Conflicting Property Rights Between Conservation Easements and Oil and Gas Leases in Ohio: Why Current Law Could Benefit Conservation Efforts

Nicholas R. House
## NOTES

CONFLICTING PROPERTY RIGHTS BETWEEN CONSERVATION EASEMENTS AND OIL AND GAS LEASES IN OHIO: WHY CURRENT LAW COULD BENEFIT CONSERVATION EFFORTS

### Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1589</td>
</tr>
<tr>
<td>I. Why Do Conservation Easements and Oil and Gas Leases Conflict?</td>
<td>1591</td>
</tr>
<tr>
<td>A. Conservation Easements: Purposes, Enforceability &amp; Deductibility</td>
<td>1591</td>
</tr>
<tr>
<td>1. Common Law Negative Easements</td>
<td>1592</td>
</tr>
<tr>
<td>2. Ohio's Enabling Statute</td>
<td>1594</td>
</tr>
<tr>
<td>3. Internal Revenue Code Requirements</td>
<td>1595</td>
</tr>
<tr>
<td>a. Applicable Definitions</td>
<td>1595</td>
</tr>
<tr>
<td>b. The Effect of Deductibility on Mineral Extraction</td>
<td>1596</td>
</tr>
<tr>
<td>B. Oil and Gas Leases</td>
<td>1597</td>
</tr>
<tr>
<td>1. Ohio’s Common Law Rule</td>
<td>1599</td>
</tr>
<tr>
<td>2. Implied Easement to Reasonable Use of Surface</td>
<td>1600</td>
</tr>
<tr>
<td>3. Right to Protect Mineral Estate from Drainage</td>
<td>1600</td>
</tr>
<tr>
<td>II. The Problem</td>
<td>1602</td>
</tr>
<tr>
<td>A. Scenario One: Unsevered Mineral Estate</td>
<td>1603</td>
</tr>
<tr>
<td>B. Scenario Two: Severed Mineral Estate</td>
<td>1604</td>
</tr>
<tr>
<td>III. Conservation Easement Language</td>
<td>1605</td>
</tr>
<tr>
<td>A. Why Attempts to Change Current Law Should Be Abandoned</td>
<td>1606</td>
</tr>
</tbody>
</table>
B. How Conservation Organizations Should Change Their Conservation Easement Language .................. 1607
1. No-Inconsistent Use Clause ............................. 1608
2. Stricter Monitoring and Enforcement Clauses ....... 1610
3. Amendment Procedures to Retroactively Apply to Old Easements ........................................ 1611

IV. ADDRESSING POTENTIAL CONCERNS ............... 1612
A. Risk of Surface Damage from Horizontal Drilling and Fracturing Mining Techniques ..................... 1613
B. Public Funding Concerns ................................. 1615

CONCLUSION ............................................ 1616
INTRODUCTION

The centuries-long struggle between development and conservation has gone through numerous iterations. Most recently, the struggle has pitted conservation easements against oil and gas development in Marcellus and Utica Shale states. While conservation organizations have used conservation easements with enthusiasm for many years as a means of preserving land for future generations, new technological breakthroughs and the discovery of deep natural gas deposits have led some commentators to question the continued effectiveness of conservation easements. Moreover, the economic potential from oil and gas development has pressured many state governments to move away from conservation activities. This recent struggle has been particularly acute in the Midwestern United States, where significant Marcellus and Utica Shale natural gas deposits have been discovered. Such discoveries have caused long-dormant property conflicts to surface as individuals and organizations compete to capitalize on the evolving oil and gas market.

Although scholars have written numerous articles discussing conservation easements, addressing issues ranging from the appropriate valuation methods for determining IRS deductions to whether conservation easements are an appropriate means of preserving land, they have neglected to discuss the conflicting

6. See, e.g., Jessica Owley, Changing Property in a Changing World: A Call for the End of Perpetual Conservation Easements, 30 STAN. ENVTL. L.J. 121 (2011) (arguing that perpetual conservation easements should no longer be used as a conservation tool); see also Jessica E.
property rights between conservation easements and oil and gas leases. In fact, the Land Trust Alliance, one of the largest umbrella organizations for land trusts, is still developing methods to handle these conflicting rights.  

This Note will focus on both Ohio’s conservation easement law and oil and gas law in order to develop a robust understanding of how conservation easements and oil and gas leases conflict. Unlike other Marcellus and Utica Shale states, Ohio’s oil and gas law is largely undeveloped. The undeveloped nature of Ohio’s oil and gas law, coupled with its current oil and gas boom, make Ohio an ideal state to discuss these conflicting property rights.

First, this Note will establish why conservation easements and oil and gas leases are likely to conflict. Second, this Note will present two scenarios under which conservation easements and oil and gas leases might conflict and then demonstrate how current law sorts out the conflicting rights. Third, it will advance several arguments for how conservation easements should be adapted, identifying specific provisions that should be altered in light of the Internal Revenue Code and Ohio’s current legal structure. By doing so, this Note will elucidate how the oil and gas boom in Ohio offers conservation organizations a unique opportunity to preserve land, while benefiting from the boom themselves. This Note maintains that conservation easements and oil and gas development can both exist and thrive, but only if conservation organizations relax their unitization prohibitions, identify and work around potential conflicts, and draft their conservation easements to protect against such conflicts.

---


9. See Ohio Oil & Gas Activity, OHIO OIL & GAS ASS’N, http://ooga.org/our-industry/ohio-oil-gas-activity/ (last visited Feb. 26, 2014) (stating an estimated 625 oil and gas wells in 40 of Ohio’s 88 counties were drilled in 2012, including more than 3.5 million feet of holes).
I. WHY DO CONSERVATION EASEMENTS AND OIL AND GAS LEASES CONFLICT?

The rights that accompany conservation easements and oil and gas leases stem from the same conceptual premise but vary significantly in purpose. In this way, the two property rights might be thought of as two sides of the same coin. Both are products of property law,10 and both come from a legal tradition that allows a property owner to control his property’s destiny with only a few limiting conditions.11 A property owner can exercise his privilege in numerous ways, including using the land for conservation purposes or for mineral development.12 However, the conceptual similarities end here.

In particular, the interests promoted by conservation easements can be directly adverse to the interests promoted by oil and gas leases. In general terms, this conflict can be characterized as property development versus property preservation. This seemingly obvious conflict sets the stage for understanding how and why these interests are adverse to one another. In order to truly appreciate the conflict, one must first gain a detailed understanding of the laws governing each interest.

