 certificates, permits and approvals were granted for the pipeline . . . – about one permit or approval for every mile of pipeline."[174] While a comprehensive list of these permits and approvals is not available, it most certainly includes approvals from the U.S. Army Corps of Engineers (USACE), the North Dakota Public Service Commission, the South Dakota Public Utilities Commission, the Iowa Utilities Board, and the Illinois Commerce Commission.[175]

Dakota Access filed a permit application with the USACE for all crossings of "Waters of the United States," which are regulated by the USACE under Section 404 of the Clean Water Act and under Sections 10 and 14 of the Rivers and Harbors Act of 1899.[176] These approvals by the USACE cover 202 jurisdictional water crossings along thirty-seven miles of the pipeline route.[177] The Section 404 and Section 10/14 permits from the USACE also trigger coordination and study requirements under other federal statutes, such as the National Environmental Policy Act and the National Historic Preservation Act.[178] However, the permits do not provide eminent domain authority to the pipeline company.[179] For an oil pipeline, that power must be obtained from the state.[180]

In North Dakota, Dakota Access filed a Combined Application for Certificate of Corridor Compatibility and Route Permit with the North Dakota Public Service Commission.[181] In South Dakota, the pipeline company submitted an application to the South Dakota Public Utilities Commission for a Facility Permit under the Energy Conversion and Transmission Facility Act.[182] In Iowa, the company filed a Petition for Hazardous Liquid Pipeline Permit with the Iowa Utilities Board.[183] And in Illinois, it applied to the Illinois Commerce Commission for a CCN and Certificate in Good Standing.[184]

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174 *What Was the Legal Approval Process for the Dakota Access Pipeline?*, DAKOTA ACCESS PIPELINE FACTS, https://daplpipelinefacts.com/dt_articles/what-was-the-legal-approval-process-for-the-dakota-access-pipeline/ (last visited Nov. 17, 2018).

175 *Id.* (explaining that the remainder of the one thousand plus approvals probably consists of local regulatory agency permits and landowners' approvals, which likely comprises the bulk of the total). For a sampling of these local regulatory agency permits and approvals *see, e.g.*, Dakota Access, LLC, Permits, Case No. PU-14-842, Docket No. 143 (Jan. 21, 2016), https://psc.nd.gov/database/documents/14-0842/143-010.pdf; Dakota Access, LLC, Permits & Approvals, Case No. PU-14-842, Docket No. 154 (Apr. 4, 2016), https://psc.nd.gov/database/documents/14-0842/154-010.pdf.

176 *Dakota Access Pipeline*, U.S. ARMY CORPS OF ENGINEERS, http://www.usace.army.mil/Dakota-Access-Pipeline (last visited Nov. 17, 2018).

177 *Id.*

178 *Id.*

179 Clean Water Act § 404, 33 U.S.C. § 1344 (2018); Rivers and Harbors Act of 1899, 33 U.S.C. § 403 (2018).

180 *See* Klass & Meinhardt, *supra* note 23, at 963.

181 DAKOTA ACCESS, LLC, COMBINED APPLICATION FOR CERTIFICATE OF CORRIDOR COMPATIBILITY AND ROUTE PERMIT, *supra* note 166, at 1.

182 DAKOTA ACCESS, LLC, DAKOTA ACCESS PIPELINE PROJECT ENERGY TRANSMISSION FACILITY: SDCL 49-41B 1 (Dec. 2014).

183 IOWA UTILITIES BOARD, PETITION FOR HAZARDOUS LIQUID PIPELINE PERMIT1 (Jan. 20, 2015).

184 ILL. COM. COMM'N, DAKOTA ACCESS, LLC: APPLICATION FOR CERTIFICATE IN GOOD STANDING AND OTHER RELIEF 1 (filed Dec. 22, 2014) (assigning File No. 14-0754).

With each of these applications to the corresponding state authority, Dakota Access also requested eminent domain authority to acquire land along the pipeline route.[185] The pipeline company stated the following in the North Dakota application regarding eminent domain:

> Dakota Access exhausts all reasonable efforts to avoid exercising any rights it may be granted regarding eminent domain due to the fact that such exercises are costly and inefficient for both parties involved. Nonetheless, experience suggests that authority to utilize such rights in proper circumstances, such as a landowner's refusal to negotiate in good faith or a landowner's refusal to respond to multiple forms of contact, may be essential. Such authority would further enable the construction of the pipeline along a route that is most efficient for all facets of the project including environmental concerns, cultural concerns, engineering compatibility, and public interest.[186]

The pipeline company further explained the purpose and need for the use of eminent domain authority to "remove [landowners'] incentive to hold out and engage in uneconomic rent-seeking, and diminish the potential monopoly power of a holdout landowner."[187]

In fact, Dakota Access did not use eminent domain authority in North Dakota.[188] The North Dakota Public Service Commission issued a Certificate of Corridor Compatibility and Route Permit for the Dakota Access Pipeline.[189] However, the final order did not grant eminent domain authority for the pipeline.[190] Dakota Access secured volun-

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185 *See, e.g.*, *id.*

186 DAKOTA ACCESS, LLC, COMBINED APPLICATION FOR CERTIFICATE OF CORRIDOR COMPATIBILITY AND ROUTE PERMIT, *supra* note 166, at 16. Similar language was used by Dakota Access in the applications for use of eminent domain in South Dakota, Iowa, and Illinois. *See* ENERGY TRANSMISSION FACILITY, *supra* note 182, at 8 ("Dakota Access is committed to working with individual landowners along the route to reduce the need for eminent domain . . . ."); APPLICATION FOR CERTIFICATE IN GOOD STANDING AND OTHER RELIEF, *supra* note 184, at 2 ("[Dakota Access] does not, . . . anticipate much, if any, need to acquire right-of-way by eminent domain. It is the policy and intention of [Dakota Access] to acquire any necessary interests in real estate through negotiated agreements with landowners to the maximum extent possible, and that acquisition of easements by eminent domain would be sought only when negotiation is refused or all reasonable economic offers have been rejected. However, there exists sufficient potential that [Dakota Access] will be unable to acquire all easements through bilateral negotiations to warrant granting eminent domain authority in this proceeding, as provided [by Illinois statute].").

187 APPLICATION FOR CERTIFICATE IN GOOD STANDING AND OTHER RELIEF, *supra* note 184, at 39.

188 *See* Motion for Clarification of Supplemental Findings of Fact, Conclusions of Law and Order, North Dakota Public Service Comm'n., No. PU-14-842, at 3 (May 24, 2016), https://psc.nd.gov/database/documents/14-0842/189-020.pdf.

189 Findings of Fact, Conclusions of Law and Order, North Dakota Public Service Comm'n, No. PU-14-842, at 114 (Jan. 20, 2016), https://psc.nd.gov/database/documents/14-0842/134-040.pdf.

190 *See id.*

tary easements from approximately 800 landowners[191] whose property would be crossed by the pipeline.[192] Later, twenty-two of these landowners in North Dakota filed suit in federal court alleging that "numerous misrepresentations [were made] to them during the easement negotiation process."[193] The case was dismissed by the court, and judgment on the pleadings was granted to Dakota Access.[194]

Similarly, Dakota Access was also able to successfully acquire voluntary easements for all properties in South Dakota.[195] The South Dakota Public Utilities Commission granted an Energy Facility Permit to Dakota Access for construction of the pipeline.[196] In the Final Decision and Order, the Public Utilities Commission concluded that "[t]he Commission has no authority over condemnation or eminent domain."[197] While obtaining this permit is a prerequisite to exercising eminent domain authority for acquiring land for construction of a pipeline, South Dakota law "requires that these issues be brought before the circuit court."[198] That is, in South Dakota, the grant of eminent domain authority is made by the courts and not the Public Utilities Commission.[199] Dakota Access did not pursue this option in South Dakota and instead "obtained voluntary easements from every landowner in its path."[200]

Dakota Access did, however, exercise eminent domain authority in Iowa.[201] The Iowa Utilities Board, in granting a Hazardous Liquid Pipeline Permit, determined that the Dakota Access Pipeline would "promote the public convenience and necessity as required by Iowa Code."[202] The Utilities Board quoted Dakota Access in its Final Order and Decision as stating that "the company will negotiate voluntary easements 'up until

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191 *North Dakota landowners sue over Dakota Access easements*, CHI. TRIB., Jan. 19, 2017 9:26 AM.

192 Motion for Clarification of Supplemental Findings of Fact, Conclusions of Law and Order, North Dakota Public Service Comm'n, No. PU-14-842, at 3 (May 24, 2016), https://psc.nd.gov/database/documents/14-0842/189-020.pdf.

193 Olin v. Dakota Access, LLC, No. 1:17-cv-007, 2017 U.S. Dist. LEXIS 166924, at *4 (D.N.D. Oct. 10, 2017).

194 *Id.* at *21.

195 John Hult, *Can the Dakota Access Pipeline be stopped?*, ARGUS LEADER (Nov. 4, 2016 4:31 PM CT), http://www.argusleader.com/story/news/2016/11/04/can-dakota-access-pipeline-stopped/93282106/.

196 *See South Dakota Public Utilities Commission Frequently Asked Questions about the Dakota Access Pipeline*, S. DAKOTA PUB. UTIL. COMM'N (Aug. 9, 2017), https://puc.sd.gov/Dockets/HydrocarbonPipeline/2014/hp14-002faq.aspx.

197 Final Decision & Order, In the Matter of the Application of Dakota Access, LLC for an Energy Facility Permit to Construct the Dakota Access Pipeline, Docket No. HP14-002, at 24 (Dec. 14, 2015).

198 *Id.*

199 S.D. CODIFIED LAWS § 21-35-1 (2017) ("In all cases where any [entity exercises] the privilege of taking . . . private property for public use, . . . it shall file a petition . . . praying that the just compensation to be made for such property may be ascertained by a jury.").

200 Hult, *supra* note 195.

201 *In re* Dakota Access, LLC, NO. HLP-2014-0001, at 156–58, att. 1–2 (Iowa Utilities Bd. Mar. 10, 2016).

202 *Id.* at 152.

we are in the courthouse door.'"[203] But the Utilities Board granted eminent domain authority to the pipeline company for condemnation of 245 parcels of land.[204] Approximately seven percent of these owners sued over the grant of eminent domain authority.[205] The Utilities Board also denied use of eminent domain authority to acquire fourteen parcels, thirteen of which appear to be publicly-owned land.[206]

Similarly, Dakota Access also used eminent domain authority in Illinois.[207] The pipeline was proposed to cross 858 parcels of land.[208] The Illinois Commerce Commission, in granting a CCN for the Dakota Access Pipeline, authorized use of eminent domain for condemnation of 179 of those parcels.[209] Specifically, the Commerce Commission found "that the Pipeline is necessary for the public convenience and necessity [and concluded] that Dakota Access should be granted eminent domain authority where necessary to acquire the easements needed to construct the Pipeline."[210] Further, the Commerce Commission limited the use of eminent domain only to those "parcels upon which Dakota Access is unable to acquire the necessary easements through good faith negotiations."[211]

Thus, Dakota Access was granted eminent domain authority in Iowa and Illinois to condemn the land of property owners who refused to negotiate voluntary easements for the land needed to construct the crude oil pipeline.[212] However, Dakota Access did not exercise eminent domain in North Dakota or South Dakota and instead secured easements voluntarily from all of the landowners along the pipeline route.[213]

V. Potential Justifications for and Impacts of the Differences in Eminent Domain Authority for Construction of Oil and Natural Gas Pipelines

"The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, *in all fairness and justice*, should be borne by the public as a whole."[214] But, the Supreme Court noted, "[t]he concepts of

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203 *Id.* at 108.
204 *Id.* at 156–158.
205 Gregor Aisch & K.K. Rebecca Lai, *The Conflicts Along 1,172 Miles of the Dakota Access Pipeline*, N.Y. Times, last updated Mar. 20, 2017.
206 Final Decision & Order, *In re Dakota Access, LLC*, NO. HLP-2014-0001, at 158.
207 Final Order, Dakota Access, LLC, No. 14-0754, at app. C (Ill. Com. Comm'n Dec. 16, 2015).
208 *Id.* at 34.
209 *Id.* at app. C.
210 *Id.* at 51.
211 *Id.*
212 *In re Dakota Access, LLC*, NO. HLP-2014-0001, at 156–58; Final Order, *Dakota Access, LLC*, No. 14-0754, at app. C.
213 Motion for Clarification of Supplemental Findings of Fact, Conclusions of Law and Order, North Dakota Public Service Comm'n, No. PU-14-842, at 3 (May 24, 2016), https://psc.nd.gov/database/documents/14-0842/189-020.pdf; Hult, *supra* note 195.
214 Armstrong v. United States, 364 U.S. 40, 80 (1960) (emphasis added).

'fairness and justice' that underlie the Takings Clause, of course, are less than fully determinate."[215] One legal scholar even noted that any attempt to provide a definition of these concepts would be "unnecessary and foolhardy."[216] So for the purposes of this Note, the terms "fairness and justice" simply look at the issues of equality and impartiality. That is, for two types of (seemingly similar) pipelines, why is the process of obtaining the necessary land for construction not the same?

The question, then—for the purposes of this Note—is *not* whether a private (i.e., non-government) natural gas pipeline company taking private property from individuals with the blessing of the federal government (i.e., a FERC CCN) comports with ideas of fairness and justice.[217] Assuming fairness and justice are satisfied in the context of takings for natural gas pipelines, why are oil pipeline companies not granted the same power of eminent domain by the federal government? More precisely, if this exercise of federal eminent domain authority by natural gas pipeline companies is an appropriate use of the federal government's power to take private property, does a valid distinction exist between oil and natural gas pipelines that justifies the discrepancy in the law?

A. Distinctions Between Oil and Natural Gas Pipelines That Might Justify Federal Eminent Domain for Natural Gas Pipelines But Not Oil Pipelines

Perhaps the explanation for the discrepancy between the laws underpinning construction of oil and natural gas pipelines is simple, even if not necessarily justifiable. The Hepburn Amendment and the Natural Gas Act originated at very different times and under drastically different circumstances.[218] A pair of energy law scholars note the rocky beginnings of oil pipeline regulation, observing that "today's oil pipeline legislation was crafted in the very early years of the last century to deal with a highly public dispute

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215 Tahoe-Sierra Pres. Council v. Tahoe Reg'l Planning Agency, 535 U.S. 302, 336 (2002).

216 Russell Engler, *And Justice for All—Including the Unrepresented Poor: Revisiting the Roles of the Judges, Mediators, and Clerks*, 67 FORDHAM L. REV. 1987, 1989 n.17 (1999) ("It is unnecessary because the profession repeatedly invokes the goals of 'fairness and justice' without having provided a universal definition of the terms.").

217 The constitutionality of a private corporation exercising eminent domain has been litigated in the past. *See, e.g.*, Parkes v. Natural Gas Pipe Line Co., 249 P.2d 462, 467-68 (1952) (quoting Nichols on Eminent Domain, p. 130, §?2.15 (Matthew Bender, 3rd ed.) holding that "[t]he power of the United States to authorize the exercise of eminent domain within the limits of the several states is not limited to the taking of property by the government itself for its own proper uses, but includes the right to delegate the power of eminent domain to corporations and other agencies for the purpose of carrying out any public use within the sphere of federal control"). The most recent challenge to the constitutionality of the eminent domain provision in the Natural Gas Act was filed in September 2017. Petition for Declaratory and Injunctive Relief, Bold Alliance v. Fed. Energy Reg. Comm'n, No. 17-1822 (D.C. Cir. Sept. 5, 2017).

218 Klass & Meinhardt, *supra* note 23, at 950 ("These differences in means of transportation and regulation of that transportation arose in part because of the physical properties of each resource but also because each regulatory system developed during different political and economic times and in response to different constellations of actors, assumptions regarding the scarcity or availability of the resource in question, the role of federal and state governments in regulating energy transportation, and varying concerns over monopoly power.").

between Teddy Roosevelt and John D. Rockefeller."[219] In fact, just a half decade after enactment of the Hepburn Amendment, Standard Oil (Rockefeller's oil company) and Rockefeller individually were found guilty of conspiring to restrain trade and attempting to monopolize the oil industry.[220] Maybe the politics of the time simply did not lend to the granting of federal eminent domain authority for construction of oil pipelines.

On the other hand, the objectives of the Natural Gas Act were aimed at "inducing investments" in the natural gas industry while also protecting consumers by stabilizing prices.[221] With this purpose as a backdrop, Congress may have included the federal eminent domain provision in the Act as a way of instilling confidence in investors that natural gas pipeline companies would not face obstacles[222] in purchasing the necessary pipeline easements. Also a relevant point, "[t]he legislative history of the Natural Gas Act indicates that it was originally intended to apply only to interstate pipelines."[223] Thus, the use of federal takings power would reasonably be more appropriate as applied exclusively to pipelines that were proposed across state boundaries (and thus likely to face multi-jurisdictional challenges).

If the explanation for the differences in eminent domain authority for construction of oil and natural gas pipelines does not originate with the legislation governing pipelines, then maybe a substantive reason for the distinction exists. Klass and Meinhardt suggest that this reason lies in the physical composition of oil versus natural gas; that is, "oil has physical properties that allow producers to transport it by multiple means: rail, pipeline, barge, and ship[,]" whereas the physical makeup of natural gas limits its transportation conduit to pipelines alone.[224] Based on this reasoning, Klass and Meinhardt conclude that the "federal system is critical to transporting natural gas effectively even while the lack of such a system for transporting oil does not appear to present problems for pipeline companies."[225]

The question remains whether there may be any further explanations for why federal takings power is granted for construction of natural gas pipelines and not for construction of oil pipelines. Potential alternative explanations include a greater public need for natural gas versus oil, or a greater number of interstate natural gas pipeline routes versus interstate oil pipeline routes.[226] First, reviewing domestic energy production and consumption, both oil and natural gas clearly dominate the energy market in the United

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219 Makholm & Olive, *supra* note 19, at 410.

220 Standard Oil Co. v. United States, 221 U.S. 1, 74–75 (1911).

221 Vernon M. Turner, *Natural Gas-Impact of Deregulation or Reregulation on Sales Contracts*, 29 Rocky Mtn. Min. L. Inst. 12–1 (1988) ("Objectives of the Natural Gas Act were two-fold- First, it was intended to stabilize and legitimize prices charged by pipelines to consumers. Second, it was intended to provide financial security for pipelines by inducing investments during a period of scarce capital.").

222 Or at least those obstacles would be mitigated by the grant of eminent domain authority.

223 Turner, *supra* note 221.

224 Klass & Meinhardt, *supra* note 23, at 1015–16.

225 *Id.* at 1016.

226 I did not consider a safety reason for the differences in federal regulation of oil and natural gas pipelines because even if a safety distinction justified federal regulation of one and not the other type of pipeline *after* construction, it would still not explain the inconsistency of eminent domain provisions for *construction* of these pipelines.

States.[227] In 2016, natural gas comprised thirty-three percent of total domestic energy production versus twenty-eight percent for oil.[228] For total energy consumption however, oil is predominant at thirty-seven percent of the total, whereas natural gas accounts for twenty-nine percent of the total.[229] Based on this data alone, domestic energy demand does not appear to explain a greater public need for natural gas versus oil.[230] Second, considering the number of approved major natural gas pipeline projects between January 1, 2013 and October 31, 2017, the large majority of routes are intrastate.[231] Less than thirty percent of the natural gas pipelines approved during this time period were interstate routes.[232] Because construction of oil pipelines is not federally regulated,[233] no compiled data exists regarding the proportion of interstate versus intrastate routes. So even though the Natural Gas Act was originally intended to govern interstate natural gas pipelines, the majority of pipelines approved by FERC under the Natural Gas Act are, in fact, intrastate routes.[234]

B. RESULTING EFFECTS OF FEDERAL VERSUS STATE EMINENT DOMAIN AUTHORITY

Unable to find a definitive explanation for why natural gas pipelines are granted federal eminent domain authority while oil pipelines are not, this Note turns to the practical impacts of this inconsistency.

1. PRELIMINARY IMPACTS TO PIPELINE COMPANIES

Klass and Meinhardt conclude that the regulatory framework "for oil pipelines at the state level and gas pipelines at the federal level [is] sufficient [at both levels] to facilitate

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227 *U.S. Energy Facts Explained; Consumption and Production*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/?page=us_energy_home (last visited Nov. 17, 2018).

228 *U.S. Total Energy Statistics*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/?page=us_energy_home (last visited Nov. 17, 2018). The total for oil includes crude oil and natural gas plant liquids because this is the way the resources are categorized by the U.S. Energy Information Administration. *Id.*

229 *Id.*

230 However, the largest energy source of electricity generation in the United States in 2016 was natural gas. *Electricity Explained, Electricity in the United States, Basics*, U.S. ENERGY INFO. ADMIN., https://www.eia.gov/energyexplained/index.cfm?page=electricity_in_the_united_states (last visited Nov. 17, 2018) ("Natural gas was the source of about 34% of U.S. electricity generation in 2016."). Perhaps the need for instantaneous natural gas supply to meet fluctuations in electricity demand plays a role in shaping the regulatory framework favoring natural gas pipeline infrastructure over oil pipeline infrastructure.

231 The year that the Sabal Trail Transmission Pipeline was proposed. Ben Lefebvre, *supra* note 5.

232 *Approved Major Pipeline Projects (2009-Present)*, FED. ENERGY REG. COMM'N, https://www.ferc.gov/industries/gas/indus-act/pipelines/approved-projects.asp (last visited Nov. 17, 2018) (illustrating that forty-four of the 149 major natural gas pipelines approved by FERC during this period were interstate routes.).

233 *Environment*, FED. ENERGY REG. COMM'N, https://www.ferc.gov/industries/oil/enviro.asp (last visited Nov. 17, 2018).

234 *See, e.g.*, *Approved Major Pipeline Projects (2009-Present)*, *supra* note 232.

construction of new oil and gas pipelines when market forces allow."[235] More specifically, "eminent domain laws do not appear to act as major obstacles to infrastructure expansion at either the state level for interstate oil pipelines or at the federal level for interstate natural gas pipelines."[236] The growth of the oil and natural gas pipelines industries supports this conclusion—the total mileage of oil and natural gas pipelines in the United States increased by 9.5% over the last five-year period and by 19.5% over the last ten-year period for which data is available.[237] Breaking this down, crude oil pipeline mileage increased by 22% and 36.8% over the respective five- and ten-year periods,[238] and natural gas pipeline mileage increased by 13.1% and 27.9%, respectively, from 2010 and 2005 mileage totals.[239]

However, this is not to say that the obstacles to entry are not drastically different for oil and natural gas pipeline companies. For construction of a new pipeline, a natural gas company need only obtain one federal approval to exercise federal eminent domain authority—a FERC CCN.[240] And in fact, that is the path that the Sabal Trail Transmission pipeline took to construct the natural gas pipeline.[241] On the other hand, Dakota Access was required to navigate the regulatory process with the U.S. Army Corps of Engineers and four states (North Dakota, South Dakota, Iowa, and Illinois).[242] All told, Dakota Access had to obtain over 1,000 permits and approvals to construct the oil pipeline.[243] On its face, this discrepancy between procedures seems patently unfair to oil pipeline companies—a conclusion that is reached without yet considering the full inequity of eminent domain authority.

2. Determination of Compensation and the Right to a Jury Trial

Once all of the required authorizations are obtained by a pipeline company (oil or natural gas), the key practical difference in the following stage lies in the varying process for determining compensation in the two scenarios (federal versus state eminent domain).[244] At the federal level, for natural gas pipelines, a pipeline company that has been

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235 Klass & Meinhardt, *supra* note 23, at 1015.

236 *Id.*

237 Association of Oil Pipelines, *supra* note 25, at 6 ("Total U.S. pipeline mileage of 199,243 miles in 2014 reflected a 6,826 mile or 3.5% increase over 2013, a 17,257 mile or 9.5% increase over the last 5 years, and a 32,483 mile or 19.5% increase over the last 10 years.").

238 *Id.* ("Crude oil pipelines stretched 66,649 miles across the U.S. in 2014, up 5,562 miles or 9.1% over 2013, a 12,018 mile or 22.0% increase over the last 5 years, and a 17,917 mile or 36.8% increase over the last 10 years.").

239 *Id.* ("U.S. pipelines carrying natural gas liquids totaled 65,595 miles in 2014, 2,827 miles or 4.5% above 2013 mileage, 7,615 miles or 13.1% above 2010 levels, and 14,311 miles or 27.9% above 2005 mileage.").

240 15 U.S.C. § 717f(h) (2018).

241 Sabal Trail Transmission, LLC, 154 F.E.R.C. ¶ 61,080 at 2, 1 (2016).

242 *What Was the Legal Approval Process for the Dakota Access Pipeline?*, Dakota Access Pipeline Facts, https://daplpipelinefacts.com/dt_articles/what-was-the-legal-approval-process-for-the-dakota-access-pipeline/ (last visited Nov. 17, 2018).

243 *Id.*

244 Others have examined the "injustices" of varying compensation standards for eminent domain takings. *See, e.g.*, Marisa Fegan, *Just Compensation Standards and Eminent Domain In-*

granted a FERC CCN need only demonstrate that it "is unable to agree with the owner of property to the compensation to be paid" for the land needed for construction of a pipeline.[245] This clause appears at least facially to remove any incentive to negotiate a settlement with landowners, which *could* theoretically in and of itself result in disproportionate compensation to landowners when oil pipeline companies do not have the same option of exercising federal eminent domain authority.[246]

For a federal condemnation action, a landowner also has a right to a jury trial,[247] except that a federal judge has the power to appoint a three-person commission to determine compensation in lieu of a jury.[248] This value was previously defined as "fair market value."[249] This definition, paired with the American Rule,[250] which typically denies an award of attorney's fees, can be substantially less than the compensation value in a state eminent domain proceeding.

For example, consider Florida's constitutional measure of compensation for a taking—*full* compensation,[251] which includes "the right to a reasonable attorney's fee."[252]

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justices: An Underexamined Connection and Opportunity for Reform, 6 CONN. PUB. INT. L.J. 269 (2007); Steven D. McGrew, *Selected Issues in Federal Condemnations for Under-Ground Natural Gas Storage Rights: Valuation Methods, Inverse Condemnation, and Trespass*, 51 CASE W. RES. 131, 183 (2000) (suggesting an amendment to the Natural Gas Act "provid[ing] specifically that state substantive law should be followed in determining value in condemnation actions").

245 15 U.S.C. § 717f(h) (2017).

246 Very little empirical evidence exists in the literature on the subject of eminent domain compensation. Yun-chien Chang, *An Empirical Study of Compensation Paid in Eminent Domain Settlements: New York City, 1990-2002*, 39 J. LEGAL STUD. 201, 201 ("There is a vacuum of empirical studies on eminent domain compensation."). Two empirical studies on eminent domain compensation conclude that settlements result in both overcompensation (above fair market value) and under-compensation (below fair market value), dependent on a variety of factors. *Id.* ("Owners of residential properties and non-residential properties alike often received extreme compensations that are less than 50 percent or more than 150 percent of [fair market value]."). *See also* Patricia Munch, *An Economic Analysis of Eminent Domain*, 84 J. POL. ECON. 473 (1976). Therefore, it is not unreasonable to surmise that settlements with landowners may not result in the same compensation as would be awarded when a pipeline company has the option of exercising eminent domain authority in federal court.

247 FED. R. CIV. P. 71.1(h)(1)(B).

248 *Id.* at 71.1(h)(2)(A) ("If a party has demanded a jury, the court may instead appoint a three-person commission to determine compensation because of the character, location, or quantity of the property to be condemned or for other just reasons.").

249 United States v. Miller, 317 U.S. 369, 374 (1943).

250 Baker Botts L.L.P. v. ASARCO LLC, 135 S. Ct. 2158, 2164 (2015) ("Our basic point of reference when considering the award of attorney's fees is the bedrock principle known as the American Rule: Each litigant pays his own attorney's fees, win or lose, unless a statute or contract provides otherwise.") (quoting Hardt v. Reliance Std. Life Ins. Co., 560 U.S. 242, 252–53 (2010)).

251 FLA. CONST. art. X, § 6(a).

252 Joseph B. Doerr Tr. v. Cent. Fla. Expressway Auth., 177 So. 3d 1209, 1215 (Fla. 2015) (holding that it is "fundamentally clear that full compensation under the Florida Constitution includes the right to a reasonable attorney's fee for the property owner") (citing

The net compensation to a landowner whose property is being condemned for construction of a pipeline could be expected to vary drastically under the federal process versus the state process in Florida.[253] Thus, a property owner in Florida whose land was being condemned for construction of a natural gas pipeline would likely receive considerably less than that person would receive for the same exact land being condemned for construction of an oil pipeline.[254] This result cannot be considered fair or just.

Despite this problematic potential scenario, federal judges adjudicating condemnation cases for the Sabal Trail Transmission pipeline recently narrowed the gap between the federal and state values of compensation due to landowners.[255] Judge Mark Walker, U.S. District Judge for the Northern District of Florida, recently held that *state* and not federal substantive law governs the compensation question in a federal eminent domain proceeding initiated pursuant to the Natural Gas Act when a private entity—and not the government—is the party exercising that power.[256] Judge Timothy Corrigan, U.S. District Judge for the Middle District of Florida, shortly thereafter adopted Judge Walker's "well-reasoned opinion" in application to the Sabal Trail condemnation proceedings active in his court.[257]

Just two months after the opinions from Judge Walker and Judge Corrigan, Chief Judge Clay Land, U.S. District Judge for the Middle District of Georgia, appeared to hold conversely—summarily citing *United States v. Miller* in four Sabal Trail Transmission pipeline cases.[258] In these opinions, Chief Judge Land did not provide any discussion directly on the issue of whether state or federal law governs the compensation question.

Tosohatchee Game Pres., Inc., v. Cent. & S. Fla. Flood Control Dist., 265 So.2d 681, 684–85 (Fla. 1972)).

253 The total net compensation awarded to landowners for condemnation would obviously depend upon each state's definition of compensation and also whether each state grants a right to a jury trial in takings cases.

254 This result would vary depending on each state's definition of compensation for eminent domain takings and whether or not the condemnee has a right to a jury trial and/or is entitled to attorney's fees, as defined in *supra* Section III.C.

255 *See, e.g.*, Sabal Trail Transmission, LLC v. +/- 1.127 Acres of Land, No. 3:16-cv-263-J-20PDB, 2017 U.S. Dist. LEXIS 92003, at *19–20 (M.D. Fla. June 15, 2017) (holding that Florida substantive law provided the measure of compensation, which includes attorney's fees and reasonable expert costs.).

256 Sabal Trail Transmission, LLC v. Real Estate, 255 F.Supp.3d 1213, 1221-22 (N.D. Fla. 2017) (holding that "state substantive law governs the compensation measure in eminent-domain condemnation proceedings brought by private parties against private property owners."), *corrected by* No. 1:16-cv-063-MW-GRJ, 2017 U.S. Dist. LEXIS 99370 (N.D. Fla. 2017) (to correct scrivener's error).

257 *Sabal Trail Transmission, LLC*, 2017 U.S. Dist. LEXIS 92003, at *19 ("This Court adopts Judge Walker's opinion and will follow its reasoning.").

258 *Sabal Trail Transmission, LLC*, 2017 U.S. Dist. LEXIS 99370, at *2; Sabal Trail Transmission, LLC v. Real Estate, 2017 U.S. Dist. LEXIS 133015, at *2 (M.D. Ga. Aug. 21, 2017); Sabal Trail Transmission, LLC v. Real Estate, No. 4:16-cv-125, 2017 U.S. Dist. LEXIS 133017, at *3 (M.D. Ga. Aug. 21, 2017); Sabal Trail Transmission, LLC v. Real Estate, No. 4:16-cv-119, 2017 U.S. Dist. LEXIS 133018, at *3 (M.D. Ga. Aug. 21, 2017). At the time of Chief Judge Land's set of opinions, all released the same day with the same language citing *Miller*, Judge Walker had previously thoroughly addressed and distinguished *Miller* because "[i]n *Miller* the federal government—not a private party—was the condemner."

However, Chief Judge Land essentially overruled these cases the following year, when he issued an opinion decisively holding "that Georgia law should be adopted as the federal rule to determine the measure of just compensation in . . . Natural Gas Act condemnation proceeding[s]."[259] With this opinion, Judge Land confirmed agreement within the Eleventh Circuit—state substantive law controls in the compensation question in federal eminent domain proceedings under the Natural Gas Act when a private entity is exercising that power.

