Black Gold Beneath the Loblolly Pines: The Takings Clause and Hydraulic Fracturing in St. Tammany Parish, Louisiana

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I. INTRODUCTION

Prohibition of hydraulic fracturing (fracking) in local communities is currently a popular and hotly contested legal issue across the United

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States. Most of the legal analysis that has arisen out of local fracking issues has addressed state preemption of local ordinances, as well as state constitutional issues. One legal doctrine that is often mentioned, but rarely analyzed, in the context of fracking is that of the Takings Clause. Takings law is an unclear area of U.S. constitutional law. There is no jurisprudence on the Takings Clause with regard to fracking. However, a group of mineral rights owners from Denton, Texas, recently filed a Takings claim in a federal district court, alleging that Denton's drilling moratoria constitute a taking.[1] Mineral rights owners in St. Tammany Parish, Louisiana, now face similar battles against other private property owners who are concerned about the health risks of fracking in St. Tammany Parish. The state has already brought the Takings Clause to the attention of their opponents.[2]

II. ST. TAMMANY PARISH

A. Parish Description

St. Tammany Parish,[3] Louisiana, is located on the northern shore of Lake Pontchartrain, approximately twenty miles from New Orleans. The parish is celebrated amongst residents and visitors alike for its unique history and natural resources, which invite both cultural and ecological tourism.[4] A popular residence choice for city commuters, St. Tammany Parish is the most affluent parish in the state, with an average adjusted gross income 28% higher than the state average,[5] and is also Louisiana's fastest-growing community.[6] In the parish's third quarter of 2014 alone, commercial building permit grants increased 69.3%, employment growth

1. Jess Davis, *Texas City Fights Off Bid To Remand Drilling Ban Suit*, LAW360 (Jan. 27, 2015, 4:14 PM), http://www.law360.com/articles/615558/texas-city-fights-off-bid-to-remand-drilling-ban-suit.

2. Robert Rhoden, *St. Tammany Parish Can Proceed With Fracking Lawsuit, Judge Rules*, NOLA.COM (Oct. 27, 2013, 3:04 PM), http://www.nola.com/crime/baton-rouge/index.ssf/2014/10/st_tammany_fracking_case_heard.html.

3. Louisiana parishes are what other states call counties. *See About Louisiana*, LOUISIANA.GOV, http://louisiana.gov/Explore/About_Louisiana/ (last visited Jan. 28, 2015).

4. *Center for Cultural & Eco-Tourism*, UNIV. LA. LAFAYETTE, http://ccet.louisiana.edu (last visited Jan. 28, 2015).

5. Drew Broach, *Louisiana's Highest Incomes Are Found in St. Tammany (No. 1), St. Charles (No. 4)*, NOLA.COM (Mar. 30, 2012, 7:15 AM), http://www.nola.com/politics/index.ssf/2012/03/louisianas_highest_incomes_are.html.

6. *St. Tammany Parish*, GREATER NEW ORLEANS, INC., http://gnoinc.org/explore-the-region/st-tammany-parish/ (last visited Jan. 28, 2015).

increased 2.5%, and residential sales increased by 10%.[7] This growth was attributed to the parish's "affluence, good schools and low crime."[8]

The economic development director of St. Tammany Parish predicted that by 2020, the population of the parish will surpass that of Orleans and Caddo Parishes, becoming the third most populous parish in Louisiana.[9] Environmental issues, including the parish's natural beauty, quality of life, and agricultural and seafood industries, are important to the residents of St. Tammany, especially during this period of rapid growth.[10] The St. Tammany Police Jury,[11] in its planning process known as New Directions 2025, stated, "[O]ur parish will afford all residents the opportunity to live, learn, work, play, and retire in a vibrant and cohesive community that respects and balances our natural resources and environment with our human potential and needs."[12] Most recently, the "needs" of the parish have centered around the issue of fracking, with sharply divided perspectives amongst the residents regarding the advantages and disadvantages of fracking in the community.

B. Tuscaloosa Marine Shale and St. Tammany Land

The middle section of Louisiana, including St. Tammany Parish, rests above the Tuscaloosa Marine Shale, which "is a sedimentary rock formation that consist of organic-rich fine-grained materials (sediments) deposited in a marine environment that existed across the Gulf Coast region approximately 90 million years ago."[13] The Shale contains "natural gas, condensate and crude oil."[14] On average, there are approximately 1,060.61 barrels of oil under each acre in the Tuscaloosa

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7. Sara Pagones, *Commercial Building Permits Jump in St. Tammany*, NEW ORLEANS ADVOC. (Dec. 22, 2014), http://www.theneworleansadvocate.com/news/sttammany/11127965-171/commercial-building-permits-jump-in.

8. *Id.*

9. *Id.*

10. *See* Alana A. Carmon, *St. Tammany Parish*, CENTER FOR CULTURAL & ECO-TOURISM, UNIV. LA. LAFAYETTE, http://ccet.louisiana.edu/tourism/parishes/Florida_Parishes/sainttammany.html (last visited Feb. 8, 2015).

11. Police juries in Louisiana are analogous to county commissions or county legislatures in common law jurisdictions. *See* POLICE JURY ASS'N LA., http://www.lpgov.org (last visited Jan. 28, 2015).

12. Bureau of Governmental Research, *Slip-Sliding Away? The Challenge of Implementing St. Tammany's Vision for Growth Management*, EMERGING ISSUES 1, 3 (Nov. 2003), http://www.bgr.org/files/reports/Slip-SlidingAway.pdf.

13. *Tuscaloosa Marine Shale*, LA. DEP'T NAT. RESOURCES, http://dnr.louisiana.gov/index.cfm?md=pagebuilder&tmp=home&pid=909 (last visited Jan. 28, 2015).

14. Wilma Subra, *Leasing and Fracking the Tuscaloosa Marine Shale in St. Tammany Parish*, LA. ENVTL. ACTION NETWORK (June 17, 2014), http://leanweb.org/our-work/water/fracking/leasing-and-fracking-the-tuscaloosa-marine-shale-in-st-tammany-parish.

Marine Shale. If the reserves underneath St. Tammany Parish equal that average, the parish holds approximately 434,756,251.2 barrels of crude oil.[15] At the current (January 2015) price per barrel of crude oil of $44.47,[16] that amounts to over $19 billion worth of crude oil underneath St. Tammany Parish.[17]

Helis Oil & Gas Company (Helis) leased 43,000 acres of land in St. Tammany Parish on October 1, 2013, for the purpose of "exploring, drilling and producing oil and gas."[18] Since then, the company has leased or acquired options to at least an additional 17,000 acres in the parish.[19] Helis is actively pursuing a drill site on 3.21 acres of a 960-acre tract of land, which involves unitization of that land.[20] Unitization is the process by which property owners coordinate their interests over a single reservoir.[21] It serves to prevent "competitive drilling and production with consequent economic and physical waste."[22] Approximately 90% of the 960-acre tract of land is classified as wetlands, and approximately 88% of the 3.21-acre portion of the tract is classified as wetlands.[23]

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15. The Tuscaloosa Marine Shale holds seven billion barrels of crude oil over 6.6 million acres, which means that there are approximately 1,060.61 barrels of oil under each acre on average. The shale lies beneath three-fourths of St. Tammany Parish, which amounts to an area of 409,920 acres over crude oil. Multiplying 409,920 acres times the average of 1,060.61 barrels per acre amounts to approximately 434,765,251.2 barrels of crude oil in total underneath St. Tammany Parish. *See id.*

16. *Crude Oil*, NASDAQ, http://www.nasdaq.com/markets/crude-oil.aspx (last visited Jan. 29, 2015).

