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Armor or Withdraw? Likely Litigation and Potential Adjudication of Shoreland Conflicts Along Michigan's Shifting Great Lake Coasts

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Armor or Withdraw? Likely Litigation and Potential Adjudication of Shoreland Conflicts Along Michigan's Shifting Great Lake Coasts

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ARMOR OR WITHDRAW? LIKELY LITIGATION AND POTENTIAL ADJUDICATION OF SHORELAND CONFLICTS ALONG MICHIGAN'S SHIFTING GREAT LAKES COASTS

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Michigan enjoys along its inland seas, the Laurentian Great Lakes, one of the longest coastlines in the U.S. Much of that shoreline is privately owned. Because of a confluence of development pressures and irrepressible physical dynamics, growing numbers of Great Lakes shoreland properties, built on shifting sandy shores, are at heightened risk of loss from coastal storm surge, inundation, erosion, and shoreline recession. In response, property owners are installing extensive hardened shoreline armoring structures like seawalls and revetments to arrest those erosional processes. Those structures, however, will substantially impair, if not ultimately destroy, the state's natural coastal beaches and other shoreland resources, as well as accelerate erosion of neighboring shoreland properties.

The clash of imperatives to protect shoreland properties versus conserve coastal resources signifies a wicked dilemma the State cannot avoid: armor or withdraw? More precisely, should we allow the armoring of Michigan's Great Lakes shorelines in an attempt to fix in place shoreland properties, at great and ongoing private and public expense, and ultimately risk the loss of public trust resources? Or should we allow—and should we compel shoreland property owners to allow—natural processes to proceed, even though doing so will increase the rate at which privately owned shorelands naturally convert into state-owned submerged bottomlands? We cannot hope to simultaneously protect both the beach and the beach house along naturally receding Great Lakes shorelines; we must choose which interest to prioritize first, recognizing the cost of doing so by losing the other.

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In addition to the complex physical dynamics at play along Michigan's Great Lakes coasts, there are evolving legal complexities as well. The State, as sovereign, enjoys police power authorities that encompass coastal shoreland management. The State has also long recognized the applicability of the public trust doctrine to its Great Lakes shores, and its constitution mandates the protection of natural resources. This article first analyzes current Michigan law to determine how those doctrines and mandates apply to Great Lakes shoreline armoring, particularly in terms of what to prioritize. Based on that assessment, we conclude that Michigan's courts, legislature, and people have consistently and clearly prioritized protecting and conserving Great Lakes natural coastal resources above developing or impairing them for private use, except when such development truly serves larger public trust interests. In contrast, the administrative rules now used to execute those protections prioritize protecting the private beach house first, even at the expense of destroying the natural beach and impairing other public trust interests. This administrative approach was not inevitable—indeed it may be unlawful—and it has created strong expectations on the part of shoreland property owners, heightening the likelihood of litigation.

The article then analyzes current Michigan law to determine how the courts might resolve disputes between property owners hoping to armor the shore and State or local constraints on such armoring. Here we find that while the Michigan courts have resolved a number of key questions regarding coastal shorelands, there is no caselaw addressing directly the lawfulness of shoreline armoring. Based on our review of relevant caselaw, we conclude the courts are not likely to find that the State lacks authority to regulate—or prohibit altogether—shoreline armoring to protect coastal resources. There is conflicting caselaw, however, upon which the courts could rely to find either that the current regulatory regime provides adequate protection of coastal resources, or alternatively that it is deficient. Finally, beyond questions of regulatory authority, the courts are not likely to find that reinvigorated regulatory efforts to prevent the destruction and impairment of public trust coastal resources from armoring—even those resulting in the accelerated loss of private properties—violate constitutional protections, especially if State reforms are undertaken with deliberation and care.

If the courts conclude that current regulatory efforts are lawful and require no greater protection, then Michigan will likely see much of its Great Lakes shorelines armored and its natural coastal beaches destroyed. If they conclude that current regulatory efforts are deficient (or if they approve of reinvigorated protection efforts), however, then private shoreland properties may be lost to the lakes. Such losses cannot be avoided forever, especially along naturally receding shorelines, but they might occur sooner than would happen absent attempts to arrest shoreline erosion with armoring. As with most wicked policy dilemmas, the best response may not be at either extreme—always armor or always withdraw—but somewhere in between. Crafting that hybrid approach, and the appropriate rules for applying it, will be the most challenging course to navigate.

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INTRODUCTION

The State of Michigan—the self-proclaimed Great Lakes State—touches the waters of Lakes Superior, Michigan, Huron, St. Clair, and Erie. It enjoys some 3,200 miles of Great Lakes shoreline, representing about 60% of the combined shoreline along the U.S. side of the Great Lakes and making it one of the longest state coastal shorelines in the U.S.¹ About 80% of Michigan’s Great Lakes shorelines are in private ownership, much of that developed for seasonal and permanent residences. Public ownership of the remaining shore consists of local, state, and federal parks, and a variety of public service, commercial-industrial, commercial-recreational, and various other uses like water and wastewater treatment facilities, power plants, and marinas.²

1. *What is the total length of the U.S. shoreline?*, NAT’L OCEANIC & ATMOSPHERIC ADMIN. (NOAA), OFF. FOR COASTAL MGMT., <https://shoreline.noaa.gov/faqs.html?faq=2> (last visited Feb. 18, 2023); *Living on the nation’s longest freshwater coastline*, MICH DEP’T OF ENV’T, GREAT LAKES, & ENERGY, <https://www.michigan.gov/egle/about/organization/water-resources/coastal-management/michigans-resilient-coast> (last visited Jan. 31, 2023); Andrew D. Gronewold, et al., *Coasts, Water Levels, and Climate Change: A Great Lakes Perspective*, CLIMATIC CHANGE 120, 697–698 (2013). For this article, we use the terms ‘coastal’ to refer to those submerged bottomlands and near-shore uplands that exist along oceans and large-lakes, including the Great Lakes; ‘shoreline’ to refer to the land-water boundary on a coast subject to coastal processes, such as “significant currents, tides, or other periodic fluctuations in standing water levels, along with episodic storm-driven high-energy waves, onshore winds, and floods, that taken together are highly dynamic and produce continuous and substantial movement of sediments longshore, onshore, and offshore;” and ‘shoreland’ as the “terrestrial component of the coastal zone, encompassing barrier islands, beaches, dunes, wetlands, estuaries, marshes, intertidal areas, and other transitional areas within [shorelines], whether already developed or still natural.” Richard K. Norton, *Planning for Resilient and Sustainable Coastal Shorelands and Communities in the Face of Global Climate Change*, OXFORD RSCH. ENCYC. WATER RES. MGMT. & POL’Y, 7–8 (2022), <https://doi.org/10.1093/acrefore/9780199389414.013.817>. On a Great Lakes coast, ‘coastal shoreland’ essentially encompasses the submerged bottomlands, beaches, foredunes, and uplands or ‘fastlands’ in close proximity to the shoreline, including uplands likely to be subject to dynamic shoreline processes within the foreseeable future as shorelines recede landward.

2. See, e.g., Terry Gibb, *Lakes Appreciation Month: The Great Lakes Facts and Features*, MICH. ST. U. EXTENSION (July 20, 2015), http://msue.anr.msu.edu/news/lakes_appreciation_month_the_great_lakes_facts_and_features; MICH DEP’T OF ENV’T, GREAT LAKES, & ENERGY, 2022 REPORT: STATE OF THE GREAT LAKES 10, 28, 36 (2022), <https://www.michigan.gov/egle/-/media/Project/Websites/egle/Documents/Reports/OGI/State-of-the-Great-Lakes/Report-2022-Widescreen.pdf?rev=d8f354ee9ad041ceb768bc9221d59a32>.