In the seminal case to decide the issue within the Eleventh Circuit, Judge Walker also held that a jury—and not a commission—would determine the amount of compensation under Florida's constitutional measure of full compensation.[260] As a practical matter, Judge Walker cited reasons of inefficiency and expense of empaneling commissions.[261] Judge Walker also noted that, "[i]n the bulk of states a land owner is entitled eventually to a jury trial."[262] This holding therefore brings federal eminent domain proceedings one step closer to the process guaranteed in a state eminent domain proceeding. This conclusion is further bolstered by Judge Walker's comment in the Sabal Trail case before him—"[A]t an even more basic level, property rights have long been recognized as sacred and fundamental[,]" and those rights will not be taken away without a jury trial.[263] Judge Walker appears to recognize the inherent unfairness in the existing law and is attempting to balance that inequity.[264]

Judge Corrigan followed suit on the issue of a jury trial for Natural Gas Act eminent domain takings, adopting Judge Walker's reasoning, and holding that the court would "honor[ ] the landowners' request that juries should be employed."[265] Judge Keith Watkins, U.S. District Judge for the Middle District of Alabama, also adopted Judge Walker's and Judge Corrigan's reasoning in holding that juries—not a commission—would hear the issue of compensation, noting that the "reasoning applies with at least as much force in the instant litigation."[266]

But not all courts have agreed with the outcome of the district court cases in the Eleventh Circuit. Judge Richard Caputo, U.S. District Judge for the Middle District of Pennsylvania, in holding contrary to the district court judges in Florida on the issue of which substantive law governs just compensation under the Natural Gas Act, noted that

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Sabal Trail Transmission, LLC v. Real Estate, 255 F. Supp. 3d 1213, 1220-21 (N.D. Fla. 2017).

259 Sabal Trail Transmission, LLC v. Real Estate, No. 4:16-cv-097, 2018 U.S. Dist. LEXIS 84560, at *3 (M.D. Ga. May 21, 2018).

260 *Id.* at *18 ("This Court tries all kinds of cases before a jury—even the most trivial ones. So, no matter how busy this Court's docket is, it will not deprive Defendants of their property rights without the same opportunity.").

261 *Id.* at *17 ("[Appointing a commission] would unnecessarily waste the parties' time and money.")

262 *Id.* at *17–18 (citing FED. R. CIV. P. 71.1, advisory committee's note).

263 *Id.* at *18.

264 *See id.*

265 Sabal Trail Transmission, LLC v. +/- 1.127 Acres of Land, No. 3:16-cv-263-J-20PDB, 2017 U.S. Dist. LEXIS 92003, at *20 (M.D. Fla. June 15, 2017).

266 Sabal Trail Transmission, LLC v. 7.72 Acres in Lee Cty., No. 3:16-CV-173-WKW, 2017 U.S. Dist. LEXIS 137415, at *3 (M.D. Ala. Aug. 28, 2017).

he had previously ruled on the issue.[267] At the time of Judge Caputo's decision, "neither the United States Supreme Court nor the United States Court of Appeals for the Third Circuit ha[d] addressed whether federal or state law should be utilized in calculating just compensation in condemnation actions under the Natural Gas Act."[268] The Third Circuit subsequently addressed the issue, holding that "[f]ederal law governs the measure of just compensation owed to landowners in condemnation actions under the Natural Gas Act."[269]

These cases highlight a distinct circuit split.[270] And the Eleventh Circuit has very recently declined to rule on the question, stating that the court "need not decide whether federal common law or state law" supplies the rule for compensation because the district court decision on appeal before the court "did not finally determine the

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267 Tenn. Gas Pipeline Co., L.L.C. v. Permanent Easement for 7.053 Acres, No. 3:12-CV-01477, 2017 U.S. Dist. LEXIS 139503, at *10 (M.D. Pa. Aug. 30, 2017) ("I have previously considered whether federal or state law applies to determining just compensation under the Natural Gas Act. . . . [I] held that 'federal law governs the substantive determination of just compensation in a condemnation action commenced [under the Natural Gas Act.'" (citations omitted)).

268 *Id.*; *see also* Tenn. Gas Pipeline Co., LLC v. Permanent Easement for 7.053 Acres, No. 3:12-CV-01477, 2017 U.S. Dist. LEXIS 180905, at *3 (M.D. Pa. Nov. 1, 2017).

269 Columbia Gas Transmission, LLC v. An Easement to Construct Operate & Maintain a 20 Inch Gas Transmission Pipeline, Nos. 17-2096, 17-3312, 2018 U.S. App. LEXIS 22140, at *5 n.4 (3d Cir. Aug. 9, 2018).

270 District courts in Florida, Arkansas, Kansas, Louisiana, Massachusetts, Mississippi, Ohio, Rhode Island, and West Virginia have held that state substantive law governs the compensation issue for Natural Gas Act takings, while the Third Circuit Court of Appeals and district courts in Maryland and Pennsylvania have held that federal substantive law governs. *Compare* Ozark Gas Transmission Sys. v. Barclay, 662 S.W.2d 188 (Ark. 1983); Sabal Trail Transmission, LLC v. Real Estate, No. 16-063, 2017 U.S. Dist. LEXIS 99370, at *7 (N.D. Fla. June 27, 2017); N. Nat. Gas Co. v. Approximately 9117 Acres in Pratt, Kingman, 2 F.Supp.3d 1174, 1179 (D. Kan. 2014); Cadeville Gas Storage, LLC v. 10.00 Acres of Land In Ouachita Par., La., No. 12-2910, 2013 WL 6712918, at *9 (W.D. La. Dec. 20, 2013); Maritimes & Ne. Pipeline, LLC. v. 0.714 Acres of Land, More or Less, in Danvers, Mass., No. 02-11054, 2007 WL 2461054, at *2 (D. Mass. Aug. 27, 2007); Tex. Gas Transmission, LLC v. 18.08 Acres +/- in Se. Quarter Section 24, Tp. 30, N., Range 4 W., Coahoma Cty., Miss., 2:08-cv-240, 2012 WL 6057991, at *5 (N.D. Miss. Dec. 6, 2012); Columbia Gas Transmission, LLC v. Booth, 1:16-cv-1418, 2016 WL 7439348, at *5 (N.D. Ohio Dec. 22, 2016); Tenn. Gas Pipeline Co. v. 104 Acres of Land More or Less, in Providence Cty. of State of R.I., 780 F.Supp. 82, 85 (D.R.I. 1991); *and* Equitrans, L.P. v. 0.56 Acres More or Less of Permanent Easement Located in Marion County, W. Va., No. 15-106, 2017 U.S. Dist. LEXIS 61058, at *1 (N.D. W. Va. Apr. 21, 2017), *with* Columbia Gas Transmission, LLC v. An Easement to Construct Operate & Maintain a 20 Inch Gas Transmission Pipeline, Nos. 17-2096, 17-3312, 2018 U.S. App. LEXIS 22140, at *5 n.4 (3d Cir. Aug. 9, 2018); Columbia Gas Transmission, LLC v. 252.071 Acres, More or Less, in Baltimore Cnty., Md., No. 15-3462, WL 7167979, at *3 (D. Md. Dec. 8, 2016); *and* Columbia Gas Transmission, LLC v. An Easement to Construct, Operate and Maintain a 20-Inch Gas Transmission Pipeline Across Properties in Washington Cnty., Pa., No. 16-1243, 2017 WL 1355418, at *2 (W.D. Pa. Apr. 13, 2017).

matter of just compensation."[271] That is, the only Natural Gas Act condemnation case to reach the Eleventh Circuit has not yet reached the procedural point in the proceedings that the issue of compensation must be ruled upon.[272] Thus, "courts continue to diverge on whether federal or state [substantive] law governs the measure of compensation in proceedings under the Natural Gas Act."[273]

VI. STATUTORY SOLUTIONS

Without deciding whether the grant of federal eminent domain authority is appropriate when only private entities—and not the federal government—are exercising that power,[274] two possible solutions exist to correct the discrepancy in the law for construction of oil and natural gas pipelines. Any one of these proposals would serve to balance the current inequities between construction of oil and natural gas pipelines. Each would also obviously result in differing impacts to landowners whose land is being crossed by one of these pipelines,[275] but at least the impact would be the same for those being faced with an oil pipeline or a natural gas pipeline crossing their land. These solutions also face hurdles—mainly, each requires Congress to act.

First, the Natural Gas Act could be amended to either remove the eminent domain provision or allow federal eminent domain authority for construction of natural gas pipelines only when the federal government (and not a private company) is the one building the pipeline. For this solution, the practical effect is the same for either of these options because the federal government itself never builds natural gas pipelines. The discretion of granting eminent domain authority would thus fall to the states. This potential solution would likely garner the greatest amount of opposition from the pipeline industry. The obvious argument from the viewpoint of a natural gas pipeline company would be that, without the federal power of eminent domain, the obstacles to constructing new natural gas pipelines would simply be too great to be financially feasible. But that is exactly the scenario that currently faces a company proposing to construct a new oil pipeline.

Second, the Interstate Commerce Act could be amended to include a provision allowing use of federal eminent domain for construction of oil pipelines. Or better yet, a new comprehensive statute could be enacted to govern regulation of oil pipelines. This proposal would likely gain significant support from the oil pipelines industry because it

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271 Transcon. Gas Pipe Line Co. v. 6.04 Acres, 910 F.3d 1130, 1173 (11th Cir. 2018).

272 *Id*. The distinct issue in the *Transcontinental* case that circuitously implicated the compensation question was what amount and type of security is required when an entity is granted injunctive relief of condemnation authority and immediate right of entry upon a property under the Natural Gas Act, prior to any payment to the landowner for the condemnation. *Id*. at 1172–73.

273 Tenn. Gas Pipeline Co., LLC v. Permanent Easement for 7.053 Acres, No. 3:12-CV-01477, 2017 U.S. Dist. LEXIS 180905, at *3-4 (M.D. Pa. Nov. 1, 2017).

274 *See North Dakota landowners sue over Dakota Access easements*, *supra* note 191.

275 The issue of varying impacts to landowners whose property is being condemned by eminent domain is obviously an important one, but this Note does not attempt to weigh the appropriateness of takings for construction of pipelines.

would make it easier to secure the land necessary to construct new pipelines. But a drawback to pipeline companies might also accompany any legislative reform of this type—that is, federal eminent domain authority is likely to come with greater federal oversight of the industry as a whole.

VII. Conclusion

This Note makes no conclusion about the fairness or justice of allowing a private company—not the government—to use a sovereign's power of eminent domain to take property from private landowners for construction of an oil or natural gas pipeline.[276] However, an obvious issue of fairness and justice *does* exist as a result of pipeline companies being granted federal eminent domain authority for construction of natural gas pipelines when that same grant of authority is not available for construction of oil pipelines. Whatever the original reason for the discrepancy, no distinction between oil and natural gas pipelines is so significant as to warrant the imbalance of equities.

These inequities are demonstrated by the recent cases of the Dakota Access (crude oil) pipeline and the Sabal Trail Transmission (natural gas) pipeline.[277] The two statutory solutions to this discrepancy in the law involve amending either the Natural Gas Act or the Interstate Commerce Act. But perhaps a third solution exists whereby the federal courts adjudicating condemnation proceedings under the Natural Gas Act apply state substantive law and grant jury trials for compensation determinations. It is yet to be determined if how the circuit split on this issue will be resolved. The recent Sabal Trail Transmission cases in the Eleventh Circuit nonetheless may signal a shift towards fairness and justice in balancing the equities regarding the discrepancy of eminent domain authority and compensation due to landowners for construction of natural gas and oil pipelines.[278]

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276 *See North Dakota landowners sue over Dakota Access easements*, *supra* note 191.

277 *See supra* Section IV.

278 *See* Sabal Trail Transmission, LLC v. Real Estate, No. 4:16-cv-97, 2016 U.S. Dist. LEXIS 75572 (M.D. Ga. June 10, 2016); Sabal Trail Transmission, Inc. v. ± 0.7 Acres of Land in Suwannee Cty. Fla., No. 3:16-cv-300-MMH-PDB, 2016 U.S. Dist. LEXIS 74786 (M.D. Fla. June 8, 2016); Sabal Trail Transmission, LLC v. 7.72 Acres in Lee Cty., Ala., No. 3:16-cv-173-WKW, 2016 U.S. Dist. LEXIS 77055 (M.D. Ala. June 3, 2016); Sabal Trail Transmission, LLC v. Real Estate, No. 1:16cv63, 2016 U.S. Dist. LEXIS 190819 (N.D. Fla. May 10, 2016).

Banning Coal: Analyzing the Eradication of Coal in North America

By Matthew Clark

I. Introduction

Preceding the 2015 Paris Climate Accords, the province of Ontario, Canada took an unprecedented step toward a future of clean energy—one that eliminated the consumption of fossil fuels.[1] At the end of 2015, Lieutenant Governor Elizabeth Dowdeswell of Ontario signed the Ending Coal for Cleaner Air Act (ECCA) into law.[2] The law had two primary objectives: 1) to permanently ban electricity production through coal burning; and 2) to ban all coal-fired electricity plants from operation in the province of Ontario.[3] The ECCA states that "no person shall use coal at a generation facility to generate electricity in Ontario after December 31, 2014."[4] With the stroke of a pen,

1 Ministry of the Env't & Climate Change, *Ontario Permanently Bans Coal-Fired Electricity Generation*, Gov't of Ontario: Newsroom, Nov. 23, 2015 [hereinafter *Ontario Bans Coal*].

2 *Id.*; Ending Coal for Cleaner Air Act, Ont. Reg. 496/07 (Dec. 3, 2015) (Can.) (structuring the Ending Coal for Cleaner Air Act as an amendment to the Environment Protection Act).

3 *Ontario Bans Coal*, *supra* note 1; The Ending Coal for Cleaner Air Act is structured as an amendment to the Environment Protection Act. In 2007, the Ontario legislation outlawed the operation of four specific coal plants in Antikokan, Lambton, Nanticoke, and Thunder Bay after the end of 2014. Ministry of the Env't & Climate Change, *Creating Cleaner Air in Ontario: Province Has Eliminated Coal-Fired Generation*, Gov't of Ontario: Newsroom, Apr. 15, 2014 [hereinafter *Creating Cleaner Air*].

4 Envtl. Prot. Act, Rev. Stat. Ont. 1990, ch. E. 19 §§ 59.3(1), 59.3(2) (Can.) (noting two exceptions: "(1) A generation facility at a facility that produces a product other than electricity or steam where the generation of electricity is not the primary purpose of the facility. (2) A generation facility that uses heat, steam or by-product gas from another facility that

Ontario became the first region in North America to take such a drastic step toward a non-fossil-fuel-dependent future.[5] This decision did not happen on a whim, nor did it happen overnight. The process was long and contentious, starting nearly two decades earlier in 1997.[6] Similarly, the Canadian province of Alberta is going through the same process, anticipating full coal phase-out by 2030.[7]

This Article analyzes Ontario's process for eliminating coal-fire-produced electricity, tracks the implementation of Alberta's coal phase-out strategy, discusses progress of coal phase-out in Washington and New York in the United States, and suggests a policy-driven approach to phasing out coal in Iowa.

II. CANADA'S COAL BAN IMPLEMENTATION

In 2001, the government of Ontario issued seven smog advisories spanning a total of 23 days, during what was, at the time, the most polluted period on record since the

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produces a product other than electricity or steam where the generation of electricity is not the primary purpose of the other facility.").

5 *Creating Cleaner Air*, *supra* note 3.

6 Jodi Lea Adams, Douglas MacDonald, & David Houle, *The Coal Industry and Electricity Policy*, CAN. POLITICAL SCI. ASS'N 1, 12 (Jun. 1, 2012). ("The first formidable calls for a coal phase out came from the Ontario Clean Air Alliance (OCAA) begun in 1997. The Ontario Clean Air Alliance, which represents 90 groups constituting over six million Ontarians in health care, unions, environmental, faith groups, and municipalities had been applying pressure to government to get rid of coal-powered electricity since formation in 1997."). The OCAA organized in response to an increasing fear that the political breakup of provincial (and privately owned) electric utility, Ontario Hydro, would foster a desire to implement more coal-fired generation facilities. Ian H. Rowlands, *The Development of Renewable Electricity Policy in the Province of Ontario: The Influence of Ideas and Timing*, 24 REV. OF POLICY RESEARCH 185, 188–190 (2007) (describing the context of government policy towards electricity generation).

7 *Climate Leadership Plan*, ALTA. GOV'T, https://www.alberta.ca/climate-leadership-plan.aspx (last visited Nov. 22, 2017) (stating the development of a Climate Leadership plan with the intent to reduce carbon emissions whilst simultaneously diversifying their economy and creating jobs); *Phasing Out Coal Pollution*, ALTA. GOV'T, https://www.alberta.ca/climate-coal-electricity.aspx (last visited Nov. 22, 2017) (stating by 2030 the province plans to phase out coal "by (1) having 30% of Alberta's electricity come from renewable sources by 2030, (2) allowing coal units to convert to natural gas where it is economically viable, and (3) creating a market for private investment in technologies such as natural gas, cogeneration or other technologies"). Geoffrey Morgan, *Alberta Could Be Coal-Free Years Ahead of Deadline as ATCO Plans Transition to Natural Gas By 2020*, FINANCIAL POST, May 10, 2017, 5:40 PM (stating while the plan intends to phase out coal in Alberta by 2030, electricity generation corporations have posited that successful phase out could be as early as 2020 due to the availability of abundant natural gas resources discovered in western Canada); Erin Collins, *Alberta's Coal Phase-Out: How the Province Plans to Kick Carbon to the Curb*, CANADIAN BROADCASTING CORPORATION NEWS — CALGARY—RADIO CANADA (last updated Feb. 05, 2016, 7:50 AM), http://www.cbc.ca/news/canada/calgary/coal-alberta-environment-renewable-solar-wind-power-1.3415931.

inception of the province's smog alert program in 1993.[8] The following year, the province issued ten smog alerts covering 27 days.[9] This remained the most polluted year on record until 2005, when there were 15 smog advisories issued over a total of 53 days.[10] In response to this progressive decline in air quality in Ontario, the government commissioned an independent study in 2005 to determine how much damage coal-fired plants contributed to Ontarian expenditures.[11] The independent consultants determined that, holding all electricity generation the same, the annual cost of the coal-fired generation facilities totaled $4.4 billion.[12]

In addition to the overwhelming financial burden created by coal-fired generators, Ontarians had many other reasons to move away from coal and toward other sources of electrical generation.[13] Historically, Ontario relied heavily on hydropower for electricity, but with a growing population, the province embraced coal-fired plants in the 1960s to increase the baseload supply of electricity.[14] This proved problematic, as the province has no exploitable coal reserves.[15] With the impending financial burden on the people of Ontario, the potential for energy independence and a bevy of natural resources to leverage into electricity, the Legislative Assembly of Ontario began constructing a plan to bring Ontario's coal-fired generators from 25% of the market share in 2003 to 0% by 2014.[16] The government set a target of green-house gas (GHG) emissions at 6% below 1990 levels.[17] In 2001, the province of Ontario was home to five coal-fired facilities,

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8 ENVTL. MONITORING & REPORTING BRANCH, ONT. MINISTRY OF THE ENV'T, AIR QUALITY IN ONTARIO –2002 REPORT at 32–34 (2003).

9 *Id.* at 34.

10 *Id.*; *The End of Coal*, GOV'T OF ONT., https://www.ontario.ca/page/end-coal (last updated July 16, 2018) (describing "how Ontario became the first North American government to eliminate coal-fired electricity generation, paving the way for a cleaner, greener electricity system.").

11 DSS MANAGEMENT CONSULTANTS INC. & RWDI AIR INC., COST BENEFIT ANALYSIS: ONTARIO'S COAL-FIRED ELECTRICITY GENERATION 2 (Apr. 2005).

12 *Id.* at 3. That is 4.4 billion Canadian 2004 dollars, equivalent to 3.466 billion U.S. dollars. This $4.4 billion annually encompasses health, financial, and environmental costs associated with coal-fired generation facilities. *Id.* at 5–7.

13 MELISSA HARRIS ET AL., INT'L INST. FOR SUSTAINABLE DEV., THE END OF COAL: ONTARIO'S COAL PHASE-OUT i–iv (Jun. 2015).

14 *Id.* at 4.

15 All coal had to be imported from the United States or from neighboring provinces. This created political pressure to become energy independent from the United States. *Id.*

16 *Id.*

17 GOV'T OF ONT., *supra* note 10, at 3. The recently elected Premier of Ontario, Dalton McGuinty, campaigned on a promise of a coal-free Ontario by 2007, calling it a "coal exit." BRYNE PURCHASE, SUMMARY REPORT: THE FUTURE OF COAL IN ONTARIO? TOWARDS A CLEAN, SECURE AND COMPETITIVE ENERGY PORTFOLIO 2–3 (May 10, 2007). Additionally, at the turn of the 21st century, the "electricity issue" in Ontario shifted from not only a cost concern, but also to a public health issue. In 2001, Ontario's coal-fired power plants produced 20% of the province's GHG emissions. HARRIS ET AL., *supra* note 13, at 12. Additionally, the Ontario Medical Association published a report on air quality in 2000 that provided the overall health related costs attributable to the air in Ontario. Sums were $601,483,422 in health care, $560,856,950 lost in productivity, $4,758,245,353 in pain and suffering, and $4,058,416,657 in loss of life. BRAD CUNDIFF, ONT. CLEAN AIR ALLIANCE

with a total capacity of nearly 8,800 Megawatts (MW) of electrical production.[18] That same year, under the guidance of Ontario Premier Mike Harris, the Ontarian legislature implemented its first regulatory closure of a coal fire generation facility, closing the Lakeview Generating Station in Mississauga by April 30, 2005.[19] Between 2010 and 2013, Ontario closed three more coal-fired generation plants: Nanticoke (3,940 MW), Antikokan (211 MW), and Lambton (1,980 MW). Finally, in 2014, the province shut down its final coal-fired plant in Thunder Bay (306 MW), eliminating all coal-fired electricity generation.[20]

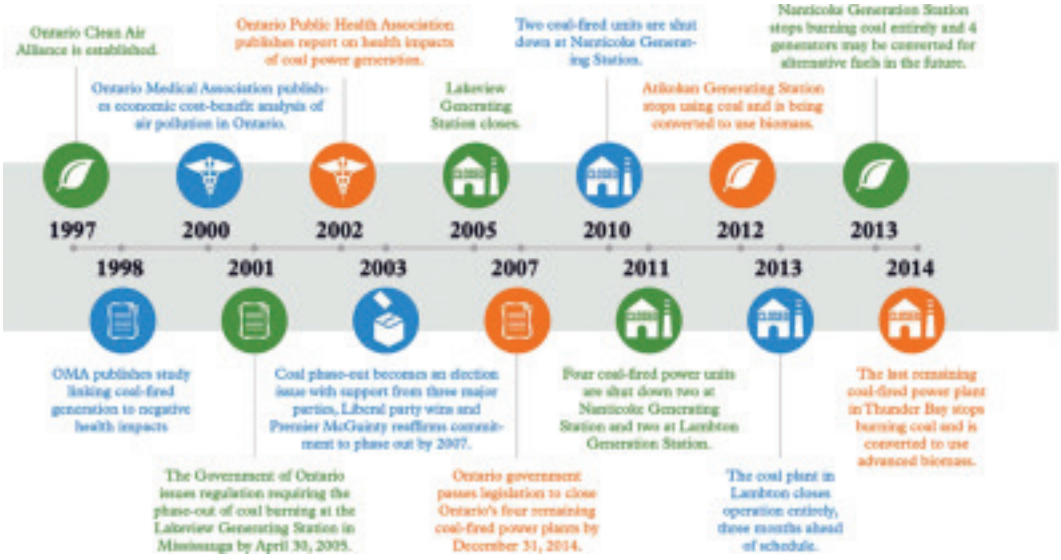

Figure 1. Ontario Coal Phase-Out Timeline.[21]

RES., ONTARIO'S COAL PHASE OUT: LESSONS LEARNED FROM A MASSIVE CLIMATE ACHIEVEMENT 26 (April 2015) (Can.). In addition to the medical report, public concern for health was catalyzed by the Walkerton incident, where a small community in Ontario was endangered by contaminated groundwater runoff sickening over 2,000 inhabitants. Rowlands, *supra* note 6, at 194. Furthermore, Ontario has a high potential capacity for producing electricity from wind, solar, and biomass resources. *Id.* at 199. The province has an exceptional capacity for biomass energy production, totaling at nearly 60 million metric tonnes of dry biomass which would double the baseload of electricity produced by the coal-fired plants in 2007. Purchase, *supra* note 6, at 12.

18 GOV'T OF ONT., *supra* note 10, at 4.

19 Lakeview Generating Station, O. Reg. 396/01 P.3 (Can.). The Lakeview Generating Station produced 2,400 MW of electricity that was to be replaced with a variety of other electrical generation sources. *Coal burning in Mississauga to End by 2005*, CBC NEWS — CANADA (Mar 27, 2001, 2:04 AM), http://www.cbc.ca/news/canada/coal-burning-in-mississauga-to-end-by-2005-1.261016.

20 The shutdown of all four coal-fired plants was memorialized in Ontario regulations, shifting it from a general policy inclination to concrete regulatory policy. O. Reg. 496/07 P.1 (Can.).

21 HARRIS ET AL., *supra* note 13, at 14.

The phase-out of these four generation stations left a void that Ontario had to fill immediately as the stations went offline. While this type of action would typically require multiple policies to offset the loss in electricity production,[22] Ontario had no major need for mitigation and transitionary policies for several reasons.

First, the contribution of coal to Ontario's electricity supply was comparatively small—25 percent at its height. Second, since coal was not mined within Ontario, the job market impacts were limited. Third, the lower-than-expected growth in demand balanced some of the upward pressure on retail power prices caused by the coal exit. Lastly, growing abundance and affordability made natural gas an attractive substitute for coal.[23]

The death of coal in Ontario was not only enabled, but catalyzed by these factors. Altogether, these factors led to the political and legal conditions that allowed for prohibition of coal in the most populous province of Canada.

A. Alberta's Coal Ban Implementation Strategy

While Ontario underwent radical changes to its coal use, Alberta's coal story was entirely different.[24] As seen below in Figure 2, during the period that Ontario was phasing out its coal use, Alberta's carbon emissions continued to increase.[25]

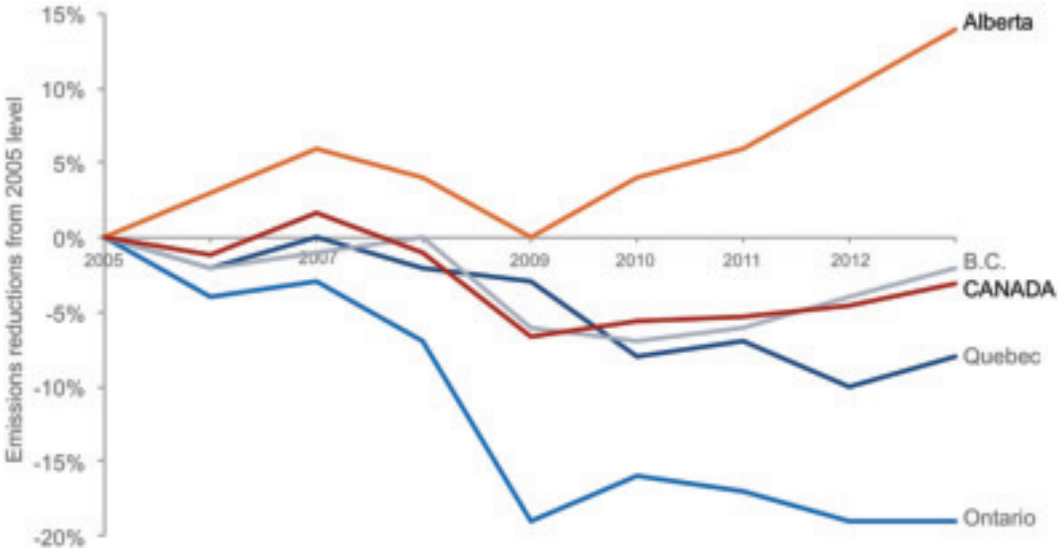

Figure 2. Tales of Canadian Climate Leadership. This graphic shows the value of emissions from 2005 to 2013 in comparison to 2005 values.[26]

22 *Id.*

23 *Id.* (citing Daniel Rosenbloom & James Meadowcroft, *The Journey Towards Decarbonization: Exploring Socio-Technical Transitions in The Electricity Sector in the Province of Ontario (1885–2013) and Potential Low-Carbon Pathways*, 65 Energy Policy 670, 676 (2014)).

24 *See* Lauren Vriens, The End of Coal: Alberta's coal phase-out, Int'l Inst. for Sustainable Dev. 22 (May 2018).

25 Gov't of Can., Canada's Sixth National Report on Climate Change 94 (2014).

26 *Id.*

As of 2013, Alberta's carbon emissions continued to rise, despite a climate plan signed in 2008 that took steps to reduce these emissions.[27] Similar to Ontario, Albertans saw an opportunity to improve carbon emissions not just for the sake of climate change, but also for health and energy efficiency reasons.[28] Based on 2008 standards of pollution from emissions, the Canadian Medical Association (CMA) estimated that, if no change was made to remedy air pollution in Alberta, by the year 2030, residents of Alberta would suffer 366 acute premature deaths, 2,835 chronic premature deaths, 1,616 hospital admits, 16,103 emergency room visits, and 2,173,000 minor illnesses from acute exposure, all purely as a result of air pollution.[29] Additionally, in terms of economic damages, Albertans would feel the brunt of more than $1.6 billion in lost productivity, $1.1 billion in healthcare costs, $858 million in quality of life expenses, and $15.3 billion in the loss of life between 2008 and 2031, solely as a result of air pollution.[30] Even with this data, it was not until 2015 that Alberta initiated a course correction to remedy this hazard.[31]

As of 2015, Alberta was still home to 18 of 35 of Canada's remaining electric generating coal units.[32] With the election of Rachel Notley as the Premier of Alberta, the government of Alberta planned to eradicate coal-fired plants from Alberta by 2030.[33] As of 2014, coal-fired electricity comprised 67% of Alberta's electricity generation and 43% of its generating capacity, and was responsible for nearly 16% of the province's total

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27 "In 2008 a climate plan was announced that targeted emission reductions of 50 Mega tonnes . . . by 2020 . . . and then future reductions after that. [As of 2014] the province [was] not on track to meet that target. The 2008 plan relied heavily on carbon capture and storage technologies and did not place a high enough price on carbon to drive emissions reductions. [Specified] Gas Emitters Regulation (SGER) introduced in 2007 targets only large emitters—those producing more than 100,000 tonnes CO_2e per year—at a price of $15 [per] tonne applied to an intensity reduction of 12 per cent. This approach has resulted in minimal net reductions in emissions." PEMBINA INST., OPPORTUNITIES TO IMPROVE ALBERTA'S CLIMATE STRATEGY 2 (Aug. 2015).

28 *Id.* at 1–5. *See* CANADIAN MEDICAL ASSOC., NO BREATHING ROOM: NATIONAL ILLNESS COSTS OF AIR POLLUTION 1–4, 33 (Aug. 2008).

29 CANADIAN MEDICAL ASSOC. *supra* note 28 at 1, 33 (Aug. 2008) (describing a formula known as the Illness Cost of Air Pollution model ("ICAP"), "based on a methodology designed for an integrated analytical system that uses the best available knowledge and data on air quality, human health and economics to produce forecasts of health impacts and expected costs relating to changes in air quality. The model estimates impacts within four age groups, using seven individual pollutants or a two pollutant combined effect (ozone O_3 and particulate matter $PM_{2.5}$) and a wide range of health effects.").

30 *Id.* at 34. Values are given in terms of 2006 Canadian dollars.

31 CHRIS LITTLECOTT & JULIAN SCHWARTZKOPFF, OXFAM E3G, G7 COAL PHASE OUT: CANADA, A REVIEW FOR OXFAM INTERNATIONAL 18 (Sep. 2015) (describing the New Democratic Party's sweeping 2015 victory in the Alberta's provincial election, which created an opportunity to focus on reducing emissions due to coal.)