A. Conservation Easements: Purposes, Enforceability & Deductibility

A conservation easement is a tool used by conservation organizations to preserve and conserve land for future generations based on its natural, scenic, ecological, or historic property value.13 In particular, a conservation easement “restrict[s] the type and amount

10. See Boyd et al., supra note 5, at 215; see also David E. Pierce, The Impact of Landowner/Lessor Environmental Risk on Oil and Gas Lessee Rights and Obligations, 31 Tulsa L.J. 731, 733-37 (1996) (discussing how multiple ownership of property can increase risks to the environment).
11. 2 THOMPSON ON REAL PROPERTY § 14.02(c) (David A. Thomas ed., 2d ed. 2000).
12. See id.
of development that may take place on [a particular landowner’s] property” through the use of a legally enforceable agreement. 14 In addition to creating restrictions on the landowner, a conservation easement also grants an enforceable, nonpossessory property interest to the easement holder, usually a nonprofit conservation organization or governmental entity. 15 In exchange for granting such an interest, the landowner usually realizes a tax benefit under a qualified deduction for a charitable contribution. 16

Under the modern understanding, a conservation easement exists in perpetuity and is fully alienable. 17 Although the term conservation easement implies a traditional understanding of real property easements, conservation easements could not have existed under the common law. 18 In recognition of this and in order to promote land preservation, every state has passed a conservation easement enabling statute that overcomes the common law impediments and incorporates the requirements for a qualified charitable contribution under the Internal Revenue Code (IRC). 19 Thus, conservation easements are creatures of the common law, state statutory law, and federal tax law. 20 This unique background raises an array of issues that require discussion beyond the scope of this Note. However, a brief overview of the legal background that allows conservation easements to exist will help elucidate how and why conservation easements conflict with oil and gas leases.

1. Common Law Negative Easements

Under the common law, a conservation easement would be considered a negative easement in gross, and as such, would be

15. See id. For a lengthy discussion on the “bundle of rights” concept in property law, see generally J.E. Penner, The “Bundle of Rights” Picture of Property, 43 UCLA L. REV. 711 (1996).
17. See Dana & Ramsey, supra note 13, at 21-27.
18. Dietrich & Dietrich, supra note 1, at xix.
19. McLaughlin, supra note 2, at 19 (“All fifty states and the District of Columbia have enacted easement enabling legislation.”). For a discussion of IRC regulations, see infra Part I.A.3.
20. See Dietrich & Dietrich, supra note 1, at xviii.
unenforceable. 21 Such a characterization comes from the fact that a
conservation easement places negative restrictions, or prohibitions,
on the type and magnitude of development on a landowner’s
property. 22 The common law recognized only four kinds of negative
easements: prohibitions on blocking sunlight; prohibitions on
blocking air movement; prohibitions against removing subjacent or
lateral support from adjacent properties; and prohibitions against
interfering with the flow of artificially created streams. 23 Because
conservation easements do not neatly fit into any of these catego-
ries, the common law would have held them unenforceable. 24

In addition to the narrow categories of negative easements
recognized by the common law, courts greatly disfavored easements
in gross, particularly negative easements in gross. 25 Specifically, the
way in which property transfers were recorded made tracking the
assignment, termination, or disposition of easements in gross
extremely difficult. 26 The difficulty comes from the fact that an
easement in gross does not benefit a particular appurtenant parcel
of land; 27 therefore, the easement would not be identifiable through
the real property recordation process. 28 Because easements in gross

21. An easement in gross is defined in Black’s Law Dictionary as “[a]n easement
benefiting a particular person and not a particular piece of land. The beneficiary need not, and
usually does not, own any land adjoining the servient estate.” BLACK’S LAW DICTIONARY (9th
ed. 2009). Additionally, Black’s Law Dictionary defines a negative easement as “[a]n easement
that prohibits the servient-estate owner from doing something, such as building an
obstruction.” Id. Thus, a negative easement in gross benefits a particular person and restricts
the servient-estate owner’s ability to do certain things. In the case of a conservation easement,
the servient-estate owner is usually prohibited from developing the property. As an aside,
even if conservation easements were considered common law restrictive covenants or
equitable servitudes, they would still be unenforceable under the common law. See DIETRICH
& DIETRICH, supra note 1, at xxi-xxii; Dana & Ramsey, supra note 13, at 15-17.
22. Dana & Ramsey, supra note 13, at 15-17.
23. DIETRICH & DIETRICH, supra note 1, at xix; Dana & Ramsey, supra note 13, at 13.
24. See also DIETRICH & DIETRICH, supra note 1, at xix; Dana & Ramsey, supra note 13,
at 13.
(noting that the common law and current Ohio law disfavor easements in gross); Merrill
26. See Lara Womack Daniel & James D. Timmons, Conservation Easements and Eminent
Domain at the Intersection; How Modern Legal Creations Meet Constitutional Principles, 36
27. Id. at 434.
28. See Owley, supra note 6, at 145.
could not be tracked, the common law did not allow them to be alienable or to perpetually exist.29

2. Ohio’s Enabling Statute

In order to overcome the impediments the common law presented, all states and the District of Columbia have passed some form of a conservation easement enabling statute.30 Nearly all enabling statutes are based on the Uniform Conservation Easement Act (UCEA), which was promulgated in 1981 and explicitly validates conservation easements.31 Ohio’s enabling statute is substantially similar to the UCEA.32 Like the UCEA, Ohio’s enabling statute overcomes the common law impediments by explicitly removing the common law restrictions on negative easements in gross.33

In addition to removing the common law impediments, Ohio’s enabling statute incorporates elements of the IRC. This allows landowners to more easily take advantage of charitable tax deductions when donating their conservation easements to conservation organizations. Specifically, Ohio’s enabling statute authorizes only certain entities to hold conservation easements, limiting holders to only those that meet the requirements of “qualified organizations” under the IRC.34 Ohio’s enabling statute also embodies the IRC’s definitions of conservation purposes.35 By

29. Dana & Ramsey, supra note 13, at 14.
33. OHIO REV. CODE ANN. § 5301.70 (“Conservation easements are not unenforceable for lack of privity of contract or estate or lack of benefit to a particular dominant estate. Conservation easements are assignable to another entity authorized to hold conservation easements.”).
34. Ohio enables nonprofit organizations as defined in 501(c) of the IRS Code, municipal corporations, and park districts, among others to be holders of conservation easements. OHIO REV. CODE ANN. § 5301.69; see also I.R.C. § 170(h)(3) (2006) (defining “qualified organizations”).
35. OHIO REV. CODE ANN. § 5301.67(A) (“Conservation easement means an incorporeal right or interest in land that is held for the public purpose of retaining land, water, or wetland areas predominantly in their natural, scenic, open, or wooded condition ... or retaining their
overcoming the impediments of the common law and incorporating many of the IRC’s definitions, Ohio’s enabling statute allows landowners and conservation organizations to mutually benefit from the donation of a conservation easement.