Here are two truisms about the Great Lakes State: first, many Michiganders and visitors alike tend to think about the Great Lakes in terms of how they experience them—at the shore where water touches land; and second, many who experience those shores want to live or vacation along them, often as close to the water's edge as possible. But these beautiful and economically remunerative places to reside are also among the most naturally dynamic, ecologically productive, and hazardous places to build, especially along sandy shores. The legal complexities that exist along Michigan's Great Lakes coasts stem in no small part from the physical dynamics that define them and the competing expectations we place on them.

The purpose of this Article is to assess the state of the law governing Michigan's Great Lakes coastal shorelands in anticipation of litigation likely to arise as natural forces and public interests increasingly confront private-shoreland-property owner's expectations. Parts I and II comprehensively review Great Lakes shoreline dynamics and the law that frames public management of private shoreland development. Because questions about the lawfulness of shoreline armoring have not yet been litigated, Part III identifies the legal claims most likely to arise in this context, analyzes Michigan caselaw related to those questions, and contemplates how a court might adjudicate those claims. The goal of this Article is to assess the legal, policy, social, and environmental tradeoffs implicated by a resolution to any of the potential claims raised. If these claims are brought, the authors' hope is that the courts will adjudicate them with full, well-reasoned, and sensible deliberation, both for today and into the future. The Article concludes with some final thoughts on policy reforms that could avoid the need for litigation in the first place.

I. COMPLEX COASTAL DYNAMICS AND SOCIAL EXPECTATIONS ALONG MICHIGAN'S GREAT LAKES SHORES

Michigan's seemingly endless sandy beaches are a defining feature of both the Great Lakes and of the state itself in popular imagination.³ Those coastal shorelines, however, are not permanently fixed. Rather, they are naturally dynamic and constantly on the move. As illustrated by Figure 1, the standing water levels of the Great Lakes fluctuate dramatically over the course of seasons, years, and decades.⁴ Because of that dynamic, the horizontal location of natural shorelines—particularly those comprised of sandy beaches—move alternately landward and

3. See *Michigan's Great Lakes: Discover the Fresh Coast*, PURE MICH., <https://www.michigan.org/great-lakes> (last visited Feb. 12, 2023) (showing vivid imagery and descriptions in a tourism campaign); *Lake Michigan: Ultimate Travel Guide*, MY MICH. BEACH, <https://mymichiganbeach.com/lake-michigan> (last visited Feb. 12, 2023) (showing same).

4. *Great Lakes Dashboard*, NOAA GREAT LAKES ENV'T RSCH. LAB., https://www.glerl.noaa.gov/data/dashboard/GLD_HTML5.html (last visited Feb. 12, 2023) (hereafter GLERL); see also Gronewald et al., *supra* note 1 (examining the variability of the Great Lakes and comparing it to water levels in New York City, San Diego, and Dublin, Ireland, among others). The standing water levels of Lakes Michigan and Huron, for example, fluctuate by as much as six feet vertically over the course of a decade. Lake levels are measured relative to sea level using the benchmark set by the International Great Lakes Datum (IGLD 1985).

lakeward as water levels rise and fall over the short term. Over the long term, however (i.e., on the order of decades), most of those shorelines are receding landward irrepressibly and remorselessly by an average of one foot per year from natural and powerful erosional processes.⁵ These ongoing lake level fluctuations and corresponding shoreline erosional processes have existed for at least several thousands of years, and they are expected to persist through—if not be exacerbated by—global climate change.⁶ This constant state of change is the normal condition for Great Lakes water levels and corresponding shoreline dynamics, rather than some static condition as suggested, for example, by the long-term average levels shown on FIGURE 1.

5. Ethan J. Theuerkauf, et al., *Coastal Geomorphic Response to Seasonal Water-Level Rise in the Laurentian Great Lakes: An Example from Illinois Beach State Park, USA*, 45 J. GREAT LAKES RSCH. 1055, 1059–61 (2019); Lyn Greer, *Lake Michigan National Shoreline Management Study*, U.S. ARMY CORPS ENG'RS BUFFALO DIST. 4 (September 2018); ORRIN H. PILKEY, ET AL., *THE WORLD'S BEACHES: A GLOBAL GUIDE TO THE SCIENCE OF THE SHORELINE* (2011); Joan Pope, et al., *The Great Lakes Shoreline Type, Erosion, and Accretion*, U.S. ARMY CORPS ENG'RS (1999); Carl W. Rovey and M.K. Borucki, *Bluff Evolution and Long-Term Recession Rates, Southwestern Lake Michigan*, 23 ENV'T GEOGRAPHY 256 (1994); PAUL D. KOMAR, *BEACH PROCESSES AND SEDIMENTATION* (2d ed. 1997); J.A. DORR & D.F. ESCHMAN, *GEOLOGY OF THE GREAT LAKES* (1970). See also *High Risk Erosion Areas: Programs and Maps*, MICH. DEP'T OF ENV'T, GREAT LAKES & ENERGY, https://www.michigan.gov/egle/0,9429,7-135-3311_4114-344443--,00.html (last visited Feb. 12, 2023) (explaining estimated shoreline erosion rates).

6. Several sources provide historical analyses of Great Lakes shoreline dynamics and corresponding coastal dune movement and beach erosion. See, e.g., Edward C. Hansen, et al., *Geomorphic History of Low-perched, Transgressive Dune Complexes Along the Southeastern Shore of Lake Michigan*, 1 AEOLIAN RSCH. 111 (2010); Alan F. Arbogast, et al., *Reconstructing the Age of Coastal Sand Dunes Along the Northwestern Shore of Lake Huron in Lower Michigan*, 2 AEOLIAN RSCH. 83 (2010); Zoran Kilibarda and Craig Shillinglaw, *A 70 Year History of Coastal Dune Migration and Beach Erosion Along the Southern Shore of Lake Michigan*, 17 AEOLIAN RSCH. 263 (2015). The Great Lakes Integrated Sciences and Assessments research program produces climatological research and impacts studies addressing the potential impacts of climate change. See GREAT LAKES INTEGRATED SCI. & ASSESSMENTS RSCH., <https://glisa.umich.edu/> (last visited Feb. 12, 2023) ("GLISA works at the boundary between climate science and decision making, striving to enhance Great Lakes' communities' capacity to understand, plan for, and respond to climate impacts now and in the future"). See also DONALD WUEBBLES, ET AL., ENV'T L. & POL'Y CTR., *AN ASSESSMENT OF THE IMPACTS OF CLIMATE CHANGE ON THE GREAT LAKES* 20 (2019), <https://elpc.org/resources/the-impacts-of-climate-change-on-the-great-lakes/> (last visited Feb. 12, 2023). Climate change is affecting shoreline erosion not because the lakes are connected to the oceans and thus subject to sea level rise—they are not—but because climate change is causing increased storminess, with correspondingly heightened wind action and wave action, which is in turn accelerating erosional processes.