32 *Id.*

33 *Id.*; *Phasing Out Coal Pollution*, *supra* note 7 (describing the five primary objectives of Alberta's "Climate Leadership Plan": (1) implementing a new carbon price on greenhouse gas emissions, (2) ending pollution from coal-generated electricity by 2030, (3) developing more renewable energy, (4) capping oil sands emissions to 100 megatonnes per year, and (5) reducing methane emissions by 45% by 2025.).

greenhouse gas emissions.[34] So, the Albertan government took several steps to mitigate fallout and ease the transition away from coal by 2030.[35]

Along with the plan to eliminate coal-fired electricity, the government aims to have 30% of the electric generation in the province come from renewable resources by 2030.[36] The government will also allow coal-fired plants to convert to natural gas plants, creating a "market for private investment in technologies such as natural gas, cogeneration or other technologies."[37] Alberta has further pledged to provide transition payments to companies that had coal-fired units that would have otherwise operated beyond 2030.[38] Finally, Alberta has set aside $40 million to assist coal workers that lose their jobs.[39]

Electricity generation companies have also taken steps to mitigate the transition.[40] In May 2017, TransAlta and ATCO, two of Alberta's largest energy producers, vowed to accelerate their transition.[41] ATCO, which operates two coal-fired facilities that produce a combined 1,469 MW of electricity, will convert both plants to natural gas facilities by 2020.[42] Similarly, TransAlta will transition its coal-fired facilities to natural gas facilities by 2022.[43] As the two largest coal-fired power producers in the province, an early transition of this nature will significantly influence the timeline for converting to a coal-free electric grid in Alberta.[44]

B. Ontarian Implementation

In 2003, when Ontario's government began to pass regulations to prohibit coal-fired plants, a quarter of all electricity generated in Ontario came from coal.[45]

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34 Alta. Gov't, Electricity Generation (Dec. 2014), https://open.alberta.ca/dataset/9bea6054-fc58-418e-bfed-f5a2a3bec0fa/resource/6b13d2b6-1fb4-4a36-b7c8-a9fe03c781ab/download/FsElectricityGeneration.pdf; *Phasing Out Coal Pollution*, *supra* note 7.

35 *Phasing Out Coal Pollution*, *supra* note 7.

36 *Id.*

37 *Id.*; *Coal Phase-Out*, Alberta Green Economy Network, http://www.albertagen.ca/issues/coal-phase-out/ (last visited Nov. 16, 2018).

38 These transition payments represent the approximate loss to the companies' capital investment in these facilities and are to be paid out of the revenues generated by Alberta's price on industrial carbon emissions rather than from consumer electricity payments. *Coal Phase-Out*, *supra* note 37.

39 "Labour Minister Christina Gray said the money will top up benefits to 75 percent of a worker's previous earnings during the time they collect employment insurance." Dean Bennett, *Alberta Puts Up $40M to Help Workers Transition During Coal-Power Phase-Out*, CTV News, http://www.ctvnews.ca/business/alberta-puts-up-40m-to-help-workers-transition-during-coal-power-phase-out-1.3672646 (last updated Nov. 10, 2017, 4:14 PM).

40 Morgan, *supra* note 7.

41 *Id.*

42 *Id.*

43 *Id.*

44 *Id.*

45 *The End of Coal*, *supra* note 10, at 9.

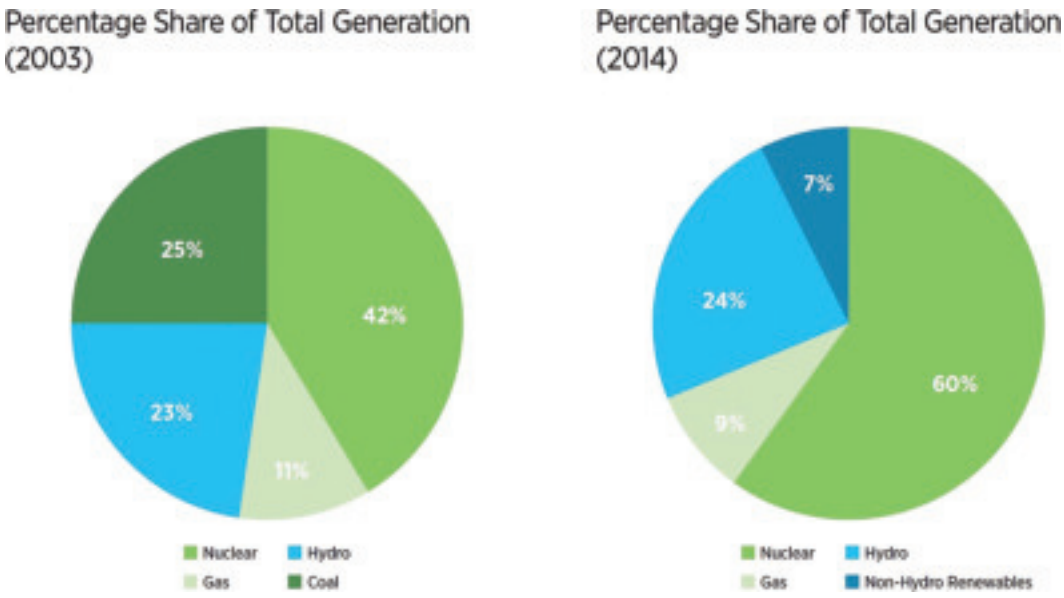

Figure 3. Change in Market Share of Resource Generation. Percentage share in 2003 is overstated by one percent due to a rounding error.[46]

As seen in Figure 3, between 2003 and 2014, the market share of resources contributing to electricity generation shifted heavily toward renewable resources.[47] In that 11-year period, market share for renewable resources, such as solar or hydropower, increased by 8%.[48] Of the amount of electricity lost due to the coal phase-out, Ontario's market share of non-renewable generation, such as nuclear and natural gas, only compensated for about half of the lost generation: approximately 13%.[49] While these conditions helped sustain the electrical grid, the transition was also eased by the introduction of the Green Energy and Green Economy Act (GEGEA).[50]

"The GEGEA introduced a comprehensive program for the promotion of renewable energy technologies and energy efficiency, including a feed-in tariff program," which allowed the government to address the gap created by the coal phase-out, and build a new sustainable energy sector.[51] The GEGEA had five primary objectives: (1) rapid de-

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46 Gov't of Ont., Ministry of Energy, Ontario's Feed-in Tariff Program Two-Year Review Report: Building Ontario's Clean Energy Future 9 (Mar. 19, 2012).

47 It is important to distinguish that this chart depicts the actual amount of electricity generated from each of these resources, not the installed capacity.

48 *The End of Coal*, *supra* note 10, at 9.

49 Coal-fired electricity was replaced by a mix of baseload, intermittent, and peaking capacity, through the construction of 5,500 MW of new combined cycle natural gas facilities, approximately 5,500 MW of non-hydro renewables, and an increase of 1,500 MW from two refurbished nuclear power units. The introduction of the non-hydro renewable generation resources was added under procurement programs including a feed-in tariff program and a Renewable Energy Standard Offer Program. *See id.* at 8.

50 *See* CANADIAN SOC. ECON. RESEARCH P'SHIPS, PUBLIC POLICY PROFILE: GREEN ENERGY & GREEN ECONOMY ACT (May 2010).

51 HARRIS ET AL., *supra* note 8, at 15.

ployment of renewable energy sources (wind, solar photovoltaic cells V, natural gas, biomass, small hydropower); (2) development of the renewable energy manufacturing and services industry (50,000 jobs by 2013); (3) rural economic development (farm and aboriginal-based projects); (4) community power development; and (5) increased public engagement and education on renewable energy.[52] With the various methods to succeed coal-produced power, Ontario's aggressive plan had the potential to go off without a hitch, as seen below in Table 1.[53]

Installed Capacity	2003	2010**	2020**	2030**
Nuclear	10,061	11,466	11,723	12,000
Hydropower	7,880	8,127	8,564	9,000
Non-Hydropower	155	1,657	8,420	10,700
Gas	4,364	9,424	9,312	9,200
Coal	7,546	4,484	0	0
	30,006	35,138	38,019	40,900

Table 1. Installed Generation Capacity in Ontario. All numeric values are reported in terms of MW.[54] ** Indicates projections based on data provided.

However, not all has gone according to plan.[55] As seen in Figure 4, gas and nuclear power grew much faster than anticipated. While there has been substantial growth in the non-hydropower renewable capacity, it is not nearly at the levels predicted at the outset of the GEGEA.[56]

52 *See* MARK WINFIELD, ONTARIO'S GREEN ENERGY EXPERIENCE 11–12 (Feb. 2014).

53 *Id.* at 14.

54 Mark Winfield, ONTARIO'S GREEN ENERGY EXPERIENCE 14 (Feb. 2014).

55 *See Closing Ontario coal plants didn't cut air pollution by much, says Fraser Institute*, CBC — CANADA, https://www.cbc.ca/news/canada/windsor/coal-plants-closing-ontario-1.3938179 (last updated Jan. 17, 2017).

56 *Supply Overview: Transmission-Connected Generation*, INDEP. ELECTRICITY SYS. OPERATOR (Sep. 21, 2017), http://www.ieso.ca/en/power-data/supply-overview/transmission-connected-generation (describing that the shift in generators also had a slight effect on prices, as the price of electricity per kilowatt hour generally increased from 2006–2015); *Historical Electricity Rates*, ONTARIO ENERGY BOARD, https://www.oeb.ca/rates-and-your-bill/electricity-rates/historical-electricity-rates (last visited Dec. 1, 2017).

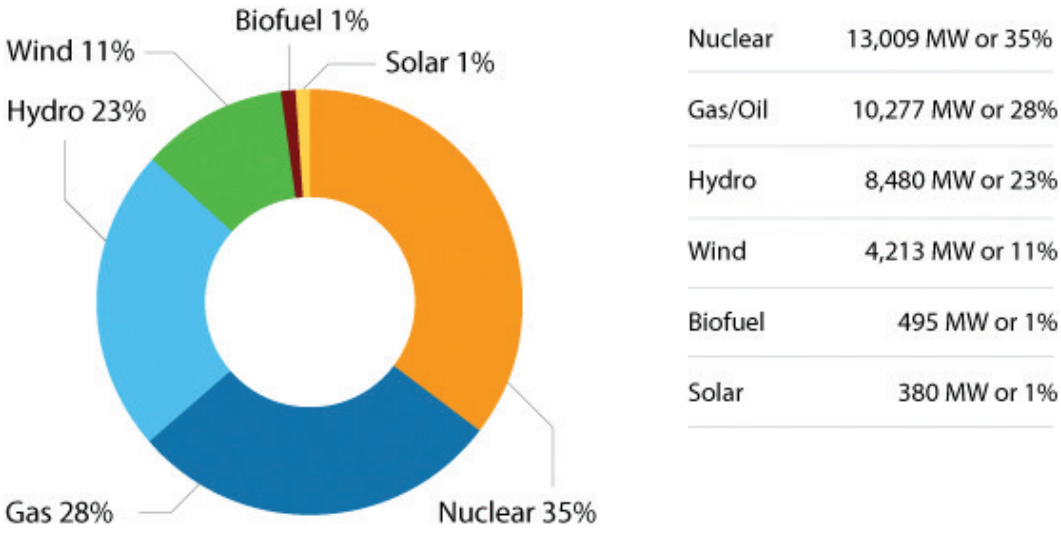

Figure 4. Ontario's Current Installed Generation Capacity.[57]

Another unforeseen effect of the GEGEA was the costliness of the Feed-In Tariff (FIT) program.[58] When introduced, Ontario's FIT program was the most comprehensive in North America and one of the most generous worldwide, providing 80.2¢ per kilowatt hour (kWh).[59] As per a typical feed-in tariff, the idea was to stimulate the economic incentive to generate new, renewable electricity through a variety of smaller projects.[60] Ideally, the introduction of these smaller renewable projects would be seamlessly integrated into the electric grid; however, like many accelerated renewable programs, Ontario's program experienced considerable growing pains.[61] In the southwest region of Ontario, the electric grid was not updated enough to allow an abundance of small energy producers to input electricity onto the grid.[62] In addition to an outdated grid, Ontario hit a variety of other unforeseen roadblocks: a lack of preparedness for the influx of renewable project applications; localized opposition to wind power projects; and, most

57 INDEP. ELECTRICITY SYS. OPERATOR, *supra* note 56.

58 GOV'T OF ONT., *supra* note 46, at 2 (discussing how "[t]he FIT Program moved Ontario forward as a leader in clean energy . . . and continues to be one of the best ways to attract investment, build clean energy and encourage local participation in the electricity sector. Ontario's clean energy initiatives have been a success, creating more than 20,000 jobs, on track to creating 50,000 jobs and attracting more than $27 billion in private-sector investment. With Ontario on track to procure 10,700 MW of non-hydro renewable energy generation by 2015, the government should review Ontario's electricity supply and demand forecast in 2013 to explore whether a higher renewables capacity target is warranted.").

59 Gail Reitenbach, PhD, *Ontario Goes Coal-Free in a Decade*, POWER MAGAZINE (May 1, 2013).

60 *See Introduction to the FIT Program*, ABORIGINAL ENERGY P'SHIPS PROGRAM, http://aboriginalrupal.powerauthority.on.ca/introduction-fit-program (last visited Sep. 28, 2018).

61 Reitenbach, *supra* note 59.

62 *Id.*

notably, an international dispute brought by Japan before the World Trade Organization (which Canada lost).[63]

Despite these complications, Ontario's progressive leap toward green energy has been an overall success.[64] The carbon intensity resulting from Ontario's energy sector has fallen 56% since 2005; in terms of greenhouse gasses, the province had reduced total GHG emissions to 20% of 2005 levels by 2015.[65] As a result of the phase-out of coal, Ontario has seen a remarkable amount of growth in the renewable energy sector.[66] The Thunder Bay and Atikokan generating stations were converted to 100% biomass electricity production, generating over 258 MW of electricity combined.[67] By 2025, Ontario anticipates having 20,000 MW of renewable energy online.[68] Another key factor is that, by successfully completing the phase-out of coal-fired plants, GHG emissions are no longer aligned with economic growth.[69] Over the course of history, Ontario's Gross Domestic Product (GDP) directly correlated with GHG emissions; as one increased, so did the other.[70] However, with the coal phase-out, this trend has radically shifted.[71] As shown in Figure 5, the correlative trend between Ontario's GDP and GHG emissions broke around 2005, when the coal phase-out was implemented.[72]

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63 *Id*. Japan and the European Union brought a challenge before the World Trade Organization claiming that Ontario's FIT Program gave preferential treatment to and unfair subsidies to renewable generation equipment originating in the Canadian Province. The plaintiff nations claimed that the treatment and pricing measures were in violation of Article XXII:1 of the *General Agreement on Tariffs and Trade 1994* ("GATT"), Article 8 of the *Agreement on Trade-Related Investment Measures* (the "TRIMs"), and Articles 4(1) and 30 of the *Agreement on Subsidies and Countervailing Measures* (the "SCM Agreement"). Request for Consultations by the European Union, *Canada—Measures Relating to the Feed-in Tariff Program—Request for consultations by the European Union*, ¶ 2, WTO Doc. WT/DS426/1 (Aug. 16, 2011). After an initial hearing, the case was appealed where the Appellate Body provided a final ruling finding that "the Minimum Required Domestic Content Levels [within Ontario's FIT program] prescribed under measures at issue were inconsistent with TRIMS Agreement Art. 2.1 and GATT Art. III:4". Appellate Body Report, *Canada—Certain Measures Affecting the Renewable Energy Generation Sector*, WTO Doc. WT/DS412/AB/R (adopted May 5, 2013).

64 LITTLECOT & SCHWARTZKOPFF, *supra* note 31, at 4–5.

65 *Id*. at 12.

66 *See The End of Coal*, *supra* note 10.

67 *Id*. at 11.

68 *Id*.

69 *Ontario's Climate Change Update 2014*, GOV'T OF ONTARIO, https://www.ontario.ca/page/ontarios-climate-change-update-2014 (last updated July 6, 2018).

70 *Id*.

71 *See id*.

72 *See id*.

Figure 5. Short Term Trends in GDP and GHG Emissions from 1990 to 2012.[73]

This break bodes well for traditional economic development in Canada, and the implications for similar initiatives in developing nations are very promising.[74] In all, Ontario's phase-out plan was successful and has accomplished the goals that were set for the province.[75]

III. U.S. ELIMINATION OF COAL

While the Canadian government has shown a solid commitment toward eliminating coal-fired electricity from its electric grid nationwide, the United States has shown similar inclinations in individual states, even if such initiatives are thought to be untenable presently at a federal level.[76] Two states in particular have shown progressive interest in transitioning away from coal-fired electricity: Washington and New York.[77] In the following paragraphs, this paper will review both states' generation statuses. Next, this paper will examine the current status of Iowa, a state with a majority share of electricity produced by coal, and will suggest policy strategies to successfully decrease and potentially phase out coal-fired power in the state.

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73 *Id.* at 7.
74 *See id.*
75 *See id.*
76 *The End of Coal*, *supra* note 10, at 7.
77 *See, e.g.*, *While Trump Administration Moves to Prop Up Coal Industry, Governor Cuomo Announces New York will Join Powering Past Coal Alliance*, NEW YORK STATE GOVERNOR'S PRESS OFFICE (Aug. 21, 2018), https://www.governor.ny.gov/news/while-trump-administration-moves-prop-coal-industry-governor-cuomo-announces-new-york-will-join; Hal Bernton, *New Trump rule to aid coal-power plants unlikely to slow Northwest push for cleaner electricity*, SEATTLE TIMES, Aug. 21, 2018.

A. Washington

Currently, the state of Washington has one of the greenest electric grids in the United States.[78] It has the capacity to produce 24,799 MW of renewable electricity, a total of 12.1% of the United States' total capacity of renewable energy.[79] In terms of pure electricity produced from hydropower, Washington has more than a quarter of the nation's total hydropower capacity.[80] In relation to energy consumption, Washington ranks second among all 50 states in terms of renewable energy consumption as a share of total consumption, totaling 43.9%.[81] Washington benefits from the abundance of water produced during wet seasons, in addition to the flow of the Columbia River, which provides access to a wealth of potential hydropower.[82] With these natural resources, the state's electric generation has historically leaned heavily toward renewable resources.[83] In the most recent year-long counting period, ending July 2017, 74.5% of Washington's electricity came from renewables, 12.1% was generated by natural-gas-fired plants, 8.3% was from nuclear plants, and 4.7% was from coal-fired plants.[84]

All 4.7% of the electricity generated from coal in Washington comes from one facility—the Centralia power plant, located in southwest Washington.[85] The Centralia plant has two coal-fired units that can direct 1,340 MW of baseload power to Washington's electric grid.[86] However, to phase out coal, the Washington legislature passed legislation in 2011 to move the Centralia plant offline.[87] In an act "Relating to Coal-fired Electric Generation Facilities" ("the Act"), Washington took several steps to not only eventually close the Centralia plant, but also to mitigate the negative fallout for those involved in the coal-firing industry. The Act had three articulated purposes:

> [1] to [affect] an orderly transition to cleaner fuels in a manner that ensures reliability of the state's electrical grid, [2] to ensure appropriate cleanup and site restoration upon decommissioning of any of these facilities in the state, [3] and to provide assistance to host communities planning for new economic development and mitigating the economic impacts of the closure of these facilities.[88]

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78 *See Washington: State Profile and Energy Estimates — Overview*, U.S. Energy Information Admin., https://www.eia.gov/state/?sid=WA (last updated Nov. 15, 2018).

79 *Washington: State Profile and Energy Estimates — Analysis*, U.S. Energy Information Admin., https://www.eia.gov/state/analysis.php?sid=WA (last updated Nov. 15, 2018).

80 *Id.*

81 *Id.*

82 *Id.*

83 *Id.*

84 *Id.*

85 *Id.*

86 *Centralia*, TransAlta USA, http://www.transalta.com/facilities/plants-operation/centralia/ (last visited Dec. 1, 2017).

87 In a bill proposed by the Washington state senate and passed into law, the legislature acknowledged that generating electricity from the combustion of coal produces pollutants that are harmful to human health, safety, and to the environment, as well as the fact that federal regulations were not doing enough to fix the issue. Additionally, they determined that coal-fired power plants were the largest single source of GHG emissions. Laws of 2011, ch. 180, §101 (Wash.).

88 *Id.* § 101(5).

There were several ways in which the Act sought to accomplish these goals. The law mandates that any baseload facilities that open their doors after June 2008 must comply with strict GHG performance standards that are unattainable for coal-fired power plants.[89] Additionally, the law stipulates that a coal-fired electric generation facility that emitted more than one million tons of GHGs in any year before 2008 must reduce the emissions of a first boiler by 2020, and if there is a second boiler, by 2025.[90] Further, to smooth the transition period between 2011 (when the law was enacted) to 2020 (when immediate capacity would need to be added to compensate for the decreasing coal-fire output), the Act incentivized and encouraged certain measures by power distributers.[91] If a power distributer applies for energy facility certification in the same county as the Centralia plant, the Washington state energy facility site evaluation council must expedite the process.[92] The Washington legislature also recognized that there would be efforts to purchase electricity from grids outside of the state, so the Act specifies that "no electrical company may enter into a long-term financial commitment unless the baseload electric generation supplied under such a long-term financial commitment complies with the greenhouse gas emissions performance standard established under RCW 80.80.040."[93] To enforce this and other provisions that regulate intrastate purchasing of power, the Act requires general review in a rate case hearing to determine whether the electricity provided meets GHG emissions standards for the state.[94]

The Act not only addresses the closure and mitigation of coal-fired facilities, it also creates an incentive structure to induce and support those who may be displaced by the policy shift.[95] The Act decrees that:

> The [board of directors or legislative authority for a utility company] shall solicit qualifying projects to plan, design, and construct public works projects needed to attract new industrial and commercial activities in areas impacted by the closure or potential closure of large coal-fired electric generation facilities, which for the purposes of this section means a facility that emitted more than one million tons of greenhouse gases in any calendar year prior to 2008.[96]

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89 *Id.* § 103(3)(b).

90 *Id.* § 103(3)(c)(i) (seemingly an obscurely specific rule; however, it directly references the dual boiler system utilized in the Centralia generating facility. Essentially, this requires that one generator must be converted by 2020, and the second by 2025. *Id.* § 201(1) (stating that any facility subject to closure under the Washington code or this Act must provide a plan for closure and post-closure of the facility, particularly the decommissioning process).

91 *See generally* Laws of 2011, ch. 180, § 109 (Wash.).

92 *Id.* § 109(b).

93 *Id.* §§ 104(1), 104(4) (defining the limit as one thousand one hundred pounds of greenhouse gases per megawatt-hour.) The Washington state energy facility site evaluation council may make case by case exceptions in certain specified cases: "(a) Unanticipated electric system reliability needs; (b) extraordinary cost impacts on utility ratepayers; or (c) catastrophic events or threat of significant financial harm that may arise from unforeseen circumstances". *Id.* § 104(5).

94 *Id.* § 104(2).

95 *See id.* § 302.

96 *Id.*

By doing so, the state legislature has mandated that former coal facilities do not become abandoned property and still retain some economic driving capacity. As a result, TransAlta entered into a Memorandum of Understanding (MOU) with the state of Washington regarding the Centralia plant.[97] In the MOU, TransAlta will phase out its coal-fired plant no later than December 31, 2025, on a defined schedule starting in 2012.[98] For its part, the state of Washington agreed to take necessary steps to ease the conversion process, most notably ensuring that TransAlta recovers its cost and a fair and adequate return for its coal-fired power plant and replacement generation investments.[99] In 2016, the Washington legislature enacted a new legislation to assist the conversion of coal-fired plants to other baseload generating facilities.[100] The stated policy objective of this bill (S.B. 5575) is

> to retain jobs at existing coal-fired electric generation facilities by providing a tax exemption to allow these facilities to convert into natural gas-fired generation plants or biomass energy facilities rather than shut down entirely. . . to provide a tax exemption for [these converting facilities] in order to reduce the costs recently imposed by the legislature on companies that operate coal-fired electric generation facilities, thereby increasing the ability of these companies to continue their operations in Washington state, thereby retaining jobs that otherwise would be lost if a coal-fired electric generation facility were to shut down.[101]

With this change in the state tax code, entities engaged in coal-fired generation are incentivized to not only get out of the coal-fired generation business but also to invest in either gas-fired or biomass electricity generation, thereby lessening the burden on corporations (TransAlta, in particular).[102] Providing this path is uniquely helpful for the labor force currently working at the Centralia plant.[103] S.B. 5575 provides companies with the opportunity to write off "[labor] and services rendered in respect to the constructing of new structures, and expansion or renovation of existing structures, for the purpose of converting a coal-fired electric generation facility into a natural gas-fired plant or biomass energy facility."[104] So, the financial burden that could force a corporation like TransAlta to lay off employees due to the conversion is alleviated.[105]

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97 Ex. PMR-11 to the Cross-Answering Testimony of Patrick M. Risken on Behalf of the St. of Montana at 2, Wash. Util. and Trans. Comm'n v. Puget Sound Energy, No. UE-170033 & UG-170034 (Aug. 9, 2017) https://www.utc.wa.gov/_layouts/15/CasesPublicWebsite/GetDocument.ashx?docID=3253&year=2017&docketNumber=170033 (TransAlta Corporation is an electricity power generation company based in Calgary, Alberta, Canada. TransAlta has major components in both Canada and the United States. *TransAlta: About Us*, TRANSALTA, http://www.transalta.com/about-us/ (last visited Jan. 21, 2018)).

98 Ex. PMR-11, *supra* at 2–3.

99 *Id.* at 3.

100 S.B. 5575, 64th Leg., 2015 Reg. Sess. (Wash. 2016).

101 *Id.* § 1(3).

102 Anna Simet, *Washington bill incentivizes conversion of last coal plant,* BIOMASS MAGAZINE, Feb. 22, 2016.

103 *Id.*

104 S.B. 5575, 64th Leg., 2015 Reg. Sess., § 2(1)(a) (Wash. 2016).

105 *See generally* Simet, *supra* note 102.

However, while this process prohibits generation of coal-fired electricity by Washington power plants, it does nothing to regulate coal-fire-generated power imported from other states.[106] In fact, about 15% of electricity used in Washington is imported from coal-fired plants in other states.[107]

Colstrip, Montana, is home to one of the largest coal-fired generating facilities in the United States.[108] Generating at a peak capacity of 2,094 MW, Colstrip has historically transmitted some of its electric power into the state of Washington, as several Washington utilities own partial shares of rights to the adjacent mine and on site generation facilities.[109]Historically, Colstrip has been an easy source of cheap energy for Washingtonians, but with ongoing pressure from Washington to eliminate electricity generated from coal-fired plants, Colstrip is on the brink of exclusion.[110]

On April 1, 2016, Washington Governor Jay Inslee signed into law Senate Bill 6248 (S.B. 6248).[111] With this bill, the Washington legislature authorized electrical utilities to set aside funds for future decommissioning of coal-fired generating units at Colstrip.[112] This option, while available, does not mandate the closure of the Colstrip facilities. In a written statement issued after the bill was signed into law, Governor Inslee commented, "To be clear, no decision has been made on when the older Colstrip units might close."[113] He further elaborated that the Washington Utilities and Transportation Commission (WUTC) would have to conduct proceedings before any facility closure decision could be made, which would not take place until 2017, at the earliest.[114]

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106 See id.

107 *Fuel Mix Disclosure* ST. OF WASH. DEPT. OF COM., https://www.commerce.wa.gov/growing-the-economy/energy/fuel-mix-disclosure/ (last visited Dec. 2, 2018).

108 Hal Bernton, *As Washington state looks for cleaner power, a Montana coal town faces an uncertain future*, SEATTLE TIMES (last updated Mar. 5, 2018, 9:12 PM) (describing the Colstrip generating station, which is the second largest coal-fired generation facility west of the Mississippi River. Colstrip consists of four separate coal-fired generating units, collectively owned by PSE, Talen Energy, Portland General Electric, Avista Corporation, PacifCorp, and NorthWestern Energy LLC. Drawing from the Rosebud coal mine, it generates 2,094 MW of electricity at its peak.).

109 *Id.*

110 *See* Corin Cates-Carney, *Colstrip Closure Will Bring Big Economic Impacts, Study Says,* MONTANA PUBLIC RADIO (Jun. 25, 2018) http://www.mtpr.org/post/colstrip-closure-will-bring-big-economic-impacts-study-says.

111 *See* Phuong Le, *Against Montana governor's wishes, Inslee signs bill to fund coal plant shutdown*, SEATTLE TIMES (Apr. 1, 2016, 5:44 PM).

112 S.B. 6248, 64th Leg., 2016 Reg. Sess. (Wash. 2016) (codified in chapter 80 of the Revised Code of Washington). This bill was highly contentious because it faced strong opposition from Montana's governor due to the effect it will have on Montana's economy. *See* Le, *supra* note 111. However, of the six utilities that own shares of Colstrip, none of them are Montana corporations, and the bill passed 33 yeas to 14 nays in the Washington Senate and 87 yeas to 9 nays in the Washington House of Representatives. This law specifically targets Puget Sound Energy, Washington's largest utility, who own fifty percent of two of the generating units in Colstrip. Robert Walton, *Washington Governor Signs Off Colstrip Bill with Partial Veto*, UTILITY DIVE (Apr. 3, 2016), https://www.utilitydive.com/news/washington-governor-signs-off-colstrip-bill-with-partial-veto/416727/.

113 Le, *supra* note 111.

114 *Id.*

Unfortunately for those opposed to Colstrip's closure, Puget Sound Energy (PSE) presented itself before the WUTC and eventually reached a settlement agreement to shut down Colstrip's entire coal burning facility by 2027.[115] PSE initiated a rate case before the WUTC because the company wanted to begin to increase the electricity rates for its customers to accrue funds to complete shutdown of the Colstrip facilities by 2027, noting that the retirement of the two generators would cost $20,160,334.[116] This was an extreme departure from the earlier estimate of Colstrip's useful life, a measure that determines when a generating facility will cost more to operate than it saves consumers.[117] Only a few years prior, in 2012, PSE was predicting the useful life of the Colstrip facilities to end in 2040.[118] However, the updated state regulations and environmental pressures moved that timeline forward by 13 years in PSE's evaluation.[119] When asked why PSE would have such a radical shift in policy in such a short time, the utility provided the following three reasons: First, closure of the two 40-years-old units minimizes financial risks by heading off any risk of "further legal proceedings or additional significant investments in the units to meet regulatory requirements."[120] Second, PSE emphasized its responsibility to its customers to be "good stewards of the environment and to keep energy costs reasonable."[121] Third, closure would "keep Montana competitive" in a changing energy landscape by better aligning the utility to a market shifting "towards cleaner energy sources": not only is the coal industry experiencing pressure, "primarily from new and very inexpensive supplies of natural gas that can produce electricity more cheaply and with fewer emissions than coal," but they are also experiencing pressure from "the changing economics of coal," where "there are shifting policies and regulations on the state and federal levels, including the Environmental Protection Agency's regional haze plan and Clean Power proposal.[122]

The WUTC approved the settlement on December 5, 2017.[123] This settlement has provided a way forward not only for the Washington-based utility but also for the other five utilities who own interests in Colstrip's facilities.[124]

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115 Tom Lutey, *Colstrip edges toward complete closure*, BILLINGS GAZETTE (Sep. 15, 2017), http://billingsgazette.com/news/government-and-politics/colstrip-edges-toward-complete-closure/article_d4575cbf-70a8-5fab-81c8-0171790b9408.html.

116 Multiparty Settlement Stipulation and Agreement, Wash. Util. and Transp. Comm'n v. Puget Sound Energy, Docket No. UE-170033 & UG-170034, ¶ 4 (Sept. 15, 2017); Ex. A, *id.* at 1. This would equate to an increase in consumer rates of 0.9% annually across PSE's one million customers. *Id.* at 4.

117 Lutey, *supra* note 115.

118 *Id.*

119 *Id.*

120 Robert Walton, *Puget Sound Energy agrees to shutter 2 oldest units at Colstrip coal plant*, UTILITY DIVE (Jul. 13, 2016), https://www.utilitydive.com/news/puget-sound-energy-agrees-to-shutter-2-oldest-units-at-colstrip-coal-plant/422503/.

121 *Id.*

122 *Id.*

123 *See* Robert Walton, *Puget Sound plan to shutter Colstrip coal units approved*, UTILITY DIVE (Dec. 8, 2017), https://www.utilitydive.com/news/puget-sound-plan-to-shutter-colstrip-coal-units-approved/512542/.

124 Lutey, *supra* note 115.

The state of Washington presents a unique scenario because of its abundance of hydropower, along with a very centralized populace.[125] With these two factors, eradicating the 4% of in-state, coal-fired electricity and the remaining outsourced coal-fired electricity is readily achievable.[126] However, as discussed below, the puzzle for New York is a little more complex.