3. Internal Revenue Code Requirements

a. Applicable Definitions

In order for a landowner to realize a tax benefit from the donation of a conservation easement, the donation must meet the requirements of the IRC and extensive Treasury Regulations (Regulations). A conservation easement will qualify as a tax deduction only if four criteria are met: (1) the contribution is of a “qualified real property interest”; (2) the contribution is made to a “qualified organization”; (3) the contribution is exclusively for “conservation purposes”; and (4) the conservation purposes of the gift are protected in perpetuity.

For the purposes of this Note, only certain definitions are of import because only specific elements of a conservation easement are likely to conflict with oil and gas lease provisions. These elements include the definition of a “qualified real property interest” and “conservation purposes.” The IRC defines a qualified real property interest as the entire interest of the donor other than a qualified mineral interest. Additionally, the IRC identifies four categories that qualify as conservation purposes: (1) the preservation of land areas for outdoor recreation by, or the education of, the general public; (2) the protection of a significant, relatively natural habitat for fish, wildlife, or plants; (3) the preservation of certain open space (including farm land and forest land) pursuant to a use predominantly as suitable habitat for fish, plants, or wildlife; that imposes any limitations on the use or development of the areas that are appropriate at the time of creation of the conservation easement to achieve one or more of those purposes; and that includes appropriate provisions for the holder to enter the property subject to the easement at reasonable times to ensure compliance with its provisions.

38. Id. § 170(h)(2).
“clearly delineated” governmental conservation policy, or for scenic purposes, resulting in a significant public benefit; or (4) the preservation of an historically important land area or certified historic structure.39

b. The Effect of Deductibility on Mineral Extraction

In addition to creating categories of conservation purposes, the IRC also places restrictions on mineral extraction from qualifying conservation easement properties. Most critically, the IRC prohibits the use of any surface mining technique to extract any mineral from a protected property when the mineral interest has not been severed prior to the grant of a conservation easement.40 While this seemingly protects properties covered under conservation easements from mineral extraction, many properties in Ohio have previously-severed mineral estates.41 In those instances, a different set of rules applies.

In the event that the mineral interest has been severed prior to granting a conservation easement, the donated conservation easement will be deductible only “if the probability of surface mining occurring on such property is so remote as to be negligible.”42 This section restricts conservation organizations and landowners from creating qualified, deductible conservation easements on land with a severed mineral estate because the organization must undertake the near-impossible task of ensuring the land will not be mined without having the legal authority to control the mineral estate’s destiny. Thus, the restriction causes a chilling effect on a conservation organization’s ability to accept properties with severed mineral estates because doing so substantially risks nondeductibility of the grant.43

39. Id. § 170(h)(4)(A).
40. Id. § 170(h)(5)(B).
43. See supra Part I.A.2.
To add yet another layer of rules, if the landowner donates the qualified mineral interest itself, the law allows extraction so long as the surface impact is not inconsistent with the conservation purposes.\textsuperscript{44} Regulators have interpreted this regulation as allowing subsurface mineral extraction where the impact is merely “limited and localized” and is not “irremediably destructive of significant conservation interests.”\textsuperscript{45} By applying this interpretation, a landowner could place a conservation easement on his property and legally extract minerals through unitization and the use of horizontal drilling techniques. Thus, the landowner would get the best of both worlds, benefiting from a tax deduction from the conservation easement and receiving royalties under a unitization agreement.\textsuperscript{46} Unfortunately, many conservation easements are more restrictive than the IRC because they explicitly prohibit unitization.\textsuperscript{47}

The federal tax structure creates a system that is flexible enough to allow mineral extraction under certain conditions, while still encouraging conservation efforts. Moreover, the IRC’s allowance of a deduction and subsurface extraction is particularly important when discussing how conservation organizations can adapt to Ohio’s oil and gas boom. Namely, the IRC allows landowners to unitize their oil and gas interests while also granting a conservation easement on the surface estate.\textsuperscript{48}

\textbf{B. Oil and Gas Leases}

Ohio’s oil and gas law is largely undeveloped, making it an ideal candidate for analyzing conflicting property rights between conservation easements and oil and gas leases. As a starting point, Ohio case law holds that oil and gas leases convey both a contractual right to remove oil and gas from the property and a limited

\textsuperscript{44} Treas. Reg. § 1.170A-14(g) (2009).
\textsuperscript{45} Id.
\textsuperscript{46} Unitization is the bringing together of small tracts of land that would not be economical to individually extract. See Howard R. Williams & Charles J. Meyers, Manual of Oil and Gas Terms 1039-40 (7th ed. 1987).
\textsuperscript{47} See infra Part III.B.
\textsuperscript{48} See infra Part III.
property right.49 Because oil and gas leases are based in both contract and property law, Ohio courts have held that the contract governs the parties' obligations, supplemented by implied rights from property law.50

Ohio common law grants a lessee of an oil and gas lease numerous implied property rights that go beyond the provisions of the lease.51 These implied property rights include, among many others, the right to reasonable surface use and the right to protect the mineral estate from drainage.52

As the default rule, Ohio's common law follows the majority of states by favoring development of the mineral estate over the interests of the surface estate.53 From this default position, the implied rights held by oil and gas lessees erode the interests of the surface estate owner54 and can even overcome a surface estate that is seemingly protected by a conservation easement.55 In order to understand how a conservation easement can be subordinate to a mineral estate interest, one first must understand the default position and how it impacts the mineral estate's implied interests.