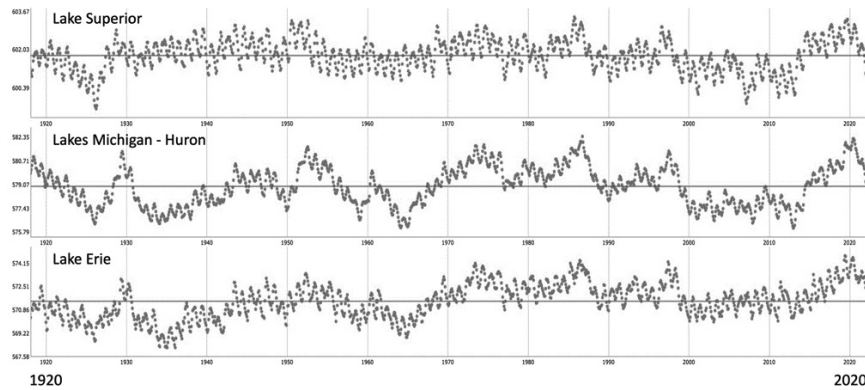


FIGURE 1. Hydrograph showing fluctuations in lake-wide monthly average lake levels (dots) from 1918 through 2022 for Lakes Superior, Michigan-Huron, and Erie, along with the lake-wide long-term average standing water level for that period for each lake (horizontal lines). Elevations are shown in feet above sea level (IGLD 1985). (Source: NOAA GLERL Great Lakes Dashboard. *See supra* note 4).

Most recently, lake levels began to rise dramatically in late 2013, following a relatively long 15-year period of unusually low standing water levels. Levels on all lakes reached historic highs around 2019–2020 and have dropped back to around the recorded long-term average level for each lake since then.⁷ During that period of rising waters, especially leading up to 2020, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) issued several thousands of permits to private shoreland property owners to install hard shoreline armoring structures like seawalls and revetments. These actions prompted controversy regarding the long-term cost, efficacy, and environmental impacts of installing such “shoreline protection” structures given the natural forces at play.⁸

The environmental consequences of armoring have long been recognized and are especially compelling due to their potential to interfere with natural processes

7. GLERL, *supra* note 4.

8. *Shoreline protection permits triple the number approved the previous year*, MICH. DEP'T OF ENV'T, GREAT LAKES & ENERGY (Nov. 16, 2020), <https://www.michigan.gov/egle/newsroom/mi-environment/2020/11/16/shoreline-protection-permits-triple-the-number-approved-the-previous-year>; see, e.g., Alex Brown, *Rising Waters Threaten Great Lakes Communities*, PEW TRUSTS: STATELINE, (Sept. 30, 2020), <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/09/30/rising-waters-threaten-great-lakes-communities>; Patrick M. O'Connell, *The Battle for Lake Michigan: As Beaches Erode, Millions of Dollars have been Poured Into Temporary Solutions. Can Anyone Find a Long-Term Fix?*, CHI. TRIB. (Nov. 20, 2020), <https://www.chicagotribune.com/news/environment/great-lakes/ct-lake-michigan-climate-change-20201120-p3jsqgclvdvq7ozpadi7oxixa-htmlstory.html>; Mario Koran, *As Lake Michigan Shoreline Vanishes, Wisconsinites Fight Waves with Walls. (Spoiler: The Waves Will Win.)*, MILWAUKEE J. SENTINEL (Dec. 21, 2021), <https://www.jsonline.com/story/news/local/wisconsin/2021/12/21/wisconsin-shoreline-residents-fight-lake-michigan-erosion-walls/6388561001/>.

integral to the ecological health of Great Lakes shorelines. In a background literature review paper prepared by researchers from the U.S. Environmental Protection Agency and Environment Canada in 1997, summarizing the then already well-established science, the authors concluded that:

From an ecological point of view, the Great Lakes shoreline is a particularly diverse and valuable habitat. Mapping of globally significant biodiversity elements carried out by the Nature Conservancy shows that 26 percent of the species and natural communities that are restricted to or have their best distribution in the Great Lakes basin occur along the [Great Lakes] coast; another 22 percent occur on the adjacent lakeplain. On an acre-for-acre basis, shoreline sites are on average much richer in biodiversity than inland sites.⁹

The authors noted further that these vital ecological communities “cannot be protected without preserving the processes that sustain them,” and that attempts to arrest naturally dynamic change, such as by armoring shorelines or seeking to stabilize fluctuating lake water levels, “destroy the special processes and habitats” that make Great Lakes shorelines so ecologically distinctive, diverse, and valuable.¹⁰

Thus, somewhat ironically, for much of Michigan’s natural Great Lakes shores to stay the same—with ecologically vital, welcomingly wide, and seemingly endless sandy beaches—they must be allowed to constantly change and move. Indeed, compelling scientific evidence continues to show that hard shoreline armoring structures designed to stop natural shoreline movement ultimately harm those shorelines, in addition to being expensive to install and maintain. According to researchers, these structures accelerate erosion of shorelines on neighboring shoreland properties not similarly armored; scour and move sediments into deep water away from the armoring, such that the natural, walkable, and ecologically productive beaches and dunes lakeward of the structure are ultimately lost so long as the structure is maintained; ultimately fail unless periodically maintained at substantial, ongoing, long-term expense; and finally leave debris in nearshore waters when they fail if not fully removed, threatening safety and navigation.¹¹

9. RON REID & KAREN HOLLAND, *THE LAND BY THE LAKES: NEARSHORE TERRESTRIAL ECOSYSTEMS* 2–3 (1997).

10. *Id.* at 4.

11. PILKEY ET AL., *supra* note 5 at 229–35; Ying-Tien Lin & Chin H. Wu, *A Field Study of Nearshore Environmental Changes in Response to Newly-Built Coastal Structures in Lake Michigan*, 40 J. GREAT LAKES RSCH. 102 (2014); Guy A. Meadows, et al., *Cumulative Habitat Impacts of Nearshore Engineering*, 31 (Supp. 1) J. GREAT LAKES RSCH. 90, 90–91 (2005); U.S. ARMY CORPS ENG’RS, *LIVING ON THE COAST: PROTECTING INVESTMENTS IN SHORE PROPERTY ON THE GREAT LAKES* 29–31 (Philip Keillor, ed., 2003), <https://re-wm.usace.army.mil/ForecastData/Coastal/Living%20on%20the%20Coast%20Booklet.pdf> (hereafter Keillor); Orrin H. Pilkey & Howard L. Wright III, *Seawalls Versus Beaches*, (Special Issue No. 4) J.

Moreover, while Great Lakes beaches partially replenish and inflate naturally during low-water periods as sand is pushed from the nearshore zone back onto the beach (i.e., such that the beach accretes both horizontally and vertically), the full replenishment of the natural beaches' sand supplies depends on the progressive erosion of the beaches and their adjacent bluffs during high-water periods. Armoring structures that effectively stop shoreline recession by arresting natural erosional processes also effectively arrest the processes that naturally replenish sediment supplies. Thus, the best current scientific evidence suggests that while Great Lakes beaches armored during high-water periods may recover to some extent, they will eventually dissipate entirely and not return even during low-water periods if armoring structures are maintained.¹² That total loss may require several cycles of low and high water to play out, but it will be the ultimate outcome nonetheless, especially along stretches of shoreline that are armored extensively.¹³

In sum, natural erosional processes on Great Lakes shores do not destroy the ecological vitality of those shores; rather, Great Lakes shores are utterly dependent on the continued progression of natural erosional processes. Furthermore, it is not possible to stop long-term shoreline recession using engineered armoring structures without also ultimately destroying the natural beaches lakeward of those structures, even on a Great Lakes shore. Accordingly, installing armoring as "shoreline protection" actually destroys the natural shoreline.¹⁴ Finally, because the natural outcome of those erosional processes is typically the long-term recession of the shoreline landward, shoreline armoring has the effect of passively filling

COASTAL RSCH. 41, 57–61 (1988); William L. Wood, *Effects of Seawalls on Profile Adjustment Along Great Lakes Coastlines*, (Special Issue No. 4) J. COASTAL RSCH. 135, 142–45 (1988).