B. NEW YORK

In January 2016, New York Governor Andrew Cuomo boldly pledged that, by 2020, the state of New York will phase out all coal-fired power plants.[127] This may seem like a grandiose statement, except when one considers New York's electricity generation mix. New York has only three coal-fired generation facilities, which provide a total of 1,011 MW of electricity—approximately 3% of the state's electricity usage, as seen in Figure 6.[128]

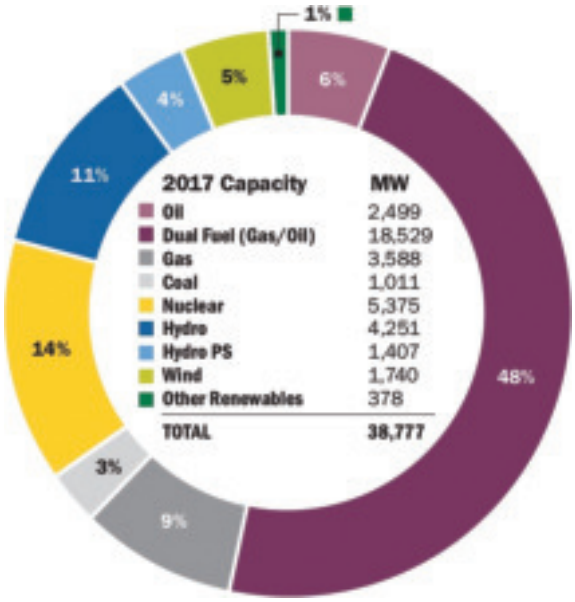

Figure 6. New York Generating Capacity by Fuel Source. NEW YORK INDEPENDENT SYSTEM OPERATOR, POWER TRENDS: NEW YORK'S EVOLVING ELECTRIC GRID, *supra* note 128, at 28 (2017).

125 As of 2016, approximately 69% of the Washington population lives within six counties in the state: Clark, King, Pierce, Snohomish, Spokane, and Yakima. ST. OF WASH., FORECASTING AND RESEARCH DIVISION, 2016 POPULATION TRENDS 10–16 (Sep. 2016).

126 *See Washington: State Profile and Energy Estimates*, *supra* note 79.

127 Andrew Cuomo, Governor, St. of N.Y., *2016 State of the State and Budget Address* (Jan. 13, 2016), https://www.governor.ny.gov/news/video-transcript-built-lead-governor-cuomos-2016-state-state-and-budget-address.

128 NEW YORK INDEPENDENT SYSTEM OPERATOR, POWER TRENDS: NEW YORK'S EVOLVING ELECTRIC GRID 28 (2017), https://www.eenews.net/assets/2017/05/19/document_ew_01.pdf.

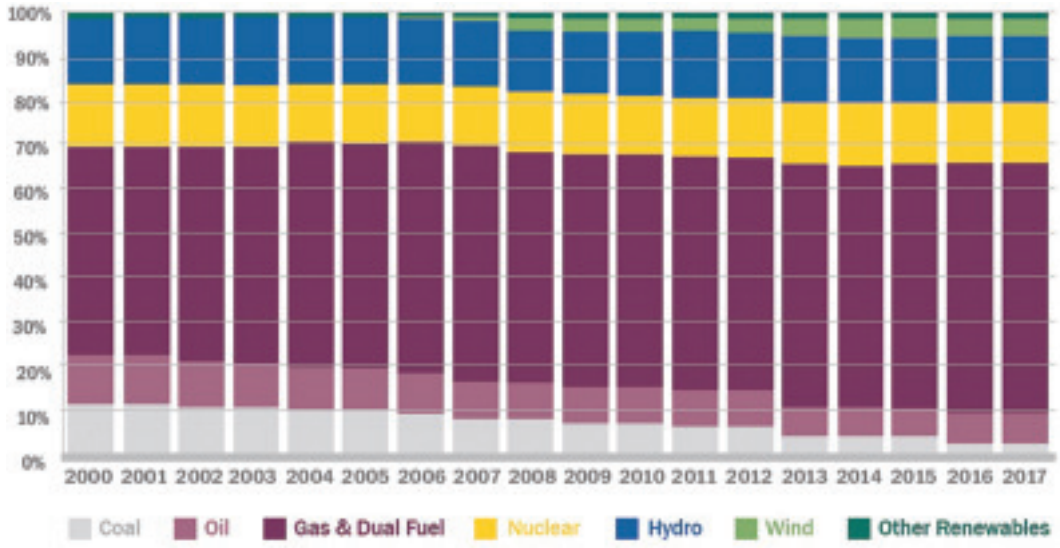

Figure 7. New York Energy Mix Over Time by Source. New York Independent System Operator, *supra* note 128, at 32.

Long before Governor Cuomo's verbal commitment to end coal-fired electricity, the state of New York had been on an aggressive path to eliminate it.[129] As seen in Figure 7, from 2000 to 2013, the state of New York cut its use of electricity from coal-fired plants by more than half.[130]

This forcible shift in the energy market is attributable to several causes—first and most notably, advances in hydraulic fracturing, which have led to increased natural gas production at much lower costs and higher volumes.[131] With this abundance of inexpensive natural gas, the implementation of new facilities in New York has heavily favored natural gas-fired plants, particularly where coal-fired facilities were burning Appalachian coal.[132] In addition to inexpensive natural gas, economic conditions suggest that the dispatch of electricity has and will continue to favor hydropower, wind power, and natural gas turbines over coal units.[133] As it stands in New York, "the increased costs of fuel, operations, and maintenance of coal-fired generation exceeds the price of power currently on the wholesale market and into the foreseeable future."[134] The three remaining plants in New York have an average age of 54 years,[135] extending well beyond the typical

129 *Id.* at 30.
130 *Id.*
131 Lisa A. Hamilton et al., Transition Support Mechanisms for Communities Facing Full or Partial Coal Power Plant Retirement in New York 10 (Mar. 2017).
132 *Id.* at 11.
133 The abundance of natural renewable resources allows for an unlimited supply of power, which does not tie the price of the resource to the finite supply of the same resource, as it would for a non-renewable resource. *Id.*
134 *Id.*
135 The three-remaining coal-fired plants in New York are Dunkirk Generating Facility, opened in 1952, Cayuga Generating Station, opened in 1955, and Somerset Generating Facility, opened in 1984. U.S. *New York: State Profile and Energy Estimates — Overview*,

useful life for a plant.[136] Naturally, as these coal-fired plants become outdated and begin to fail, new and more efficient plants will be built.[137] Rather than charging consumers more for less, highly expensive coal-fired plants will be used less often and replaced as the baseload providers on the electric grid.[138]

In addition to coal-fired operations' lack of efficiency and general high cost of operation, their harsh emissions present additional financial burden.[139] The United States Environmental Protection Agency (EPA) has continued to levy more stringent requirements to reduce emissions.[140] So, "[o]wners and operators of coal-fired electric generation units with more favorable gross margins have also been faced with the decision to switch fuels and convert facilities to natural gas or biomass, or to invest millions in pollution-control technologies to comply with EPA regulations."[141] New York's shift from coal has more to do with market conditions than governmental pressures, but regardless of the reason, the result is the same.[142] New York is one of 15 states to join the United States Climate Alliance, a "bipartisan coalition committed to the goal of reducing greenhouse gas emissions consistent with the goals of the Paris Agreement," even though the United States as a whole is in the process of withdrawing.[143] The state of New York is well on the path to eliminating all coal-fired electricity generated within its borders, but the question remains if the people of New York have the environmental courage to take the next step and eliminate all interstate transmission of coal-fired electricity.[144]

ENERGY INFO. ADMIN., https://www.eia.gov/state/analysis.php?sid=NY (last updated Aug. 16, 2018).

136 "Traditionally, it is common to retire a plant after 35 to 40 years of service where it is assumed that older plants with higher heat rates and lower efficiencies would be retired to make room for newer, larger, and more efficient units." HAMILTON ET AL., *supra* note 131, at 11.

137 *Id.*

138 *See* Nick Stockton, *Much of the US Electric Grid Could Go the Way of The Landline Phone*, WIRED, (Jul. 26, 2018, 6:41 PM) https://www.wired.com/story/electric-grid-rising-costs-renewables/.

139 *See* HAMILTION ET AL., *supra* note 131, at 24–25.

140 *See Reducing Emissions of Hazardous Air Pollutants*, ENVTL. PROT. AGENCY, https://www.epa.gov/haps/reducing-emissions-hazardous-air-pollutants (last updated Feb. 9, 2017).

141 HAMILTON ET AL., *supra* note 131, at 12.

142 *Id.* at 24–25.

143 U.S. CLIMATE ALLIANCE, https://www.usclimatealliance.org (last visited Nov. 16, 2018). The United States has indicated intent to withdraw from the Paris Climate Accord. *See* Statement, Secretary General, Note to Correspondents on Paris Climate Agreement, August 1, 2017, https://www.un.org/sg/en/content/sg/note-correspondents/2017-08-04/note-correspondents-paris-climate-agreement. However, actual withdrawal cannot occur until 3 years after its ratification plus one year following a State's notice of withdrawal. The agreement became effective on November 4, 2016. Paris Climate Agreement, art. 28, Dec. 12, 2015, U.N. Doc. FCCC/CP/2015/L.9/Rev/1.

144 NEW YORK'S DYNAMIC POWER GRID, 2018 POWER TRENDS 34 (2018).

C. Iowa

From 2008 to 2016, the state of Iowa decreased its share of electricity generated by coal from 76% to 47%.[145] This precipitous drop can be attributed to two factors: the rise of cheap natural gas and a state-wide push toward development of wind energy. Iowa finds itself at a crucible in energy production.[146] While 47% of its electricity comes from coal, 100% of that coal is imported from other states.[147] The general trend of the world (despite the current federal administration) is transitioning away from traditional electricity production from fossil fuels to more sustainable forms of energy production.[148] Like Alberta, a considerable share of Iowa's energy economy is produced from coal-fired plants, but there is an opportunity to get ahead of the curve and transition to sustainable energy sources.[149] Should the state mobilize toward the eradication of coal-fired electricity, the opportunity will provide several advantages to Iowans: (1) increased diversity in the state energy portfolio; (2) money spent importing coal from other states can be repurposed toward Iowa jobs (most notably in the renewable energy space); and (3) Iowan energy independence.[150]

The first step in transitioning away from coal is utilizing the capacity of alternatives at the state's disposal. As seen in Table 2, in 2015, Iowa's capacity and generation values differed significantly.

Electric Generation In Iowa By Primary Energy Source	Capacity (MW)	%	Generation (MWH)[2]	%
Coal	6867	37.51%	29,811,075	52.61%
Hydro	129	0.71%	960,145	1.69%
Natural Gas	3,124	17.06%	2,398,135	4.23%
Nuclear	680	3.71%	5,234,446	9.25%
Other Renewables	23	0.13%	263,194	0.46%
Petroleum	1,171	6.40%	110,292	0.19%
Wind	6,314	34.49%	17,872,632	31.54%
Total	18,308		56,658,919	

Table 2. Electricity Generation Portfolio for Iowa for 2015.[151]

145 *Iowa State Energy Profile*, U.S. Energy Info. Admin., https://www.eia.gov/state/?sid=IA (last updated Mar. 15, 2018).

146 *Id*. *See also* Union of Concerned Scientists, Iowa's Dependence on Imported Coal 1 (2010); Jim Pollock, *Eyeing A Career in Iowa Coal Mining? Too Late*, Business Record (Apr. 28, 2008, 10:45 AM), https://businessrecord.com/Content/Default/Archives/Article/Eyeing-a-career-in-Iowa-coal-mining-Too-late/-3/988/49641.

147 Iowa spent $496 million to import coal to power electricity generators in 2008. The state's coal mines have been closed since 1994. Union of Concerned Scientists, *supra* note 146; Jim Pollock, *supra* note 146.

148 Clifford Krauss & Diane Cardwell, *Policy Shift Helps Coal, but Other Forces May Limit Effect*, N.Y. Times, Mar. 28, 2017.

149 *Iowa State Energy Profile*, *supra* note 145.

150 Inova Energy Group, Iowa Energy Plan 39, 42 (2016).

151 *Id*.

In 2015, when running all available sources of electricity generation, coal only comprised 37.5% of the available capacity, yet it constituted over 50% of the electricity generation.[152] A justification for this discrepancy could be that coal was relied upon as a stable baseload generator. However, natural gas had similar baseload ability, but was underutilized by 13%.[153]

A common theme seen in the aforementioned states and provinces is a progressive shift from coal-fueled power toward renewable and sustainable resources. While natural gas is economically viable in the current U.S. market and is more environmentally friendly than coal, it is still a nonrenewable resource, which is eventually confined by scarcity.[154] Stability is key, and the most economically stable source for electricity generation is renewable resources.

In 2017, Iowa generated the second-highest amount of electricity from wind power in the United States.[155] The state has taken drastic steps to ensure the growth of the wind-power industry, increasing capacity from 921 MW in 2006 to 6,314 MW in 2015.[156] In terms of generation, Iowa has increased its use of wind-powered electricity by more than 15 million MWh^2 in that same ten-year timespan.[157] As a direct result of this growth in the wind-energy business, Iowa saw the generation of more than 30,000 jobs to support the industry.[158] Part of this growth is attributable to the Obama Administration's Clean Power Plan and its directive to states to grow renewable sources of energy.[159] However, for Iowa in particular, federal support was an added bonus in a quickly evolving electric grid.[160] Similarly, former EPA Chief's (Scott Pruitt) efforts to roll back the Clean Power Plan are unlikely to hinder Iowan policy to grow the state wind industry.[161] In a statement from a spokeswoman for Iowa Governor Kim Reynolds, Brenna Smith said, "Iowa didn't need permission from the federal government when it was the first state to establish a renewable portfolio standard in 1983, and we aren't going to wait for

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152 *Iowa's Electric Profile*, IOWA UTILITIES BOARD, https://iub.iowa.gov/electric-profile (last visited Nov. 16, 2018).

153 *Id.*

154 ROBERT BRYCE, TEN REASONS WHY NATURAL GAS WILL FUEL THE FUTURE, ENERGY POLICY & THE ENVIRONMENT REPORT 9 (Apr. 2011).

155 *Iowa State Energy Profile*, *supra* note 145.

156 *Iowa's Electric Profile*, *supra* note 152.

157 *Id.*

158 Donnelle Eller, *Will Iowa Continue Adopting Wind, Solar Without Federal Mandate?*, DES MOINES REGISTER, Oct. 9, 2017 (last updated Oct. 9, 2017, 10:20 PM) (explaining that the growth in the renewable energy sector continues to grow. In fact, from 2016 to 2017, Iowa saw a 7% growth increase in jobs directly related to the clean energy sector).

159 *Id.*

160 *See generally* Standards of Performance for Greenhouse Gas Emissions from Existing Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,661, (Oct. 23, 2015) (codified 40 C.F.R. § 60) (explaining that by pressuring states to adhere to stricter emissions standards in electricity generation, particularly regarding carbon emissions, the Clean Power Plan served as an invisible hand pushing state electricity towards greener avenues of production.).

161 Juliet Eilperin & Brady Dennis, *EPA Chief Scott Pruitt Tells Coal Miners He Will Repeal Power Plant Rule Tuesday: 'The War Against Coal Is Over'*, WASH. POST, Oct. 9, 2017.

the federal government to act when determining our actions today."[162] Iowa's wind energy sector will continue to grow, and with that growth must come an increase in market share for electricity generation.[163]

A common critique of wind energy is that it is a poor baseload-generating source, due to the inconsistent nature of the wind.[164] However, there are two renewable resource remedies that can replace the baseload share currently managed by coal-fired power: hydropower and biomass energy.[165]

Iowa has 4,625.5 miles of rivers within its borders.[166] Additionally, it is bracketed to the east by the Mississippi River and to the west by the Missouri River. Despite this abundance of flowing water, the state of Iowa only has three hydroelectric facilities within its borders, producing less than 2% of the energy used within the state.[167] In fact, according to a recent survey conducted by the Oak Ridge National Laboratory, Iowa has 427 MW of hydroelectric capacity readily available in non-powered dams.[168] By simply adding hydrogenation capability to existing dams, Iowa could increase its current capacity for hydropower by 330% and greatly offset the baseload of coal-fired plants.[169]

The remaining baseload needs could be provided from biomass-fueled generation.[170] As of 2015, "other renewables," including biomass, only accounted for 0.13% of Iowa's electric capacity. But similar to Ontario, the state has an extremely large potential capacity for biomass-fueled generation.[171] As part of the state's renewable resource efforts, the University of Iowa president set a sustainability target to obtain 40% of the univer-

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162 Eller, *supra note* 158.

163 *See 15,000 wind energy jobs in Iowa by 2020!*, IOWA WIND ENERGY ASSOC., (Jan. 27, 2018), https://www.iowawindenergy.org/15000-wind-energy-jobs-in-iowa-by-2020/. *See also* Betsy Lillian, *Report: Wind And Solar Jobs Outnumber Coal And Gas Jobs In Majority Of States*, NORTH AMERICAN WIND POWER, (Jan. 23, 2018) https://nawindpower.com/report-wind-solar-jobs-outnumber-coal-gas-jobs-majority-states.

164 *See* Dana Nuccitelli, *Renewable energy can provide baseload power – here's how*, THE CONVERSATION, (Jul. 26, 2011, 5:04 PM) http://theconversation.com/renewable-energy-can-provide-baseload-power-heres-how-2221.

165 *See generally Renewable Energy*, IOWA UTILITY ASSOC., http://www.iowautility.org/key-industry-issues/renewable-energy/ (last visited Nov. 16, 2018).

166 *See generally Interior Rivers*, IOWA DEP'T OF NATURAL RES., http://www.iowadnr.gov/Fishing/Where-to-Fish/Interior-Rivers (last visited Nov. 16, 2018).

167 *Hydropower Development in Iowa*, NAT'L RENEWABLE ENERGY LAB., https://openei.org/wiki/RAPID/Hydropower/Iowa (last updated Oct. 3, 2017).

168 U.S. DEP'T OF ENERGY, WIND AND WATER POWER PROGRAM, BUDGET ACTIVITY NUMBER ED1907042, AN ASSESSMENT OF ENERGY POTENTIAL AT NON-POWERED DAMS IN THE UNITED STATES 25 (Apr. 2012) (explaining that a non-powered dam is a dam that is used for other non-electricity generating purposes, like irrigation, water supply, or inland navigation).

169 In 2015, the Iowa Utilities Board reported 129 MW of hydropower capacity. *Iowa's Electric Profile*, *supra* note 152.

170 *See id.*

171 *Id.*

sity's electricity from renewable resources.[172] To accomplish this goal, the university determined that it would have to displace coal power with biomass production.[173]

Through academic research and multiple rounds of experimentation, the university determined that the growth and combustion of a type of grass, commonly known as *Miscanthus x Giganteus* ("Giant Silvergrass"), would create a highly efficient and effective source of energy.[174] "[Giant Silvergrass] is a warm season, perennial grass plant, and thus expresses greater photosynthetic efficiency and lower water use requirements than other plant species that utilize C3 carbon fixation."[175] Essentially, this species of grass produces more yield for less input. In terms of energy production, the combustion of 790 acres of Giant Silvergrass would produce 1 MW of electricity.[176] Due to its nature, the Giant Silvergrass would be able to be grown in vast quantities all across Iowa.[177]

Other than those who would wish to grow Giant Silvergrass on their property as a source of revenue, the answer to widespread growth of this plant could lie in a federal program.

Every year, the United States Department of Agriculture (USDA) allocates a certain acreage of land in each state that can be enrolled in the Conservation Reserve Program (CRP).[178] The land owners propose to "conserve" that land by not using it for agricultural purposes for 10 to 15 years.[179] In return, the federal government provides a rental payment for the land every year.[180] The purpose for this program is two-fold: for the federal government, it conserves and preserves the soil, land, and wildlife across the United States; for farmers, it provides supplementary income for land that would have to be rotated without any crops so as to not overuse the soil.[181] An additional positive quality of Giant Silvergrass is that it is a perennial, meaning that no tilling is required in its cultivation.[182] Thus, it would "protect and hold the soil against wind and water erosion while increasing soil quality and organic matter. Perennials also improve water quality by reducing nutrient loading".[183] If the lands used in the federal CRP were allowed a concession, to allow the growth and harvest of Giant Silvergrass at a discounted rental rate, this could provide a solution to the issue of acreage needed to provide large scale

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172 FRAZIER BARNES ET AL., MISCANTHUS X GIGANTEUS DEVELOPMENT PLAN TO DELIVER A SUSTAINABLE AND RENEWABLE BIOPOWER FEEDSTOCK 5 (Dec. 9, 2014).

173 *Id.*

174 *Id.* at 9.

175 *Id.* "It has very low nutritional requirements – it has high nitrogen use efficiency, and therefore is capable of growing well on marginal soils without the aid of heavy fertilization. Miscanthus x giganteus is a sterile hybrid and therefore propagates vegetatively underground through its rhizomes. Additionally, as a perennial energy crop, Miscanthus can provide a solid foundation for sustainability with performance that is equal to or improved over that of annual crops." *Id.*

176 *Id.*

177 *Id.* at 14–16.

178 *See* 16 U.S.C. § 3831 (2018).

179 *Id.*

180 *Id.* § 3834.

181 *Id.* § 3831.

182 BARNES ET AL., *supra* note 172, at 3.

183 *Id.* at 9 (citing Humberto Blanco-Canqui, *Energy Crops and Their Implications on Soil and Environment*, 102 AGRONOMY J. 403, 407 (2010)).

production of the Giant Silvergrass. In 2017, Iowa had 534,781 acres enrolled in the CRP.[184] This acreage could produce approximately 675 MW of power, not including any commercial farming of Giant Silvergrass.

In an ideal world, with fewer barriers to transitioning energy sources, it would be possible for Iowa to immediately shift from coal to renewable resources. However, in reality, phase-out will require a gradual process.[185] As renewables acquire more market share, the burden of baseload should shift to natural-gas-fired energy production.[186] Already, some Iowa-based generators have begun to transition away from coal to natural gas.[187] In 2016, Alliant Energy announced that it would immediately begin converting its Prairie Creek Generation Station, outside of Cedar Springs, to a natural gas facility, to be completed by 2025.[188] Furthermore, in a settlement reached between the Sierra Club, the United States Justice Department, the EPA, and the state of Iowa, Alliant agreed to phase out seven of its coal burning units in Iowa.[189] According to Alliant, its smaller coal-fired facilities will be taken out of commission and its larger facilities will transition to natural gas facilities.[190] While not an overwhelming conversion to sustainable resources, phasing out coal seems to be a growing trend, even in Iowa.[191]

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184 U.S. Dep't of Agric., CRP General and Continuous Signup Average Annual Rental Payments Based on Cumulative Enrollment (Sep. 30, 2017).

185 *See Clean Energy*, Iowa Envtl. Council, https://www.iaenvironment.org/our-work/clean-energy/ (last visited Nov. 16, 2018).

186 *See* Emma Foehringer Merchant, *Midwest Utilities Contemplate a Future Less Reliant on Coal*, Green Tech Media (Aug. 14, 2018), https://www.greentechmedia.com/articles/read/midwest-utilities-contemplate-a-future-less-reliant-on-coal.

187 *Id.*

188 Mitchell Schmidt, *Coal no longer king for Iowa utilities*, The Gazette, Oct. 30, 2016, 6:00 AM (explaining how Alliant converted the first of four 245 MW coal burning units in 2017 and will convert the remaining three 245 MW units by 2025); Assoc. Press, *Alliant Converting Coal-Fired Power Unit to Natural Gas*, U.S. News (Nov. 2, 2017, 8:47 AM), https://www.usnews.com/news/best-states/iowa/articles/2017-11-02/alliant-converting-coal-fired-power-unit-to-natural-gas.

189 *See* Consent Decree, United States v. Interstate Power and Light Company, No. 1:15-cv-00061 (N.D. Iowa Jul. 15, 2015) (describing settlement in reaction to a lawsuit filed by the Sierra Club alleging that Alliant Energy violated the Clean Air Act through the use of its coal-fired facilities); Thomas Content, *Alliant to spend $620 Million to close, clean up coal fired plants*, Milwaukee Wisconsin Journal Sentinel, Jul. 15, 2015, http://archive.jsonline.com/business/alliant-to-spend-620-million-to-close-clean-up-coal-fired-plants-b99538906z1-315566291.html/; *Iowa utility agrees to phase out seven coal plants in settlement*, Reuters (Jul. 15, 2015, 3:30 PM), https://www.reuters.com/article/us-usa-coal-sierraclub/iowa-utility-agrees-to-phase-out-seven-coal-plants-in-settlement-idUSKCN0PP2HV20150715.

190 *See* Consent Decree, *Interstate Power and Light Company*, No. 1:15-cv-00061.

191 *See Iowa Home to 200th Coal Plant Phase Out*, Sierra Club — Iowa Chapter, https://www.sierraclub.org/iowa/iowa-home-200th-coal-plant-phase-out, (last visited Nov. 16, 2018).

IV. CONCLUSION

From November 6 to 17, 2017, the United Nations held a Climate Conference to further discuss climate change and the efforts concerned members of the world must take in order to slow the rise in global temperatures.[192] Twenty-seven nations were in attendance, as well as two representatives from the United States: Washington and Oregon.[193] All parties present signed an accord that committed them to phase coal out of their energy economies by 2030.[194]

This paper has examined Ontario and Alberta's efforts to eliminate coal, as well as three very different American states that each struggle with coal-fired plants and all the negative externalities that accompany them. No matter the region, economy, or people, a transition away from coal is possible. All it takes is a singular commitment and perseverance to move in a green direction.

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192 Rachel Layne, *Bonn climate goal to phase out coal by 2030 may further isolate U.S.*, CBS NEWS (Nov. 16, 2017, 12:24 PM EST), https://www.cbsnews.com/news/bonn-climate-conference-goal-to-phase-out-coal-by-2030-may-further-isolate-u-s/.

193 *Id.*

194 *Id.*

Give the Fans What They Really Want: How Professional Sports Stadiums Across the World Can Positively Impact the Environment

By Kevin McHale

I. INTRODUCTION

There are over one hundred major professional sports teams in the United States.[1] Of the 126 teams in North America, only 38 use renewable energy for "at least some of their needs."[2] At the time of writing this Note, only sixty-eight of these teams, barely more than half, employ some "energy-efficient programs."[3] These professional sports teams and their minor league counterparts call the nearly-900 sports stadiums in the United States home.[4] Each one of these stadiums is capable of massive energy consumption.[5] The Dallas Cowboys' stadium, for example, uses up to 750 megawatts (mW) of electricity during peak times (home football games or big concerts),[6] which is enough to power the entire city of Santa Monica.[7] Even more surprising might be how this consumption compares to other countries.[8] The country of Liberia, for example, can only generate 197 mW of energy at any given point, which means one single sports stadium in Dallas consumes more than three times the total energy consumption of an entire third-world country.[9]

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1 *The Names of MLB, NBA, NFL, and NHL Teams*, MISC. BASEBALL (May 4, 2012), https://miscbaseball.wordpress.com/2012/05/04/the-names-of-mlb-nba-nfl-and-nhl-teams/ (listing names of the major sports teams in North America). A "major" sports team means a team in one of the four above-mentioned leagues. Steve Davis, *When it comes to team sports, we think of the NFL, NBA, MLB and NHL. When will MLS break into that group?*, FOURFOURTWO, Feb. 22, 2017 (noting that the number of teams is based on five major sports leagues, including MLS, at the time the article was written).

2 Mollie Simon, *Philadelphia Eagles Go Green with Renewable Energy*, KLEINMAN CENTER FOR ENERGY POLICY (June 29, 2016), https://kleinmanenergy.upenn.edu/blog/2016/06/29/philadelphia-eagles-go-green-renewable-energy (stating less than one third of professional sports teams successfully use and employ renewable energy for their operations).

3 *See id.* (noting more teams use energy efficient programs than use renewable energy, but that many teams still fail to employ these types of programs).

4 *Stadiums in the United States*, World Stadiums, http://www.worldstadiums.com/north_america/countries/united_states.shtml (last visited Jan 19, 2018) (discussing number of stadiums in world and the United States).

5 Edwin Rios, *It Takes How Much Electricity to Power an NFL Game?*, MOTHERJONES (July 20, 2015), http://www.motherjones.com/environment/2015/07/hershkowitz-green-sports-stats/ (alluding to power consumption of NFL stadiums, specifically Dallas Cowboys' stadium).

6 *Id.* (noting the Cowboys' stadium is capable of consuming the same amount of energy required to power midsize city).

7 Owen Glubiak, *Cowboys New Stadium A Reminder of How to Waste Energy*, EE TIMES, Aug. 18, 2009 (comparing Dallas Cowboys' stadium energy consumption to that of Santa Monica, CA).

8 *See generally* Jon Greenberg, *Kristof: Dallas Cowboys stadium draws 3 times more power than Liberia can produce*, POLITIFACT: PUNDIFACT, (Oct. 30, 2014), http://www.politifact.com/punditfact/statements/2014/oct/30/nicholas-kristof/kristof-dallas-cowboys-stadium-draws-3-times-more- (comparing energy consumption of Cowboys' stadium to Liberia and noting Cowboys' stadium is actually capable of consuming more energy than entire country of Liberia).

9 *Id.*; *Countries of the Third World*, NATIONS ONLINE, http://www.nationsonline.org/oneworld/third_world.htm (last visited Jan. 19, 2018) (listing Liberia as a third world country).

This statistic is one of many extremely troubling figures regarding sports stadiums and the environment.[10] In one month, for example, the 2014 World Cup in Brazil generated 2.7 million tons of carbon dioxide (CO_2),[11] or the equivalent of the annual emissions from 560,000 cars.[12] NASCAR drivers collectively burn through an average of 5,375 gallons of fuel during the Daytona 500.[13] Finally, National Hockey League (NHL) teams collectively use 321 million gallons of water each year, which equates to close to 16.5 gallons of water per person who attends a game.[14] Despite these statistics, however, many teams have taken the steps required not only to offset the negative environmental effect of their stadium, but also to contribute positively to the environment.[15]

Many sports teams, both college and professional, have realized the negative impact their stadiums have on the environment.[16] In addition to taking active steps to reduce these effects, some teams have used their stadiums as a way to promote and demonstrate environmental change.[17] Multiple teams have installed solar panels on the roofs of their stadiums and parking structures.[18] Arizona State University installed solar panels on the Sun Devil Stadium parking structure and Wells Fargo Arena in 2008 and 2011, respectively.[19] As a result, the two structures produce approximately two million kWh of electricity each year.[20] This is enough energy to power 161 homes for an entire year.[21] Another example is the Staples Center, which is home to the Los Angeles Lakers and hosts dozens of concerts each year.[22] The Staples Center installed solar panels that pro-

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10 *See* Rios, *supra* note 5 (listing multiple statistics pertaining to sports stadiums and environment).

11 *See id.* (listing emissions during 2014 World Cup.). The World Cup spanned June 12–July 13. *Matches*, FIFA, http://www.fifa.com/worldcup/archive/brazil2014/matches/index.html (last visited on Feb. 16, 2018).

12 *See* Rios, *supra* note 5 (comparing above-listed emissions to CO_2 levels released by cars).

13 *See* Jack Linshi, *Here's How Much Gas Daytona 500 Racers Will Use*, TIME, Feb. 22, 2015 (noting how much fuel NASCAR racers are projected to use in 2015 at the Daytona 500, which spans only three hours).

14 *See* Rios, *supra* note 5 (noting how much water NHL teams use each year and quantified in terms of gallons of water per fan).

15 *See* NAT. RESOURCES DEF. COUNCIL, SOLAR ELECTRIC GUIDE FOR YOUR STADIUM OR ARENA https://www.nrdc.org/sites/default/files/stadium-solar-guide.pdf (last visited Jan. 19, 2018) (explaining how stadiums have contributed to positive environmental change).

16 *See id.* (explaining steps stadiums have taken to positively contribute towards positive environmental change).

17 *See id.* (introducing idea that stadiums can produce and generate energy rather than only using energy).

18 *See id.* (providing statistics about stadiums that use solar panels).

19 NATIONAL RESOURCES DEFENSE COUNCIL, COLLEGIATE GAME CHANGERS: HOW CAMPUS SPORT IS GOING GREEN 44–48 (Aug. 2013) [hereinafter COLLEGIATE GAME CHANGERS].

20 *See id.* (describing how effective Arizona State's solar panel installation project has been).

21 *Greenhouse Gas Equivalencies Calculator*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator (last visited Jan. 19, 2018) (converting kWh to energy used to power homes).