49. "An oil and gas lease also creates a limited property right, such that the lessee has the right to possess the land to the extent reasonably necessary to perform the terms of the lease on his part." Maverick Oil & Gas, Inc. v. Bd. of Educ. of Barberton City Sch. Dist., 872 N.E.2d 322, 327 (Ohio 2007) (citing Harris v. Ohio Oil Co., 48 N.E. 502, 506 (Ohio 1897)); see also Quarto Mining Co. v. Litman, 326 N.E.2d 676, 684-85 (Ohio 1975); Pure Oil Co. v. Kindall, 156 N.E. 119, 123 (Ohio 1927); Harris v. Ohio Oil Co., 48 N.E. 502, 506 (Ohio 1897).

50. See Litman, 326 N.E.2d at 683-85; see also Gloria L. Scott, Development Obligations of the Oil and Gas Lessee, 13 ST. MARY'S L.J. 846, 847 (1982).


52. Id. at 1305 n.13. Although Ohio has granted mineral rights holders many implied rights, including the right to reasonable surface use, it has curtailed the rights in some instances. See Skivolocki v. E. Ohio Gas Co., 313 N.E.2d 374, 378 (Ohio 1974) ("[T]he right to strip mine is not incident to ownership of a mineral estate.").

53. For a summary of oil and gas law, see generally JOHN S. LOWE, OIL AND GAS LAW IN A NUTSHELL (4th ed. 2003).


55. See infra Part II for a discussion of when a conservation easement will protect the surface estate from the implied rights of the mineral estate.
1. Ohio’s Common Law Rule

Ohio’s common law favors development of mineral interests because extraction of minerals has been and continues to be considered a public good supported by strong public policy. Because public policy favors extraction, mineral estates are dominant estates, and surface estates are servient estates. In other words, a mineral estate’s interests override the conflicting interests of the surface estate because the surface estate is servient to the dominant mineral estate. This right even extends to allow the mineral estate holder to damage the surface estate without compensation, so long as the mineral estate holder is only using a reasonably necessary portion of the surface and the damage occurs during an extraction-related activity.

Ohio generally has followed the common law rule of mineral estate dominance over a conflicting surface estate. Recently, however, the Ohio courts have slightly relaxed the rule through judicial interpretation of lease contracts. Nonetheless, Ohio’s common law still strongly favors mineral extraction over conflicting surface rights. Upon this background, Ohio’s common law affords little protection to conservation easements from potential mineral extraction, further placing conservation organizations on a precarious footing to fend off the oil and gas boom.


58. Id. at 42-43.

59. See Moore v. Indian Camp Coal Co., 80 N.E. 6, 8 (Ohio 1907); see also Realty Title & Inv. Co. v. Fairport, Painesville & E. Rd. Co., 12 Ohio App. 73, 79, 82 (1919); Chartiers Oil Co. v. Curtiss, 24 Ohio C.D. 106, 111-12 (1911), aff’d., 106 N.E. 1053 (Ohio 1913).

60. For example, Ohio courts have held that strip mining is not a right incident to a mineral lease. See Skivolocki v. E. Ohio Gas Co., 313 N.E.2d 374, 378 (Ohio 1974).

61. See infra note 68 and accompanying text.
2. Implied Easement to Reasonable Use of Surface

Arguably the most important implied right for the mineral estate holder is the right to make reasonable use of the surface estate. Consequently, reasonable use is also the implied right that most often conflicts with the purposes of a conservation easement. Courts established the right to reasonable surface use out of necessity in order to give the mineral estate holder access to his bargained-for interest. In this way, the implied right to reasonable surface use can be considered an appurtenant easement. While state courts have interpreted the right to reasonable surface use differently, Ohio courts hold that reasonable surface use is a question of fact that must be assessed on a case-by-case basis.

Nonetheless, the cases establish several key requirements. First, the mineral estate holder cannot use more land than is necessary to extract the mineral from the ground, unless the lease expressly grants the mineral estate holder such a right. Second, the mineral estate holder cannot destroy the surface when its destruction would be totally incompatible with the surface owner’s use and enjoyment of his land. While these two limitations exist, Ohio courts are reluctant to invoke them and instead continue to favor the mineral estate over the surface estate. Again, Ohio’s application of the common law weakens the protection offered by conservation easements against mineral extraction.

3. Right to Protect Mineral Estate from Drainage

In addition to the implied right of reasonable surface use, mineral estate holders are also granted the right to protect their mineral

60. See infra Parts II-III.
61. Polston, supra note 57, at 44.
62. Id.
64. See Quarto Mining Co. v. Litman, 326 N.E.2d 676, 684-85 (Ohio 1975).
65. Skivolocki v. E. Ohio Gas Co., 313 N.E.2d 374, 378 (Ohio 1974) (holding that strip mining is totally incompatible with the surface owner’s interest in use and enjoyment of his land). Most critically for conservation easements, this case law might allow a conservation easement to prevent extraction in extreme circumstances where extraction would completely destroy the conservation purposes of the easement.
66. See Snyder, 985 N.E.2d at 173-74.
interests from drainage.\(^6^9\) Ohio courts have recognized this right for many years.\(^7^0\) Additionally, the Ohio legislature codified and expanded the common law right in a recently passed oil and gas conservation statute.\(^7^1\) The statute reinvigorates the right to protect from drainage by creating a new governing agency for regulating oil and gas production—the Ohio Division of Oil and Gas Resources Management.\(^7^2\) This agency promulgates and updates the regulations that govern oil and gas production, including the number, placement, spacing, and minimum acreage requirements of well sites.\(^7^3\) These regulations help ensure the efficient extraction of Ohio's oil and gas resources. The agency's regulations have greatly diminished the need for a robust common law right to protect from drainage, but also have created additional potential for conflicts between oil and gas leases and conservation easements, particularly under Ohio's forced pooling/unitization statute.\(^7^4\)

"Unitization" or "pooling" is a term used to describe the bringing together of small tracts of land that individually would be insufficient to meet minimum acreage and well spacing regulations.\(^7^5\) The coalescing of small tracts is necessary to ensure that oil and gas can be economically developed on the properties.\(^7^6\) Moreover, unitization eliminates wasteful expenditures by minimizing the number of wells that need to be drilled to drain a particular area of land.\(^7^7\) Unitization and pooling provisions come in two varieties: voluntary unitization and involuntary or forced unitization.\(^7^8\) The latter of these two varieties presents a significant barrier to conservation organizations attempting to convince landowners to donate

---

\(^6^9\) Frost, supra note 51, at 1305 n.13.


\(^7^1\) OHIO REV. CODE ANN. § 1509.02 (West 2013).