12. Wood, *supra* note 11, at 141; *see supra* notes 5 and 11.

13. Where armoring structures are limited and there are sufficient sediment supplies in the larger 'cell' or shoreline region, and given the particular longshore and cross-shore sediment movements at a specific location, sediment supplies might be sufficient to replenish the beach in front of the limited structures during low-water periods, drawing from the ongoing erosion of the adjacent non-armored shores. But where armoring is continuous and extensive, such that sediment replenishment is arrested throughout the cell or shoreline region, the beaches lakeward of the structures installed will most likely dissipate entirely during low-water periods, so long as the structures are maintained. *See, e.g.*, Wood, *supra* note 11, at 145.

14. These dynamic shoreline processes and the impacts of installing shoreline armoring on them are becoming increasingly and easily discernable with the advent of Google Maps, Google Earth, and similar online programs and data bases that provide aerial photography of shorelines over time. *See, e.g.*, *Michigan's Great Lake Shorelines Throughout Time*, MICH. TECH. UNIV. (last visited Feb. 12, 2023), <https://portal1-geo.sabu.mtu.edu/mtuarcgis/apps/webappviewer/index.html?id=d758800bb18e460ab39aa66631051156>; *see also Michigan's Lake Superior Shorelines*, MICH. TECH. UNIV. (last visited Feb. 12, 2023), <https://portal1-geo.sabu.mtu.edu/mtuarcgis/apps/sites/#/czmp/app/c9d98e7656e44b38bc7ada1bcff4714f>. They are also increasingly evident through comparison of Great Lakes shorelines in different states that engage different coastal management regimes. Most notably, some 70% of the Lake Erie shoreline—and as much as 90% in some counties—has been armored in the state of Ohio, which has a shoreline management regime that allows armoring much more readily than does Michigan (*see infra* Part II.A.2; CASEY YANOS ET AL., OHIO DEP'T NAT. RES., RECONNECTING WITH OUR GREAT LAKE'S COAST: MAKING LAKE ERIE SHORELINES MORE FISH FRIENDLY 2 (2017), https://ohiodnr.gov/static/documents/coastal/owc/owc_t echbull4_Shorelines.pdf). As a result, much of Ohio's Lake Erie natural shoreline has been substantially degraded, if not 'permanently' lost (i.e., so long as the structures are maintained).

submerged bottomlands of the lake (i.e., preventing the natural transition of shoreland from dry upland to submerged bottomland that would occur but for the presence of the structure), again for at least as long as the armor remains in place.¹⁵

As lake levels have dropped from historic highs since 2020, the pressure to armor appears to have waned somewhat, but the lakes remain relatively high and it is only a matter of time before they rise, fall, and then rise again—as they always have. The confluence of natural forces, development pressures, and other competing demands along these highly dynamic coastal shores, unfolding within the context of the fitful yet remorseless recession of coastal shorelines landward, thus portends a slow-motion crisis. That crisis will increasingly force difficult, controversial, yet unavoidable decisions about how best to manage the future of Michigan’s Great Lakes shores.

The issue here is not one of pure paternalism, asking whether shoreland property owners should be allowed to take actions that will ultimately work to their own detriment over the long term. Nor is it simply the question of whether to advance public policy purely toward environmental protection or natural resource conservation concerns. If it were possible to protect Great Lakes shorelines in a way that did not ultimately destroy the natural beach and public access to it, and if the costs of armoring or deploying other engineered measures to stop erosional processes were borne by shoreland property owners alone, then the way forward would be easy and clear: armor the shore. But just as it has become evident that it is often not possible to protect both the beach and the beach house, it has also become clear that the financial, accessibility, and environmental costs of deciding to protect beach houses instead of beaches are borne not by shoreland property owners alone, but by the public at large. This happens especially through public policies and expenditures that essentially indemnify private shoreland property owners from their private losses at public expense and lead to the direct loss of natural coastal resources.¹⁶

15. The term “passive filling” is ours. We use “passive” to indicate that the consequent “fill” of bottomland that occurs not because of active human movement of sediment from upland onto bottomland but rather through prevention of the natural movement of sediment into the lake that would occur otherwise but for the installation of the structure. The occurrence of passive filling might have legal consequences, as discussed more below; *see infra* Part III.A.3.

16. *See, e.g.,* PILKEY ET AL., *supra* note 5; KEILLOR, *supra* note 11; James G. Titus, 1998. *Rising Seas, Coastal Erosion, and the Takings Clause: How to Save Wetlands and Beaches Without Hurting Property Owners*, 57 MD. L. REV. 1279 (1998); TIMOTHY BEATLEY, *PLANNING FOR COASTAL RESILIENCE: BEST PRACTICES FOR CALAMITOUS TIMES* (2009); Komali Kantamaneni, *Counting the Cost of Coastal Vulnerability*, 132 OCEAN & COASTAL MGMT. 155 (2016); COASTAL IMPACTS, ADAPTATION, AND VULNERABILITIES: A TECHNICAL INPUT TO THE 2013 NATIONAL CLIMATE ASSESSMENT (Virginia Burkett & Margaret Davidson eds., 2012); Richard K. Norton, et al., *Overlooking the coast: Limited local planning for coastal area management along Michigan’s Great Lakes*, 71 LAND USE POL’Y 183 (2018); GILBERT M. GAUL, *THE GEOGRAPHY OF RISK: EPIC STORMS, RISING SEAS, AND THE COST OF AMERICA’S COASTS* (2019); Robin Kundis Craig, *Coastal Adaptation, Government-subsidized Insurance, and Perverse Incentives to Stay*, 152 CLIMATIC CHANGE 215 (2019); *A BLUEPRINT FOR COASTAL ADAPTATION: UNITING DESIGN, ECONOMICS, AND POLICY* (Carolyn Kousky et al. eds., 2021); *SUSTAINABLE COASTAL DESIGN AND PLANNING* (Elizabeth Mossop ed., 2019); JEFFREY PETERSON, *A NEW COAST: STRATEGIES FOR RESPONDING TO DEVASTATING STORMS AND RISING SEAS* (2019).

At the same time, for properties situated at the edge of a naturally receding Great Lakes shoreline, the question is not whether but rather when the lake will eventually transform that shoreland—and the structures situated on it—into submerged bottomland. Even the best engineered armoring structures will eventually give way. Thus, protecting the natural beach by prohibiting the installation of shoreline armoring does not cause the loss of shoreland property so much as move the timing of that loss forward. Allowing natural processes to proceed also minimizes the total expenditures put toward engineered attempts to slow down those inevitable processes and outcomes. Nonetheless, a policy of withdrawal does not obviate the ultimate loss of whatever investments were put into the property itself otherwise, and it compels shoreland property owners to face the reality they most want to forestall: that the time has indeed come to give way to the lake.

Taken altogether, deciding not to manage shoreland development, and allowing instead shoreland property owners to armor their shores, necessarily equates to permitting the destruction of the sandy beaches and bluffs that comprise much of the state's natural coastal shoreline, a decision that will unfold through the proverbial thousand cuts (or seawalls). Yet, deciding to prioritize conservation of the natural shore will place substantial shoreland structures and other investments at risk sooner than would occur with armoring, frustrating the hopes and expectations of shoreland property owners—both private and public. What shall we prioritize in reconciling those competing imperatives? Equally important, what processes shall we engage in making such decisions, and what standards shall we use to do so? Some of the struggle toward reconciliation will undoubtedly play itself out in the Michigan courts as various stakeholders bring their conflicts forward for resolution. The confluence of irrepressible natural forces and conflicting expectations thus also raises pressing questions about legal rights, responsibilities, and liabilities along Great Lakes shores.