17. This calculation is based on averages over the entire Tuscaloosa Marine Shale and is a modest estimate, since the shale is thickest in the southern parts of the Florida Parishes, which include St. Tammany Parish. Subra, *supra* note 14; *Florida Parishes*, NAT'L PARK SERV., U.S. DEP'T INTERIOR, http://www.nps.gov/nr/travel/louisiana/parishes.htm (last visited Jan. 28, 2015).

18. Subra, *supra* note 14.

19. *See* Faimon A. Roberts, III, *Energy Company with Fracking Plans Eyes 60,000 Acres in St. Tammany Parish*, ADVOCATE (May 14, 2014), http://theadvocate.com/news/neworleans/9026463-148/energy-company-with-fracking-plans.

20. *Id.*; Application for Department of the Army Permit from Helis Oil & Gas Co., LLC, U.S. ARMY CORPS ENGINEERS (Oct. 14, 2014), http://www.mvn.usace.army.mil/Portals/56/docs/regulatory/publicnotices/Helis%20PN%20revised%20all%20Oct-2014%20.pdf.

21. Jaqueline Lang Weaver & David F. Asmus, *Unitizing Oil and Gas Fields Around the World: A Comparative Analysis of National Laws and Private Contracts*, 28 HOUS. J. INT'L L. 3, 6 (2006).

22. *Id.* at 7.

23. Faimon A. Roberts III, *EPA Asks Corps To Hold Up Permit for St. Tammany Well*, NEW ORLEANS ADVOC. (Dec. 19, 2014), http://www.theneworleansadvocate.com/news/11071067-171/epa-asks-corps-to-hold; Application for Department of the Army Permit from Helis Oil & Gas Co., LLC, *supra* note 20.

C. What Is a Wetland?

It may come as a surprise to some people that wetlands include more than marshlands and swamps. According to the Environmental Protection Agency (EPA), "Wetlands can be found in every county and climatic zone in the United States."[24] The United States Army Corps of Engineers and the EPA define wetlands as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."[25] This is significant to the issue of fracking in St. Tammany Parish because Helis and the private landowners may not have known that the 960-acre tract is 90% wetlands. The remainder of the 60,000 acres of leases and options that Helis has acquired may also be wetlands. Helis will need an additional permit to engage in fracking activity on wetland areas.[26] Thus, the fact that the land is wetlands is another hindrance to fracking. If the wetlands permits are denied, there is also one more opportunity for a takings claim by private property landowners.

D. Local Opposition to Fracking

1. General Health Concerns

St. Tammany Parish citizens are concerned about potential health risks as a side effect of fracking, especially because the proposed fracking site is less than two miles away from a high school.[27] A fracking project in the parish would drill through the Southern Hills Aquifer, a sole-source aquifer that supplies 90% of the parish's water.[28] The three main health concerns include inhalation exposure, dermal absorption, and ingestion exposure. A report from the Natural Resources Defense Council indicates that oil and gas drilling wells may expose nearby neighborhoods to hazardous airborne chemicals such as benzene and formaldehyde.[29] The Preventative Medicine and Family Health

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24. *Wetlands Overview*, U.S. EPA, http://water.epa.gov/type/wetlands/outreach/upload/overview.pdf (last visited Jan. 28, 2015).

25. 40 C.F.R. § 232.2 (2014).

26. *See infra* Part III.

27. *St. Tammany Parish Project*, HELIS OIL & GAS, http://www.helisenergyproject.com/st-tammany-parish-project/ (last visited Feb. 8, 2015).

28. Anna Aguillard, *St. Tammany Parish Sues To Prevent Fracking; Cites Concerns over Aquifer*, LA. RECORD (Aug. 27, 2014, 8:58 AM), http://louisianarecord.com/news/262864-st-tammany-parish-sues-to-prevent-fracking-cites-concerns-over-aquifer.

29. Tanja Srebotnjak & Miriam Rotkin-Ellman, *Fracking Fumes: Air Pollution from Hydraulic Fracturing Threatens Public Health and Communities*, NAT. RESOURCES DEF. COUNCIL 4 (Dec. 2014), http://www.nrdc.org/health/files/fracking-air-pollution-IB.pdf.

Committee of the Medical Society of the State of New York indicates that dermal absorption or ingestion of lead, a fracking byproduct, may cause health problems such as a variety of cancers and organ failure.[30] St. Tammany Parish residents are especially concerned about the ingestion of fracking byproducts, because Louisiana's water table is higher than that in states that have recently banned fracking due to health concerns.

2. Natural and Industrial Disaster Concerns

The residents of St. Tammany Parish, and indeed the state of Louisiana, are familiar with natural and industrial disasters, the most recent and extreme examples being Hurricane Katrina, Hurricane Rita, and the DEEPWATER HORIZON oil spill. The local Louisiana governments (especially the coastal ones such as St. Tammany), the state government, and the federal government, each have an interest in protecting wetlands in southern Louisiana as natural and industrial disaster mitigation. The federal government spent over $100 billion during the aftermath of Hurricanes Katrina and Rita.[31] It is still unknown how much money the federal and state governments, businesses, and individuals spent on recovery from the DEEPWATER HORIZON oil spill, but it is likely within the ten-digit range as well.[32] Environmental repercussions would be especially severe in St. Tammany Parish if a Hurricane Katrina-sized storm whipped through an active drill site. Although St. Tammany's wetlands are not in as imminent danger of erosion and subsidence as those within the southernmost Louisiana parishes, the Gulf of Mexico is rapidly encroaching inland into Louisiana. The state is losing the equivalent of one football field of wetlands every hour, partially due to oil and gas exploration and production activity.[33]

III. PERMITTING PROCESS

To proceed with its exploration and production goals, Helis must apply for and receive at least four permits from the Louisiana and federal

30. Sheila Bushkin-Bedient & Geoffrey E. Moore, The Preventive Med. & Family Health Comm. of the Med. Soc'y of the State of N.Y., *Update on Hydraulic Fracturing*, AM. ACAD. PEDIATRICS, N.Y. ST., http://nysaap.org/update-on-hydrofracking/ (last visited Feb. 8, 2015).

31. Daniel Hoople, *The Budgetary Impact of the Federal Government's Response to Disasters*, CONG. BUDGET OFF. (Sept. 23, 2013), http://www.cbo.gov/publication/44601.

32. Tom Zeller, Jr., *Does BP Deserve Mercy in Setting Deepwater Horizon Penalty?*, FORBES (Feb. 8, 2015, 11:11 AM), http://www.forbes.com/sites/tomzeller/2015/02/08/does-bp-deserve-mercy-in-setting-deepwater-horizon-penalty/.