\(^7^2\) Id.

\(^7^3\) OHIO REV. CODE ANN. § 1509.02, .21, .24.

\(^7^4\) Id.

\(^7^5\) Id.

\(^7^6\) OHIO ADMIN. CODE 1501:9-1-04 (2013) (outlining the administration of the oil and natural gas conservation program in Ohio); OHIO REV. CODE ANN. § 1509.25-29 (establishing the criteria for unitization of property into drilling units); id. § 1509.24 (establishing minimum acreage requirements and minimum well distances).

\(^7^7\) WILLIAMS & MEYERS, supra note 46, at 1039-40.

\(^7^8\) Id.

\(^7^9\) Id.

\(^8^0\) Ralph B. Shank, Pooling Problems, 28 TEX. L. REV. 662, 662, 670 (1950).
conservation easements, especially when a conservation easement prohibits voluntary unitization.\textsuperscript{79}

Ohio expressly permits forced unitization by statute.\textsuperscript{80} Ohio’s forced unitization provision is intended to stop landowners from holding out and preventing the economical extraction of oil and gas, and to overcome free rider issues.\textsuperscript{81} In Ohio, forced unitization can be accomplished through application to the Division of Oil and Gas Resources Management after the mineral estate holder has attempted and failed to enter into a voluntary unitization agreement with the holdout owner on a “just and equitable basis.”\textsuperscript{82} Upon meeting the additional criteria established in the statute, the Division of Oil and Gas Resource Management will unitize the involuntary mineral holder’s interest.\textsuperscript{83} The statute also penalizes the involuntary mineral holder by forcing the holder to pay a risk-penalty.\textsuperscript{84} The threat of forced unitization will be discussed later in this Note because it poses a significant threat to conservation easements, while voluntary unitization presents a significant opportunity for conservation organizations.\textsuperscript{85}

\section*{II. The Problem}

Some scholars have argued that the current law, which favors oil and gas development over conservation, should be altered.\textsuperscript{86} Contrary to such propositions, this Note contends that legal changes are unwarranted because the current laws strike the appropriate balance between mineral development and conservation interests by encouraging avoidance of conflict and placing the burden of avoidance on those who are in the best position to do so. Additionally, the law provides conservation organizations with significant

\begin{footnotesize}
\begin{enumerate}
\item If a conservation easement prohibits surface owners from entering into voluntary unitization agreements, many landowners will forgo granting a conservation easement in order to preserve their right to unitize their property and receive royalty payments.
\item \textsc{Ohio Rev. Code Ann.} § 1509.27 (West 2013).
\item \textsc{Id.}
\item \textsc{Id.}
\item See infra Part III.
\item See Pierce, supra note 10, at 751.
\end{enumerate}
\end{footnotesize}
legal solutions to have severed mineral estates declared abandoned and vested in the surface estate, thus reuniting the mineral estate with the surface estate.87 While current law should be maintained, the oil and gas boom in Ohio admittedly presents significant barriers to conservation easements.

In order to overcome these barriers, conservation organizations should alter their conservation easement language and take a proactive approach in assessing potential conservation easement properties. In particular, conservation organizations should identify potential conflicts before accepting any conservation easement and draft their conservation easements to protect against such conflicts. If the conservation organizations find any conflicts, they should attempt to have the mineral estate deemed abandoned and vested in the surface estate pursuant to Ohio Revised Code § 5301.56. If the conflict cannot be resolved, conservation organizations should avoid the property and seek alternative properties. This Note will demonstrate that conservation organizations in Ohio have been presented with a unique opportunity to preserve land while benefiting from the oil and gas boom themselves. The two scenarios below will elucidate the difficult position Ohio’s conservation organizations have been placed in and will demonstrate how these organizations might use the oil and gas boom and Ohio’s current legal structure to their advantage.

A. Scenario One: Unsevered Mineral Estate

Conservation organizations are encouraged to accept conservation easements from properties with unsevered mineral estates.88 Unsevered mineral estates greatly reduce the risk of future conflicts between a conservation easement and an oil and gas lease because the owner of the property controls the fate of both the surface and mineral estate.89 Therefore, when a conservation easement is placed on a property with an unsevered mineral estate, the conservation organization will know that oil and gas development will not occur

87. See OHIO REV. CODE ANN. § 5301.56 (West 2013) (creating a notification requirement to have a severed mineral estate vest in the surface owner).
88. See Howard & McDonough, supra note 7.
89. See id.
on the property or, at a minimum, will have legal recourse against the surface owner for breach of the conservation easement.90 While unsevered mineral estates are ideal for a conservation organization because they reduce the potential for future conflicts, the current oil and gas boom likely will present major hurdles for getting landowners to donate their land.

The most significant hurdle is that oil and gas leases will become even more enticing for landowners due to the great potential for massive royalty payments.91 When making the decision whether to donate property, a landowner of an unsevered mineral estate must choose between donating a conservation easement and receiving a tax benefit or leasing his property to a mineral developer and receiving lease payments and potentially substantial royalty payments. This choice is forced on the landowner by the IRC regulations that require a complete prohibition on surface mining in order to qualify for a deduction and the unitization prohibitions found in most conservation easements.92 Because of Ohio’s current law and the language of conservation easements, oil and gas leases and conservation easements are in direct competition for landowners. In Ohio, where the presumption is in favor of extracting minerals and other resources, many landowners likely have found the potential profits from oil and gas leases too enticing and may have turned away from conservation organizations.93 The mutually exclusive options forced on Ohio’s landowners necessitate that conservation organizations adapt by making their conservation easements more appealing to landowners.94 This change can occur only if conservation organizations embrace the oil and gas boom.

B. Scenario Two: Severed Mineral Estate

Because conservation easements and oil and gas leases are both created through contractual relationships that can span across time

90. See supra note 40 and accompanying text.
91. Presumably not all large tract landowners are environmentally or conservation minded. Therefore, the enticement of large amounts of money may be enough to turn away at least some landowners from conservation easements.
92. See supra Part I.
93. Howard & McDonough, supra note 7.
94. See infra Part III.
and ownership, disputes between these conflicting interests typically occur on properties where the mineral rights have been severed. Such disputes place conservation organizations in a precarious situation because the severed mineral estate is favored over the surface estate or, in other words, the conservation easement. Therefore, if the conservation organization does not obtain a subordination or forfeiture and abandonment of the conflicting mineral estate, the conservation easement risks becoming void and unenforceable. Because of that risk, conservation organizations are encouraged to avoid severed mineral estates.