II. THE LAW OF MICHIGAN'S GREAT LAKES COASTAL SHORELANDS AND SHORELINES

The United States Supreme Court has long recognized a federal “navigational servitude” over the nation's navigable waters, including Great Lakes waters,¹⁷ given the federal government's “dominant public interest in navigation.”¹⁸ Even so, the U.S. Submerged Lands Act of 1953 recognizes coastal states' powers to manage, administer, lease, develop, and use the lands beneath navigable waters within each state's boundaries.¹⁹ It also defines the landward boundary of submerged lands as the ordinary high water mark²⁰ and vests the states with title and rights to

17. Gibson v. United States, 166 U.S. 269, 271–72 (1897).

18. United States v. Willow River Power Co., 324 U.S. 499, 507 (1945).

19. 43 U.S.C. § 1311(a)(2).

20. *Id.* § 1301(a)(1).

the natural resources on or within those lands,²¹ while still maintaining the federal government's authority to regulate certain offshore activities for flood control, power production, national defense, international affairs, commerce, and especially navigation.²²

Based on these authorities, Great Lakes shoreland property owners in Michigan seeking to install armoring on their shorelines must obtain a permit from the U.S. Army Corp of Engineers (USACE) and the Michigan Department of Environment, Great Lakes, and Energy.²³ Nonetheless, the federal interest in managing the shoreline relates primarily to navigation on U.S. waters. Therefore, legal protections afforded to Great Lakes shorelands arise primarily from state law, as detailed more below.²⁴ We focus our attention on the origins and applicability of Michigan law to Great Lakes shores accordingly, approaching this task from the perspective of litigation likely to arise over armoring. In this context, the claim most likely to arise among shoreland property owners and governmental officials is that a regulation prohibiting or otherwise limiting the installation of shoreline armoring to safeguard coastal resources effects a regulatory taking, necessitating just compensation to the property owner.²⁵ That claim, however, does not come first, analytically.

Rather, three first-order questions arise in a sequence appropriate for legal and policy analysis. First, can the government adopt regulations that constrain or prohibit shoreline armoring—or does it have a duty to adopt such regulation—in the first place? Second, even if the government could or should regulate, might its use of that authority violate constitutional protections nonetheless, particularly regarding due process and equal protection? Finally, even if duly enabled and constitutionally lawful otherwise, might its regulation effect a regulatory taking either facially or as applied? Asking about proper regulatory authorities implicates several more specific questions in turn, including: Precisely which authorities apply? Which level(s) of government enjoy those authorities? To what extent do those authorities implicate

21. *Id.* § 1311(a)(2).

22. *Id.* § 1311(d), 1314(a).

23. The USACE coordinates its permitting activities with state coastal submerged bottomlands and shoreland management programs through a joint permitting application process. *See EGLE/USACE Joint Permit Application*, MICH. DEP'T OF ENV'T, GREAT LAKES & ENERGY (last visited Apr. 1, 2022), <https://www.michigan.gov/egle/about/organization/water-resources/joint-permit-application>.

24. *See infra* Part II.A. Nothing in these provisions suggests that the federal issuance of a permit here would somehow preempt state permitting authority under state law, such that a state permit denial would not control. *See State Certification of Activities Requiring a Federal License or Permit*, 40 C.F.R. § 121 (2021). In addition, as conveyed by state staff, when a project is proposed above the State of Michigan's elevation-based ordinary high-water mark (OHWM) but below the USACE OHWM, the USACE must coordinate with the State to receive authorization or a denial under Section 401 of the U.S. Clean Water Act. The State has in fact denied 401 certification for projects. *See, e.g., Letter from John Bayha, P.E. Dist. Eng'r*, Kalamazoo Dist. Off., Mich. Dep't of Env't, Great Lakes, and Energy to Michael Yannel (Sept. 30, 2022) https://mienviro.michigan.gov/nsite/map/results/detail/8077010534824552488/documents/Yannel_401_Cert_Denial_9-30-22-1.pdf; Email Correspondence with Kate Lederle, Env't Quality Specialist, Mich. Dep't of Env't, Great Lakes & Energy (Oct. 2022).

25. *See infra* Part III.B.2.

permissive powers to regulate, versus duties to regulate, to promote some public interest such as Great Lakes coastal resource conservation? And to what extent can those authorities be modified by the state legislature, specifically for the purpose of facilitating more shoreline armoring than may be currently allowed?

Both federal and state law have long recognized the existence of police power authorities that states enjoy in their capacity as the original sovereigns.²⁶ With those authorities, Michigan and the other Great Lakes states can and do exercise their prerogative to regulate the development and use of coastal shorelands for a variety of purposes. They have also uniformly delegated some of those authorities to their local units of government through a variety of mechanisms, most prominently by enabling local planning, police power regulations, zoning ordinances, and subdivision regulations.²⁷

Federal law, the laws of the several Great Lakes states, and all of the ocean coastal states have also long recognized the existence and applicability of the public trust doctrine on coastal shores.²⁸ Almost as soon as Michigan entered the Union in 1837, seminal federal and state cases made clear that Michigan's "inland seas"—the Great Lakes—represent especially valuable resources for its citizens. They further recognized that the State as sovereign carries a unique duty to safeguard those coastal resources under the public trust doctrine.²⁹ Both the police power doctrine and the public trust doctrine exist in tension with federal and state constitutional imperatives to safeguard private property rights in shoreland properties from governmental abuse.³⁰

This section provides a comprehensive review of Michigan's doctrinal, constitutional, legislative, and administrative laws that speak to Great Lakes coastal shorelands and to the placement of armor along lake shorelines. It also assesses the extent to which the state legislature might lawfully modify state and local authorities and duties regarding shoreline armoring through statutory amendment.³¹

26. See *infra* Part II.A.1.

27. See *infra* Part II.B.

28. See *infra* Part II.A.2.

29. *Id.*

30. See *infra* Part II.A.5.

31. All of these topics speak to the ultimate questions of whether the State, either through its legislature or its courts, can or should stop a shoreland property owner from installing shoreline armoring for the purpose of protecting private property because of the harms those armoring structures do or could yield. Part III.B.2, *infra*, then addresses whether any such actions the State or its localities might take could be found to violate constitutional protections of private property rights.

A. State Enabling Authorities and Duties to Regulate Great Lakes Coastal Resources

1. The Police Power Doctrine and Constitutional Provisions

When the original 13 states ratified the U.S. Constitution and Bill of Rights, they ceded certain powers to the national government, but they also reserved those sovereign powers previously enjoyed and not expressly ceded.³² Not long after, both the federal and state courts were required to label and characterize precisely what those reserved powers were. Early cases were framed in the context of discerning the balance of national and state powers under the kind of federalism created by the U.S. Constitution. The police power doctrine was adopted to characterize and conceptualize the sovereign state authorities that exist within that balance of state-federal authorities. The phrase “police power” itself was understood at the time to encompass more broadly the notion of something like “public policy” or the public policy doctrine.³³

Through more litigation and deliberation, it became clear that the reach of police power authorities cannot be characterized by express enumeration because the powers are too expansive to enumerate. Moreover, the courts have recognized that general characterizations should be read broadly as representative of the powers states enjoy, not narrowly as a constraint on the reach of those powers.³⁴ The general characterization routinely recited today is that the police power is the authority that a state enjoys as sovereign to protect and promote the public health, safety, morals, and general welfare.³⁵ Thus the police power encompasses state authorities to adopt

32. The states ceded authority, for example, to regulate commerce among the several states by operation of article I, section 8 of the U.S. Constitution, U.S. CONST. art. I, § 8, cl. 3 (“The Congress shall have Power...To regulate Commerce...among the several states...”), and by article VI, *id.* art. IV, cl. 2 (“This Constitution, and the Laws of the United States which shall be made in Pursuance thereof...shall be the supreme Law of the Land...”), while reserving all authorities not so ceded through the 10th Amendment, *id.* amend. X (“The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”).