33. Nathaniel Rich, *The Most Ambitious Environmental Lawsuit Ever*, N.Y. TIMES (Oct. 3, 2014), http://www.nytimes.com/interactive/2014/10/02/magazine/mag-oil-lawsuit.html.

governments.[34] The oil company first applied for a unitization permit from the Louisiana Office of Conservation, which was approved on August 29, 2014.[35] Because the tract of land is 90% wetlands and the proposed site of the drilling pad within the tract is 88% wetlands, Helis will also have to obtain a permit under section 404 of the Clean Water Act (CWA).[36] Section 404 of the CWA regulates fill activities involving U.S. waters through a permitting program.[37] The purpose of the program is to ensure that no dredged or fill material is discharged into waters of the United States if a practicable, less environmentally damaging alternative exists.[38] Another permit required for fracking in St. Tammany Parish is a water quality permit from the state, in compliance with section 401 of the CWA.[39] Helis applied for—and on December 19, 2014, was granted—a permit to drill.[40] That permit is now the subject of litigation.[41]

IV. THE TAKINGS CLAUSE

If Helis's proposed fracking activity is barred by denial of any or all of the four permits, Helis and the private landowners may institute takings claims against the government entity that denied the permit or permits. Similarly, if the fracking activity is prohibited by a local ordinance, Helis and the private landowners may institute a takings claim

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34. Subra, *supra* note 14; Robert Rhoden, *State Office of Conservation Grants Drilling Permit for Helis Oil's Project Near Mandeville*, NOLA.COM (Dec. 19, 2014, 6:52 PM), http://www.nola.com/politics/index.ssf/2014/12/state_office_of_conservation_g.html; *see also* Application for Department of the Army Permit from Helis Oil & Gas Co., LLC, *supra* note 20 (consolidating Helis Oil & Gas Co., LLC's Clean Water Act §§ 401-404 permit applications); Letter from Richard W. Revels, Jr., Counsel, Helis Oil & Gas Co., LLC, to Hon. James. H. Welsh, Comm'r of Conservation, LA. DEP'T NAT. RESOURCES (Mar. 31, 2014), http://ucmwww.dnr.state.la.us/ucmsearch_070611/UCMRedir.aspx?url=http%3a%2f%2fdnrucm%2fucm%2fgroups%2fconservation%2fdocuments%2fooc%2f4879886.pdf; Letter from Hon. James H. Welsh, Comm'r of Conservation, to Helis Oil & Gas Co., LLC, U.S. ARMY CORPS ENGINEERS (Dec 19, 2014), http://www.mvn.usace.army.mil/Portals/56/docs/PAO/Helis/Exhibit03.pdf.

35. Robert Rhoden, *State Approves Helis Oil's Request To Establish Drilling and Production Unit Near Mandeville*, NOLA.COM (Aug. 29, 2014, 6:12 PM), http://www.nola.com/politics/index.ssf/2014/08/state_approves_helis_oils_requ.html.

36. Subra, *supra* note 14.

37. Clean Water Act § 404, 33 U.S.C. § 1344 (2012).

38. Norman v. United States, 429 F.3d 1081, 1086 n.1 (Fed. Cir. 2005) (citing *Section 404 of the Clean Water Act: An Overview*, U.S. EPA, http://www.epa.gov/owow/wetlands/facts/fact10.html (last visited Nov. 4, 2005)).

39. Susan Buchanan, *St. Tammany Parish Residents Worry Fracking Will Harm Their Water*, HUFFINGTON POST (May 11, 2014, 3:43 PM), http://www.huffingtonpost.com/susan-buchanan/st-tammany-parish-residen_b_5306339.html.

40. Rhoden, *supra* note 34.

41. Motion for Leave To File Second Supplemental Petition for Declaratory and Injunctive Relief at 4, State v. St. Tammany Parish, No. 631370 (La. 19 Jud. Dist. filed Jan. 2, 2015).

against the parish government. The Takings Clause of the Fifth Amendment to the United States Constitution provides that private property shall not "be taken for public use, without just compensation."[42] Justice Black, in his much-cited statement in *Armstrong v. United States*, reasoned that the Takings Clause 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."[43] However, as is true for the majority of legal issues that arise under the Constitution, jurisprudential attitude toward governmental takings of private property has shifted alongside historical events and ever-changing social views.[44]

A. History of Takings Law

At the time of the American Revolution, "The principle that the State should compensate individuals for property taken for public use was not widely established in America."[45] Even though the Fifth Amendment was ratified in 1791, it was not until the nineteenth century that Americans moved to establish the just compensation principle.[46] In this era, the courts viewed the Takings Clause as extending only to physical takings of property by the federal government.[47] The Fifth Amendment does not directly apply to the states.[48] Instead, the Takings Clause language was first applied to the states indirectly in *Chicago Burlington & Quincy Railroad Co. v. Chicago*.[49] There, the United States Supreme Court incorporated the Takings Clause into the Fourteenth Amendment's Due Process Clause language and reasoned that the Fourteenth Amendment requires compensation for private property taken for public use by a state.[50] Thereafter, the Supreme Court addressed a

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42. U.S. CONST. amend. V.

43. 364 U.S. 40, 49 (1960); *e.g.*, Penn. Cent. Transp. Co. v. New York City, 438 U.S. 104, 123 (1978) (citing *Armstrong*, 364 U.S. at 49).

44. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1055 (1992) (Blackmun, J., dissenting).

45. *Id.* at 1056.

46. *Id.* at 1057 (citing M. HORWITZ, THE TRANSFORMATION OF AMERICAN LAW, 1780-1860, at 65 (1977)).

47. *Id.* at 1057 n.23 (citing William Michael Treanor, *The Origins and Original Significance of the Just Compensation Clause of the Fifth Amendment*, 94 YALE L.J. 694, 711 (1985)).

48. Glynn S. Lunney, Jr., *A Critical Reexamination of the Takings Jurisprudence*, 90 MICH. L. REV. 1892, 1892 n.1 (1992) (citing Barron v. Mayor of Balt., 32 U.S. (7 Pet.) 243, 250-51 (1833)).

49. 166 U.S. 226 (1897).

50. *Id.* at 239.

series of state railroad rate regulation cases and devised a theory of regulatory takings.[51]

In *Pennsylvania Coal Co. v. Mahon*, the Supreme Court discussed in depth regulatory takings, or takings other than physical seizure of property, under the Takings Clause.[52] In his majority opinion, Justice Holmes reasoned that government regulations may also amount to takings under the Takings Clause.[53] The general rule, he stated, is this: "[W]hile property may be regulated to a certain extent, if regulation goes too far it will be recognized as a taking."[54] He reasoned that "a strong public desire to improve the public condition is not enough to warrant achieving the desire by a shorter cut than the constitutional way of paying for the change."[55] Justice Brandeis dissented from the majority opinion, expressing his view that regulations could not constitute takings under the Fifth Amendment because property under regulation is still in the possession of the private owner.[56] Nevertheless, Justice Holmes' *Pennsylvania Coal* holding became a recognized rule in Takings jurisprudence.[57]

Thus, after *Pennsylvania Coal*, there were two recognized categories of takings: physical takings, where the government appropriates private property for its own use, and regulatory takings, where the government regulates private property to an extent that it prevents the private owner from using the property.[58] However, in creating the new regulatory takings category under the Takings Clause, Justice Holmes did not define when a regulation goes "too far" so that it amounts to a taking.[59]

B. Modern Takings Law

1. Partial Takings Under *Penn Central* and Total Takings Under *Lucas*

Modern takings law, like its historical counterpart, is not an "articulated legal doctrine" and instead is decided on "an ad hoc, case-

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51. Glynn S. Lunney, Jr., *Responsibility, Causation, and the Harm-Benefit Line in Takings Jurisprudence*, 6 FORDHAM ENVTL. L.J. 433, 445 n.59 (1995) (citing Smyth v. Ames, 169 U.S. 466, 546 (1898); Reagan v. Farmers' Loan & Trust Co., 154 U.S. 362, 412 (1894); Covington & Lex. Turnpike Road Co. v. Sandford, 164 U.S. 578, 594-95 (1896)).