III. CONSERVATION EASEMENT LANGUAGE

As demonstrated by the previous two scenarios, conservation organizations are placed in a difficult situation by oil and gas development in Ohio. They can accept donations only from properties with unsevered mineral estates, accept donations only from properties with severed mineral estates, or accept both types of properties. If the organizations choose the first option, they risk alienating landowners who may want to preserve their land, but do not want to forego the monetary benefits of mineral development. If the organizations choose the second option, they risk having their conservation easements invalidated by competing oil and gas leases, which they have no control over. If the conservation organizations choose the third option, they risk both alienating landowners and having invalidated conservation easements.

96. See supra Part I.B.
97. Subordination agreements can be obtained only through agreement with the mineral estate holders. See Howard & McDonough, supra note 7.
98. Forfeiture of a mineral estate can be done by following Ohio’s oil and gas lease forfeiture process. OHIO REV. CODE ANN. § 5301.332 (West 2013).
99. OHIO REV. CODE ANN. § 5301.56.
100. See supra note 43 and accompanying text.
101. See supra note 43 and accompanying text.
102. This assumes that conservation organizations are unable to subordinate or cause a forfeiture and abandonment of the mineral interest—both of which can be cumbersome and difficult processes. See supra notes 97-100 and accompanying text.
A. Why Attempts to Change Current Law Should Be Abandoned

One approach to solving the dilemma could be to alter current law so that it no longer favors oil and gas leases over conservation easements. Such a change to the underlying legal framework would allow conservation organizations to pursue properties with severed mineral estates without risking invalidation. However, changing the current law would be a monumental task and would lead to an inefficient result.

First, changing the current law would be an enormous undertaking. The law has favored oil and gas leases over surface estates for hundreds of years, and legislative inertia is difficult to overcome. This is especially true because the Ohio legislature has been working to encourage Ohio’s oil and gas development. 103 Therefore, lobbying efforts by conservation organizations are likely to fall on deaf ears in the Ohio legislature. Even if conservation organizations might be able to muster some sympathy in the Ohio legislature, passing such a significant reform likely would take substantial time—time that conservation organizations do not have to spare. Every day more oil and gas leases are entered into in Ohio, making it difficult for conservation organizations to wait for the legislative process to work in their favor. 104

Second, current law is efficient because it places the burden of avoidance on the entity in the best position to avoid the conflict and offers legal processes to conservation organizations to protect their conservation easements. 105 Current law encourages conservation organizations and oil and gas companies to assess the title of the property by penalizing the entity that fails to do so. 106 Avoiding conflict is important because of the high costs of arbitration and


105. This assumes adequate foresight, due diligence, and legal maneuvering pursuant to OHIO REV. CODE ANN. §§ 5301.332 and 5301.56.

106. See, e.g., ALASKA STAT. ANN. § 29.45.062 (West 2013); COLO. REV. STAT. ANN. § 38-30.2-109 (West 2013).
Current law disfavors later-arriving entities if they attempt to use the property in a way that is inconsistent with its previous uses.\textsuperscript{108} For example, if a property has an oil and gas lease, current law encourages the conservation organization to search the property’s title and discern whether the mineral rights have been severed.\textsuperscript{109} Because the law will favor oil and gas leases over conservation easements, the conservation organization knows to either avoid the properties with oil and gas leases or attempt to get a subordination or forfeiture and abandonment of the mineral rights.\textsuperscript{110}

The law would reach an unfair and inefficient result if it penalized the prior estate holder—who has done nothing wrong—merely because a later-coming entity failed to search the property records and assess the burdens currently on the property. Moreover, later-arriving entities are in the best position to avoid the conflict because they can easily discover the current state of title. Because the current law favors firstcomers, it is efficient. For that reason alone, it should not be altered.

\textbf{B. How Conservation Organizations Should Change Their Conservation Easement Language}

A more realistic approach to solving the problem would involve conservation organizations altering their conservation easement language. This approach is realistic in the sense that the actual terms of a conservation easement are created by agreement between the conservation organization and the landowner.\textsuperscript{111} Therefore, conservation organizations could unilaterally adopt new easement language for prospective easements and negotiate with current landowners for existing easements.\textsuperscript{112} There are several provisions


\textsuperscript{108} See Diehl & Barrett, supra note 14, at 122 (enforcing a strict policy for amendments).

\textsuperscript{109} See supra note 106.

\textsuperscript{110} See supra Part II.


\textsuperscript{112} See id.
that conservation organizations should alter in their conservation easements in order to make them more appealing to landowners of unsevered estates and, therefore, more competitive against oil and gas leases.  

1. No-Inconsistent Use Clause

The key provision that conservation organizations should alter is the no-inconsistent use clause. A no-inconsistent use clause is a critical provision in any conservation easement because it prohibits the landowner from using his property in a way that is inconsistent with the conservation purposes of the easement. To establish inconsistent activities, conservation organizations will create a baseline report of the property, outlining the existing conditions and uses before the easement goes into effect. Preexisting conditions and preexisting uses of the property will typically be allowed to continue after the easement is granted, so long as they do not conflict with the conservation purposes. For example, if a walking path exists at the time the conservation easement is granted, its existence and use will be allowed to continue so long as the path is not expanded and does not otherwise conflict with the conservation purposes. Thus, a no-inconsistent use clause, along with an accompanying baseline report, is the main tool to determine whether the conservation easement has been violated.