33. For a more comprehensive discussion of the history and evolving conceptualization of the police power over time, particularly in the context of Great Lakes shoreland management, see Richard K. Norton & Nancy H. Welsh, *Reconciling Police Power Prerogatives, Public Trust Interests, and Private Property Rights Along Laurentian Great Lakes Shores*, 8 MICH. J. ENV'T & ADMIN. L. 409, 422–429 (2019); see also D. Benjamin Barros, *The Police Power and the Takings Clause*, 58 U. MIAMI L. REV. 471, 475 (2004).

34. See Norton *supra* note 33, at 424–25. Since the mid 1930s, the federal courts have similarly recognized the broad reach of state police power authorities through generally deferential treatment of those authorities in adjudicating claims of constitutional violations brought against the exercise of them. *Id.* In Michigan, the Michigan Supreme Court has characterized the police power as “a power or organization of a system of regulations tending to the health, order, convenience, and comfort of the people and to the prevention and punishment of injuries and offenses to the public.” *People v. Brazee*, 149 N.W. 1053, 1054 (1914), *aff'd* 241 U.S. 340 (1915). It has similarly found that that power is so broad that it is incapable of precise definition. *People v. Sell*, 17 N.W.2d 193, 196 (1945).

35. See, e.g., JULIAN C. JUERGENSMEYER ET AL., *LAND USE PLANNING AND DEVELOPMENT REGULATION LAW* 47 (4th ed. 2018).

and enact programs, policies, and regulations both in order to prevent nuisance-like harms and to promote the general public welfare.

When Michigan joined the Union in 1837, it joined on an equal footing with the original 13 states, enjoying the same sovereignty and jurisdiction over its own territory.³⁶ That is, Michigan joined with its inherent police power authority, which exists as a distinct doctrinal authority under federal and state law and enlivens express authorities provided in Michigan's Constitution. Specifically, art. 4, § 51 of the Constitution of the State of Michigan of 1963 provides:

The public health and general welfare of the people of the state are hereby declared to be matters of primary public concern. The legislature shall pass suitable laws for the protection and promotion of the public health.

Similarly, art. 4, § 52 provides:

The conservation and development of the natural resources of the state are hereby declared to be of paramount public concern in the interest of the health, safety and general welfare of the people. The legislature shall provide for the protection of the air, water and other natural resources of the state from pollution, impairment and destruction.³⁷

Again, both provisions are broadly stated such that they encompass the adoption of state laws and programs created by law that protect the public health—such as by regulating nuisance-like activities—and promote the general welfare. The latter includes the public's welfare gained through the conservation of natural resources, such as the Great Lakes. Before addressing state efforts to effectuate these constitutional provisions through statutory and regulatory law, we next review the

36. *Pollard v. Hagan*, 44 U.S. (3 How.) 212 (1845).

37. While Section 52 was added to the Michigan Constitution for the first time with its 1963 ratification, it is clear from the text itself that the drafters were well aware of the police power doctrine and were drawing from that doctrine, if not crafting a constitutional provision parallel to it. More than that, review of the legislative history of the Constitutional Convention regarding this section documents several attempts to soften its terms in order to make it merely exhortative or declaratory (*e.g.*, restating "shall" as "may"), all of which were rejected by a majority of the Convention. In addition, because a section heading is to be read as an integral element of the section itself, Section 52 places extra emphasis on the conservation of natural resources relative to their development. The legislative history and the section's construction make clear that the section should be read as clearly stated on its face—that the conservation of natural resources is of paramount concern to the people—and that the section imposes a mandatory duty on the state legislature to protect the state's air, water, and other natural resources from pollution, impairment, and destruction. *State Highway Comm'n v. Vanderkloot*, 220 N.W.2d 416, 425–26 (1974); *Whittaker & Gooding Co. v. Scio Twp.*, 323 N.W.2d 574, 575–76 (1982).

second key foundational authority speaking to Michigan's Great Lakes shorelands: the public trust doctrine.

2. The Public Trust Doctrine³⁸

Commenters have increased their attention to the public trust doctrine over the past several decades, recognizing current and impending conflicts between property rights, land development, and resource conservation imperatives that are becoming increasingly urgent, especially in coastal settings. They have argued both that the doctrine should be interpreted and applied expansively—even beyond its original focus,³⁹ and narrowly—if recognized at all.⁴⁰ These debates have also addressed application of the doctrine generally and specifically to the Great Lakes, particularly with regard to Michigan.⁴¹ While we recognize contemporary arguments

38. The authors published an early version of this subsection in the Michigan Bar Journal, in part to present preliminary analysis and solicit input from members of the Bar. See Norton, *Shifting Sands: Michigan's Great Lake Shores*, MICH. BAR J. (June 2022), <https://www.michbar.org/journal/Details/Shifting-sands-Michigans-great-lake-shores?ArticleID=4447>. See also Norton & Welsh, *supra* note 33, for prior analysis extended through this article.

39. See, e.g., Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 417, 474 (1970) (arguing for the extension of the doctrine from its historical coastal focus to encompass the protection of other natural resources); Scott W. Reed, *Fish Gotta Swim: Establishing Legal Rights to Instream Flows through the Endangered Species Act and the Public Trust Doctrine*, 28 IDAHO L. REV. 645, 658 (1992) (interpreting the public trust doctrine to prioritize use of water for environmental protection over drinking water); Michael Blumm & Thea Schwartz, *Mono Lake and the Evolving Public Trust in Western Water*, 37 ARIZ. L. REV. 701, 708–09 (1995) (discussing how public trust jurisprudence has revolutionized California water law); Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift*, 39 ENV'T L. 43 (2009); Mary Christina Wood, *Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part II): Instilling a Fiduciary Obligation in Government*, 39 ENV'T L. 91 (2009); DOUGLAS QUIRKE, PUBLIC TRUST DOCTRINE: A PRIMER (2016), https://law.uoregon.edu/sites/law1.uoregon.edu/files/mary-wood_0/mary-wood/PTD_primer_7-27-15_EK_revision.pdf.

40. See, e.g., Glenn J. MacGrady, *The Navigability Concept in the Civil and Common Law: Historical Development, Current Importance, and Some Doctrines that Don't Hold Water*, 3 FLA. ST. U. L. REV. 511, 589–91 (1975); Patrick Deveney, *Title, Jus Publicum, and the Public Trust: An Historical Analysis*, 1 SEA GRANT L.J. 13 (1976); James L. Huffman, *A Fish Out of Water: The Public Trust in a Constitutional Democracy*, 19 ENV'T L. 527 (1989) (critiquing Sax's interpretation of the public trust doctrine as a violation of the U.S. Constitution's takings clause); Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central*, 71 U. CHI. L. REV. 799, 924–30 (2004) (providing a thorough review of the history and issues underlying the *Illinois Central* decision and critiquing both its soundness and subsequent influence); James L. Huffman, *Speaking of Inconvenient Truths—A History of the Public Trust Doctrine*, 18 DUKE ENV'T L. & POL'Y F. 1 (2007) (providing a recent critique of the public trust doctrine in general).