22 *See Solar Electric Guide for Your Stadium or Arena*, *supra* note 15 (introducing Staples Center as a premier venue in America, not only for sports, but for concerts and other forms of entertainment as well).

duce 456,000 kWh of electricity each year.[23] To illustrate the magnitude of this project, approximately four hundred acres of established forests would be required to sequester the carbon emissions produced from generating 456,000 kWh of electricity.[24] By generating its own clean and renewable energy, stadiums employing this technology are actively reducing the amount of carbon emissions released into the atmosphere.[25]

The goal of this Note is not to chastise some sports teams and applaud others. Rather, the goal is to provide an oversight of how certain teams, cities, countries, and athletic organizations can effectively use their stadiums as a catalyst to benefit the environment, while also providing a great atmosphere to all their fans.

Section II of this Note addresses stadiums in the United States. It offers an insight into the average life of stadiums in the United States and the costs of planning, constructing, and operating the stadiums, both environmentally and financially; this will fully illuminate the severity of this issue. Section III focuses on how agencies and organizations such as the U.S. Environmental Protection Agency (EPA) and the National Resources Defense Council (NRDC) have worked with professional sports teams to achieve their joint environmental goals. Section IV addresses how different organizations and countries outside the United States have handled this issue, with some clearly prioritizing the issue and others viewing the environment as an afterthought. Section V addresses how the Olympics, specifically the International Olympic Committee (IOC), has carefully and successfully managed to make the environment a priority. Finally, Section VI provides suggestions and recommendations for cities, countries, leagues, and organizations to ensure stadiums worldwide have a sustained positive impact on the environment. After reading this Note, the reader will be able to analyze environmental standards of various stadiums, cities, and countries and make positive recommendations to quell this disastrous approach to sports.

II. STADIUMS IN THE UNITED STATES

A. INTRODUCTION TO STADIUMS IN THE UNITED STATES

Roger Noll, a retired sports economics professor at Stanford, noted the seemingly short lifespan of sports stadiums—about twenty years.[26] In addition to the obvious financial challenges this can place on a team, it has many severe implications on the environ-

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23 *See id.* (explaining how Staples Center has followed the example of many other arenas around the country and installed solar panels on its roof in an attempt to generate clean energy and offset its own energy use).

24 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (converting kWh to carbon levels sequestered by forests).

25 *See Solar Electric Guide for Your Stadium or Arena*, *supra* note 15, at 4 (noting projects such as those listed help to reduce a facility's "energy needs . . . energy waste . . . [and] energy consumption").

26 Jorge L. Ortiz & Ray Giler, *As Turner Field Shuts Down, MLB Ponders: is 20 Years New Stadium Life Span?*, USA TODAY (Sept. 28, 2016), https://www.usatoday.com/story/sports/mlb/2016/09/28/turner-field-final-homestand-sun-trust-park-globe-life-park-rangers/91212778/ (noting Noll explained "20-year horizon is roughly the average [life of sports stadiums]").

ment.[27] The Dallas Cowboys' new stadium, which holds close to 100,000 people, is a perfect example.[28] A stadium this size has very harsh financial and environmental costs, as the "stadium averages roughly $200,000 in monthly utility bills."[29] Based on the price of electricity in Texas—in 2009, at the time the stadium opened, one author projected the stadium itself used 24,439,918 kWh of energy per year.[30] For perspective, this is about the same amount of annual energy consumed by the city of Santa Monica, California,[31] or the equivalent of burning approximately ten thousand tons of coal.[32]

One solution big metropolitan cities have used is sharing stadiums between multiple teams.[33] At least ten different cities have an arena that hosts at least two professional teams, and Oakland has an outdoor arena that hosts both a football team and a baseball team.[34] Chicago, Toronto, Dallas, Los Angeles, New York, Washington D.C., Boston, Philadelphia, and Denver have stadiums that at least two teams call "home."[35]

In contrast, Major League Soccer (MLS) has spent two decades "moving aggressively to create custom-made venues for its teams" and most teams in professional soccer do not share a stadium.[36] Instead, MLS trends suggest each of its twenty-three teams play in its own stadium, with few exceptions, including New York City Football Club (FC), Seattle Sounders FC and Atlanta United FC.[37] While this idea originated out of the desire to "allow[ ] clubs greater control over revenue," some teams are successfully using NFL venues and setting single-game attendance records.[38] Multiple NFL owners, includ-

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27 WASTE MGMT., SUSTAINABLE STADIUMS & ARENAS, https://www.wm.com/sustainability-services/documents/insights/Stadiums%20and%20Arenas%20Insight.pdf (last visited Jan. 19, 2018) (discussing constriction costs of stadiums—noting costs can exceed $1 billion).

28 *See* Glubiak, *supra* note 7 (estimating capacity of Cowboys' stadium).

29 *See id.* (estimating total of Cowboys' stadium bills).

30 *See id.* (projecting total use of energy in Cowboys' stadium based on monthly bills).

31 *See id.* (comparing Cowboys' stadium energy use to Santa Monica's. For reference, Santa Monica had population of 88,000 people in 2009).

32 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (indicating that a sum of greenhouse gas emissions in CO_2 equivalents from 24,439,918 kWh of electricity is equal to burning 19,000,003 lbs. of coal).

33 *See e.g.*, Terry Frei, *NBA, NHL Attendance Rankings of 10 Arenas with Both Teams*, THE DENVER POST: ALL THINGS AVALANCHE (Nov. 29, 2015), http://blogs.denverpost.com/avs/2015/11/29/complete-nbanhl-attendance-rankings-of-the-10-buildings-with-both-teams/22718/ (ranking arenas in which both NHL and NBA teams play by attendance).

34 *Id.* (listing number of cities that have both NBA, NHL teams play in same arena). Oakland Raiders are included in this number even though the team recently announced a move to Las Vegas Stadium, which is anticipated to open for the 2020 NFL season. *Frequently Asked Questions*, RAIDERS, http://lasvegasstadium.raiders.com (last visited Feb. 16, 2018).

35 Frei, *supra* note 33 (listing attendance numbers for stadiums where NBA, NHL teams played. Note these teams all play in big-market cities).

36 Zach Spedden, *Don Garber: MLS Could be Open to Tweaking Soccer-Specific Stadium Rule*, SOCCER STADIUM DIGEST (Sept. 18, 2017), https://soccerstadiumdigest.com/2017/09/don-garber-mls-could-be-open-to-tweaking-soccer-specific-stadium-rule/ (explaining MLS does not allow teams to share stadiums, which differs from policies of all "Big Four" leagues). *E.g.*, Alicia DelGallo, *MLS Commissioner Don Garber Open to Modifying Soccer-Specific Stadium Mandate*, ORLANDO SENTINEL, Sept. 16, 2018.

37 *See* Zach Spedden, *supra* note 36.

38 *See id.* (stating MLS teams draw bigger crowds at NFL stadiums).

ing Falcons' owner Arthur Black, have expressed a strong desire to host MLS games in their stadiums, which would not only improve the bottom line, but also help the environment.[39]

B. Tailgating

While the stadiums themselves have a significant environmental footprint, the fans on game day (specifically, tailgating) can also negatively affect the environment.[40] A study from North Carolina State University examined the effect of tailgating on the environment, and the air quality near the tailgates.[41] Researchers discovered "spikes in air pollution" next to large charcoal grills, "old generators and large, idling vehicles," all of which are common staples at major college and professional sporting tailgates.[42] In addition, the researchers noted that air quality "sometimes [does] not return[ ] to normal pre-game levels until the following morning."[43] The researchers attribute this phenomenon to all the fans (sometimes up to 100,000) driving home from the stadium at approximately the same time.[44]

III. U.S. Regulations (Federal)

A. The EPA and Sports Stadiums

The EPA's mission is to "protect human health and the environment."[45] The EPA enforces several federal environmental laws, including the Clean Air Act (CAA) and the Clean Water Act (CWA).[46] The CAA "regulates air emissions from stationary and mobile sources."[47] In addition, Congress, through the CAA, "authorizes [the] EPA to establish National Ambient Air Quality Standards (NAAQS) to . . . regulate emissions of hazardous air pollutants."[48] The CWA "establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality stan-

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39 *See id.* (explaining NFL owners' desires to host MLS games in NFL stadiums, not only for financial purposes, but environmental purposes).

40 *See, e.g.*, Carla Davis, *Research Reveals Air Quality Impacts on Tailgating*, N.C. STATE U. (Aug. 18, 2016), https://sustainability.ncsu.edu/blog/2016/08/18/research-reveals-air-quality-impacts-football-tailgating/ (N.C. State University study of air pollution as result of tailgating).

41 *Id.*

42 *Id.* (finding spikes in air pollution near tailgates).

43 *Id.* (explaining air quality is often lower near pollution sites).

44 *Id.* (attributing some pollution to fans leaving stadium at same time).

45 *Our Mission and What We Do*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/aboutepa/our-mission-and-what-we-do (last visited Jan. 19, 2018) (explaining mission of the EPA).

46 33 U.S.C. ch. 23 § 1151, *See also Summary of the Clear Water Act*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/laws-regulations/summary-clean-water-act (last visited Jan. 19, 2018) (summarizing the Clean Water Act).

47 42 U.S.C. § 7401, *See also Summary of the Clean Air Act*, U.S. ENVTL. PROT. AGENCY, https://www.epa.gov/laws-regulations/summary-clean-air-act (last visited Jan. 19, 2018) (summarizing Clean Air Act).

48 *See id.*

dards for surface waters."[49] The EPA has enforced the CWA by "implement[ing] pollution control programs . . . [and] set[ting] water quality standards for all contaminants in surface waters."[50] In addition, the "CWA made it unlawful to discharge any pollutant from a point source into navigable waters, unless a permit was obtained."[51] The EPA enforces this through its National Pollutant Discharge Elimination System (NPDES) permit program.[52]

While the EPA does not necessarily enforce these regulations directly on professional sports teams, the EPA has made broad recommendations to teams and has even gone so far as to enter into agreements with different stadiums regarding carbon, energy, water, and solid waste reduction.[53] Two stadiums, both in New York, reached agreements with the EPA regarding these subjects in 2008, and their actions have set the stage for teams complying with federal regulations today.[54]

1. Case Study: New York Metropolitans

The New York Metropolitans ("Mets") play in Citi Field, which opened in 2009.[55] Queens Ballpark Company, L.L.C. (QBC) developed and designed the stadium.[56] The EPA and QBC entered into a Memorandum of Understanding (MOU) with the goal of working together to further progress in sustainable development.[57] The MOU focused on design, construction, operation, and implementation of programs designed to further the stadium's environmental sustainability.[58]

The design included ideas such as a "green roof," swales to improve water runoff, incentives for alternative methods of transportation, and waterless urinals.[59] The goals included using coal combustion products, recycled steel, recycled materials, and low sul-

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49 *Summary of the Clean Water Act*, *supra* note 46.

50 *See id.* (describing EPA's actions under CWA).

51 *See id.* (explaining ways the CWA has contributed to environmental protection and conservation).

52 *Overview, About NPDES*, U.S. Envtl. Prot. Agency, https://www.epa.gov/npdes/npdes-permit-basics (last visited Jan. 19, 2018) (introducing and explaining National Pollutant Discharge Elimination System [NPDES] and its effect). "The NPDES permit program addressed water pollution by regulating point sources that discharge pollutants to waters of the United States." *Id.*

53 *Sustainability: Metlife Stadium Sets Industry Precedent for Green Initiative*, Metlife Stadium, http://www.metlifestadium.com/stadium/sustainability (last visited Jan. 19, 2018) (introducing agreements made between EPA and sports teams) [hereinafter *Sustainability: Metlife Stadium*].

54 *See id.* (explaining agreements made by both Mets and Giants).

55 *Citi Field Overview Highlights, and Media*, N.Y. Mets, http://newyork.mets.mlb.com/nym/ballpark/citifield_overview.jsp (last visited Jan. 27, 2018) (introducing Citi Field and work done to build it).

56 Elias Rodriguez, *EPA and New York Mets Agree on Environmental Goals for Citi Field*, U.S. Envtl. Prot. Agency (Mar. 13, 2008), https://archive.epa.gov/epapages/newsroom_archive/newsreleases/d87469e9e29de0238525740b004fc02c.html (introducing agreement between the EPA and Mets).

57 *See id.*

58 *See id.*

59 *See id.*

fur diesel fuel during construction with the goal of minimizing harm to the environment.[60] The operational goals included energy conservation and water conservation.[61] Finally, the Mets and the EPA implemented programs designed to eliminate waste ("WasteWise"), encourage recycling ("Recycling On The Go"), and save energy ("Energy Star").[62]

Chief Operating Officer of the Mets, Jeff Wilpon, acknowledged the arrangement and its successful implementation during the stadium's opening.[63] When delivering remarks about the environmental sustainability of the new ballpark, Wilpon thanked "Alan [J. Steinberg, EPA Regional Director] and his colleagues at the EPA for their interest and willingness to work with us and their invaluable guidance in the greening effort for our new home."[64] The Mets used "at least 2 million pounds of recycled coal combustion products" instead of the alternative, "newly manufactured Portland cement."[65] In addition, "approximately 95% of the 12,500 tons of structural steel used to construct Citi Field is recycled."[66]

Additional bonuses included the above-mentioned "green roof," which decreases the amount of energy the stadium needs, improved drainage systems for the parking lots, water conservation systems, and many other environmentally friendly systems.[67] As then-mayor Michael Bloomberg said, it "probably would have been easier to build a new ballpark without incorporating 'green technology,' but the Mets understand [ ] their responsibility . . . they've taken the initiative to be . . . environmentally responsible."[68]

2. *Case Studies: New York Giants and New York Jets*

The Mets are not the only New York sports team that relied on the EPA for stadium advice.[69] In fact, MetLife Stadium, which is home to both the New York Giants and the New York Jets, signed an agreement with the EPA as it undertook a mission to "become an environmental steward."[70] As part of its mission, MetLife Stadium focused on its construction as well as its energy footprint once built.[71]

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60 *Id.* (highlighting construction goals for Citi Field).

61 *Id.* (detailing operation goals for Citi Field).

62 *Id.* (introducing programs implemented in Citi Field to help eliminate waste).

63 *Id.* (quoting COO of Mets discussing work with the EPA).

64 *Id.*

65 *Id.* (describing ways Mets made their stadium more environmentally friendly).

66 *Id.*

67 *Id.*

68 *Id.* (including comment from Bloomberg on new stadium).

69 *See Sustainability: Metlife Stadium*, *supra* note 53 (noting Giants and Jets also worked with EPA to achieve clean energy goals).

70 *Id.* (detailing MetLife Stadium's MOU with the EPA and MetLife's desire to implement "a number of green initiatives that would reduce its carbon footprint and further improve our planet's environment").

71 METLIFE STADIUM, SUSTAINABILITY GUIDE, http://cms.metlifestadium.com/docs/default-source/sustainability-docs/sustainable-stadium-presentation-2016_website-version.pdf (last visited Jan. 27, 2018) (detailing construction of MetLife Stadium).

The first focus was on the demolition of the old stadium.[72] MetLife's construction crew successfully recycled one hundred thousand tons of concrete and other demolition materials from the demolition site of the old stadium.[73] The crew used 40,000 tons of recycled steel to erect the stadium, which is twice as large as the old stadium, but consumes thirty percent less energy.[74]

The stadium boasts an impressive recycling program: it recycled approximately 940 tons of materials in 2014 and was the first stadium to have an in-house composter.[75] The stadium has a solar ring that has produced over 903 Mwh of energy since its inception.[76] This is enough energy to power over one hundred homes for an entire year.[77] The stadium also implemented a turf replacement program, so old turf can be recycled and used "in gyms and batting [c]ages."[78] As a result of these and other "collective and widespread efforts," the "[s]tadium reduced its carbon footprint by 247,379.4 MTCO2e (Metric Ton Carbon Dioxide Equivalent)."[79] For reference, this is the amount of CO_2 emitted from burning over 27 million gallons of gasoline.[80]

MetLife Stadium has received many honors for its sustainability and environmental progress.[81] The EPA honored MetLife as the "Greenest Stadium" in the NFL.[82] The New Jersey Department of Environmental Protection recognized MetLife for "Outstanding Achievement in Recycling," and it has been named one of the most energy efficient stadiums in the NFL.[83] Even though MetLife Stadium has made very important and crucial environmental progress, it is not the only stadium to undertake and achieve such goals.[84]

B. The NRDC and Lincoln Financial Field

Lincoln Financial Field is home to the Philadelphia Eagles.[85] The "Linc" as it is commonly referred to, opened in 2003, and seats approximately 69,000 people.[86] With the help of the NRDC, the Eagles have been "pioneers in the greening of professional

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72 *Id.* (noting MetLife's green energy plan included recycled materials from the demolition of the old stadium).

73 *Id.* (describing demolition crew's successful attempt to recycle hundreds of thousands of tons of demolition materials).

74 *Id.* (detailing MetLife's crew's ability to build stadium using recycled materials).

75 *See id.* (noting recycling program produced 939.28 tons of recyclables out of 1,856.4 tons of total waste and touting MetLife as first stadium to have in-house composter).

76 *Id.* (discussing solar ring on MetLife Stadium).

77 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (calculating energy needed to power homes for a year).

78 *Sustainability Guide*, *supra* note 71 (detailing turf replacement program in MetLife Stadium).

79 *See Sustainability: Metlife Stadium*, *supra* note 53 (detailing how MetLife reduced its carbon footprint).

80 *See id.* (providing example to demonstrate how much MetLife Stadium reduced its carbon footprint).

81 *See id.* (introducing honors MetLife Stadium received for environmental activism).

82 *Id.* (noting MetLife won award in 2009).

83 *Id.* (listing accolades given to MetLife Stadium).

84 Collegiate Game Changers, *supra* note 19, at 35–39.

85 *Id.* (noting Eagles play in Lincoln Financial Field).

86 *Id.* (detailing opening date and seating capacity of Lincoln Financial Field).

sports operations."[87] The owner of the Eagles, Jeffery Lurie, stated the organization "search[es] relentlessly for ways to reduce [the stadium's] environmental footprint."[88]

The stadium has taken countless steps to achieve Lurie's goal, especially with help from the NRDC and other advisers.[89] The steps taken were so effective that the initiative has been called "the most comprehensive greening effort of any major sports team."[90] In fact, the "Go Green Initiative," as the Eagles call it, fully eliminates the use of fossil fuels at the Linc.[91] In addition, the stadium "uses 100% green energy."[92] The eleven thousand solar panels and fourteen wind turbines installed on the stadium annually supply "more than 4 times the power consumed during a season of home game days."[93]

In addition, "100 percent of team operations are powered by clean energy generated on U.S. wind farms."[94] The Eagles save close to 170 trees each year by "convert[ing] all of their tissue paper products to 100 percent post-consumer recycled paper."[95] The total paper reduction plan saved close to six thousand trees between 2003 and 2010.[96] At the time of its inception, this was deemed the "most ambitious green initiative yet," and owner Jeffery Lurie was happy to challenge the notion that "excellent environmental practices are too expensive or not wise for a company."[97]

Lincoln Financial Field and MetLife Stadium are not the only energy efficient stadiums.[98] Century Link Field, home to the Seattle Seahawks, saves 1.3 million gallons of water each year through its low-flow water fixtures.[99] Its 3,500 solar panels also generate enough energy to "power 95 Seattle-area homes for an entire year."[100] M&T Bank Stadium (home to the Baltimore Ravens) "reduced its electricity use from 2005–2012 by 5

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87 *Id.* (introducing relationship between Eagles and NRDC).

88 *Id.* (detailing Eagles' owner's commitment to reducing team's environmental footprint).

89 *Id.* (introducing Eagles' successes regarding environmental efforts).

90 *NFL Green*, NAT'L FOOTBALL LEAGUE (Jun. 16, 2011), http://www.nfl.com/news/story/09000d5d8205a0e7/article/nfl-green (praising Eagles' efforts).

91 *Id.* (noting "Go Green" initiative eliminates Eagles' use of fossil fuels).

92 *See* Simon, *supra* note 2 (noting Eagles use 100% green energy).

93 *5 NFL Football Stadiums Score Big on Efficiency*, OFF. OF ENERGY EFFICIENCY & RENEWABLE ENERGY (Sept. 11, 2017), https://www.energy.gov/eere/articles/5-nfl-football-stadiums-score-big-efficiency.

94 COLLEGIATE GAME CHANGERS, *supra* note 19, at 34–39.

95 *Id.* (mentioning that the Eagles save 170 trees each year through recycling tissue paper alone).

96 *Id.* (stating that the total paper reduction plan saved close to 6,000 trees between 2003 to 20).

97 Ken Belson, *For Eagles, a Winning Mix of Wind, Biodiesel and Solar*, N. Y. TIMES (Nov. 17, 2010), http://www.nytimes.com/2010/11/18/sports/football/18stadium.html (detailing Jeffery Lurie's eagerness to implement a seemingly challenging program).

98 Michael Timberlake, *Here Are The NFL's 5 Most Energy-Efficient Stadiums*, ALLIANCE TO SAVE ENERGY (Jan. 11, 2014), http://www.ase.org/blog/here-are-nfls-5-most-energy-efficient-stadiums (detailing other NFL teams' successful energy-saving programs).

99 *Id.* (explaining how the Seattle Seahawks save millions of gallons of water each year).

100 *5 NFL Football Stadiums Score Big on Efficiency*, *supra* note 93 (detailing how Baltimore Ravens reduce energy use).

million kilowatt-hours."[101] This is "equivalent to the energy needed to heat 440 homes for an entire year."[102] Finally, Mercedes-Benz Stadium (home to the Atlanta Falcons) is "built to catch more than 1 million gallons of rainwater," which will be used for "irrigation and the stadium's cooling system."[103]

IV. International Stadiums and their Environmental Effects

How do other countries regulate the environmental impact of stadiums without the EPA or the focus of the NRDC?[104] For some, the answer is self-regulation and setting strong environmental goals without the oversight of a national program.[105] For others, the answer is unfortunately paying less attention to the environmental impact of its stadiums.[106] Wembley Stadium in London provides an example of how self-regulating can be successful and how a stadium can be environmentally friendly without much oversight.[107] Brazil, on the other hand, failed to live up to the environmental challenges and expectations that come with hosting a World Cup.[108] The impact of the Brazil World Cup on the environment provides an example of why a universal oversight committee might be necessary.[109]

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101 *Id.* (noting Ravens made major effort to reduce energy).

102 *Id.* (noting that Ravens saved enough energy to power 440 homes for a year).

103 *Id.* (explaining how the roof on Atlanta Falcons' stadium helps catch rainwater and contribute to irrigation).

104 The EPA and NRDC have international initiatives, but they do not focus on mitigating the environmental impacts of stadiums. *See, e.g.*, *International*, Nat. Resources Def. Council, https://www.nrdc.org/international (last visited Jan. 29, 2018) (summarizing NRDC's environmental initiatives in Canada, China, India, and Latin America); *Where EPA Works Around the World*, U.S. Envtl. Prot. Agency, https://www.epa.gov/international-cooperation/where-epa-works-around-world (last visited Sept. 23, 2018) (EPA carries out bilateral cooperative programs with many other countries around the world).

105 James Huarston, et al., Going Greener, Our Journey to Environmental Sustainability 2012-13 (2015) [hereinafter Going Greener]. *See, e.g.*, *Providing a World Leading, Inspirational Venue*, Wembley http://www.wembleystadium.com/TheStadium/StadiumGuide/Sustainability (last visited Sept. 23, 2018) (indicating Wembley Stadium has incorporated ISO standards in implementing sustainable best practices).

106 *The Biggest Loser At The 2014 World Cup In Brazil? According To FIFA, It's The Environment*, Fox News (Dec. 10, 2013), http://www.foxnews.com/sports/2013/12/10/environment-to-lose-big-at-2014-world-cup-272-million-tons-co2-expected.html (noting Brazil failed to adequately protect environment while hosting 2014 World Cup) [hereinafter *The Biggest Loser*].

107 *See* Going Greener, *supra* note 105, at 8–9.

108 *See The Biggest Loser*, *supra* note 106 (introducing Brazil's failures to adequately develop and enforce strategies to help offset 2014 World Cup's impact on environment).

109 *Id.* (describing Brazil's careless attitude towards environmental concerns while hosting 2014 World Cup).

A. CASE STUDY: WEMBLEY STADIUM

Wembley Stadium in London is "one of the most modern and breathtaking arenas in the world."[110] Wembley National Stadium Limited ("Wembley") describes the stadium as a "world-class venue" with over two million visitors a year.[111] Wembley notes that the stadium adheres to the "sustainability principles of integrity, inclusivity, transparency, and stewardship."[112]

Wembley National Stadium Limited is a wholly-owned subsidiary of The Football Association Group.[113] Wembley has an Environmental Management System that "identifies . . . how activities at the Stadium interact with the environment."[114] Wembley has focused specifically on its environmental impact concerning six key areas: energy, water, waste, transport, marketing and communications, and procurement.[115]

Wembley incorporated this process while rebuilding the new Wembley Stadium after demolishing the old stadium in 2003.[116] The stadium has a circumference of 1 km, which is close to the size of ten football fields, and seats close to ninety thousand people.[117] For concerts, however, the stadium allows people on the field, and therefore can hold almost 100,000 people.[118] The old stadium hosted the World Cup, the Olympics, and the EURO World Cup.[119] The new stadium now hosts NFL games, in addition to sell-out concerts.[120]

The stadium has been dubbed the "most iconic stadium in world football"[121] by international writers, and [one of the top 25 most iconic [v]enues in sports history] by

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110 *Stats and Facts*, WEMBLEY STADIUM, http://www.wembleystadium.com/Press/Presspack/Stats-and-Facts (last visited Jan. 30, 2018) (describing Wembley Stadium as "breathtaking" among other things).

111 WEMBLEY STADIUM'S SUSTAINABILITY PROJECT TEAM, WEMBLEY STADIUM CRC ENERGY EFFICIENCY CASE STUDY 1 (Jul. 29, 2013).

112 *See id.*

113 *Meet Our Stakeholders*, WEMBLEY STADIUM, http://www.wembleystadium.com/Organisation/Stakeholders.aspx (last visited Nov. 26, 2018).

114 WEMBLEY STADIUM'S SUSTAINABILITY PROJECT TEAM, *supra* note 111, at 1.

115 *See id.*

116 *See* GOING GREENER, *supra* note 105, at 8–9.

117 *Stats and Facts*, *supra* note 110.

118 *Id.* James Hanley, *Adele shows to smash Wembley Stadium's attendance record*, MUSIC WEEK (Jun. 27, 2017), http://www.musicweek.com/live/read/adele-shows-to-smash-wembley-stadium-s-attendance-record/068939 (noting Wembley Stadium will host close to 100,000 fans to see Adele in concert).

119 *See Stats and Facts*, *supra* note 110 (listing events old Wembley Stadium hosted).

120 *Wembley Stadium: The 11 Massive Acts Who've Played Multiple Nights To Mind-Boggling Crowds*, NEW MUSICAL EXPRESS (Jun. 15, 2016), http://www.nme.com/photos/wembley-stadium-the-11-massive-acts-who-ve-played-multiple-nights-to-mind-boggling-crowds-1405636 (noting Wembley has hosted NFL games and famous musicians such as U2, Eminem, and Ed Sheeran).

121 *Ranking The Top 10 Stadiums In World Football*, LIFE BEYOND SPORT, http://lifebeyondsportmedia.com/Ranking-the-Top-10-Stadiums (last visited Jan. 30, 2018) (ranking Wembley as "most iconic stadium in football").

American writers.[122] The fame and prestige of Wembley Stadium made it even more important when Wembley announced that, for its reopening in 2007, it would be "Going Green" and on a "journey to environmental sustainability."[123]

1. The Process

This journey began with the construction of Wembley Stadium and has continued with Wembley receiving multiple awards and certifications for its environmental activism and progress.[124] First, Wembley made a "significant investment in the public transport infrastructure around Wembley Stadium."[125] There are significant CO_2 savings regarding visitor travel, which can account for "up to 85% of event emissions."[126] Not only did this investment prove to be an important step for Wembley, but for other businesses as well, as "event organisers are increasingly aware of the need for public transport accessible venues."[127]

The first year the stadium opened, the stadium hosted a Live Earth concert, which was a concert devoted to combat climate change.[128] Wembley first embarked on greening preparations for this concert, and later the stadium team developed a plan to make the stadium more environmentally friendly.[129]

The next year, Wembley formally committed to this strategy by inviting Carbon Trust and Green500 to assess energy saving opportunities.[130] In 2009, Wembley established a "Green Team" and "Green Team Sub Groups."[131] The Team and Sub Groups responded to "specific issues identified by [the Stadium's self-imposed Environmental Management System] EMS Initial Environmental Review and Manual."[132] These issues included "energy efficiency; waste management; water efficiency; and a core Sub Group established for transport . . . and . . . communications."[133]

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122 Michael Akelson, *The 25 Most Iconic Venues In Sports History*, Bleacher Report, http://bleacherreport.com/articles/522420-the-25-most-iconic-venues-in-sports-history (last visited Jan. 30, 2018) (ranking Wembley Stadium one of most iconic venues in sports history).

123 *See* Going Greener., *supra* note 105, at 8.

124 *Providing a World Leading, Inspirational Venue*, Wembley Stadium, http://www.wembleystadium.com/TheStadium/StadiumGuide/Sustainability (last visited Jan. 30, 2018) (noting Wembley Stadium has won multiple awards for its environmental progress).

125 *See* Huarston et al, Going Green 6 (2012) [hereinafter Going Green] (on file with author).

126 *Id.* at 24.

127 *Id.*

128 *London Live Earth Line-Up Revealed*, New Musical Express (Jul. 5, 2007), http://www.nme.com/news/music/live-earth-40-1345164 (noting Wembley Stadium hosted Live Earth concert in 2007, with attendees including Leonardo DiCaprio, and concert featuring performances by The Red Hot Chili Peppers, Genesis, and Madonna).

129 *See* Going Greener, *supra* note 105, at 8–9.

130 *Id.* at 8 (noting multiple groups invited to help carry out initiatives).

131 *Id.* (noting creation of "Green Team" and "Green Team Sub Groups").

132 *Id.* (discussing roles of "Green Team" and "Green Team Sub Groups").

133 *Id.* (noting specific issues identified by EMS to which "Green Team" and "Green Team Sub Groups" responded).

Wembley not only focused on its stadium, but focused on its employees and their effect on the environment as well.[134] Wembley Stadium developed a program called "The Energy Referee" that the stadium calls "a fun way to engage with all members of the staff."[135] The program challenges employees to "switch off their computers, monitors and laptops at night as well as unplugging phone chargers."[136] The "Energy Ref" would visit desks after hours and issue a "yellow card" for a first offense, and a "red card" for a second offense.[137] The Ref posted results in a staff kitchen each week, and emailed yellow and red card recipients.[138]

2. *The Results*

a. Energy

One of Wembley Stadium's greatest impacts so far has been its energy consumption, and the types of energy it uses to operate.[139] Wembley purchases "100% of the Stadium's electricity from a renewable energy tariff."[140] The following is a breakdown of energy consumed at the Stadium: forty-four percent wind, twenty-eight percent hydro, sixteen percent landfill gas, nine percent municipal & industrial waste, and three percent biomass.[141] After diagnosing where the stadium can save energy, the stadium successfully saved an increasing amount of energy every year over the years 2008-2011.[142]

Wembley also changed its lightbulbs, saving 19,272 kWh of energy per year.[143] The stadium installed motion sensors to reduce the amount of light needed in the building during non-working hours.[144] This change saves 36,400 kWh per year.[145] Finally, the stadium changed its emergency lighting procedures and no longer requires lighting on non-event days, which saves an additional 264,000 kWh per year.[146] These three changes save 319,672 kWh each year,[147] or the equivalent of about 36 homes' CO_2 emissions from annual electricity use.[148]

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134 WEMBLEY STADIUM'S SUSTAINABILITY PROJECT TEAM, *supra* note 111, at 3.

135 *Id.* (introducing and discussing "Energy Referee" program that helps promote environmental sustainability among employees).

136 *Id.* (describing the goals Wembley set out to achieve through the "Energy Referee" program).

137 *Id.* (outlining methods used to punish employees for failing to comply with program).

138 *Id.* (noting how Wembley announced results of program to its employees).

139 *Id.* at 2.

140 WEMBLEY, WEMBLEY RECEIVES TRIPLE AWARD (May 22, 2014).

141 GOING GREENER, *supra* note 105, at 14 (breaking down types of energy use at Wembley Stadium).

142 WEMBLEY STADIUM'S SUSTAINABILITY PROJECT TEAM, *supra* note 111, at 2. (depicting gradual increase in energy saved over years 2008–2011).

143 *See id.* at 17 (outlining changes Wembley made pertaining to lightbulbs in stadium).

144 *Id.* (detailing additional improvements Wembley made to reduce its electricity use).