52. 260 U.S. 393, 415 (1922).

53. *Id.*

54. *Id.*

55. *Id.* at 416.

56. *Id.* at 417 (Brandeis, J., dissenting).

57. *See, e.g.*, Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1014 (1992) (citing *Pa. Coal*, 260 U.S. at 414-15).

58. *Id.* at 1015.

59. *See Pa. Coal*, 260 U.S. at 415; *see Lucas*, 505 U.S. at 1015 (discussing *Pa. Coal*, 260 U.S. 393).

by-case basis."[60] In *Penn Central Transportation Co. v. New York City*, the Supreme Court stated that it "ha[d] been unable to develop any 'set formula' for determining when 'justice and fairness' require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons."[61] However, in that case, the Court established a factor test to determine when a regulation constitutes a taking under the Takings Clause.[62] The nonexhaustive list of factors enumerated by the Court include (1) "the economic impact of the regulation on the claimant," (2) the claimant's reasonable investment-backed expectations, and (3) "the character of the governmental action."[63]

In regard to these factors, the Court listed the taxing power and economic harm that does not impact what the claimant could reasonably consider his or her property as examples of contexts in which an economic harm suffered by a claimant do not constitute a taking.[64] The Court also stated that zoning laws designed to promote "'health, safety, morals, or general welfare'" are the classic example of regulations that would not trigger protection under the Takings Clause.[65] The *Penn Central* factors remain a modern test for regulatory takings claims.[66]

The economic impact factor is the most important *Penn Central* factor: if the claimant has not suffered economic harm, then there is no reason for the government to provide compensation. In determining the value of the economic impact on the claimant, courts calculate the fair market value of the property at the highest and best use it could be put to if the regulation did not affect it, subtracting from that figure the amount that the property is worth with the regulation in place.[67] Highest and best

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60. Gideon Kanner, *Making Laws and Sausages: A Quarter-Century Retrospective on* Penn Central Transportation Co. v. City of New York, 13 WM. & MARY BILL RTS. J. 679, 683, 683 n.17 (2005) (listing three exceptions to the ad hoc nature of the modern takings jurisprudence: (1) "when there is a permanent physical invasion of the regulated land" (citing Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419 (1982)); (2) "when the regulation deprives the property owner of all economically viable property use" (citing *Lucas*, 505 U.S. at 1003); and (3) "where owners are required to convey property to the government as a condition of development permit issuance, and the demanded property lacks a nexus or is disproportionate to the public burdens created by private development" (citing Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 825 (1987))).

61. 438 U.S. 104, 124 (1978) (citing Goldblatt v. Hempstead, 369 U.S. 590, 594 (1962)).

62. *Id.* (citing *Goldblatt*, 369 U.S. at 594; United States v. Causby, 328 U.S. 256 (1946)).

63. *Id.* (citing *Goldblatt*, 369 U.S. at 594; *Causby*, 328 U.S. at 256).

64. *Id.* at 124-25 (citing United States v. Willow River Power Co, 324 U.S. 499 (1945); United States v. Chandler-Dunbar Water Power Co., 229 U.S. 53 (1913)).

65. *Id.* at 125 (quoting Nectow v. Cambridge, 277 U.S. 183, 188 (1928)).

66. *See, e.g.*, Norman v. United States, 429 F.3d 1081, 1091-92 (Fed. Cir. 2005) (quoting Norman v. United States, 63 Fed. Cl. 231, 261 (2004)).

67. Loveladies Harbor, Inc. v. United States, 21 Cl. Ct. 153, 156 (1990).

use is defined as "the reasonably probable and legal use of . . . property, which is physically possible, appropriately supported, financially feasible, and that results in the highest value."[68] The *Penn Central* factor test is a narrow interpretation of the Takings Clause and is considered a manipulation of Takings precedent "to establish a less generous measure of compensation . . . to permit the legislature to accomplish as much as it can for society with its limited resources."[69] No Takings Clause claimant has ever prevailed under the *Penn Central* factor test alone.

After *Penn Central*, the next significant development in Takings law was the creation of per se rules, which introduced the denominator principle as the "one factor determinative of an obligation to compensate."[70] Per se takings occur in "the extraordinary circumstance when *no* productive or economically beneficial use of land is permitted"[71] and the "proscribed use interests" were part of the claimant's title when he or she acquired the property.[72] In 1982, the Supreme Court held that "'permanent physical occupation,' no matter how small or economically insignificant, always requires compensation."[73] Then, in 1992, the Supreme Court decided *Lucas v. South Carolina Coastal Council*.[74] In that case, the Court applied its per se rules to create a subcategory within regulatory takings: per se takings, also known as categorical takings or total takings.[75]

The *Lucas* court reasoned that "the *functional* basis for permitting the government, by regulation, to affect property values without compensation . . . does not apply to the relatively rare situations where the government has deprived a landowner of all economically beneficial uses."[76] In a footnote discussing the denominator inquiry, the Court recognized that in "*some* cases the landowner with 95% loss will get nothing, while the landowner with the total loss will recover in full," and then illustrated that this "occasional result is no more strange than the

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68. *Id.* (quoting AM. INST. OF REAL ESTATE APPRAISERS, THE APPRAISAL OF REAL ESTATE 42 (9th ed. 1987)).

69. Glynn S. Lunney, Jr., *Compensation for Takings: How Much Is Just?*, 42 CATH. U. L. REV. 721, 769 (1993).

70. Holly Doremus, *Takings and Transitions*, 19 J. LAND USE & ENVTL. L. 1, 2 (2003).

71. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1017 (1992).

72. *Id.* at 1027.

73. Doremus, *supra* note 70 at 8 (quoting Loretto v. Teleprompter Manhattan CATV Corp., 458 U.S. 419, 427 (1982)).

74. 505 U.S. 1003.

75. *Id.* at 1015 (citing Agins v. Tiburon, 447 U.S. 255, 260 (1980); Nollan v. Cal. Coastal Comm'n, 483 U.S. 825, 834 (1987); Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 495 (1987); Hodel v. Va. Surface Mining Reclamation Ass'n, 452 U.S. 264, 295-96 (1981)).