41. See, e.g., Bertram C. Frey & Andrew Mutz, *The Public Trust in Surface Waters and Submerged Lands of the Great Lakes States*, 40 U. MICH. J.L. REFORM 907 (2007) (supporting the Michigan Supreme Court's construction of the public trust doctrine in its decision of *Glass v. Goeckle*, discussed *infra*); Carl Shadi Paganelli, Note, *Creative Judicial Misunderstanding: Misapplication of the Public Trust Doctrine in Michigan*, 58 HASTINGS L.J. 1095 (2007) (critiquing the Michigan Supreme Court's construction of the public trust doctrine in its decision of *Glass v. Goeckle*); Robert H. Abrams, *Walking the Beach to the Core of Sovereignty: The Historic Basis for the Public Trust Doctrine Applied in Glass v. Goekel*, 40 MICH. J.L. REFORM 861 (2007) (countering much of the historical interpretation of Roman law offered by

that the public trust doctrine does and should apply to environmental protection and natural resource conservation broadly, many, if not most, of the earliest cases acknowledging, clarifying, and applying the doctrine arose out of conflicts over public access to, and the use of coastal waters and shorelands specifically. As such, the historical pedigree of the doctrine is most robust in those settings. Because the focus of this analysis is on conflict between the use and conservation of coastal shorelines, we examine the public trust doctrine from that coastal perspective, and not from a broader view.

The public trust doctrine is generally understood to have been articulated first under ancient Roman law through the sixth century Justinian Institutes, which recognized that by “natural law the following things belong to all men, namely: air, running water, the sea, and for this reason the shores of the sea.”⁴² The doctrine was subsequently incorporated into English common law, and then adapted to American federal and state law. Today it is comprised of a hybrid of common law, constitutional law, and statutory law in most states.⁴³ Despite attributes that are fairly uniform across the country, the public trust doctrine is not a singular national doctrine but a collection of state doctrines, recognized and applied individually, and acknowledged as such under federal law.⁴⁴

As noted, the U.S. Supreme Court clarified in 1845 that states joining the Union after the original 13 did so on an equal footing, with the same sovereignty, rights, and jurisdiction over navigable waters and lands submerged by those waters.⁴⁵ In two key cases decided in the early 1890s, the U.S. Supreme Court further held that under the public trust doctrine a state may not grant title to lands submerged by navigable waters (including the Great Lakes) to private entities, except when doing so serves a public trust interest.⁴⁶ The Court also held that the public trust jurisdiction over those waters and submerged lands extends to the high water mark,⁴⁷

commenters arguing for a narrow interpretation of the public trust doctrine, relying heavily on historical treatments of Roman law and English common law at odds with those narrower interpretations).

42. J. INST. 2.1.1–5 (Samuel P. Scott trans., 1932); as reprinted in full in Abrams, *supra* note 41, at 871–72. See also Bruce W. Frier, *The Roman Origins of the Public Trust Doctrine*, 32 J. ROMAN ARCHEOLOGY 641 (2019) (reviewing DOMENICO DURSI, *RES COMMUNES OMNIUM, DALLE NECESSITA ECONOMICHE ALLA DISCIPLINA GIURIDICA* (2017) and providing additional analysis of the Justinian Institutes in the context of earlier Roman and Greek texts).

43. See Norton & Welsh, *supra* note 33, at 419.

44. See, e.g., DAVID C. SLADE ET AL., *PUTTING THE PUBLIC TRUST DOCTRINE TO WORK* 3–9 (1990); ROBERT W. ADLER ET AL., *MODERN WATER LAW* Ch. 7 (2d ed., 2018) [hereinafter *MODERN WATER LAW*]. See also Norton & Welsh, *supra* note 33, at 462. As such, the state of Ohio, for example, has the least protective public trust doctrine in terms of its spatial reach, stopping at the water’s edge, while the state of Indiana recognizes application of its public trust doctrine including full state ownership of its coastal shorelands up to the ordinary high water mark (a concept discussed in more detail *infra*). All six of the remaining Great Lakes states—including Michigan—recognize overlapping boundaries, rights, and responsibilities somewhere in between those two applications. *Id.* at 462–64.

45. Pollard v. Hagan, 44 U.S. (3 How.) 212, 230 (1845).

46. Illinois Central R. Co. v. Illinois, 146 U.S. 387 (1892); Shively v. Bowlby, 152 U.S. 1 (1894).

47. Shively v. Bowlby, 152 U.S. 1, 43–44 (1894).

and that, beyond those principles, the title and rights of riparian and littoral owners (particularly vis-à-vis public rights) are governed by the laws of the specific states.⁴⁸

Today it is well settled that title to and jurisdiction over navigable waters and the submerged lands underlying them, as between the federal and state governments, is determined by federal law under the equal footing doctrine.⁴⁹ Once a state has title to the bed and banks of a navigable water body, however, the boundary lines of the state's ownership interests and duties as between the states and private shoreland owners is a matter of state law, determined under each state's public trust doctrine.⁵⁰ To resolve conflicts and questions regarding shifting coastal shorelines along Michigan's Great Lakes, it is necessary to look to Michigan's public trust doctrine, both in-and-of itself and vis-à-vis other relevant doctrines.

A Michigan chancery court first acknowledged the applicability of the public trust doctrine to the Great Lakes and lands submerged by them in *La Plaisance Bay Harbor*, only six years after statehood.⁵¹ That ruling and the key principles flowing from it have been recognized and upheld repeatedly by the Michigan Supreme Court and now constitute well-settled law.⁵² To the extent

48. *Id.* 'Riparian' refers to the setting and to property rights along inland rivers and streams, while 'littoral' refers to shorelands and property rights along oceans, seas, and large lakes, including the Great Lakes. *Riparian*, BLACK'S LAW DICTIONARY (11th ed. 2019).

49. *PPL Mont., LLC v. Montana*, 565 U.S. 576, 603–04 (2012). Note that the conveyance of title and public trust jurisdiction over lands to the state in states admitted subsequent to the original 13, such as Michigan, may be constrained where patents were made to private owners by the federal government prior to statehood. There is a strong presumption against finding congressional intent to defeat state equal footing and public trust title and jurisdiction, however, and such intent cannot be inferred by the mere patent itself. *Utah Div. of State Lands v. United States*, 482 U.S. 193 (1987). In 1964, the Michigan Supreme Court in its decision of *Klais v. Danowski*, 129 N.W.2d 414 (Mich. 1964), held that a patent issued by the U.S. Government before Michigan became a state, where the lakeward boundary of that patent was fixed and discernable (*see id.* at 276), is not subject to Michigan's public trust doctrine or the moveable freehold and state ownership of submerged bottomlands under that doctrine. Because the applicability of the public trust doctrine with regard to state ownership of submerged bottomlands is determined by federal law, however, and given the U.S. Supreme Court's decisions since *Klais* was decided on that question, the continued legal force of the *Klais* holding is questionable. Indeed, without expressly doing so, the Michigan Supreme Court appears to have quietly overruled *Klais* in its decision of *Glass v. Goekel*, 703 N.W.2d 58, 62 (Mich. 2005) ("Pursuant to this longstanding [public trust] doctrine, when the state (or entities that predated our state's admission to the Union) conveyed littoral property to private parties, that property remained subject to the public trust.").

50. *See* ROBERT W. ADLER ET AL., *MODERN WATER LAW* (2d ed. 2018), at 117–121.

51. *La Plaisance Bay Harbor Co. v. City of Monroe*, Walker Chancery Rep. 155 (Mich. 1843).