145 *Id.* (noting amount of energy this change saved).

146 *Id.* (announcing final lighting change Wembley made).

147 *Id.* (noting total energy savings due to three above-mentioned changes).

148 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (converting kWh to CO_2 emissions).

b. Water and Waste

In addition to saving electricity, Wembley also takes pride in recycling waste and conserving water.[149] Wembley prides itself on being a "zero waste to landfill venue."[150] This means all waste is "either recycled or sent to a waste-to-energy plant where energy is returned to the National Grid."[151]

Further, Wembley manages water consumption, as water is becoming an increasingly restricted resource in the UK.[152] All of Wembley's 2,618 toilets "contain a low flush cistern," which cuts the water use from 6 liters to 3 liters.[153] In addition, Wembley added "fitting aerated heads to existing taps" in the restrooms.[154] This can save up to 55% of the water the taps would normally use.[155] Finally, Wembley gave each employee a "water saving pack" to help provide training and the necessary tools to help each employee save water at home.[156]

c. Travel

Wembley also has taken initiative by helping promote greener ways to commute.[157] Wembley participates heavily in Bike Week, which promotes cycling instead of driving when possible.[158] To promote the event, Wembley provided a free breakfast and bike maintenance session for all cyclists.[159]

Wembley hosted Singapore's Land Transit Authority to demonstrate how the stadium works "with businesses in West London to reduce transport emissions by decreasing travel and encouraging modal shift."[160] The stadium not only worked with foreign countries, but it headed an "initiative to share best practices" in its own community.[161] This involved speaking to GlaxoSmithKline, British Broadcasting Company, and others to "identify where resources/campaigns and best practices can be shared."[162]

Finally, Wembley surveys many of its visitors regarding transportation to big events at the stadium.[163] The stadium distributes these surveys during different times of the

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149 *See* Going Greener, *supra* note 105, at 18 (introducing Wembley's waste reduction and water conservation programs).

150 *Id.* (noting Wembley advertises its status as a "zero waste to landfill venue").

151 *Id.* (defining qualifications needed to be deemed a "zero waste to landfill venue").

152 Going Green, *supra* note 125, at 22.

153 *Id.* at 23 (noting how Wembley changed its toilets to make them conserve more water).

154 *Id.* at 23 (adding more details about changes Wembley has made to their toilets).

155 *Id* (noting water savings as result of Wembley's water-saving methods).

156 *Id.* at 25.

157 *Id.* at 28 (introducing Wembley's desire to improve environment through providing education on transportation methods).

158 *Id.* at 29 (describing "Bike Week" and Wembley's involvement in its promotion).

159 *Id.* at 29 (noting Wembley took initiative to incentivize people to participate in "Bike Week" by providing breakfast and bike maintenance).

160 *Id.* (describing how Wembley not only helped promote environmental change in England, but in Singapore as well).

161 *Id.* (introducing commentary on how Wembley made positive changes in its community as well as globally).

162 *Id.*

163 *Id.* at 28 (noting Wembley asks for input from fans to make determinations regarding its strategy to help "green" transportation).

year, which can help the staff determine how the weather has affected the transportation methods of Wembley visitors.[164] The stadium noted the purpose of these surveys is to "ensure that Wembley's Green Travel Plan is effective."[165]

d. MARKETING AND COMMUNICATION

Wembley noted that "marketing and communication activities can have extremely positive impacts on the environment, society . . . through the promotion of best practice activities and influencing behaviour."[166] Wembley uses the equivalent of a jumbotron, or big-screen TV, in the stadium to provide information about energy, waste, water, transport, and procurement.[167] Not only does the stadium display its message on a big screen, but the stadium broadcasts audio messages throughout big events detailing the stadium's environmental goals.[168] The stadium uses these mediums to relay its message, as "marketing and communication activities can have negative impacts on the environment . . . through the use of resources and energy e.g. from use of virgin forest paper, computer servers or freight transport."[169]

e. PROCUREMENT

Wembley also focuses on procurement.[170] The stadium defines procurement as "only purchasing goods that are really needed and buying items or services whose production use and disposal both minimise negative impacts and encourage positive outcomes for the environment, economy, and society."[171] The stadium strives to achieve this goal by ensuring, before any projects begin, that all contracts include sustainability considerations.[172] Further, the stadium hopes to "minimise carbon emissions, water use, and waste generation from procurement decisions."[173] Finally, another step towards achieving this goal is to "require that all suppliers comply with relevant legal (including social, ethical, environmental and financial) requirements . . . and are able to demonstrate compliance."[174]

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164 *Id.* (explaining Wembley conducts these surveys at different times during year, ensuring accuracy and preventing bias based on season during which survey conducted).

165 *Id.* (outlining purpose of travel surveys and reasoning behind asking fans to complete surveys at different points during year).

166 *Id.* at 34 (introducing Wembley's marketing and communication efforts).

167 *Id.* at 36 (explaining how Wembley uses jumbotron to broadcast its environmentally friendly message to as many fans in stadium as possible during game days).

168 *Id.* at 37 (noting Wembley also uses audio messages to broadcast to fans its message about its "five priority areas: energy, waste, water, transport, and procurement.").

169 *Id.* at 34 (explaining Wembley uses jumbotron and audio messages as its mediums to deliver these messages since other mediums can harm environment through use of paper, etc.).

170 *Id.* at 30 (introducing Wembley's focus on procurement as well).

171 *Id.* (defining how Wembley thinks of procurement).

172 *Id.* (noting Wembley ensures all contracts consider sustainability before entering into them).

173 *Id.* (introducing some of Wembley's additional procurement goals).

174 *Id.* at 30 (explaining requirement that suppliers, in addition to providing good work for Wembley, demonstrate compliance with "social, ethical, environmental and financial" requirements).

Wembley also allows fans to help achieve these goals.[175] The stadium offers fans the ability to "purchase granite stones with engraved messages to be located along the Wembley Way walkway surrounding the stadium."[176] While this provides a unique opportunity for fans, it is also environmentally friendly, as the "stone is sourced from Portugal that results in reduced carbon emissions from transports."[177]

3. Awards and Acknowledgments

Wembley's environmental efforts have not gone unnoticed; the stadium has received numerous environmental awards and recognitions.[178] Wembley achieved the Carbon Trust Standard "in recognition of its ongoing commitment to reducing carbon each year."[179] The stadium has won multiple "Industry Green Awards" for its environmental achievements.[180] The stadium won Platinum in the Mayor's Green500 Awards, placed in the top 5% in the Carbon Reduction Commitment Energy Efficiency Survey, and was awarded the Industry Green Certification for Venues.[181] Overall, the stadium has made an outstanding effort to be a leader in environmental protection and advocacy.[182]

B. Case Study: Brazil and the 2014 World Cup

While Wembley provided an example of a stadium that is able to self-regulate, there are unfortunately other examples of stadiums—and even nations—that cannot.[183] According to the Federal International Football Association (FIFA), the 2014 World Cup produced the equivalent of 2.72 million metric tons of CO_2.[184] For reference, this is the equivalent of the CO_2 emissions from 407,674 homes' annual electricity use,[185] or annual emissions from 560,000 passenger cars.[186] While FIFA has taken steps to offset some of

175 *Id.* at 33 (introducing how Wembley allows gives fans opportunity to participate to help achieve environmental initiatives).

176 *Id.* (describing how fans can purchase stone on Wembley Walk to help environment as well as act as souvenir).

177 *Id.* (defines how stones available for purchase on Wembley Walk can be beneficial to environment).

178 *Id.* at 7 (introducing commentary on numerous awards Wembley has won for its environmental activism).

179 *Id.* (noting Wembley achieved Carbon Trust Standard).

180 *Id.* at 7 (noting Wembley has won multiple "Industry Green Awards" for environmental accomplishments and achievements).

181 *Id.* at 38 (describing multiple other awards Wembley has won as result of its continued and relentless efforts to achieve and promote environmental sustainability).

182 *Id.* (regarding Wembley as a leader in environmental activism).

183 *See The Biggest Loser*, *supra* note 106 (criticizing Brazil's perceived failure to self-regulate environmental issues during preparations for 2014 World Cup).

184 *See id.* (noting amount of CO_2 produced by 2014 World Cup).

185 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (converting levels of CO_2 World Cup produced to electricity needed to power homes).

186 *See The Biggest Loser*, *supra* note 106 (converting levels of CO_2 to CO_2 level consumption of cars).

those emissions, many environmental organizations have asked whether the efforts were needed.[187]

While Brazil made some attempt to offset emissions, many questioned basic determinations made by the host country.[188] For example, Brazil chose to hold games "dotted around the vast country" as opposed to a few close-by areas.[189] As a result of this, "everyone from the players and staff to the media and fans [were] subjected to a series of medium- and long-haul flights."[190] For instance, the United States team had to travel more than 5,000 km over the course of the tournament.[191] To make matters worse, Brazil lacked "cleaner, more efficient public transport systems for intra- and inter-city travel, such as those that were available to fans in the 2006 World Cup held in Germany, for example."[192] This adds up. Travel of fans, players, media, etc. was expected to contribute to 84% of the CO_2 emissions.[193]

Accommodations for fans and players fell short of accommodations in other World Cups, namely Germany, that boasted very "efficient public transport systems for intra- and inter-city travel".[194] Germany was not the only country to environmentally outperform Brazil: Brazil's World Cup projected carbon footprint was 2.72 million metric tons.[195] The 2010 World Cup in South Africa, for example, produced about 1.65 million metric tons of CO_2, nearly forty percent less carbon than the 2014 World Cup in Brazil produced.[196] This statistic highlights how poor Brazil's environmental efforts were compared to years past.[197]

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187 *See id.* (introducing questions environmentalists made concerning Brazil's effect on environment during 2014 World Cup).

188 *See e.g.*, Giles Constantine, *Brazil 2014: an Environmental Nightmare?*, EYE ON LATIN AM. (Jun. 5, 2014), https://eyeonlatinamerica.com/2014/06/05/brazil-2014-environmental-nightmare/ (introducing spotty decisions Brazil made during and in preparation for World Cup).

189 *Id.* (explaining Brazil's decision to host games across the country, as opposed to in a more concentrated area of country).

190 *Id.* (noting challenges that arose as result of Brazil's decision to hold games throughout entire country as opposed to smaller area).

191 *Id.* (highlighting United States team, that had to travel close to 5,000 km during course of World Cup).

192 *Id.* (noting Brazil did not have clean or efficient enough travel system to support this much travel throughout Brazil).

193 *Id.* (noting that 84% of CO_2 emissions were result of intra-country travel in Brazil).

194 *Id.* (introducing Germany's experience hosting World Cup as comparison to Brazil's experience).

195 *Id.* (introducing notion that other countries tackled environmental issues more effectively than Brazil).

196 *Id.* (explaining how South Africa's hosting experience was superior to Brazil's).

197 *Id.* (noting World Cups in years prior achieved greater environmental success than 2014 World Cup in Brazil, and even questioning if Brazilians should see this failure as a "national shame, and yet another symptom of [sic] government's failings.").

Specifically, Brazil made multiple questionable environmental decisions, including deciding to build a new stadium for the World Cup.[198] Brazil built the stadium "in the heart of the Amazon," which damaged a fragile ecosystem and left roads, exposing the area to future disruption.[199] To make matters worse, many question whether Brazil will even use the stadium after "the four scheduled World Cup games are over."[200]

It is unfortunate that Brazil not only was unable to make environmental progress for the World Cup, but took a significant step back in terms of its carbon footprint.[201] This is an example of how some officials will choose to avoid upholding environmental safeguards and procedures without proper enforcement techniques.[202]

V. Olympics

A. The International Olympic Committee Mission

The IOC is a "not-for-profit independent international organization made up of volunteers" that is "committed to building a better world through sport."[203] The IOC has noted it considers caring for the environment an "integral dimension of Olympism, alongside sport and culture."[204] The IOC ensures "the Olympic Games take place in conditions that take into account the environment in a responsible way . . . ."[205] In fact, in 1996, the IOC "added a paragraph on environmental protection to the Olympic Charter."[206] The text read, "[The IOC's role with respect to the environment is] to encourage and support a responsible concern for environmental issues, to promote sustainable development in sport and to require that the Olympic Games are held accordingly."[207]

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198 Holly Richmond, *Brazil's World Cup gets a red card on the environment*, Grist (Apr. 24, 2014), https://grist.org/living/brazils-world-cup-gets-a-red-card-on-the-environment/ (noting Brazil built brand new stadium for World Cup).

199 *Id.* (explaining environmental consequences of new stadium, including damaging Amazon's ecosystem).

200 *Id.* (questioning whether Brazil will even use stadium after World Cup and noting World Cup will only use stadium for four games during World Cup).

201 Giles Constantine, *supra* note 188 (noting 2014 World Cup's carbon footprint was big area of concern and many felt Brazil could have done more to lessen environmental impact of World Cup, especially carbon footprint).

202 *See id.* (highlighting how some fail to properly protect environment when entrusted with its safekeeping).

203 Int'l Olympic Committee, https://www.olympic.org/the-ioc (last visited on Feb. 14, 2018) (introducing IOC and its role regarding Olympic Games).

204 Int'l Olympic Committee, Factsheet: The Environment and Sustainable Development update (Jan. 2014) [hereinafter Factsheet: Development].

205 *Id.* (explaining IOC's commitment to ensuring Olympics are environmentally responsible).

206 *Id.* (noting IOC went as far in showing this devotion as to add "a paragraph on environmental protection to Olympic Charter.").

207 *See id.*

The IOC does not just state its desire to help the environment, it works closely with host cities to ensure the city is doing all it can to protect the environment.[208] The IOC provides host cities with "assistance and guidance in its preparations by the IOC Coordination Commission, which also includes an environmental advisor."[209] "The IOC's objective is during the staging of the Games, for environmental risks to be avoided and reduced where possible, and the positive impact and opportunities of the event maximised."[210]

To put its plan in motion, the IOC created Agenda 21, which focused on environmental sustainability.[211] The IOC intended Agenda 21 to accomplish goals in a few key areas including social and economic dimensions, conservation and management of resources for development, strengthening the role of women and young people, and providing means for implementation.[212] Agenda 21 turned out to be the economic and social blueprint that host cities strive to achieve.[213] The Olympics first "explicitly included environmental considerations" in 1994 while preparing for the Winter Olympics in Lillehammer, Norway, and all subsequent Games have taken into account environmental concerns while striving to make the host country greener and more environmentally friendly.[214]

B. RESULTS BY OLYMPICS

1. 2004—ATHENS

In preparing for the 2004 Games, the IOC, along with the Athens Organizing Committee, made "improvements in the city's public transportation infrastructure."[215] The improvements included a new international airport with links to the city center, an expanded metro system, a tramway, a city ring road, and a computerized "road-traffic

208 FACTSHEET: DEVELOPMENT, *supra* note 204, at 3 (introducing notion that IOC heavily involves itself with host Olympic city to best protect environment during Games).

209 *Id.* (explicitly stating the IOC provides "assistance and guidance" to host cities to ensure they can properly take environmental precautions).

210 *Id.* (stating goal of IOC during and in preparation for Olympic Games).

211 INT'L OLYMPICS COMMITTEE, OLYMPIC MOVEMENT'S AGENDA 21 19, https://stillmed.olympic.org/media/Document%20Library/OlympicOrg/Documents/Olympism-in-Action/Environment/Olympic-Movement-s-Agenda-21.pdf (last visited on Feb. 15, 2018) (introducing broad goals and objectives of Agenda 21).

212 *Id.* (denoting specific objectives Agenda 21 sets forth, including objectives in environmental, social, and economic spaces).

213 *Id.* (noting Agenda 21 serves as gold standard which host cities strive to meet).

214 INT'L OLYMPIC COMMITTEE, SUSTAINABILITY THROUGH SPORT, IMPLEMENTING THE OLYMPIC MOVEMENT'S AGENDA 21–2012 16, https://stillmed.olympic.org/Documents/Commissions_PDFfiles/SportAndEnvironment/Sustainability_Through_Sport.pdf (last visited Feb. 14, 2018) [hereinafter SUSTAINABILITY THROUGH SPORT].

215 *Id.* at 40 (introducing how IOC helped Athens Organizing Committee achieve sustainability goals).

management system."[216] Each one of these "helped reduce the city's extremely heavy traffic and improved its air quality."[217]

The Athens Organizing Committee also worked with Olympic sponsors to promote green technology.[218] Coca-Cola promoted the committee's recycling objectives and Heineken developed cups made from recycled materials that promoted recycling.[219] Kodak organized a used battery program and Hyundai promoted a hybrid car, while Panasonic brought attention to its wind and solar-powered lighting units.[220] According to the IOC, "[a]ll of these initiatives left a legacy in terms of general environmental awareness across Greece."[221]

2. 2006—Torino

The Torino Organizing Committee followed in the footsteps of the Athens Organizing Committee in terms of its commitment to improve and protect the environment.[222] The Torino Organizing Committee "created the HECTOR (HEritage Climate TORino) project to increase understanding of climate change issues and enable the offsetting of greenhouse-gas emissions during the Games by investing in reforestation, energy efficiency, and renewable energy projects."[223]

HECTOR provided many great benefits, including making it possible to "analyse every aspect of the Games including transport infrastructure, hospitality facilities, and waste and sustainable event management."[224] It "estimated the volume of direct and indirect greenhouse gas emissions, [and] then partnered with Italian and international compensation projects to offset these emissions."[225]

During the Games, the Torino Organizing Committee "optimised the use of water, [and] storage facilities required for making snow."[226] In addition, it dedicated resources to ensure the region returned to pre-Games conditions or better.[227] The Torino Organizing Committee made lasting improvements, including "river bank protection, reforestation, and the application of nature-friendly engineering techniques to combat hydro-geologi-

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216 *Id.* (denoting specific acts IOC and Athens Organizing Committee completed to help city achieve Agenda 21's set-out goals).

217 *Id.* (explaining specific positive results of IOC's and Organizing Committee's changes to Athens' infrastructure).

218 *Id.* at 41 (introducing IOC's work with Organizing Committee to promote green technology).

219 *Id.* (mentioning how sponsors were involved with this promotion as well).

220 *Id.* (expanding on previous sentence listing sponsors' involvement with 2004 Games).

221 *Id.* (noting IOC's thoughts that all initiatives left a "legacy" in Greece).

222 *Id.* (introducing Torino Organizing Committee's work with IOC to promote sustainability in Torino Games).

223 *Id.* (introducing "HECTOR" project created for 2010 Games).

224 *Id.* (noting all research and development HECTOR allowed Torino to undertake).

225 *Id.* (describing HECTOR's actual accomplishments during and leading up to 2006 Games).

226 *Id.* at 42 (explaining how Torino Organizing Committee worked with the IOC to sustainably create and keep snow for Games).

227 *Id.* (explaining goals of committees to leave land better than they found it).

cal instability drainage and support piling to prevent landslips, dyke building, and securing unstable slopes."[228]

3. 2008—BEIJING

The Beijing Organizing Committee set out to reach the same level of environmental success as past committees.[229] The Beijing Organizing Committee emphasized the importance of "protect[ing] drinking water, clean[ing] rivers and lakes[,] and enhance[ing] wastewater treatment."[230] To achieve this "Beijing's major rivers all underwent environmental regeneration, including the introduction of aquatic plants and animals to carry out natural purification, and 10 water-recycling facilities were built in lakes and rivers to improve water quality."[231] Further, it helped improve sewage treatment as "new treatment plants in Beijing and satellite towns and villages now handle the majority of the city's waste water."[232]

The Beijing Organizing Committee prioritized protecting air quality by enacting "200 measures [aimed at] address[ing] pollution concerns."[233] "More than 300,000 high-emitting vehicles including 11,000 used in public transport were replaced or scrapped."[234] In addition, "polluting factories were relocated, heating systems of more than 60,000 households were converted from coal burning to cleaner natural gas."[235] Finally, actions were taken to curb "Beijing's major thermal power stations."[236] "To ensure these measures made a difference . . . the Beijing municipality established sampling stations to monitor concentrations of sulphur dioxide, carbon monoxide, nitrogen dioxide and particulate matter."[237]

Overall, Beijing's efforts "increased the green area of the city to 43%," increased the amount of waste sorted and recycled, and increased "detoxification of household waste . . . reaching 100% in the city itself, [as well as] 85% in suburban areas."[238] The 2008 Games have been called the "Beijing Green Olympic Games," as a result of Beijing's many environmental successes.[239]

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228 *Id.* (noting all specific projects IOC and Torino Organizing Committee undertook and completed to achieve sustainability goals).

229 *Id.* at 42–3 (introducing IOC's goals heading into 2008 Olympics).

230 *Id.* at 43 (introducing IOC's involvement with Beijing Organizing Committee and highlighting areas of importance for Games).

231 *Id.* (explaining methods IOC and Beijing Organizing Committee used to achieve their environmental sustainability goals).

232 *Id.* (denoting explicit steps taken by IOC and Beijing Organizing Committee to realize environmental goals).

233 *Id.* (introducing air quality as another concern for 2008 Games).

234 *Id.* (noting how IOC and Beijing Organizing Committee attacked air quality issue and how two Committees worked to improve situation).

235 *Id.* (adding more detail on how two Committees improved air quality in Beijing).

236 *Id.* (introducing goal to curb "Beijing's major thermal power stations.").

237 *Id.* (outlining how IOC and Beijing Organizing Committee made sure they were able to improve these conditions set forward above).

238 *Id.* (outlining IOC and Beijing Organizing Committee's successes).

239 *Id.* (noting Beijing Olympics' nickname, and explaining why 2008 Games had such a nickname).

4. 2010—Vancouver

The Beijing Olympics set the stage for the 2010 Games, as Vancouver's environmental efforts were arguably the most thorough and successful the Games had ever seen.[240] The Vancouver games "focused on building increased awareness about sustainable solutions for business, communities and individuals and encouraged action on local and global sustainability challenges.'"[241] Notably, "Vancouver became the first Olympic host city to ensure that all buildings for the Games achieved at least Leadership in Energy and Environmental Design (LEED) Silver standards."[242]

The Vancouver Convention Center, home to 10,000 journalists covering the Games, highlighted Vancouver's diligent efforts to achieve and maintain sustainability during the Games.[243] The building boasted a "living roof," which housed hives for 60,000 bees.[244] In addition, the roof housed "more than 400,000 individual plants and grasses from 19 indigenous species selected to attract insects and birds."[245] Further, "[a] marine habitat [was] built into its foundations, ideal for mussels, seaweed, starfish, crabs and fish."[246] This roof "help[ed] with water conservation, which combined with its desalinisation and sewage treatment systems, reduced its freshwater draw-off during the Games by up to 70%."[247]

In addition to the Convention Center, Vancouver showcased its environmental prominence through its speed-skating venue.[248] The Richmond Olympic Oval "used salvaged timber that had been eaten by mountain pine beetles."[249] By using this wood for the venue, Vancouver's Organizing Committee successfully "helped communities that

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240 *Id.* at 44 (introducing Vancouver Olympic games as most environmentally sustainable Games at this point. By 2010, each Organizing Committee was making great leaps, even from the Games two years prior).

241 *Id.* (outlining Vancouver Organizing Committee's goals for 2010 Games.). This report outlined Vancouver's transition from bidding to host Games to preparing to host Games. *Id.* at 25–28. This report also detailed progress Vancouver made in preparing venues and stadiums for Games. *Id.* at 29–52.

242 Sustainability Through Sport, *supra* note 214, at 44 (explaining Vancouver's achievement regarding LEED. LEED is "the most widely used green building rating system in the world."); *LEED Certification*, U.S. Green Building Council, https://www.usgbc.org/help/what-leed (last visited Feb. 23, 2018).

243 Sustainability Through Sport, *supra* note 214, at 44 (expounding on notion that Vancouver did not only prepare green venues for athletes, but went as far as to erect and construct green buildings for reporters' use).

244 *Id.* (explaining Convention Center's green features and noting its green roof is largest in Canada).

245 *Id.* (noting further amount of diverse wildlife that calls Convention Center home).

246 *Id.* (expounding upon notion that Convention Center is incredibly "green" space, and further promoting Vancouver's idea that "sustainable solutions marry ecological, social and economic benefits").

247 *Id.* (explaining magnitude of Convention Center's impact on sustainability of Games).

248 *Id.* (noting Vancouver did not only focus on one building or arena, but erected multiple green venues in preparation for Games).

249 *Id.* (explaining how Vancouver erected Olympic Oval).

had been economically hit by the infestation, [and] showcased the beauty of the material and reduced unnecessary waste."[250]

The Vancouver Organizing Committee also worked with its sponsors, staff, and countless others to achieve its "zero-solid waste management strategy."[251] For example, Coca-Cola (a worldwide partner of the Games) provided "large syrup containers" that the venues used to collect waste.[252] After the games, these venues gave the collected waste "to recycling depots in local communities."[253]

The Vancouver Organizing Committee focused on "smart travel," which reduced "the number of cars on the road during the Games by 30%."[254] The committee used a "carbon offsetting partner" for the first time in Olympic history.[255] To offset the effects of the Games, "Canada's leading provider of carbon management solutions . . . developed a portfolio of projects . . . on each of the five continents."[256] These projects included "wind farms in New Zealand and Turkey, the distribution of efficient and clean burning stoves in Uganda, a run-of-river hydro project in China and a biogas power generation project in India."[257]

Finally, the Vancouver Organizing Committee emphasized biological diversity.[258] Vancouver citizens took initiative, too, as volunteers helped relocate "12 locally significant plant species . . . to another local wetland."[259] "Trees in the way of the Vancouver Olympic Centre were carefully moved, rather than felled."[260] In one instance, "tailed frogs, together with their tadpoles, were manually moved 40 [meters] for their well-being and security."[261]

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250 *Id.* (detailing process by which Olympic Oval helped support local communities and fully exhibit resourcefulness and beauty of nature).

251 *Id.* (introducing Vancouver's attempts to elicit help form sponsors to achieve environmental goals).

252 *Id.* (explaining how Coca-Cola assisted in efforts to reduce waste. Bottles Coca-Cola provided were reused "as receptacles to collect and recycle drink bottles." Coca-Cola also provided "bottle-compacting unites for each of the main venues.").

253 *Id.* (noting how Vancouver disposed of waste collected during Games).

254 *Id.* (explaining how committee achieved this reduction in number of cars on road. The committee achieved this goal by "expanding public transportation to include [sic] fleet of hydrogen-[fueled] buses that reduced fuel use and carbon emissions, smart driver training and careful planning.").

255 *Id.* at 45 (illustrating how committee offset emissions from "construction of Olympic facilities and of [sic] staging of [sic] Games" as well as emissions of "partners and sponsors.").

256 *Id.* (expounding upon committee's goal to promote "best practices in carbon management and reduction.").

257 *Id.* (explaining projects committee pushed to help achieve worldwide sustainability. In addition to these, the committee also pushed spectators to "join a voluntary scheme which offset a further [eight thousand tons] of emissions.").

258 *Id.* (introducing the committee's focus treating biodiversity concerns with "considerable care").

259 *Id.* (noting how the committee helped protect local species before and during Games, and enlisted help of spectators to do so).

260 *Id.* (explaining how the committee successfully salvaged trees at sites near Games rather than simply cutting them down).

261 *Id.* (explaining short anecdote about frogs, which serves as microcosm for all work Vancouver Committee did to protect environment).

The Vancouver Organizing Committee created its own sustainability logo and even put together videos to demonstrate to local businesses how to act environmentally responsibly.[262] The efforts were successful as, in addition to the carbon emissions offset, 63% of solid waste was either recycled or composted.[263] The committee and its partners "reached a new level of sustainability performance for the Olympic Games."[264]

5. 2012—London

Many have called the London Olympic Games "the greenest ever."[265] The London Organizing Committee coined the concept of "One Planet Living" when the committee chair noted the committee was "committed to hosting the world's first truly sustainable Olympic Games."[266] The Chair stated he expected the London Games to "[build] on the work of previous host cities and [recognize] the Olympic Movement's growing voice in the global debate on sustainable development."[267] The committee focused on multiple key areas during its preparation and execution: climate change, waste, biodiversity, and healthy living.[268]

a. Climate Change

The London Organizing Committee set out to achieve massive reduction in emissions.[269] It successfully achieved this goal, as the Games saved the equivalent of 400,000

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262 *Id.* (noting that the committee worked to ensure local businesses took part in sustainability efforts as well. The committee went as far as to show multiple videos to local businesses in effort to promote knowledge. In addition, Committee provided up to fifty examples of "Games-related stories that showed examples of sustainability" for journalists to publish to increase awareness.).

263 *Id.* at 44 (noting successes of the committee's program, as it diverted 77% of solid waste from landfills, despite fact that committee's goal was to divert 85%).

264 *Id.* at 46 (praising Vancouver Organizing Committee for great triumphs and successes in preparing for and hosting 2010 Games).

265 *London 2012: Olympic Games 'Greenest Ever'*, B.B.C. News (Aug. 11, 2012), http://www.bbc.com/news/uk-19220847 (noting belief that London Games were total success, including member of Commission for [sic] Sustainable London 2012 calling Games "massive success").

266 Sustainability Through Sport, *supra* note 214, at 46 (explaining London Committee's slogan for Games, and reasoning behind choosing "One Planet Living." The committee noted that, if everyone lived "as the average North American, five planets would be needed. Clearly, that is unsustainable.").

267 *Id.* (reiterating London's commitment to put on sustainable games and noting that committee is "committed to hosting the world's first truly sustainable Olympic Games").

268 *Id.* at 46–47 (introducing areas of focus for London Games with goal of London Games becoming "blueprint for social, economic, and environmental change on which other host cities can build.").

269 *Id.* at 47 (introducing committee's goal to "understand how carbon emissions arise in order to minimi[z]e them, mitigate their impact and incorporate climate change awareness into its planning so buildings, infrastructure, and lifestyles are fit for [sic] long-term future").

tons of CO_2.[270] For reference, that is the equivalent of the CO_2 emissions generated by burning more than 218,818 tons of coal.[271]

The London Organizing Committee also set out to ensure the spectators would be able to successfully travel to the Games using public transportation.[272] The committee worked to achieve this goal by cooperating with the Olympic Delivery Authority and Transport for London.[273] "Eighty-six percent of Olympic Park visitors [traveled] by rail."[274] Over nine million "Games Travelcards were issued for use on public transport within London."[275] In addition, the Games Family (family members of participating athletes) were provided with free public transport during the Games.[276]

b. WASTE

The London Organizing Committee focused on delivering a "zero-waste Games."[277] They successfully accomplished this goal, as it diverted one-hundred percent of the operation's waste from landfills.[278] In sum, 17% of waste was re-used, 29% was recycled, 17% was composted, and 37% was recovered using energy.[279]

Further, the London Organizing Committee reused or recycled 99% of "waste generated in connection with the installation and decommissioning of [the Game's] venues

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270 THE NAT'L ARCHIVES, LONDON 2012: POST-GAMES SUSTAINABILITY REPORT, A LEGACY OF CHANGE 2 (Dec. 2, 2012) (noting levels of CO_2 Games saved against reference footprint).

271 *See Greenhouse Gas Equivalencies Calculator*, *supra* note 21 (converting tons of CO_2 to emissions achieved from burning coal).

272 LONDON 2012: POST-GAMES SUSTAINABILITY REPORT, *supra* note 270, at 32 (noting levels of CO_2 Games saved against reference footprint and explaining that goals of committee included "fully public transport Games," and an "Active Travel Programme to encourage cycling and walking to venues").

273 *Id.* at 32 (noting the committee worked not only with Olympic Delivery Authority and Transport for London, but with partners such as "Department for Transport . . . Network Rail . . . and London Continental Railways").

274 *Id.* at 2 (describing committee's success regarding percentage of spectators who traveled to Olympic Park using rail transportation).

275 *Id.* at 32 (noting committee's success arranging public transport, and also highlighting fact that "discounted fares were negotiated with train operating companies and national coach operators for travel within the UK").

276 *Id.* (highlighting benefits given to Games Family).

277 SUSTAINABILITY THROUGH SPORT, *supra* note 214, at 47 (noting desire to be a "zero-waste Games," with the goal to 'design out' the production of waste "during construction and operation of the Olympic facilities." Additional goals include "reusing and recycling" as well as attempting to "ensure a high recovery rate of materials from the disassembly of temporary structures after the Games.").

278 LONDON 2012: POST-GAMES SUSTAINABILITY REPORT, *supra* note 270, at 2 (detailing enormous success of committee's agenda).