76. *Id.* at 1018.

gross disparity between the landowner whose premises are taken for a highway (who recovers in full) and the landowner whose property is reduced to 5% of its former value by the highway (who recovers nothing)."[77]

In his dissent to the majority opinion, Justice Blackmun declared: "Today the Court launches a missile to kill a mouse."[78] He expressed his concern that "the Court's new policies will spread beyond the narrow confines of the present case."[79] Justice Stevens also wrote a dissenting opinion, in which he stated:

> The Court's categorical approach rule will, I fear, greatly hamper the efforts of local officials and planners who must deal with increasingly complex problems in land-use and environmental regulation . . . these officials face both substantial uncertainty because of the ad hoc nature of takings law and unacceptable penalties if they guess incorrectly about that law.[80]

Thus, in post-*Lucas* cases involving regulatory takings, courts must first determine whether the taking is a per se taking. If it is a per se taking, the claimant may recover under the Takings Clause; if it is not a per se taking, the court must next determine whether the taking is compensable under the *Penn Central* factors.[81] When the taking only affects part of a parcel, it is a partial taking, not a categorical taking, and it is proper to apply the *Penn Central* factors.[82]

Many modern regulatory takings claims arise from local or federal environmental regulations, including the CWA.[83] In the context of fracking in St. Tammany Parish, the relevant regulations against which Helis or the private landowners could assert takings claims are the wetlands permit (issued by the federal government), the water quality permit (issued by the state government), or the local zoning ordinance (imposed by the parish government).[84]

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77. *Id.* at 1019-20 n.8.

78. *Id.* at 1036 (Blackmun, J., dissenting).

79. *Id.*

80. *Id.* at 1070 (Stevens, J., dissenting).

81. *See* Palazzolo v. Rhode Island, 533 U.S. 606 (2001); *see also* Tahoe-Sierra Pres. Council v. Tahoe Reg'l Planning Agency, 535 U.S. 302 (2002); Norman v. United States, 429 F.3d 1081 (Fed. Cir. 2005).

82. *Tahoe-Sierra Pres. Council*, 535 U.S. at 331 (citing Pa. Cent. Transp. Co. v. United States, 438 U.S. 104, 130-31 (1978)).

83. *See, e.g.*, Loveladies Harbor, Inc. v. United States, 21 Cl. Ct. 153 (1990); *Lucas*, 505 U.S. 1003; *Palazzolo*, 535 U.S. 606; *Tahoe-Sierra Pres. Council*, 535 U.S. 302; *Norman*, 429 F.3d 1081.

84. In this instance, the unitization permit is not relevant under a takings analysis because it has already been approved and issued.

2. The Denominator Problem

Lucas created what is known as the denominator problem. If the denominator used in the takings calculation is the value of the parcel of property affected by the regulation, this would lead to a greater disproportion between what the property is worth without the regulation and what it is worth with the regulation. This scenario lends itself more readily to a finding of a per se taking. However, if the denominator used is the entire parcel of property, of which only part is affected by a regulation, the *Penn Central* factors will more likely be applied, leading to a finding that no taking has occurred.

Lost Tree Village Corp. v. United States is a recent case that involved the denominator problem. It arose from a section 404 CWA permit denial for development on a wetland.[85] The issue in that case was how a relevant parcel, or denominator, under categorical takings claims should be determined, and how to value the relevant parcel.[86] Instead of evaluating the compensability of a regulatory taking within a segment of a landowner's property that has sustained the taking (a smaller denominator), courts generally look to the "rights *in the parcel as a whole*" (a larger denominator), leading to application of the *Penn Central* factors.[87]

From 1969 to 1974, Lost Tree Village Corporation (Lost Tree), a land-development business, purchased 2,750 acres of land.[88] In total, it purchased approximately fifty-six plats and developed some of those plats into a residential community.[89] One of Lost Tree's purchases included half of the land on McCuller's Point.[90] This last purchase, made in 1974, included a parcel known as Plat 57.[91] Lost Tree had no plans to develop Plat 57 until 2002. That year, the developer that owned the other half of McCuller's Point informed Lost Tree of its plan to improve its half of McCuller's Point as mitigation for a permit it had obtained under section 404 of the CWA.[92] Because Lost Tree was the owner of the land adjacent to the proposed mitigation site on McCuller's point, the other

85. Lost Tree Village Corp. v. United States, 115 Fed. Cl. 219, 233 (2014).
86. *Id.* at 224-25.
87. Keystone Bituminous Coal Ass'n v. DeBenedictis, 480 U.S. 470, 497 (1987) (quoting Pa. Cent. Transp. Co. v. United States, 438 U.S. 104, 130-31 (1978)).
88. *Lost Tree Village Corp.*, 115 Fed. Cl. at 223 (citing Lost Tree Village Corp. v. United States, 100 Fed. Cl. 412, 415 (2011)).
89. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 416).
90. *Id.* at 224.
91. *Id.* at 223 (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 415).
92. *Id.* at 224 (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 424).

developer needed Lost Tree's approval for the mitigation project.[93] Lost Tree sought permitting credits in exchange for agreeing to convert McCuller's Point into mitigation land.[94]

In an attempt to maximize the value of the potential credits, in August 2002, Lost Tree moved forward with its plan to develop Plat 57 as part of the residential community by submitting an application to the Army Corps of Engineers for a wetlands fill permit pursuant to section 404 of the CWA.[95] Lost Tree obtained all zoning, local, and state approvals required for the development of Plat 57, but the Corps denied its wetland fill permit application, stating, "'[L]ess environmentally damaging alternatives were available to [Lost Tree] and the project purpose ha[d] already been realized through the development of home-sites within the subdivision.'"[96]

Lost Tree filed a claim in the United States Court of Federal Claims arguing that the Corps' denial of the wetlands fill permit "constituted a taking in contravention of the Takings Clause" because the denial, it alleged, resulted in the elimination of "all economically viable use of Plat 57."[97] The first issue before the Court of Federal Claims was what area the relevant parcel included.[98] The court held that the relevant parcel included Plat 57, neighboring Plat 55, and scattered wetlands within the residential community because they were contiguous and were held for comparable usage objectives.[99] The court then addressed the second issue, "whether the resulting partial regulatory taking was compensable."[100] Having determined that the relevant denominator was several parcels, rather than just Plat 57, the denial of the permit did not deny all economically viable use of the relevant parcel as a whole. The court therefore applied the *Penn Central* factor test, rather than *Lucas*'s per se rule, and found no taking.[101] Lost Tree appealed to the United States Court of Appeals for the Federal Circuit.[102] That court reversed the decision below, holding that the relevant parcel included Plat 57 alone.[103] It then remanded the case for the Court of Federal Claims to determine

93. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 424).
94. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 424).
95. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 424-25).
96. *Id.* (quoting *Lost Tree Village Corp.*, 100 Fed. Cl. at 425).
97. *Id.* at 222.
98. *Id.* at 224.
99. *See id.* at 224-25 (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 435).
100. *Id.* at 225 (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 437-39).
101. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 437-39).
102. *Id.* (citing Lost Tree Village Corp. v. United States, 707 F.3d 1286, 1288 (Fed. Cir. 2013)).
103. *Id.* (quoting *Lost Tree Village Corp.*, 707 F.3d at 1294).

the economic loss that Lost Tree sustained due to the denial of the section 404 permit for Plat 57 and whether that loss amounted to a compensable taking.[104]