For example, a conservation easement that is donated under the conservation purpose of preserving the ecological and scenic integrity of the property will prohibit the landowner from destroying those aspects of his property. The no-inconsistent use clause, in this instance, would explicitly prohibit the landowner from developing the property, constructing buildings that would impair scenic enjoyment, altering any waterways that traverse the property, and destroying vegetation, trees, or animals. More pertinent to this

---

113. By doing so, the conservation easement still will be legally binding because it will meet the requirements of both the enabling statute and IRC. See supra Part II.A.
114. DIETRICH & DIETRICH, supra note 1, at 15-16.
115. DIEHL & BARRETT, supra note 14, at 71-72.
116. See id. at 6.
117. Notice that these uses all pertain to the surface of the property. See supra note 35 and accompanying text.
Note, conservation easements typically prohibit any mineral development on the property, both surface and subsurface.\(^{118}\) While the surface restriction is required in order to qualify for a tax deduction, the subsurface restriction is not.\(^{119}\) Therefore, current conservation easement language is overly restrictive on landowners to the conservation organization’s detriment.\(^{120}\)

Conservation organizations should alter this prohibition in order to allow the landowner to extract minerals through subsurface extraction techniques. In particular, the no-inconsistent use clause should expressly allow a landowner to voluntarily unitize his property. Such a change would allow the landowner to preserve his land with a conservation easement and benefit from the monetary gains of an oil and gas lease. Moreover, allowing voluntary unitization would also protect the landowner from Ohio’s punitive, forced unitization statute.\(^{121}\) Hydraulic fracturing techniques coupled with horizontal drilling techniques have made subsurface extraction much easier and significantly more profitable.\(^{122}\) In fact, subsurface extraction can have a pay zone over fifty times larger than traditional vertical well extraction techniques.\(^{123}\) Not only is the pay zone larger, but horizontal drilling techniques also allow large areas of oil and gas extraction while minimizing surface impacts.\(^{124}\)

Additionally, as part of the no-inconsistent use language, a conservation organization should include a requirement that the landowner pay the conservation organization a percentage of the royalties that come from the oil and gas extraction. Altering the no-inconsistent use clause would make conservation easements more attractive to landowners and supply the conservation organization with a consistent and potentially large funding source.

\(^{118}\) Diehl & Barrett, supra note 14, at 188-89; Dietrich & Dietrich, supra note 1, at 66; Howard & McDonough, supra note 7.

\(^{119}\) See supra Part I.A.3.b.

\(^{120}\) Thus, prohibitions against voluntary unitization are more restrictive than the requirements under the IRC. See C. Timothy Lindstrom, Income Tax Aspects of Conservation Easements, 5 Wyo. L. Rev. 1, 24-28 (2005).

\(^{121}\) See supra Part I.B.3.

\(^{122}\) See Terry W. Roberson, Environmental Concerns of Hydraulically Fracturing a Natural Gas Well, 32 Utah Envtl. L. Rev. 67, 67, 71 (2012).

\(^{123}\) Id. at 72-73.

\(^{124}\) See id.
2. Stricter Monitoring and Enforcement Clauses

While conservation organizations should be lenient in allowing landowners to voluntarily unitize their unsevered properties, conservation organizations must simultaneously strengthen their monitoring and enforcement provisions. A monitoring and enforcement clause places obligations on the conservation organization to monitor the property and ensure that the terms of the easement are being met.125 Although the obligation for monitoring and enforcement is placed on the conservation organization, it is the responsibility of the landowner to pay for and remedy violations.126 By allowing landowners to voluntarily unitize their properties, conservation organizations certainly increase the risks to the property’s surface, either from unintended gas or chemical releases or from merely allowing oil and gas operators onto the property.127 Usually, conservation organizations monitor property for violations only once a year;128 however, with the increased risks of oil and gas extraction, organizations should require property to be monitored more often. While this will cost conservation organizations more time and resources, requiring the landowners to pay organizations a percentage of the royalties from mineral development could alleviate the increased costs of monitoring.129

In addition, the monitoring and enforcement clause should require immediate notification upon any suspected surface disturbance and place the burden of notification on the landowner. Upon being notified of a violation, a conservation organization may take several different paths of enforcement.

The easement holder might take an informal approach by notifying the landowner of the violation and requesting that the violation be remedied.130 If the landowner fails to comply with the request, the conservation organization may force the landowner into mandatory arbitration or mediation proceedings.131 Most conserva-

125. Diehl & Barrett, supra note 14, at 87.
126. Id. at 88, 92.
127. Roberson, supra note 122, at 68, 127.
129. See supra Part I.A.3.b.
131. Id. at 92-93.
tion easements require arbitration or mediation as a way of avoiding costly litigation. If the arbitration fails to force the landowner to comply with the easement, the conservation organization can seek judicial intervention through litigation.132

Conservation organizations should try to avoid litigation, however, because it is extremely costly and can negatively affect the organization’s public image.133 If landowners believe they will be sued over even minor infractions, they will be less likely to donate a conservation easement.134 Therefore, conservation organizations should work hard to avoid litigation in most instances by approaching violations through less formal methods.

Finally, the monitoring and enforcement clause should include strict penalties if the landowner fails to immediately notify the conservation organization upon a suspected surface impact. The penalties will help the conservation organization avoid litigation, while giving their requests for landowner compliance some teeth. Moreover, the organization can use the financial gains from the penalties to fund further conservation efforts.

3. Amendment Procedures to Retroactively Apply to Old Easements

In order for a conservation organization to be equitable to all of its landowner partners, the organization should amend its old easements to reflect the lenient no-inconsistent use provision.135 Older conservation easements will typically have a provision that allows the terms of the easement to be amended under certain circumstances.136 The amendment process is critical to ensure a positive relationship between the landowner and the conservation organization, but it can also present risks to the conservation organization and to the easement itself.137 The process usually

132. Id. at 92.
133. Conservation organizations must be ever cognizant of how the public views their work. See infra Part IV.B.
134. See Diehl & Barrett, supra note 14, at 92 (discussing the high costs and risks of litigation to both parties).
135. See supra Part III.B.1.
136. Diehl & Barrett, supra note 14, at 123.
137. Diethrich & Diethrich, supra note 1, at 158-59, 169-70.
occurs when a landowner wants to use his land in a way that is prohibited by the conservation easement but will not substantially affect the conservation purposes or value of the conservation easement. In fact, the conservation organization should accept an amendment only if the change will have a neutral or beneficial effect on the conservation purposes. Amending a conservation easement can be a tricky and dangerous endeavor because the landowner may have additional tax liability if the value of the conservation easement substantially changes, or the easement could be considered void for failing to meet the requirements of the state enabling statute.

The amendment to allow landowners to voluntarily unitize their property and have subsurface extraction of the mineral estate would not substantially impact the conservation purposes of any easement because the surface conditions on the property would not be impacted. Moreover, the conservation organization’s increased monitoring should allow for quick detection of violations and, therefore, quick remedies from the landowner. In addition, the increased revenues from percentage royalty payments from landowners who have voluntarily unitized will provide funds for the conservation organization to expand and protect more land. In this way, amending previous conservation easements to allow voluntary unitization will have a neutral or improving effect on the conservation purposes of the organization as a whole.