279 *Id.* at 28 (breaking down how committee treated waste from Games to meet goal of being "zero-waste." Report noted that "reuse data is likely to be under-reported as several surplus items, such as equipment and machinery are in the process of being sold or donated at the time of writing.").

between 1 January and 31 October 2012."[280] In total, 62% of the 10,173 tons of the Games' operational waste was either reused, recycled, or composted.[281]

c. Biodiversity

The London Organizing Committee focused heavily on "conserve[ing] diverse ecosystems and [sic] creat[ing] green urban spaces."[282] The committee transformed parklands in east London from "a polluted and derelict post-industrial landscape through sustainable rehabilitation."[283] The committee used recycled soil and materials, which "absorbs and uses rainwater, minimi[z]es flood risk through the design of new wetland areas, maximi[z]es opportunities for a rich ecology and provides shading and cooling to reduce the effects of the urban heat."[284] All told, the committee helped to change this area from a "neglected part of east London . . . into a thriving community."[285]

d. Healthy Living

As part of its initiative to "inspire people to take up sport and develop more active, healthy and sustainable lifestyles," the London Organizing Committee placed a strong focus on encouraging folks to walk or cycle.[286] The committee succeeded in accomplishing this objective, as there was a twenty-nine percent increase in the "number of cyclists in central London during the Olympic Games compared with [the] same period the year before."[287]

In addition to providing a "diverse and affordable choice of food options," and "a provision of free drinking water," the committee helped provide over fifteen million "sustainably sourced meals" throughout the course of the Games.[288] Advertising pro-

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280 *Id.* (highlighting recycling efforts of Games and noting this included data from installation and decommissioning of the Olympic venues.).

281 *Id.* at 2 (noting exactly how much waste the committee reused, recycled, or composted—around 6,300 tons of waste).

282 Sustainability Through Sport, *supra* note 214, at 47 (introducing committee's desire to take a "responsible attitude to [sic] management of natural resources," especially focusing on "direct enhancements [made] to [sic] ecology" of many neighborhoods and by "promoting [sic] value of [sic] natural environment").

283 *Id.* at 48 (detailing case study regarding east London parklands' transformation).

284 *Id.* (noting how committee helped to rejuvenate east London parklands and help area positively impact environment).

285 London 2012: Post-Games Sustainability Report, *supra* note 270, at 11 (noting how committee delivered "lasting change . . . through sport." The committee also noted ability to change "the way large scale construction projects are planned and built," "the way [the Committee] manage[ ] events," and "the way [sic] Olympic and Paralympic Movements view sustainability.").

286 *Id.* (introducing committee's attempt to promote healthy lifestyle across London. The committee noted "with almost three-quarters of all journeys in UK less than [eight kilometers], there is huge potential for positive and lasting change.").

287 *Id.* at 2 (noting massive increase in cycling as result of committee's efforts).

288 *Id.* at 2, 47 (highlighting committee's efforts and successes regarding providing sustainably sourced meals and "diverse and affordable choice[s] of food options at catering concessions").

moted healthy food choices as well, as the "messaging on all menu boards emphasiz[ed] 'Greener, tastier, healthier.'"[289]

6. 2014—Sochi

While there had been no official release of a "Post-Games Sustainability Report" at the time of this publication, the IOC did make available Sochi's mission for the 2014 Games.[290] Sochi's Organizing Committee set out to "combine the efforts, expertise and experience of its delivery partners to efficiently integrate sustainable development principles into all aspects of Games preparation and delivery."[291] The Sochi Organizing Committee focused on promoting "healthy living, [a] barrier-free world, culture and national values, harmony with nature, economic prosperity, and modern technologies."[292] The IOC deemed the Sochi Games "a project of transformative value for the city, the region, and the country."[293] Only time will tell if the Sochi Organizing Committee accomplished its objectives like its counterparts in previous Games.[294]

7. 2016—Rio

Like Sochi, the Rio Games had not released a Post-Games Sustainability Report at the time of this publication.[295] However, "Rio's goal [was] not only to reach high levels of excellence in Games-time delivery, but also to demonstrate leadership by setting new standards for sustainable management that will positively impact the country and the region."[296] The Rio Organizing Committee built its mission around an "inclusive foundation of principles, actions and projects related to sustainability."[297] Time will tell

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289 *Id.* at 47 (noting committee's efforts did not only include providing food but providing education on healthy eating and good eating habits to all those who attended Games).

290 FACTSHEET: DEVELOPMENT, *supra* note 204, at 5 (noting Sochi did not yet release official report detailing successes and failures of Olympics but did release environmental goals for Games).

291 *Id.* (highlighting Sochi Organizing Committee's mission. Also noting committee's work with United Nations Environment Program, United Nations Development Program, World Wide Fund for Nature, and Greenpeace).

292 *Id.* (outlining committee's plans with "multitude of partners.").

293 *Id.* at 6 (noting IOC's view of Sochi Games. IOC also noted Games will help "[restore] the complicated ecosystems and set in place the creation of a unique ecological legacy which will continue after the Games.").

294 For a discussion of previous successes, *see* SUSTAINABILITY THROUGH SPORT, *supra* note 214.

295 For a further discussion of Rio's lack of a "Post-Games Report," *see* SUSTAINABILITY THROUGH SPORT, *supra* note 214, at 34.

296 FACTSHEET: DEVELOPMENT, *supra* note 204, at 6 (outlining goals of Rio Organizing Committee. The committee focused especially on the leaving as small an environmental footprint as possible, making Games accessible to everyone, and contributing to economic prosperity of Rio.)

297 *Id.* This mission included focus on reducing environmental impact of Games, making Games accessible to everyone, and contributing to economic development of Rio de Janeiro. *Id.*

whether Rio accomplished these objectives, but it is clear Rio's goals were aligned with the goals of past Games.[298]

8. 2018—PyeongChang

Similar to Sochi and Rio, the PyeongChang games had not released a Post-Games Sustainability Report at the time of this publication. Leading up to the 2018 Games, the national government of South Korea designated PyeongChang as a "Low-Carbon Green Growth Model City."[299] The main focus points for the 2018 Games included venue construction, biodiversity, water management, energy, green transport, and education.[300] It may be years before we know whether PyeongChang reached its goals; however, it is clear PyeongChang's goals were similar to the goals of many Games prior.[301]

C. Lasting Impression

The IOC made indisputable and tremendous strides to accomplish its goal of "the Olympic Games [having] as minimal an environmental impact as possible, while acting as an example of what can be achieved not only for the planet but for individuals."[302] By providing assistance in the form of Organizing Committees and governing bodies, the IOC is truly committed to achieving this goal.[303]

The IOC does not only focus on making environmental changes in host cities.[304] The IOC awards an "IOC Award for Sport and the Environment" to a city that is not an Olympic host city.[305] Cape Town, South Africa, received this award as the IOC recognized the 2010 World Cup host city for implementing "41 environment-friendly projects in nine thematic areas during the tournament."[306] Prizes have included an invitation to the IOC World Conference and a "special sport and environment trophy from the

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298 For a discussion goals of previous Organizing Committees, *see* Sustainability Through Sport, *supra* note 214.

299 Factsheet: Development, *supra* note 204, at 6 (noting PyeongChang's designation). This came as result of "conserving water resources, revitalising ecosystems, improving biodiversity and recycling waste materials." *Id.*

300 *Id.* (outlining areas of focus for committee. As seen with previous organizing committees, focus was on environment and people).

301 For a discussion of the goals of previous Organizing Committees, *see* Int'l Olympic Committee, *supra* note 203.

302 Sustainability Through Sport, *supra* note 214, at 47.

303 For a discussion of the role of Organizing Committees in helping to plan Games, *see* Int'l Olympic Committee, *supra* note 203.

304 Int'l Olympic Committee, Regulations Regarding the IOC Award for Sport and the Environment 1 https://stillmed.olympic.org/Documents/Commissions_PDFfiles/SportAndEnvironment/Rules_and_Regulations_IOC_Award_For_Sport_And_The_Environment-2010-eng.pdf (last visited Feb. 24, 2018) (introducing IOC's award for sports and environment).

305 *Id.* (stating eligibility requirements. Award is open to individuals, groups, and organizations as well. Further, one winner from each of five eligible regions, Africa, Americas, Asia, Europe, and Oceania, wins an award).

306 *2011 IOC Sport and Environment Award Winners*, Int'l Olympic Committee, http://websites.sportstg.com/get_file.cgi?id=1277005 (last visited Feb. 24, 2018) (announcing winners of 2011 award. Additional winners included Japan Swimming Federation for "promoting at

IOC."[307] This is a fine example of the IOC striving to award and encourage "sport and the environment."[308]

VI. CONCLUSION

This Note discussed stadiums in different leagues, multiple countries, and different continents. Wembley Stadium, Met-Life Stadium, Lincoln Financial Field, and every Olympic Host City since 1994 have one thing in common: they successfully prioritized the environment. Through implementing sustainable environmental practices, reducing carbon emissions, and "going green," stadiums, cities, and international sports organizations have made a considerable potential impact on the Earth's environment. However, Brazil unfortunately failed when it was tasked with putting on an environmentally sustainable World Cup. This leads to the million-dollar question: what really works?

Others should look to the Olympics as an example. The IOC focuses on the environmental sustainability of the Games and does not simply leave this issue to the host city.[309] This plan might be difficult to implement and regulate, but thanks to groups like Wembley National Stadium Limited, we know it is possible. Additionally, having a sustainability plan in place before the event would help prevent environmental disasters like Brazil's 2014 World Cup.

Overall, no one program is definitively better than any other. Leagues and governing bodies need to try different solutions until they find a plan that best fits their teams. However, it would be wise for all major leagues to follow the example set by the Olympics to implement league-wide procedures. Leagues could even hire members of the IOC to provide oversight to different teams.[310] It is time that all sports moguls around the globe work to encourage the marriage of "sport and the environment."[311]

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the grassroots level the relationship between sport, the environment and sustainable development.").

307 *See Regulations Regarding the IOC Award for Sport and the Environment*, *supra* note 304, at 1 (listing prize for winning Award. IOC also pays for "costs of an economy class air ticket and hotel accommodation for the winners.").

308 *See id.* (outlining criteria IOC seeks when awarding prize). The IOC lists the following as areas for which award may be attributed: design and/or construction of sport facilities; protection and enhancement of biodiversity or cultural heritage through sport; environmental education or raising sports community awareness on environmental and sustainability issues; management of sport events, facilities or clubs; media coverage and production of material to promote sustainability in sport; agenda 21 initiatives incorporating sustainable sport practices. *Id.*

309 *See* INT'L OLYMPIC COMMITTEE, *supra* note 203 (outlining Olympics' and IOC's commitment to establishing strong Organizing Committees in each Games' host city).

310 *See id.* (highlighting how IOC works to provide oversight to all Olympic host cities in the form of organizing committees).

311 *See Regulations Regarding the IOC Award for Sport and the Environment*, *supra* note 304 (outlining Olympics' goal to act in such way to promote environmental sustainability through sport).

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PROPOSED REPEAL OF CLEAN POWER PLAN

INTRODUCTION

On October 16, 2017, the Environmental Protection Agency (EPA) issued a notice proposing to repeal the Clean Power Plan (CPP).[1] The EPA's initial review was performed in accordance with Executive Order 13783, published on March 31, 2017, which directed the Administrator of the EPA to review and, if appropriate, to suspend, revise, or rescind regulations that "unduly burden the development of domestic energy resources beyond the degree necessary to protect the public interest or otherwise comply with law."[2] The Executive Order directed specific review of the EPA's CPP and related rules and agency action.[3]

THE CLEAN POWER PLAN

The final CPP rule was promulgated on October 23, 2015, under the Obama administration.[4] The CPP established final emission guidelines for states to reduce the emission of greenhouse gases—specifically carbon dioxide—from existing fossil fuel-fired electric generating units.[5] This final rule established guidelines for greenhouse gas emissions for the first time[6] and specifically proposed three measures for achieving lower emissions at power plants. The measures included: (1) improving heat rate at affected coal-fired steam generating units; (2) substituting increased use of lower-emitting units for decreased use of higher-emitting units; and (3) substituting increased generation from new zero-emitting renewable energy.[7] Implementation of the CPP was set to begin in 2022, with the period from 2022 to 2029 divided into three periods that require reductions in specific carbon dioxide emission rates for each period.[8]

The CPP's carbon dioxide reduction rules are controversial, as shown by the twenty-seven states that sued to block the plan.[9] The states opposing the CPP argue that the reduction rules impose an undue burden on the states.[10] On February 9, 2016, the Su-

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1 Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,035 (Oct. 16, 2017).
2 Exec. Order No. 13783, 78 Fed. Reg. 16,093, §1 (March 31, 2017).
3 *Id.* at 16,095, § 4.
4 Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64,662 (Oct. 23, 2015).
5 *Id.* at 64,663.
6 *Id.*
7 *Id.* at 64,667.
8 *Id.* at 64,664.
9 Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,037 (Oct. 16, 2017); Nichola Groom & Valerie Volcovici, *Most states on track to meet emissions targets they call burden*, REUTERS, Sept. 26, 2016.
10 Groom & Volcovici, *supra* note 9.

preme Court stayed implementation of the CPP pending judicial review.[11] The D.C. Circuit granted the EPA's motion to hold the cases in abeyance on April 28, 2017, and on August 8, 2017, the court directed the EPA to file status reports at 30-day intervals.[12]

PROPOSED CHANGE TO LEGAL INTERPRETATION

Following the EPA's review of the CPP as directed by Executive Order 13783, the EPA proposed a change to the interpretation of Section 11 of the Clean Air Act (CAA), Standards of Performance for New Stationary Sources, and stated that the new interpretation is "the most appropriate reading of the statute. . . ."[13] The EPA explained the previous interpretation exceeded the agency's statutory authority.[14] In particular, the phrase "best system of emission reduction," which has arguably been interpreted too broadly by the Obama administration, includes: (1) improving heat rate at affected coal-fired steam generating units; (2) substituting increased use of lower-emitting units for decreased use of higher-emitting units; and (3) substituting increased generation from new zero-emitting renewable energy.[15] The proposed repeal found that the interpretation of "best system of emission reduction" should be limited to emission reduction measures that "can be applied to or at an individual stationary source."[16] The EPA found this narrower interpretation consistent with other sections of the CAA.

POLICY CONCERNS

In its proposed repeal, the EPA noted the economic and political implications of the CPP's emission reduction measures.[17] The EPA stated that, although it is authorized to regulate emissions, the regulation of the nation's generation mix is not within its authority.[18] "Regulation of the energy sector . . . is generally undertaken by the Federal Energy Regulatory Commission (FERC) and states, depending on which markets are being regulated," and such regulation therefore exceeds the EPA's authority.[19] The EPA solicited comments on the potential economic and political implications of the CPP and whether the EPA exceeded its authority in regulating generation mix.[20]

FURTHER ACTION

The EPA held two public hearings in November 2017, and three listening sessions in February and March 2018.[21] The comment period closed on December 15, 2017.[22]

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11 Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,037 (Oct. 16, 2017).
12 *Id.*
13 *Id.* at 48,036.
14 *Id.*
15 *Id.* at 48,037–39.
16 *Id.* at 48,039.
17 *Id.* at 48,042.
18 *Id.*
19 *Id.*
20 *Id.*
21 Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 51,787 (Nov. 8, 2017); Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 83 Fed Reg. 4,620 (Feb. 1, 2018).

Following its consideration of notice and comment, the EPA may issue a final rule repealing the CPP.[23]

Proposal of the Affordable Clean Energy Rule

Following the notice proposing to repeal the CPP, the EPA issued an advance notice of proposed rulemaking on December 28, 2017, soliciting information regarding a rule to replace the CPP.[24] On August 21, 2018, the EPA proposed to replace the CPP with the Affordable Clean Energy Rule (ACE).[25] The agency's press release states ACE "replaced the prior administration's overly prescriptive and burdensome [CPP] and instead empowers states, promotes energy independence, and facilitates economic growth and job creation."[26] ACE establishes emission guidelines for use by states in developing greenhouse gas limits at power plants based on the current administration's interpretation of the "best system of emission reduction."[27] Additionally, under ACE, a source would not be subject to major New Source Review (NSR) unless a physical or operational change would result in an hourly emissions increase at the existing electric generating unit and a significant increase in actual annual emissions.[28]

The EPA held a public hearing on October 1, 2018, in Chicago, Illinois, and extended its comment period through October 31, 2018.[29] In addition, the EPA will likely hold additional hearings given the public's interest in the rulemaking.[30]

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22 Repeal of Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 82 Fed. Reg. 48,035 (Oct. 16, 2017).

23 *A Guide to the Rulemaking Process*, Office of the Federal Register, https://www.federalregister.gov/uploads/2011/01/the_rulemaking_process.pdf.

24 State Guidelines for Greenhouse Gas Emissions from Existing Electric Utility Generating Units, 82 Fed. Reg. 61,507 (Dec. 28, 2017).

25 *EPA Proposes Affordable Clean Energy (ACE) Rule*, U.S. Envtl. Prot. Agency, Aug. 21, 2018, https://www.epa.gov/newsreleases/epa-proposes-affordable-clean-energy-ace-rule; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guideline Implementing Regulations; Revisions to New Source Review Program, 83 Fed. Reg. 44,746 (Aug. 31, 2018) [hereafter ACE Proposed Rule].

26 *EPA Proposes Affordable Clean Energy (ACE) Rule*, U.S. Envtl. Prot. Agency, Aug. 21, 2018, https://www.epa.gov/newsreleases/epa-proposes-affordable-clean-energy-ace-rule.

27 ACE Proposed Rule, 83 Fed. Reg. 44,748.

28 *Id.* at 44,748, 44,781.

29 Notice of public hearing and extension of comment period, 83 Fed. Reg. 45,588 (Sept. 10, 2018).

30 83 Fed. Reg. at 44,748, 44,781.

FEDERAL CASENOTE

FLORIDA V. GEORGIA, 138 S. CT. 2502 (2018).

INTRODUCTION

The Apalachicola-Chattahoochee-Flint River Basin ("ACF Basin"), an interstate river basin formed by the Chattahoochee, Flint, and Apalachicola Rivers, is the subject of a decades-long dispute between the states of Florida and Georgia.[1] In January 2018, the Supreme Court of the United States heard the states' arguments concerning the use of the water.[2] Then, in June 2018, the Supreme Court issued a long-awaited ruling in favor of Florida.[3]

BACKGROUND

The ACF Basin is formed where the Chattahoochee and Flint Rivers, which both originate near Atlanta, Georgia, flow south through Georgia into Florida and meet the Apalachicola River.[4] Florida, Alabama, and Georgia all use the water in the ACF Basin.[5] Numerous federally-regulated dams are operated by the United States Army Corps of Engineers (USACE) along the Chattahoochee River and the Flint River.[6] The Apalachicola River is unimpeded by any dams.[7] Recreational use of all the lakes in the ACF Basin is common.[8] Additionally, the ACF Basin supports populations of oysters and some federally-threatened species.[9] Experts anticipate that, due to climate changes, droughts will likely become more frequent and severe, which will adversely affect recreational activities, populations of oysters, and threatened species.[10] While the ACF Basin

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1 Stephen E. O'Day et al., *Wars Between the States in the 21st Century: Water Law in an Era of Scarcity*, 10 VT. J. ENVTL. L. 229, 231 (2009).

2 Oral Argument Transcript at 1, Florida v. Georgia, 138 S. Ct. 2502 (2018) (No. 142, Orig.).

3 Florida v. Georgia, 138 S. Ct. 2502, 2505 (2018).

4 Laurie Fowler, Univ. of Ga. River Basin Ctr., Fall Kick-off Symposium, Supreme Court decision in Florida v. Georgia, part of the Apalachicola-Chattahoochee-Flint "Water Wars" (Aug. 16, 2018).

5 *Id.*

6 Report of the Special Master at 5–6, Florida v. Georgia, 138 S. Ct. 2502 (Feb. 14, 2017) (No. 142, Orig.).

7 *Id.* at 7.

8 Laurie Fowler, Univ. of Ga. River Basin Ctr., Fall Kick-off Symposium, Supreme Court decision in Florida v. Georgia, part of the Apalachicola-Chattahoochee-Flint "Water Wars" (Aug. 16, 2018).

9 *Id.*

10 *Figure 17.12: A Southeast River Basin Under Stress*, NAT'L CLIMATE ASSESSMENT, https://nca2014.globalchange.gov/report/regions/southeast/graphics/southeast-river-basin-under-stress (last visited Feb. 28, 2019).

has been the subject of litigation for over 30 years,[11] the lawsuits have generally been against government agencies and the USACE.[12]

As an example, in 2012, water diversions within Georgia from the ACF Basin resulted in record-low levels of water flowing into the Apalachicola Bay.[13] This reduction of flows caused higher levels of salinity than usual in the Bay, which adversely affected Florida's oyster fisheries;[14] and may have also resulted in negative implications for other animal and plant species in the Bay.[15]

In 2013, Florida filed a lawsuit against Georgia,[16] claiming that the amount of water Georgia had diverted from the Chattahoochee and Flint rivers caused the collapse of Florida's oyster industries.[17] Metro Atlanta diverts water from the ACF Basin and treats the resulting wastewater before it returns to the basin.[18] Florida alleged that it was experiencing economic distress due to the hardships experienced by the oyster industries.[19] Additionally, Florida claimed that Georgia's water use and its effect on marine species in the ACF Bay constituted a "take" of protected species under the Endangered Species Act.[20] In its request for relief, Florida requested that Georgia's use of both groundwater and surface water resources from the ACF Basin be limited by a consumption cap.[21] Florida asked the court to issue a decree equitably apportioning the Basin's waters and asked that the cap be set at Georgia's 1992 water use levels.[22]

Georgia responded that the USACE, not the state of Georgia, controlled the amount of water that flows from the Flint River to the Apalachicola River, and thus the USACE, not Georgia, is the proper defendant in Florida's lawsuit.[23] Georgia also claimed that factors other than its water use contributed to the harm sustained by Florida's oyster industries.[24] Subsequently, the Supreme Court agreed to exercise its original jurisdiction in this matter and appointed a Special Master.

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11 O'Day et al., *supra* note 1, at 231 ("Since the droughts of the 1980s, the states of Alabama, Florida, and Georgia have engaged in ongoing disputes over the waters [of the ACF Basin].").

12 *See generally id.* at 236–48 (describing the history of litigation over the ACF Basin).

13 Laurie Fowler, Univ. of Ga. River Basin Ctr., Fall Kick-off Symposium, Supreme Court decision in Florida v. Georgia, part of the Apalachicola-Chattahoochee-Flint "Water Wars" (Aug. 16, 2018).

14 *Id.*

15 *Id.*

16 *Id.*

17 *Id.*

18 Shaila Dewan, *River Basin Fight Pits Atlanta Against Neighbors*, N.Y. TIMES, Aug. 15, 2009.

19 Laurie Fowler, Univ. of Ga. River Basin Ctr., Fall Kick-off Symposium, Supreme Court decision in Florida v. Georgia, part of the Apalachicola-Chattahoochee-Flint "Water Wars" (Aug. 16, 2018).

20 *Id.*

21 *Id.*

22 *Id.*

23 State of Georgia's Answer at 13, Florida v. Georgia, 138 S.Ct. 2502 (Jan. 8, 2015) (No. 142, Orig.).

24 *Id.* at 21.

Special Master Decision

The Supreme Court appointed Ralph Lancaster, Jr. as Special Master, and in 2017, he recommended that the Court dismiss Florida's complaint.[25] The Special Master considered whether Florida actually suffered real and substantial harm as a result of Georgia's water use, and concluded that it did.[26] However, Special Master Lancaster concluded that Florida's harm was not redressable by the Supreme Court because the USACE, which was not a party in the suit (the United States declined to waive its sovereign immunity from suit in the case), was ultimately in control of the water flow.[27]

Supreme Court Decision

In response to Georgia's argument that the USACE is the appropriate party to the lawsuit, the USACE and the United States both indicated in briefing to the Court that they were willing to follow water apportionment recommendations.[28]

The Supreme Court ultimately held that the doctrine of equitable apportionment applies and that both Georgia and Florida possess equal rights to reasonable use of the water.[29] Additionally, the Supreme Court noted that, when considering competing claims to interstate water, the Court's effort is to secure an equitable apportionment while avoiding "quibbling over formulas."[30]

The Supreme Court also held that, until the Special Master makes a final ruling concerning the extent of Florida's injuries and the amount of water required to relieve these injuries, Florida is not required to prove with clear and convincing evidence that the Supreme Court can possibly address its solution.[31] Under this new standard, the Supreme Court held that Florida did made a legally sufficient showing of redressability.[32] Consequently, the Supreme Court returned the case to the Special Master with instructions to assess Florida's injuries more thoroughly and to recommend a plan to equitably distribute the waters in the ACF Basin.[33] In August 2018, Lancaster was discharged and the Honorable Paul J. Kelly, Jr. was appointed Special Master.[34]

Conclusion

Although this decades-long dispute over the ACF Basin is not yet fully resolved, the Court's decision was a positive development for Florida's water rights and industries affected by the state's access to water from the ACF Basin. Surely all interested parties

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25 Report of the Special Master at 3, Florida v. Georgia, 138 S.Ct. 2502 (Feb. 14, 2017) (No. 142, Orig.).

26 *Id.* at 27, 31, 34.

27 *Id.* at 69.

28 Fowler, *supra* note 4.

29 Florida v. Georgia, 138 S. Ct. 2502, 2513 (2018).

30 *Id.*

31 *Id.* at 2507 ("Unless and until the Special Master makes the findings of fact necessary to determine the nature and scope of likely harm caused by the absence of water and the amount of additional water necessary to ameliorate that harm significantly, the complaining State should not have to prove with specificity the details of an eventually workable decree by 'clear and convincing' evidence.").

32 *Id.*

33 *Id.* at 2507–08.

34 Miscellaneous Order, 585 U.S. 142, Orig. (2018).

anxiously await Special Master Kelly's forthcoming recommendation with the hope that the conflict over the waters of the ACF Basin will finally end.

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NATURAL RESOURCES

PARKER COUNTY APPRAISAL DISTRICT V. BOSQUE DISPOSAL SYSTEMS, LLC

INTRODUCTION

The Supreme Court of Texas issued an order in *Parker County Appraisal District v. Bosque Disposal Systems, LLC*, which concerns the taxation of land containing saltwater disposal wells.[1] At issue was the separate appraisal of the wells and the land for tax purposes, which plaintiffs contended amounted to illegal double taxation.[2] The Court could have ruled on the tax treatment of all permit-based, subterranean land rights but instead chose to decide the narrower question of taxation of underground hydrocarbon storage, which potentially has wide-ranging consequences regarding taxation of different components of a property.[3]

BACKGROUND

The plaintiffs, Bosque Disposal Systems, LLC, unsuccessfully challenged the appraisals of the saltwater disposal wells with the county appraisal review board and subsequently sought review in the district court, arguing that "the Tax Code does not permit the County to appraise the wells separately from the land itself where both interests are owned by the same person and have not been severed into discrete estates."[4] The district court granted the plaintiffs' motion for summary judgment.[5] The Second Court of Appeals reversed and remanded the trial court's grant of summary judgment and rendered judgment in favor of the Bosque County.[6]

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1 Bosque Disposal Sys., LLC v. Parker Cty. Appraisal Dist., 555 S.W.3d 92, 93 (Tex. 2018).
2 *Id.*
3 *Id.* at 96.
4 *Id.* at 94.
5 *Id.*
6 *Id.*

The land in question contains four saltwater disposal wells.[7] Saltwater disposal wells are used to dispose of wastewater from oil and gas operations.[8] Wastewater from oil and gas production has total dissolved solids (TDS) greater than 35,000 milligrams per liter and is classified as brine.[9] As "approximately 10 barrels of salt water are produced with every barrel of crude oil," the disposal of wastewater plays a critical role in the operations of oil and gas production.[10] Operators inject the brine into subsurface rock formations for permanent storage.[11] The process and locations of the injection sites can be especially critical for environmental concerns because of the potential correlation between injections and seismic activity.[12] The establishment and operation of saltwater disposal wells is permitted and regulated by the Texas Railroad Commission.[13]

ARGUMENT

The plaintiffs, Bosque Disposal Systems, LLC, appealed the issue of the tax treatment of the land and wells and sought a reversal of the Second Court of Appeals' decision.[14] The defendant, Parker County Appraisal District, separately appraised the land at a value of $700,000 and the four wells at a value of "approximately $7 million."[15] The plaintiffs contended the Second Court of Appeals incorrectly relied on *Matagorda Cty. Appraisal Dist. v. Coastal Liquids Partners, L.P.*[16] In *Coastal Liquids*, the Court examined whether the storage of hydrocarbons in man-made underground caverns constituted an interest that could receive a separate tax appraisal.[17] In 2018, the Court ruled that whether real property aspects can be appraised separately is determined "on a case-by-

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7 *Id.* at 93.

8 R. Marcus Cady, II, *Drilling into the Issues: A Critical Analysis of Urban Drilling's Legal, Environmental, and Regulatory Implications*, 16 TEX. WESLEYAN L. REV. 127, 141 (2009).

9 *Id.* at 140; *Seawater FAQs*, TEX. WATER DEV. BD., http://www.twdb.texas.gov/innovativewater/desal/faqseawater.asp (last visited Dec. 6, 2018) (explaining TDS concentration in brine).

10 Aaron Powell, *Salty Plaintiffs and Industry Defenses: A Texas Lawyer's Guide to Induced Seismicity and Saltwater Disposal Wells*, 48 TEX. TECH L. REV. 1001, 1002 (2016) (quoting PATRICK H. MARTIN & BRUCE M. KRAMER, WILLIAMS & MEYERS MANUAL OF OIL AND GAS TERMS 82 (15th ed. 2012)).

11 *Id.* at 1003.

12 *See generally* GROUND WATER PROTECTION COUNCIL AND INTERSTATE OIL AND GAS COMPACT COMMISSION, POTENTIAL INJECTION-INDUCED SEISMICITY ASSOCIATED WITH OIL & GAS DEVELOPMENT: A PRIMER ON TECHNICAL AND REGULATORY CONSIDERATIONS INFORMING RISK MANAGEMENT AND MITIGATION 1 (2015) (discussing the "potential for seismicity induced by the underground injection of fluids related to the development of oil and gas resources").

13 *See* 16 TEX. ADMIN. CODE § 3.9 (describing the Railroad Commission's authority to regulate disposal wells), *Id.* § 3.46 (outlining permitting requirements).

14 Bosque Disposal Sys., LLC v. Parker Cty. Appraisal Dist., 555 S.W.3d 92, 93 (Tex. 2018).

15 *Id.*

16 *Id. See* Matagorda Cty. Appraisal Dist. v. Coastal Liquids Partners, L.P., 165 S.W.3d 329 (Tex. 2005).

17 *Coastal Liquids*, 165 S.W.3d at 330.

case basis, taking into account 'the individual characteristics that affect the property's market value.'"[18]

The plaintiffs argued the land and the wells constitute a single real property interest because the interests are held in common ownership and in an unsevered estate.[19] Therefore, the value of the land already included the value of the wells, and a separate appraisal would mean the value of the wells is taxed twice.[20]

Conversely, the defendants contended both that the land appraisal does not include the value of the wells and that the wells require a separate tax evaluation.[21] The land was appraised using a comparative method with other tracts of raw land, while the saltwater disposal wells were appraised using an income method based on approximate income generation.[22] The defendants stated only the application of both methods can represent the market value of the land and wells.[23]

The Court agreed that *Coastal Liquids* controlled this case.[24] The Court recognized the physical difference between the saltwater disposal wells and the storage of hydrocarbons in caverns, but determined the analysis was unaffected by this distinction.[25] In fact, the Court categorized both features as "underground structures that combine manmade elements with the ground itself for use in the oil and gas industry" that increase the market value of the real property.[26]

Though the Court reaffirmed *Coastal Liquid* and the acceptability of separate appraisals, it acknowledged that it was "certainly not the case that the income generated on a piece of land always provides a fair basis for appraising the land itself."[27] It concluded with an emphasis on the plaintiffs' ability to challenge the use of the income method if they believed the assessment did not reflect the market value of the saltwater disposal wells.[28]

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18 *Bosque Disposal Sys., LLC*, 555 S.W.3d at 96 (quoting *Coastal Liquids*, 165 S.W.3d 329, 334 (quoting Tex. Tax Code § 23.01(b))).
19 555 S.W.3d at 95–96.
20 *Id.* at 95–96.
21 *Id.* at 95.
22 *Id.*
23 *Id.*
24 *Id.* at 95–96.
25 *Id.* at 97.
26 *Id.*
27 *Id.* at 101.
28 *Id.*

STATE CASENOTE

CITY OF LAREDO V. LAREDO MERCHANTS' ASSOCIATION

INTRODUCTION

On June 22, 2018, the Supreme Court of Texas issued its opinion in *City of Laredo v. Laredo Merchants' Ass'n*.[1] At issue was a 2014 ordinance adopted by the City of Laredo (the "City") prohibiting commercial establishments from providing or selling one-time-use paper or plastic bags to customers (the "Ordinance").[2] The Ordinance applied to commercial enterprises selling retail goods to the public.[3] Violations of the Ordinance were punishable by a $2,000 fine per violation.[4]

In its original suit, the Laredo Merchants' Association ("Merchants") sought a declaratory judgment that the Ordinance was preempted by the Texas Solid Waste Disposal Act (the "Act").[5] The City moved for summary judgment, arguing that the Act did not clearly and unmistakably preempt the Ordinance.[6] The trial court granted the City's motion for summary judgment and denied Merchants' motion, finding the Act did not preempt the Ordinance because "reasonable constructions exist under which both the Act and the Ordinance could be effective."[7] The San Antonio Court of Appeals reversed, holding the Act does preempt the Ordinance.[8] However, the court was divided on the definition of "container" within the Act.[9] The City then appealed the San Antonio Court of Appeals' decision to invalidate the Ordinance.