On remand, the lower court first addressed the issue of whether the taking was a categorical taking under *Lucas*.[105] Because the United States Court of Appeals for the Federal Circuit redefined the relevant parcel to include Plat 57 alone, it was necessary to determine the economic impact on Lost Tree when the Corps denied the section 404 permit.[106] Pursuant to *Lucas*, the court inquired "whether Plat 57 retain[ed] any economically beneficial use without a Section 404 permit."[107] The government's expert testified that Plat 57 was worth $30,000 without the permit and that its "highest and best use" without the permit would be recreation.[108] Lost Tree's expert valued Plat 57 at $25,000 without the permit and stated that without the permit the plat had only nominal value and could be used only for projects "in support of mitigation activities in development of other lands."[109] The court found that the value of Plat 57 without the permit was $27,500, the difference between the two experts' appraisals of the plat.[110]

Next, the court turned to the value of Plat 57 at its highest and best use with the section 404 permit, which the parties agreed would be for a single-family home.[111]

Again, the court split the difference between the experts' appraisals, finding that the value of Plat 57 with the residential development was $4,760,000.[112] In evaluating deductions for the cost of developing the plat, the court adopted Lost Tree's expert's deductions, finding them more reliable.[113] Thus, the court found that the fair market value of Plat 57 with the permit would be $4,245,387.93.[114]

Accordingly, the court determined that the diminution of value of the plat with the permit ($4,245,387.93) to its value without it ($27,500.00) was 99.4%.[115] The court then reasoned that this diminution constituted a categorical taking under *Lucas*, especially because "the

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104. *Id.* (quoting *Lost Tree Village Corp.*, 707 F.3d at 1295).
105. *Id.* at 228.
106. *Id.*
107. *Id.*
108. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 426).
109. *Id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 425-26).
110. *Id.*
111. *Id.*
112. *Id.* at 231.
113. *See id.* (citing *Lost Tree Village Corp.*, 100 Fed. Cl. at 437 n.33).
114. *Id.*
115. *Id.*

assigned valuation without a permit is a nominal amount that does not reflect any economic use."[116] Although no further analysis is necessary after a taking is classified as a categorical taking under *Lucas*, the court also applied the *Penn Central* factors to the facts presented "[f]or completeness."[117]

Two of the *Penn Central* factor findings previously made by the court at trial remained undisturbed on remand.[118] Those factors were "the character of the governmental action and investment-backed expectations."[119] In briefly recounting its prior findings, the court stated that the character of the governmental action factor weighed in favor of Lost Tree, and "the court was persuaded that the Corps singled out Lost Tree for adverse treatment."[120] In regard to the reasonable investment-backed expectations, the court determined that this factor did not weigh in favor of either party because Lost Tree's expectations were not unreasonable, even though it did not have a specific development expectation until 2001 or 2002.[121] Upon addressing the remaining *Penn Central* factor anew, the court reiterated its above finding that "a diminution in value of 99.4% resulted from the Corps' action," and that the high degree of diminution weighed heavily in Lost Tree's favor under the economic impact factor.[122] Therefore, the court concluded that the denial of the section 404 permit constituted a regulatory taking both under *Lucas* and *Penn Central*.[123]

V. ZONING ORDINANCE

The 3.21 acres Helis proposes for the drill site within the 960-acre tract of land is zoned as an "A-3 Suburban District" under the Parish's Unified Development Code.[124] The provision of the zoning ordinance that governs permitted uses in A-3 suburban districts is section 5.0802,

116. *Id.*
117. *Id.* at 232.
118. *Id.*
119. *Id.*
120. *Id.* ("[H]ad a different applicant requested a permit, the Corps would have responded favorably to the application.").
121. *Id.* (citing Lost Tree Village Corp. v. United States, 100 Fed. Cl. 412, 438-39 (2011)).
122. *Id.* at 233.
123. *Id.*
124. *Zoning Map, Ward 4*, ST. TAMMANY PARISH GOV'T, http://www2.stpgov.org/pdf/zoning_ward4.pdf (last visited Mar. 4, 2015); Robert Rhoden, *St. Tammany Parish Residents Angry over 'Fracking' Proposal*, NOLA.COM, http://www.nola.com/politics/index.ssf/2014/04/st_tammany_parish_residents_ou.html (last updated May 14, 2014, 12:14 PM); *Unified Development Code, Volume 1: Zoning*, ST. TAMMANY PARISH GOV'T, http://www.stpgov.org/departments/planning/13-parish-departments/200-unified-developmentcode-zoning (last visited Feb. 6, 2015).

which lists single-family dwellings, private garages and accessory structures, garage apartments or guest houses, community central water treatment, well, and storage facilities, household agriculture, and other "similar and compatible uses" as the only allowed uses in A-3 suburban districts.[125] As to similar and compatible uses, the ordinance states that "[o]ther uses which are similar and compatible with the allowed uses of the [district] as determined by the Director of Planning acting in the capacity of Zoning Administrator" are permitted.[126] It is implausible that the Director of Planning could consider fracking as a similar and compatible use to the enumerated permitted uses in this section; therefore, the ordinance prohibits fracking in the 3.21-acre proposed drill site.

However, a portion of the 960-acre tract located north of the proposed drill site is not zoned suburban.[127] Instead, it appears that a small part of the 960-acre tract is zoned as a "HC-3 Highway Commercial District," and another portion is zoned as an "I-2 Industrial District."[128] The purpose of the HC-3 Highway Commercial District "is to provide for the location of larger scale, heavy commercial retail, office and service uses with primary accesses being collectors constructed for the development or arterials roadways."[129] This section contains a similar, exclusive list of permitted uses, and fracking is not among them.[130] Conversely, the purpose of the I-2 Industrial District "is to provide for the location of industrial uses of large scale and highly intense industrial uses along major collectors and arterials in such a fashion and location as to minimize the conflict with nearby residential uses," and the provision expressly specifies "[w]ell drilling services" as a permitted use.[131] Although the ordinance does not define well drilling services, it lists commercial excavation as a permissible use with an administrative permit granted by the Department of Planning.[132] It defines excavation as "[r]emoval or recovery by any means whatsoever of rock, minerals, [or]

125. *Unified Development Code, Volume 1: Zoning*, *supra* note 124, § 5.0802.

126. *Id.* § 5.0802(D).

127. *Compare Zoning Map, Ward 4*, ST. TAMMANY PARISH GOV'T, http://www2.stpgov.org/pdf/zoning_ward4.pdf (last visited Mar. 4, 2015), *with* Letter from Richard W. Revels, Jr., to Hon. James H. Welsh, *supra* note 34.

128. *Compare Zoning Map, Ward 4*, *supra* note 127, *with* Letter from Richard W. Revels, Jr. to Hon. James H. Welsh, *supra* note 127; *Unified Development Code, Volume 1: Zoning*, *supra* note 124, §§ 5.22, .25.

129. *Unified Development Code, Volume 1: Zoning*, *supra* note 124, § 5.22.

130. *Id.*

131. *Id.* § 5.25.

132. *Id.*

mineral substances . . . whether exposed or submerged."[133] Thus, under St. Tammany's zoning laws, Helis cannot frack the 3.21-acre portion of the 960-acre tract of land, but may be permitted to do so in the northern part of the unitized tract that is zoned as industrial. However, as noted above, Helis is currently pursuing permits only on the 3.21-acre suburban tract. Nonetheless, if the zoning ordinance prevents Helis from fracking the 3.21-acre drilling site under the ordinance, Helis and the private landowners may attempt a takings claim against the parish.