IV. ADDRESSING POTENTIAL CONCERNS

Although allowing unitization and subsurface extraction will likely benefit both conservation organizations and landowners, conservation organizations have resisted this change due to concerns

---

138. DIEHL & BARRETT, supra note 14, at 121-22.
139. Id.
140. If the amendment substantially diminishes the value of the conservation easement, or harms the conservation purposes, the landowner might be required to pay the IRS the amount of his deduction, including penalties and fees.
141. See generally Kevin J. Smith, Surface Mining and the Continuing Battle Between Surface and Subsurface Property Owners: A Look at South Dakota Mining Association v. Lawrence County, 15 J. NAT. RESOURCES & ENVTL. L. 1, 10 (2000) (prohibiting surface mining, but not subsurface mining after considering the potential surface impacts of both).
142. See supra Part III.B.2.
over unintended surface damage and maintaining a positive public image for funding purposes. Admittedly, some of these concerns may be justified, but the gains from allowing unitization outweigh the risks, especially if the conservation organization will not bear the risks.

A. Risk of Surface Damage from Horizontal Drilling and Fracturing Mining Techniques

Many of Ohio’s conservation organizations have expressed concerns about the safety of horizontal drilling and fracturing techniques. In particular, conservation organizations are concerned that allowing unitization would create an unnecessary risk to the surface property and the conservation purposes. There is some evidence to suggest that horizontal drilling techniques and fracturing may cause surface damage due to leaching of the fracturing fluid and escaping of rogue gases from the fractured rock. Fracturing fluid contains numerous volatile chemicals, some of which are known to be harmful to humans and animals. The risk of leaching, therefore, could pose a serious threat to the conservation purposes of the easement. By allowing unitization, conservation organizations argue that they would be allowing the destruction of the very property they set out to protect. There are two issues with this view.

First, Ohio’s conservation organizations may misperceive and overestimate the risk from fracturing. In its simplest formulation, risk can be explained as the probability of an event occurring times the magnitude of the possible damage. Studies show that people

---

145. EPA, supra note 144, at 196-245.
tend to overestimate the risk of an event occurring when the magnitude of potential damage is high and the probability of the event occurring is extremely low. In this way, fear of the event taints an individual’s ability to accurately perceive and respond to the risk.\textsuperscript{148} Moreover, risk perception can also be altered by leadership credibility,\textsuperscript{149} perceptions of safety,\textsuperscript{150} and opinion leaders,\textsuperscript{151} among numerous other factors. Given all of the factors that confuse risk perception, conservation organizations should not abstain from acting based on their perceived risks. In other words, conservation organizations must recognize the potential for overestimation and not be paralyzed by a misconceived threat.

Second, if a surface disruption were to occur, the conservation organization would not be financially responsible for the cleanup or restoration of the property. In fact, the landowner would be held liable to the conservation organization for the damages under the enforcement clause of a conservation easement.\textsuperscript{152} This would be especially true if the conservation organization created a stricter enforcement clause, as argued in Part III of this Note.\textsuperscript{153} By having a stricter enforcement clause, conservation organizations put the landowner in the position to best balance his own liability. The conservation organization should be indifferent to the decision of the landowner to unitize because they are in the same position regardless of the landowner’s choice.\textsuperscript{154}

Conservation organizations might respond to this argument by claiming that the financial obligation to restore the property will not truly be enough to repair the damaged property and that the conservation easement will be completely lost if the landowner is...
This contention is fair because a restoration project could require millions of dollars and years to fully restore a damaged property to its previous state. However, stricter monitoring and enforcement clauses should protect the conservation easement from these risks. By creating stricter monitoring clauses, conservation organizations should be able to quickly detect damage, mitigating the potential harm to the conservation easement. Additionally, the monetary benefits from allowing unitization give conservation organizations more financial flexibility to preserve greater quantities of land. More preserved land means that the impact from the loss of any one conservation easement is greatly diminished.

B. Public Funding Concerns

Even though allowing unitization will preserve more property in the end, allowing unitization might still risk damaging a conservation organization’s public image, and thus its main funding source. Having a positive public perception is of critical importance for conservation organizations because much of their funding comes from donations. If a conservation organization allows subsurface development, some donors might believe that they no longer have the best interests of environmental preservation at heart and might refuse to further donate to the organization. If enough donors refuse to fund the conservation organization, the organization may become insolvent.

While losing donors is a concern, oil and gas leases could offer the conservation organization an additional revenue source. As discussed in this Note, conservation organizations should require landowners to pay the organization a percentage of the royalties from the oil and gas extraction. Doing so is likely to create a monetary boon for conservation organizations, which allows them to disregard the risk that donors will stop funding them. In other words, conservation organizations will no longer be subject to the whims of their donors. Therefore, allowing a landowner to volun-

---

155. See Boyd et. al., supra note 5, at 234, 245.
156. See supra Part III.B.1.
tarily unitize and have subsurface extraction of oil and gas should result in a net monetary gain for conservation organizations.

CONCLUSION

The conflicting interests between conservation easements and oil and gas leases likely will continue and be magnified by the recent Marcellus and Utica Shale boom in Ohio. Ohio’s enabling legislation for conservation easements overcomes the common law impediments and incorporates much of the IRC’s charitable contribution language. The protection offered by conservation easements is questionable, however, especially where the underlying mineral estate has been severed. With severed mineral estates being too risky, conservation organizations must make their conservation easements more appealing to landowners of property with an unsevered mineral estate. Therefore, conservation organizations should alter their no-inconsistent use clauses to allow voluntary unitization of the landowner’s mineral estate and do so retroactively through the amendment process. However, such an amendment might place conservation organizations in a difficult situation because amending their easements might undermine the conservation organization’s standing in the community and negatively affect donations. Conservation organizations should not be deterred, however, because they will be able to increase revenue through percentage royalty payments from landowners who opt to unitize.

While Ohio’s oil and gas boom poses a significant threat to conservation organizations and conservation easements, oil and gas may also provide conservation organizations with opportunities to strengthen their position in the land market. Conservation organizations must be willing to embrace the boom rather than fight it. In this way, both conservation easements and oil and gas leases can continue to thrive in Ohio.

Nicholas R. House


* J.D. Candidate 2014, William & Mary Law School; B.A. 2010, University of Michigan. Many thanks to my wife and family for their unwavering support and to the Law Review editors and staff for their efforts throughout the publication process.