THE TEXAS SUPREME COURT'S DECISION

Chief Justice Hecht wrote the majority opinion for the Court.[10] The Court first addresses both parties and the many *amici curiae* who raised public policy arguments in their briefs. The opinion states that it is the Legislature's purpose to weigh public policy arguments—not the Court's.[11] The Court's purpose is to "take statutes as they are written."[12]

The Court then addressed the issue of preemption and emphasized that when they conflict, legislative mandates must prevail.[13] Regardless of the City's home-rule status, the Court observed that the City's powers are still limited. Ordinances must not "contain

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1 City of Laredo v. Laredo Merchs. Ass'n, 550 S.W.3d 586 (Tex. 2018).
2 *Id.* at 590.
3 *Id.*
4 *Id.*
5 *Id.* at 591.
6 *Id.*
7 *Id.*
8 *Id.*
9 *Id.* at 591–92.
10 *Id.* at 588.
11 *Id.* at 589.
12 *Id.*
13 *See id.* at 592–93.

any provision inconsistent with the Constitution of the State, or of the general laws enacted by the Legislature of this State."[14] While home-rule cities "have all power not denied by the Constitution or state law, and thus need not look to the Legislature for grants of authority,"[15] that authority may be limited by general law.[16] Whether a statutory limitation is express or implied, the "Legislature's intent to impose the limitation must appear with unmistakable clarity."[17] If state law and local law can coexist without conflict, "both will be given effect or the latter will be invalid only to the extent of any inconsistency."[18]

Chief Justice Hecht stated that the Act clearly preempts the Ordinance.[19] The Act reads, in relevant part: "A local government . . . may not adopt an ordinance [to] . . . prohibit or restrict, for solid waste management purposes, the sale or use of a container or package in a manner not authorized by state law."[20] The legislative intent for this Act to preempt the local law is clear.[21] Under the Texas Constitution, city ordinances shall not conflict with state law.[22]

The Ordinance was Enacted for Solid Waste Management Purposes

The City argued that the Ordinance's purpose is not solid waste management because it regulates bags, which have not yet been discarded and thus are not yet "solid waste."[23] To construe the meaning of "solid waste management purposes," the Court looked to the Act's statutory text and the ordinary meanings of its words.[24] The Court adopted a definition of the term that includes managing the source of solid waste "on the front end so those single-use materials cannot be inappropriately discarded on the back end."[25] The Court concluded simply that "[t]he Ordinance's stated purposes are to reduce litter and eliminate trash—in sum, to manage solid waste, which the Act preempts."[26] Although the City argued that the Ordinance was adopted for other purposes, such as beautification and flood prevention, the Court held that these purposes were merely ancillary to solid waste management.[27]

The Ordinance Clearly Prohibits the Sale of Containers

The City's second argument was that it did not prohibit or regulate the sale or use of bags because the Act does not clearly apply to new bags for point-of-sale purchases.[28] It

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14 *Id.* at 592 (citing Tex. Const. art. XI, § 5).
15 *Id.* at 592.
16 *Id.*
17 *Id.* at 593 (quotations omitted).
18 *Id.*
19 *Id.* at 598.
20 Tex. Health & Safety Code § 361.022.
21 *Laredo Merchs. Ass'n*, 550 S.W.3d at 594.
22 Tex. Const. art. XI, § 5.
23 *Laredo Merchs. Ass'n*, 550 S.W.3d at 594.
24 *Id.*
25 *Id.*
26 *Id.*
27 *Id.* at 595.
28 *Id.* at 591.

emphasized that the Act used the term "container or package," and not "bag."[29] The Court rejected this argument, finding that a "bag" is within the commonly understood definition of "container," and the City's own Ordinance "repeatedly characterize[d] bags as containers."[30] Accordingly, the Court determined that the City was prohibiting or regulating the sale or use of a container within the meaning of the Act.[31]

JUSTICE GUZMAN'S CONCURRENCE

While Justice Guzman agrees with the majority opinion that the Court's role is to interpret statutes "in a manner that effectuates the Legislature's intent," and that the Legislature clearly and unmistakably expressed its intent to preempt local regulations,[32] her concurrence highlights both environmental and economic concerns expressed by *amici curiae*. She warns Texans and legislators alike to consider our environmental legacy,[33] stating that plastic, although useful, becomes a "scourge on the environment and an economic drain" when improperly discarded, with single-use plastics being a particular menace.[34]

She continued on to discuss the harms caused by single-use plastic, ranging from killing animals to burdening the taxpayer and creating public eyesores.[35]

Her concurrence advocates for the preservation of the "majestic beauty" of Texas, and expresses her support for similar ordinances to "preserv[e] the well-being of livestock and wildlife," which are "vitally important to Texas industries, tourism, and recreatio[n]."[36] Justice Guzman also highlights the financial costs of plastic-bag pollution on taxpayers and municipalities. Before the ordinance, Laredo paid $340,000 annually in plastic-bag remediation.[37] The combined total in litter abatement and enforcement for Texas's big cities exceeds $50 million a year.[38] Justice Guzman concludes by emphasizing that the Legislature has the power to make these changes and urges the Legislature not to "stand idle in the face of an ongoing assault on our delicate ecosystem."[39]

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29 *Id.*
30 *Id.* at 596–97.
31 *Id.*
32 *Id.* at 599.
33 *Id.*
34 *Id.* at 599–600.
35 *Id.* at 601.
36 *Id.* at 601.
37 *Id.* at 602.
38 *Id.*
39 *Id.* at 604.

WASHINGTON UPDATE

PROPOSED CHANGES TO THE IMPLEMENTATION OF THE ENDANGERED SPECIES ACT

INTRODUCTION

The Endangered Species Act (ESA) is a 45-year-old cornerstone of protection for many key species of plants and animals. On July 25, 2018, in three proposed rules, the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (collectively, the "Services") proposed to revise portions of rules implementing Sections 4 and 7 of the ESA (the "Proposed Revisions").[1] The Services' stated intent is to streamline the processes associated with the ESA, and their proposed changes include, but are not limited to: (1) how species designated as "threatened" are treated under the ESA; (2) how unoccupied critical habitat is designated; (3) what it means to consider impacts that could happen in the "foreseeable future"; and (4) how and when costs can be considered. However, there is a good deal of uncertainty and controversy surrounding the effects these changes will actually have.

This Development discusses the three proposed rules that make up the Proposed Revisions. Part I discusses the proposal to remove the "blanket rule" for species listed as threatened, which, as currently implemented, means "threatened" species have the same protections as "endangered" species. This proposed change would only apply to the FWS. Part II discusses the proposed changes to listing species and critical habitat designations, applicable to both the Services. Part III discusses changes to rules implementing Section 7 of the ESA related to interagency consultation procedures.

Comments on the Proposed Revisions were due on September 24, 2018, and the Services are still considering the thousands of public comments on the proposed rules.

DISCUSSION

PART I: SECTION 4(D)—RESCISSION OF BLANKET PROTECTIONS FOR THREATENED SPECIES

The FWS currently extends the same protections for endangered species to threatened species.[2] Section 4(d) of the ESA allows special regulations to be established for threatened species, and the FWS has used its authority to extend the prohibition of "take" (which includes "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or

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1 Endangered and Threatened Wildlife and Plants; Revision of the Regulations for Prohibitions to Threatened Wildlife and Plants, 83 Fed. Reg. 35,174 (proposed July 25, 2018) (to be codified at 50 C.F.R. pt. 17); Endangered and Threatened Wildlife and Plants; Revision of the Regulations for Listing Species and Designating Critical Habitat, 83 Fed. Reg. 35,193 (proposed July 25, 2018) (to be codified at 50 C.F.R. pt. 424); Endangered and Threatened Wildlife and Plants; Revision of Regulations for Interagency Cooperation, 83 Fed. Reg. 35,178 (proposed July 25, 2018) (to be codified at 50 C.F.R. pt. 402).

2 Revision of the Regulations for the Prohibitions to Threatened Wildlife and Plants, 83 Fed. Reg. at 35,175.

collect") to all threatened species.[3] This has been known as the "blanket rule."[4] Under the Proposed Revisions, the FWS proposes to rescind the blanket rule.[5] These changes would align the FWS with the NMFS, which does not have a similar blanket rule.[6]

Instead, for each species listed as threatened, FWS would promulgate prohibitions, protections, or restrictions tailored specifically to that species.[7] These are known as the "species-specific rules."[8] As written, however, the Proposed Revisions do not *require* FWS to adopt species-specific rules when a new species is listed as threatened.[9] Species listed or reclassified as a threatened species after the effective date of the Proposed Revisions, if finalized, would have protective regulations only if the Service promulgates a species-specific rule.[10] It is unclear how active FWS would be in promulgating species-specific rules.

Species listed as threatened prior to the effective date of the final rule are grandfathered under the original blanket rule, and the proposed changes would apply to species listed as threatened after the effective date of the final rule.[11]

PART II: SECTION 4—SPECIES LISTING AND CRITICAL HABITAT DESIGNATION

ECONOMIC COSTS ARE NOW TO BE DISCUSSED IN PROPOSED LISTING

ESA Section 4(b)(1)(A) requires listing decisions to be made "solely upon the basis of the best scientific and commercial data available after conducting a review of the status of the species."[12] In 1982, "solely" was added to clarify that the determination of endangered or threatened status was intended to be made "solely based upon biological criteria."[13]

The Proposed Revisions remove the prohibition on the Services describing economic factors when making a listing decision.[14] Specifically, the Proposed Revisions delete the phrase "without reference to possible economic or other impacts of such determination" from the current rules that apply to listing decisions.[15] In removing the phrase, the Services state that they will continue to make determinations based solely on

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3 *Id.*; 16 U.S.C. § 1532(19); 16 U.S.C. § 1533(d).

4 Press Release, U.S. Fish & Wildlife Service, U.S. Fish and Wildlife Service Seek Public Input on Proposed Reforms to Improve & Modernize Implementation of the Endangered Species Act (July 19, 2018), https://www.fws.gov/news/ShowNews.cfm?ref=u.s.-fish-and-wildlife-service-and-noaa-fisheries-seek-public-input-on-&_ID=36286.

5 Revision of the Regulations for the Prohibitions to Threatened Wildlife and Plants, 83 Fed. Reg. at 35,175.

6 *Id.*

7 *Id.*

8 *Id.*

9 *Id.*

10 *Id.*

11 *Id.* at 35,194–95.

12 Revision of the Regulations for Listing Species and Designating Critical Habitat, 83 Fed. Reg. 35,193, 35,194 (proposed July 25, 2018).

13 *Id.*

14 *Id.* at 35,194–95.

15 *Id.*

the biological factors, but they would be permitted to refer to economic considerations in informing the public during the listing process.[16]

The Timeframe for "Foreseeable Future" is Defined on a Case-by-Case Basis

A species is defined as "threatened" under the ESA when it is likely to become endangered within the "foreseeable future,"[17] though there has been no definition of that phrase to date. The Proposed Revisions define "foreseeable future" as extending only so far in time as the agencies can "reasonably determine that both the future threats and the species' responses to those threats are probable."[18] The exact timeframe is to be determined on a case-by-case basis.[19] The foreseeable future consideration would be uniquely related to the particular species,[20] using the "best available data, . . . species' life-history characteristics, threat-projection timeframes, and environmental variability."[21] The Proposed Revisions add that the foreseeable future for a status determination extends "only so far as predictions about the future are reliable."[22] "Reliable" does not mean "certain," but rather, means sufficient to "provide a reasonable degree of confidence in the prediction."[23]

The Services rely on the 2013 D.C. Circuit case—*In re Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation*—in support of their approach to tailoring the analysis of the foreseeable future to each species' unique listing determination, arguing that "[c]ourts have expressly endorsed the Services' approach of tailoring analysis . . . ."[24] In *Polar Bear*, the court held that FWS's tailoring of "foreseeable future" on a case-by-case basis for the polar bear was reasonable because it was based on the "best available scientific data."[25]

The proposed definition of "foreseeable future" clarifies the Services' application of the term and seeks to address criticisms that listing decisions premised on long-term models are overly speculative. Yet, the new definition could also create controversy over what is "reliable" if a species has not been studied at length.

The Proposed Revisions Change Aspects of the Delisting Process

The Proposed Revisions clarify that listing and delisting decisions use the same standards.[26] As stated by the Services, the standard for a decision to delist a species is the

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16 *Id.* at 35,195.
17 *Id.*
18 *Id.*
19 *Id.*
20 *Id.*
21 *Id.*
22 *Id.*
23 *Id.*
24 *Id.* at 35,195; *In re* Polar Bear Endangered Species Act Listing and Section 4(d) Rule Litigation, 709 F.3d 1, 15–16 (D.C. Cir. 2013).
25 709 F.3d at 15–16.
26 Revision of the Regulations for Listing Species and Designating Critical Habitat, 83 Fed. Reg. at 35,196.

same as the standard for a decision not to list it in the first instance.[27] Further, the Proposed Revisions seek to streamline the delisting process to more clearly align with the factors stated in section 4(a) of the ESA.[28] To do this, the Services propose to replace the current rule that states the first reason for delisting a species as, "[t]he species is extinct."[29] Additionally, the Services propose to remove the word "recovery" from 50 C.F.R § 424.11(d)(2) because species that have recovered no longer meet the definition of endangered or threatened.[30] Finally, the Services propose to clarify that listed species will be delisted if they do not meet the definition of "species" based on "new information" or "new analysis of existing information."[31]

The current rules state that a species may be delisted "only if": (1) a sufficient period of time has been allowed to show that the species is extinct; (2) the species is no longer endangered or threatened; or (3) the original data that supported the classification is shown to be in error.[32] By changing the language of (1) to "the species is extinct," the Services eliminates the sufficient time period requirement to show that a species is extinct.[33] The language of (3) would also change from "data error" to "new information" or "new analysis of existing information,"[34] further streamlining and altering existing requirements.

THE PROPOSED REVISIONS SEEK TO CLARIFY "NOT PRUDENT DETERMINATIONS" IN CRITICAL HABITAT DESIGNATIONS

ESA Section 4(a)(3)(A) allows the Services to determine that the designation of critical habitat would not be prudent.[35] In the Proposed Revisions, the Services propose to set forth a non-exhaustive list of circumstances in which the Services may find it is not prudent to designate critical habitat.[36] The Services would have the authority but not be required to find a designation "would not be prudent in the enumerated circumstances."[37] The Services propose to retain existing language in the rules that, "the species is threatened by taking or other human activity and identification of critical habitat can be expected to increase the degree of such threat to the species."[38] However, the Services propose to remove the phrase, "indicating that it would not be prudent to designate critical habitat when 'designation of critical habitat would not be beneficial to the species,'" claiming that this language had been interpreted in ways the Services did not intend.[39] The Services claim that basing determinations on whether circumstances are present, rather than on if a designation would be beneficial to the species, "provides

27 *Id.*
28 *Id.*
29 *Id.*
30 *Id.*
31 *Id.*
32 50 C.F.R. § 424.11(d) (2018).
33 Revision of Regulations for Listing Species and Designating Critical Habitat, 83 Fed. Reg. at 35,196.
34 *Id.*
35 *Id.* at 35,196–97.
36 *Id.* at 35,196–97.
37 *Id.* at 35,197.
38 *Id.*
39 *Id.*

an interpretation of the statute that is clearer, more transparent, and more straightforward."[40]

The Services proposed non-exhaustive list of circumstances in which designation would not be prudent include: (1) if identification of habitat would increase the threat to the species; (2) if threats to the "species' habitat stem solely from causes that cannot be addressed through management actions"; (3) if areas within the U.S. would "provide no more than negligible conservation value"; (4) if "no areas meet the definition of critical habitat"; or (5) if the Secretary otherwise determines designation would not be prudent after analyzing the best scientific data available.[41]

The Services Would Be Required to Consider Occupied Areas First When Designating Critical Habitat

The Proposed Revisions would require the Services to first consider areas occupied by the species at the time of listing before considering whether unoccupied areas are necessary to include in designated critical habitat.[42] Under the existing rules, the Services can designate lands or waters as "critical habitat" that are not currently occupied, or perhaps even habitable, by the species.

The Proposed Revisions would require occupied areas to be considered first for critical habitat designation.[43] Under the Proposed Revisions, the Services may only consider unoccupied areas "essential" for the conservation of the species when designation limited to occupied areas would: (1) be inadequate to ensure species conservation; or (2) would result in "less-efficient conservation for the species."[44] "Efficient" conservation refers to situations where "conservation is effective, societal conflicts are minimized, and resources expended are commensurate with the benefit to the species."[45] In determining whether there is a reasonable likelihood that the unoccupied area will contribute to the conservation of the species, the Services can consider such factors as: (1) whether the area is currently or is likely to become usable habitat; (2) the likelihood Section 7 interagency consultation will be triggered; and, (3) "how valuable the potential contributions of the area are to the biological needs of the species."[46]

Part III: Section 7—Interagency Cooperation

Section 7 of the ESA requires federal agencies to consult with the appropriate agency or Service prior to taking or approving actions that could impact listed species or designate critical habitat.[47] As part of the Proposed Revisions, the Services have proposed to amend numerous portions of the regulations that implement Section 7 of the ESA, with the stated purpose of "improv[ing] and clarify[ing] the interagency consultation processes and mak[ing] them more efficient and consistent."[48]

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40 *Id.*
41 *Id.* at 35,201.
42 *Id.* at 35,198.
43 *Id.*
44 *Id.*
45 *Id.*
46 *Id.*
47 50 C.F.R. § 402.01 (2018).
48 83 Fed. Reg. 35,178 (proposed July 25, 2018).

Among the changes, the Services propose to:

> [p]reclude the need to consult when the Federal agency does not anticipate take and the proposed action will: (1) [n]ot affect listed species or critical habitat; or (2) have effects that are manifested through global processes and (i) cannot be reliably predicted or measured at the scale of a listed species' current range, or (ii) would result at most in an extremely small and insignificant impact on a listed species or critical habitat, or (iii) are such that the potential risk of harm to a listed species or critical habitat is remote, or (3) result in effects to listed species or critical habitat that are either wholly beneficial or are not capable of being measured or detected in a manner that permits meaningful evaluation.[49]

The second prong—"effects . . . manifested through global processes"—will likely be particularly controversial as that may involve exempting consideration of the effects of climate change.

The Services also propose to make several changes to the actual process of consultation. These changes include clarifications of what is necessary to initiate formal consultation.[50] The rule proposes alternative kinds of consultation—programmatic and expedited consultations—that could reduce the time needed for consultations.[51] Programmatic consultations could be used to address multiple similar, frequently occurring, or routine actions expected to be implemented in particular geographic areas, or used to address a proposed program, plan, policy, or regulation that provides a framework for future actions.[52] The Services propose to add a new system of "expedited consultations" that could "offer opportunities to streamline consultation, particularly for actions that have minimal adverse effects or predictable effects based on previous consultation experience."[53]

The Services also propose to modify how agencies consider destruction or adverse modification.[54] This includes revising the definition of "destruction or adverse modification" to limit the potential use of the definition to encompass presently unsuitable, but potential, future critical habitat as part of the consideration.[55] The Proposed Revisions also voice the position that there is no "'baseline jeopardy' status even for the most imperiled species," focusing on actions that will "appreciably diminish"" the value of a critical habitat as a whole to the conservation of the species.[56]

In addition, the Services state that, in reviewing other agency submissions, "[i]f the Federal agency provides information in sufficient detail for the Services to meaningfully evaluate the effects of measures proposed to avoid, minimize, or offset adverse effects, the Services must consider the proposed measures during a consultation . . . ."[57] The Services state that "[t]here is no requirement for the Service to independently evaluate whether

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49 *Id.* at 35,185.
50 *Id.* at 35,186.
51 *Id.* at 35,187–88.
52 *Id.* at 35,184–85.
53 *Id.* at 35,188.
54 *Id.* at 35,179.
55 *Id.* at 35,179–81.
56 *Id.* at 35,182–83.
57 *Id.* at 35,187.

the Federal agency is likely to carry out its commitments,"[58] adding that the Services were proposing revisions "to clarify there is no requirement for measures that avoid, minimize, or offset the adverse effects of an action that are included in the proposed action to be accompanied by 'specific and binding plans,' 'a clear, definite commitment of resources', or meet other such criteria."[59] The Services, in their review, will also "take into consideration the effects of the action as proposed, both beneficial and adverse."[60]

Conclusion

Any changes made to the ESA implementing regulations are certain to be subject to legal challenge. However, what is clear is that the Services intend to streamline the ESA rules, and reduce burdens on agencies and activities that could impact threatened or endangered species.

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Water Rights

Texas v. New Mexico

Background

The United States Supreme Court's recent decision in *Texas v. New Mexico* permits the United States to bring forward a claim alongside Texas, casts a new light on the case, and provides some clarity on the way forward for this cause of action.[1] However, before one can understand the intricacies of the case, one must first briefly consider the history of the 1938 Rio Grande Compact, which is deeply intertwined in the Rio Grande Project.

In the 1890s, during a time of regular water shortages, the Mexican government pressed claims against the United States for increased diversions upstream.[2] To mitigate Mexico's concerns, the United States began a storage and irrigation project, which culminated in the development of the Elephant Butte Reservoir ("Elephant Butte") and the Rio Grande Compact (the "Compact").[3] In 1904, Texas and New Mexico represent-

58 *Id.*
59 *Id.*
60 *Id.*
1 Texas v. New Mexico, 138 S. Ct. 954, 957 (2018).
2 On Motion for Leave to File a Complaint, Brief for the United States as Amicus Curiae at 3, *Texas*, 138 S. Ct. 954 (No. 22O141).
3 *Id.*

atives and a delegation from Mexico endorsed building a dam at the current Elephant Butte Reservoir site.[4] Accordingly, in 1905, the United States Congress extended The Reclamation Act of 1902 to the proposed site.[5] Construction of Elephant Butte began in 1910, after the United States Secretary of Interior determined there was "sufficient land in New Mexico and in Texas [that] can be supplied with the stored water."[6] Construction of Elephant Butte, its canal system and diversion dams, a system of drains, and a second storage facility was completed in 1938.[7]

Initial negotiations with the federal Bureau of Reclamation and New Mexico, Texas, and Colorado began before Elephant Butte's construction.[8] In 1929, Congress authorized Colorado, New Mexico, and Texas to "negotiate an apportionment of the waters of the Rio Grande."[9] In 1938, with the United States acting "as a sort of 'agent' of the Compact,"[10] each of the states signed the Compact. Colorado, New Mexico, and Texas entered into the Compact "to remove all causes of present and future controversy among these States . . . with respect to the use of the waters of the Rio Grande above Fort Quitman, Texas" and "for the purpose of effecting an equitable apportionment of such waters."[11]

The Compact requires Colorado to deliver a specified amount of water in the Rio Grande River at the New Mexico state line.[12] In contrast with the state-line requirements between Colorado and New Mexico, the Compact instead requires New Mexico to deliver water to Elephant Butte, located a little more than 100 miles from the Texas state line.[13] This difference, as argued by Texas, is because at the time of signature, "the United States had negotiated and approved the Downstream Contracts," which assures a certain amount of water should be delivered to Texas.[14] Under the backdrop of those concurrent negotiations with the United States as the primary negotiator, Texas argues in *Texas v. New Mexico* that the parties understood the all of the water delivered to Elephant Butte would be for Texas' use, not for other New Mexico residents.[15]

ORIGINAL COMPLAINT

Texas claims New Mexico is not adhering to the Compact's terms. When New Mexico delivers the water to Elephant Butte, that water, Texas argues, "is allocated and belongs to Rio Grande Project beneficiaries in southern New Mexico and in Texas," and

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4 *Id.*
5 *Id.* at 3–4.
6 *Id.* at 4.
7 *Id.*
8 *Id.* at 6–8.
9 *Id.* 6.
10 *Texas*, 138 S. Ct. at 959.
11 The Rio Grande Compact, 53 Stat. 785, pmbl. (2018).
12 *Id.* art. III.
13 Specifically, Article IV requires New Mexico to deliver water to a gauging station upstream of Elephant Butte. *Id.* art. IV. In 1948, the Rio Grande Compact Commission changed the gauge location to Elephant Butte. On Motion for Leave to File Complaint, New Mexico. Motion for Leave to File Supplemental Brief and Supplemental Brief in Response to the United States at 1 n.1, *Texas*, 138 S. Ct. 954 (No. 22O141).
14 *Texas*, 138 S. Ct. at 959.
15 *Id.*

federal contracts govern its distribution.[16] When New Mexico allows its water users to intercept surface water and groundwater hydrologically connected to the Rio Grande below Elephant Butte in excess of Project allocations, then "deliveries of water to Texas and to Mexico cannot be assured."[17] Texas further argues that water availability at the state line has diminished and that such diminishment has been to Texas' detriment.[18]

New Mexico argues it "honors its Compact obligations."[19] According to New Mexico, it complied with its explicit obligation under the Compact and that it is not required to deliver water to the Texas state line.[20] Any violation, it contends, would be of an alleged implied duty, which may not be read into the Compact.[21]

United States' Requests to Intervene

In 2014, the United States moved for leave to intervene as a plaintiff in Texas' original action.[22] It requested to intervene for two reasons. First, the Rio Grande Project is a Bureau of Reclamation project operated by the Department of Interior and the "Court's interpretation of the parties' rights and obligations under the Compact would affect how the Bureau of Reclamation calculates those diversion allocations."[23] Second, the United States has an interest in "ensuring that water users who either do not have contracts with the Secretary of the Interior under the Project, or who use water in excess of contractual amounts, do not intercept or interfere with release and delivery of Project water" intended for Project beneficiaries or delivery to Mexico.[24]

After the Court permitted the United States to intervene in the existing action, New Mexico filed a motion to dismiss.[25] The Special Master, appointed by the Court to consider the case, issued an interim report that recommended the Court "deny New Mexico's motion to dismiss Texas's Complaint, but grant New Mexico's motion to dismiss the United States' Complaint in Intervention to the extent it fails to state a claim under the 1938 Compact."[26]

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16 Motion for Leave to File Complaint, Complaint, and Brief in Support of Motion for Leave to File Complaint, para. 4, *Texas*, 138 S. Ct. 954 (No. 22O141).

17 *Id.* para. 11.

18 *Id.* para. 18.

19 On Motion to Dismiss, New Mexico's Reply Brief at 3, *Texas*, 138 S. Ct. 954 (No. 22O141).

20 *Id.*

21 *Id.* at 4.

22 Motion of the United States for Leave to Intervene as a Plaintiff, Complaint in Intervention, and Memorandum in Support of Motion to Intervene as a Plaintiff, *Texas*, 138 S. Ct. 954 (No. 22O141).

23 *Id.* at 2.

24 *Id.*

25 *See* On Motion for Leave to Intervene, New Mexico's Response to the Motion of the United States for Leave to Intervene as a Plaintiff, *Texas*, 138 S. Ct. 954 (No. 22O141).

26 On New Mexico's Motion To Dismiss Texas's Complaint and The United States' Complaint in Intervention and Motions of Elephant Butte Irrigation District and El Paso County Water Improvement District No. 1 for Leave to Intervene, First Interim Report of the Special Master, *Texas*, 138 S. Ct. 954 (No. 22O141).

PARTY EXCEPTIONS TO THE SPECIAL MASTER'S REPORT

In response to the Special Master's Report (the "Report"), the parties submitted several exceptions. Colorado made two exceptions to the Report. First, Colorado argued the United States should proceed on actions that threaten an international treaty and not from an alleged Compact injury.[27] Second, Colorado argued the Court should not accept the Report's "numerous presumptions and historical context as factual findings and legal conclusions."[28]

New Mexico expressed four exceptions to the Special Master's report. First, that the Compact does not surrender New Mexico's sovereignty over water delivered to the Project.[29] Second, the federal reclamation projects should comply with state water laws that do not conflict with specific congressional directives.[30] Third, the doctrine of equitable apportionment governs the Project.[31] And fourth, "the Special Master improperly relied upon documents outside the pleadings."[32]

Finally, the United States filed one exception to the Report. It argued that its "ability to seek declaratory and injunctive relief for New Mexico's violations of the Compact is based on specific federal interests protected by the Compact."[33] Accordingly, it argued, its exception should be sustained.[34]

COURT REASONING

The Court ultimately "agreed to hear two of these exceptions—one by the United States and one by Colorado—concerning the scope of the claims the United States can assert" in the original action.[35]

The Court's analysis begins with establishing the role of the Compact Clause of the Constitution, which states that "[n]o State shall, without the Consent of Congress, . . . enter into any Agreement or Compact with another State."[36] The purpose of the approval is to "prevent any compact or agreement between any two States, which might affect injuriously the interests of the others . . . . [and] check any infringement of the rights of the national government."[37] Further, "once Congress gives its consent, a compact between States—like any other federal statute—becomes the law of the land."[38] With original jurisdiction over disputes between States,[39] the Court may "regu-

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27 On Exceptions to the First Interim Report of the Special Master, State of Colorado's Sur-Reply at 10, *Texas*, 138 S. Ct. 954 (No. 22O141).

28 *Id.*

29 On Exceptions to the First Interim Report of the Special Master, State of New Mexico's Sur-Reply to the Replies of the United States, Texas, and Colorado at 5, *Texas*, 138 S. Ct. 954 (No. 22O141).

30 *Id.* at 16.

31 *Id.* at 2.

32 *Id.* at 4–5.

33 On the Exception by the United States to the First Interim Report of the Special Master, Sur-Reply Brief for the United States at 2, *Texas*, 138 S. Ct. 954 (No. 22O141).

34 *Id.* at 18.

35 *Texas*, 138 S. Ct. at 958.

36 U.S. CONST. art. I, § 10, cl. 3.

37 *Texas*, 138 S. Ct. at 958 (citations omitted).

38 *Id.* (*citing Texas* v. *New Mexico*, 462 U. S. 554, 564 (1983)).

39 *Id.*

late and mould the process it uses in such a manner as in its judgment will best promote the purpose of justice."[40]

Four considerations taken collectively persuade the Court to allow the United States to pursue its pleaded claims.[41] First, as described in BACKGROUND, *supra*, "the Compact is inextricably intertwined with the Rio Grande Project and the Downstream Contracts," with the United States playing a large role in its creation.[42] Second, New Mexico "conceded that the United States plays an integral role in the Compact's operation" because it is "'responsible for . . . delivery of . . . water' as required by the Downstream Contracts and anticipated by the Compact."[43] Third, if the Compact is breached, the federal government's ability to satisfy its treaty obligations with Mexico could be jeopardized.[44] Finally, the United States seeks substantially the same relief as Texas in the already-existing action.[45] The Court determined the United States' exception to be sustained and all others overruled.[46]

LOOKING FORWARD

With the United States permitted to bring forward its claim alongside Texas and the motion to dismiss overruled, the parties will continue to develop their cause of action. Much of the Court's future analysis will likely require substantial contractual interpretation. As New Mexico expressed, it has an express duty to provide water to Elephant Butte. The context under which the Compact was signed—the Compact's rich and intertwined history with Elephant Butte and related projects—will undoubtedly continue to play a substantial role in the Court's determination on whether the water, once delivered to Elephant Butte, is allocated to the Project beneficiaries or falls beneath New Mexico's sovereignty. This determination will be critical to determining the success of Texas' and the United States' claims.

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40 *Id.* (citations omitted).
41 *Id.* at 960.
42 *Id.* at 959.
43 *Id.*
44 *Id.* at 959–60.
45 *Id.* at 960.
46 *Id.*

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