A. Nuisance Exception to Takings Claims

In addition to the language of the parish ordinance itself, St. Tammany may attempt to defend against a takings claim under a public nuisance theory based on the parish ordinance. If the parish is able to prevail on a public nuisance theory, the zoning ordinance barring fracking activity will not be a taking at all because engaging in a public nuisance on private property is not a landowner right.[134] In regard to prior Takings Clause public nuisance doctrine, the *Lucas* court stated:

> A review of the relevant decisions demonstrates that the "harmful or noxious use" principle was merely this Court's early formulation of the police power justification necessary to sustain (without compensation) *any* regulatory diminution in value; that the distinction between regulation that "prevents harmful use" and that which "confers benefits" is difficult, if not impossible, to discern on an objective, value-free basis; and that, therefore, noxious-use logic cannot be the basis for departing from this Court's categorical rule that total regulatory takings must be compensated.[135]

Thus, under *Lucas*, the public nuisance doctrine is no longer a valid defense against a takings claim. However, an alternate defense that the parish could raise is that the zoning ordinance is a general land-use plan. In his dissent, Justice Stevens discussed diminutions in property value resulting from zoning regulations that are part of a general land-use plan compared to "spot zoning" ordinances.[136] He reasoned that the latter "is far more likely to constitute a taking."[137] Spot zoning is defined as "a land-use decision which arbitrarily singles out a particular parcel for different, less favorable treatment than the neighboring ones."[138]

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133. *Id.* § 2.

134. *See* LA. CIV. CODE ANN. art. 667 (2015).

135. Lucas v. S.C. Coastal Council, 505 U.S. 1003, 1004 (1992).

136. *Id.* at 1073 (Stevens, J., dissenting) (citing Euclid v. Ambler Realty Co., 272 U.S. 365 (1926); Pa. Cent. Transp. Co. v. United States, 438 U.S. 104, 132 n.28 (1978)).

137. *Id.* (citing *Pa. Cent. Transp. Co.*, 438 U.S. at 132 n.28).

138. *Pa. Cent. Transp. Co.*, 438 U.S. at 132 (citing ARDEN H. RATHKOPF & DAREN A. RATHKOPF, THE LAW OF ZONING AND PLANNING 26-4 & n.6 (4th ed. 1978)).

B. State Preemption in the Context of Takings Claims

The State of Louisiana also has an interest in whether Helis's fracking project is allowed in St. Tammany Parish. The Louisiana Constitution provides:

> The natural resources of the state, including air and water, and the healthful, scenic, historic, and esthetic quality of the environment shall be protected, conserved, and replenished insofar as possible and consistent with the health, safety, and welfare of the people. The legislature shall enact laws to implement this policy.[139]

This is similar to a provision in the Pennsylvania Constitution.[140] In a case involving state preemption of local fracking restrictions, the Pennsylvania Supreme Court recently held that the environmental rights provision in the Pennsylvania Constitution limited the state's power to act contrary to the environmental rights of its citizens.[141] However, Louisiana has a strong history of encouraging its oil and gas industry, and that history is still a major modern theme, unlike in Pennsylvania.[142] The state government will likely attempt to preempt the zoning ordinance, if the ordinance is valid. Under a Louisiana statute, it is likely that the state will be able to preempt any antifracking ordinance. The statute clearly indicates its preemption authority over local laws:

> The issuance of the permit by the commissioner of conservation shall be sufficient authorization to the holder of the permit to enter upon the property covered by the permit and to drill in search of minerals thereon. No other agency or political subdivision of the state shall have the authority, and they are hereby expressly forbidden, to prohibit or in any way interfere with the drilling of a well or test well in search of minerals by the holder of such a permit.[143]

The United States Court of Appeals for the Fifth Circuit cited this statute in its analysis invalidating a local Louisiana law restricting fracking activity in *Energy Management Corp. v. Shreveport*.[144]

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139. LA. CONST. art. IX, § 1.

140. PA. CONST. art. 1, § 27.

141. Robinson Township v. Commonwealth, 83 A.3d 901, 975 (Pa. 2013). For an in-depth discussion of state constitutions and fracking bans, see Jordan Lesser, *Local Land-Use Control, Constitutional Environmentalism, and Hydrofracking: New York and Beyond*, 28 TUL. ENVTL. L.J. 315 (2015).

142. *See, e.g.*, *Louisiana Gov. Signs Bill Killing Lawsuits Against Oil and Gas Companies*, RT.COM (June 10, 2014, 1:53 PM), http://rt.com/usa/164552-louisiana-blll-oil-lawsuits/.

143. LA. REV. STAT. ANN. § 30:28(F) (2015).

144. 397 F.3d 297, 302-05 (5th Cir. 2005). For a detailed analysis of state preemption in the fracking context, see Jamal Knight & Bethany Gullman, *The Power of State Interest: Preemption of Local Fracking Ordinances in Home-Rule Cities*, 28 TUL. ENVTL. L.J. 297 (2015).

VI. ANALYSIS

A. Federal and State Government Takings Claims

If the Army Corps of Engineers denies Helis's permit application for the wetlands fill permit under section 404 of the CWA, Helis and the private landowners of the 960-acre tract of land may institute a takings claim against the federal government. If Louisiana denies the water quality permit, Helis and the private landowners may sue the state under a takings theory. The federal government's denial of the section 404 permit likely would not constitute a per se taking, nor would the state government's denial of the water quality permit with regard to the private landowner claims. Although the area where the proposed fracking would take place is 88% wetlands, similar to the land in *Lost Tree Village Corp.*, the area is not a wetland in the layman's sense, but instead is likely a loblolly pine and slash pine tree farm.[145]

In its final rule, the United States Fish and Wildlife Service designated a tract of land containing a tree farm worth over $33 million as a critical habitat for the dusky gopher frog.[146] Specifically, the $33 million tract of land was a 1,544-acre tree farm in St. Tammany Parish.[147] Accounting for the difference in the size of the 1,544-acre tract and the 960-acre tract, the 960-acre tract of land is likely worth $20 million without the permits. If the 960-acre tract of land contains approximately 1,060.61 barrels of oil per acre on average, at $44.47 per barrel, the oil underneath the land could be worth as much as $45 million.[148] If the 960-acre tract of land was the denominator in a per se analysis,[149] the loss in value of the land with the permit minus its value without the permit is only a loss in value of 42%. Thus, on these facts, the landowners will not prevail under a per se takings claim. There is, of course, a possibility that oil prices will increase, thus increasing the loss in value of the land if the permits are denied, but the increase would have to be drastic for the

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145. John Bestoloffe, *Helis Seeks To Tap Southern Louisiana Shale*, EAGLEFORD TEXAS.COM (Apr. 8, 2014), http://eaglefordtexas.com/news/id/42471/helis-seeks-tap-southern-louisiana-shale/; Letter of Comment from Poitevent Landowners to Div. of Policy & Directives Mgmt., U.S. Fish & Wildlife Serv., REGULATIONS.GOV (Feb. 28, 2012), http://www.regulations.gov/#!documentDetail;D=FWS-R4-ES-2010-0024-0154 (under "View Attachment," follow PDF link).

146. Markle Interests, LLC v. U.S. Fish & Wildlife Serv., No. 13-234, slip op. at 11 (E.D. La. Aug. 22, 2014).

147. *Id.*

148. *See supra* Part II.B. This does not account for deductions for the costs of extraction, providing for a very generous takings analysis for the mineral rights owners.

149. As opposed to including nearby tracts of land into the denominator, which would make a per se taking analysis less favorable to the mineral rights owners.

landowners to prevail under a per se takings claim. However, if the private landowners have sold their mineral rights to a wholly owned subsidiary so that the mineral rights and the tree farm are separate, the landowners may then be able to prevail on a per se takings claim because then they would be deprived of 100% of the value of their property. Similarly, Helis may be able to prevail on a per se takings claim because its interest is only in the minerals, not the land itself.

If Helis and the landowners do not prevail under a per se takings theory, the next step in the analysis is whether the denial of the permits would be a partial taking under *Penn Central*. First, the economic impact factor is in favor of Helis and the landowners, as it would be a loss, albeit a speculative loss, of $45 million minus extraction fees. Second, the investment-backed expectations factor would likely weigh in favor of the government, because Helis and the private landowners knew or should have known that regulations regarding fracking are extensive and often unpredictable. Third, the character of the governmental action factor would likely weigh in favor of the government, unless, like in *Lost Tree Village Corp.*, Helis or the private landowners can claim that they were singled out for adverse treatment, because otherwise this factor would never weigh in favor of the governments any time they are faced with takings claims for denials of the permits at issue. Again, it is worth noting that no takings claimant has ever prevailed under the *Penn Central* factor test alone. Therefore, while any entity (including Helis) whose interest is separated from the land may be able to prevail on takings claims, the landowners would be unlikely to prevail against the federal or state governments under a takings theory, at least barring a gigantic increase in oil prices or a showing of individual adverse treatment in the permitting process.

B. Local Government Takings Claim

If Helis is able to obtain the section 404 CWA permit and the Louisiana water quality permit, the only regulation stopping Helis from pursuing fracking operations would be St. Tammany Parish's zoning ordinance. As discussed above, state regulations may preempt the zoning ordinance. However, if the ordinance is not preempted, the property owners would be unlikely to prevail on a takings claim against the parish.

If the property owners file a takings claim against the parish, they may argue that the zoning ordinance is based on public nuisance principles and is therefore invalid under *Lucas* as a defense against providing just compensation. Similarly, the claimants may argue that the ordinance constitutes "spot zoning" and is therefore compensable under a

takings analysis. If these arguments were valid, because the takings claim could be worth up to $45 million minus costs of extraction, it is unlikely that St. Tammany Parish would be able to sustain such a claim, and the ordinance might be defeated. The 2014 St. Tammany Parish operating budget totaled $103 million.[150] A takings recovery by Helis or the landowners of the 960-acre tract of land would be unsustainable by the parish government.

However, St. Tammany's zoning ordinance does not reference harmful or noxious uses in regard to mineral excavation; instead, the applicable section expressly lists permissible uses of suburban property while banning all dissimilar uses. Also, it is unlikely that the ordinance can be classified as spot zoning because it is a general land-use plan. The only way that the ordinance could be said to arbitrarily single out the 3.21-acre proposed drilling site for less favorable treatment in the fracking context is if the Director of Planning allowed neighboring A-3 suburban district property owners to frack their lands under the "similar and compatible use" provision. This is not the current situation and is extremely unlikely.[151]

Additionally, property owners within the 960-acre unit that are prevented from fracking in the suburban district may further be prevented from recovery under a takings claim against the parish if a drilling site can be placed on the industrial zoned area of the tract, because in that situation, all the parish would be "taking" would be whatever convenient feature that led Helis to choose the suburban-zoned area for the drilling site. Therefore, if the zoning ordinance is not preempted by the state, it is unlikely that Helis or the private property owners would be able to prevail against the parish in a takings claim.

C. A Doctrinal Problem in Takings Law

Takings claims in the mineral rights context are an issue of first impression in the American legal system. Undoubtedly, this issue will create a new doctrine of takings law since they are unique from any other takings situations addressed by courts before: if the government prohibits the activity and provides takings claimants with just compensation, the value of what has been taken still exists underground.

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150. *2014 Operating & Capital Budgets*, ST. TAMMANY PARISH GOV'T 1, 3, http://www.stpgov.org/files/Public%20Information/2014_Operating__Capital_Budget.pdf (last visited Feb. 8, 2015); *see also* Robert Rhoden, *St. Tammany Parish Council Adopts $118 Million Operating and Capital Budget for 2014*, NOLA.COM (Dec. 5, 2013, 8:48 PM), http://www.nola.com/politics/index.ssf/2013/12/st_tammany_parish_council_adop_2.html.

151. *Unified Development Code, Volume 1: Zoning*, *supra* note 124, § 5.0802.

Typically, the government entity providing just compensation allows the claimant to retain the valueless property.[152] However, in a takings claim involving minerals, the value of the property inherently exists. In other words, the value of the property is not entirely dependent upon government permits, unlike current takings jurisprudence. Here, the claimants would be left with valuable property that they cannot extract. If technology is developed which allows for extraction of the minerals without environmental or health risks, theoretically the property owners could extract the minerals without opposition from federal, state, or local governments. In that situation, the property owners (or their successors) would have to reimburse the government entity that provided just compensation to the takings claimant. This situation would become increasingly complex as the property (the compensation from the government and the minerals) is transferred to different parties over time.

VII. CONCLUSION

The fracking fight in St. Tammany Parish is one that seems far from ending. However, it is in every involved party's best interest to accelerate findings of solutions, rather than spending years in litigation, even if that means compromise. One solution could be an ex ante remedy in which Helis would contribute to a disaster mitigation fund before beginning the fracking process. Helis has already offered to commit to monitoring conditions specifically for its operations in St. Tammany Parish constructed and regulated by the state Department of Natural Resources.[153] In this arrangement, all interested parties would meet a compromise: Helis would not be prohibited from its fracking project; the private landowners would get their return on their land investment and would not have their land-use rights potentially taken from them; the local, state, and federal governments would gain tax revenue; and the residents of St. Tammany Parish would have a fund to draw from in case of an environmental accident related to the fracking activity. Of course, some St. Tammany residents will likely want to prohibit fracking under any circumstances, arguing that the environmental risk associated with fracking justifies complete prohibition. Nevertheless, compelling arguments on all sides of the St. Tammany Parish fracking issue await courtrooms as crude oil simmers beneath St. Tammany's loblolly pines.

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152. *See, e.g.*, Pa. Coal Co. v. Mahon, 260 U.S. 393 (1922); *see also* Lost Tree Village Corp. v. United States, 115 Fed. Cl. 219 (2014).

153. Julie Dermansky, *Fracking Permit Issued in Louisiana's St. Tammany Parish*, TRUTHOUT (Dec. 23, 2014, 9:43 AM), http://truth-out.org/news/item/28173-fracking-permit-issued-in-louisiana-s-st-tammany-parish#.