52. Most notable of those decisions include *Lincoln v. Davis*, 19 N.W. 103 (Mich. 1884) (finding the public trust doctrine applicable to Michigan's Great Lakes); *People v. Silberwood*, 67 N.W. 1087 (Mich. 1896) (reaffirming the applicability of the public trust doctrine to Michigan's Great Lakes); *People v. Warner*, 74 N.W. 705 (Mich. 1898) (reaffirming the applicability of the public trust doctrine to Michigan's Great Lakes); *State v. Venice of America Land Co.*, 125 N.W. 770 (Mich. 1910) (reaffirming state ownership of submerged bottomlands of the Great Lakes, including Lake St. Clair); *Nedtweg v. Wallace*, 208 N.W. 51 (Mich. 1926) (reaffirming the applicability of the public trust doctrine to Michigan's Great Lakes and state duties under that doctrine that cannot be abrogated); *Hilt v. Weber*, 233 N.W. 159 (Mich. 1930) (reaffirming the applicability of the public trust doctrine to Michigan's Great Lakes and recognizing that shoreland property owners' lakefront boundaries naturally shift); *Obrecht v. National Gypsum Co.*, 105 N.W.2d 143 (Mich. 1960) (reaffirming the applicability of the public trust

disputes over authorities, duties, and rights have been litigated in the Michigan courts to date, they have focused mostly on deciding where and to what extent the public trust doctrine applies to Michigan waters. They have also generally addressed what rights and responsibilities exist between public and private actors under that doctrine (e.g., when state-owned submerged bottomlands can be conveyed to private actors, or who has access to what portions of Great Lakes beaches). And they have focused on how to distinguish boundaries between private and public rights and responsibilities as an initial matter.⁵³

In its most recent decision regarding Great Lakes shorelines—and thus the decision that will most directly shape future disputes—*Glass v. Goeckel*,⁵⁴ the Michigan Supreme Court reviewed extensively the origins and history of the public trust doctrine. Drawing from that decision and the prior caselaw upon which it was decided, the most robust elements of Michigan’s public trust doctrine today are:

1. It applies to the waters and submerged lands of the Great Lakes, including some portion of their foreshores, albeit not to the state’s inland lakes and rivers;⁵⁵
2. The State owns title (or “jus privatum”) to the submerged bottomlands underlying the lakes up to the water’s edge, in trust for the people;⁵⁶
3. Private entities (and governments) can own title to periodically submerged foreshores and shorelands adjacent to a lake (also “jus privatum”), extending from the water’s edge landward, enjoying littoral rights by virtue of doing so;⁵⁷

doctrine to Michigan’s Great Lakes, and that the state can alienate public trust resources only when public trust interests are served by doing so).

53. See, e.g., *La Plaisance Bay Harbor Co.*, *supra* note 51 (acknowledging the State’s ownership of Great Lakes submerged bottomlands); *Nedtweg*, *supra* note 52 (reaffirming that the state holds submerged bottomlands [and foreshores] in trust for the people, and that the state has the duty to guard the public’s interest in those resources); *Hilt*, *supra* note 52 (holding that littoral [lakefront] property owners along the Great Lakes hold riparian [littoral] rights as a consequence of owning waterfront property).

54. 703 N.W.2d 58 (Mich. 2005) (reaffirming the applicability of the public trust doctrine to Michigan’s Great Lake shores and holding that the public enjoys access rights under that doctrine along the shoreline below and lakeward of the natural ordinary high water mark).

55. See e.g., cases cited *supra* note 52; *Glass*, *supra* note 54. The Michigan Supreme Court held in 1860 that while the State retains a public trust interest in access to all navigable surface waters in the state, the full doctrine over waters and submerged bottomlands applies only on the Great Lakes, not including the connecting rivers between them or the inland lakes connected directly to them. *Lorman v. Benson*, 8 Mich. 18, 32 (1860).

56. E.g., *Warner*, *supra* note 52 (reaffirming the applicability of the public trust doctrine to Michigan’s Great Lakes and grappling with marking boundaries, making clear in doing so that jus privatum title from state-owned bottomland to privately-owned shoreland is coterminous and occurs at roughly the waters edge (*i.e.*, the convergence of low and high water marks, should they coincide)).

57. E.g., *Hilt*, *supra* note 52; *Glass*, *supra* note 54. The *Glass* court clarified that property rights arising from adjacency to large lakes like the Great Lakes should be labeled and conceptualized as ‘littoral’ rights, while those arising from adjacency to inland rivers and smaller lakes should be labeled and conceptualized as ‘riparian’ rights. *Glass*, 703 N.W.2d at 61, n.1. While similar in many ways, littoral rights are different from riparian rights mainly for purposes here to the extent that Great Lakes shorelines are considerably more dynamic and ambulatory over time than are the shores of inland rivers and lakes.

4. The boundary separating state-owned bottomland jus privatum title interests from privately owned jus privatum title interests is an ambulatory or “moveable freehold” boundary at the water’s edge, capable of moving lakeward and landward as the water’s edge shifts through erosion, accretion, inundation, and reliction;⁵⁸
5. The State also holds a dominion interest—or the “jus publicum”—over the waters of the Great Lakes, and over lands submerged by those waters both permanently and periodically, up to the “ordinary high-water mark” (OHWM) on the shore;⁵⁹
6. The jus publicum imposes a duty on the State as trustee to protect and conserve public interests in those waters and submerged bottomlands, including shorelands periodically submerged lakeward of the OHWM,⁶⁰ for navigation, fishing, fowling, commerce, and the access necessary to do those things (including beach walking);⁶¹
7. The boundaries of jus privatum title ownership (i.e., the coterminous boundary separating state-owned bottomland from privately-owned shoreland) and the reach of the jus publicum can and often do overlap, particularly when water levels are low and shoreland that was previously submerged—and that will be submerged again when lake levels rise—are exposed (i.e., similar to ocean coastal shorelands exposed during low tide);⁶²
8. Where the State’s jus publicum dominion interest overlaps with a private shoreland property owner’s jus privatum interest, that shoreland property owner owns to the water’s edge, but her title interest is impressed with a public trust servitude lakeward of the OHWM;⁶³ and

58. *Id.* See also *Glass*, 703 N.W.2d at 91 (Markman, J., dissenting). While Justices Markman and Young dissented with regard to the reach of beach-walking rights (*see infra* notes 66–68 and accompanying text), the court agreed uniformly that the lakeward boundaries separating shoreland property owners’ properties from State-owned submerged bottomlands are naturally ambulatory. This doctrine in dynamic coastal settings benefits both shoreland property owners, when shorelines are accreting and expanding, and the public, when shorelines are eroding and receding. This is true in particular for shoreland property owners with titles clearly extending property boundaries to the water’s edge or to a meander line. In cases where titles clearly indicate static boundary lines (*e.g.*, via parcel maps), then the shoreland property may in fact not expand as lake levels fall, requiring further parcel-specific investigation to determine ownership interests on lands gained through reliction or accretion. Nonetheless, such parcel boundaries fixed through titles would be moveable and parcels would naturally diminish on shorelines that are receding landward, as shoreland becomes submerged bottomland, because private agreements (*i.e.*, transfers of title interest) cannot supersede state law (*i.e.*, the public trust doctrine).

59. *Glass*, 703 N.W.2d at 86.

60. As explained by the court in *Glass*, 703 N.W.2d at 69: “The land between this mark [the natural ordinary high water mark] and the low water mark is submerged on a regular basis, and so remains subject to the public trust doctrine as ‘submerged land.’” See also the court’s discussion of shoreline boundaries given Great Lakes water level fluctuations in *Glass* at 71–73.

61. *Glass*, 703 N.W.2d at 73–75.

62. *Glass*, 703 N.W.2d at 70; *see infra* notes 67–69 and accompanying text.

63. *Glass*, 703 N.W.2d at 70.

9. The State cannot surrender the public interests protected by the jus publicum “any more than it can abdicate the police power or other essential power of government;”⁶⁴ albeit
10. The State can grant jus privatum title ownership of submerged Great Lakes bottomlands to private shoreland owners, but only with “due finding of one of two exceptional reasons” for doing so: (1) where the State has determined that doing so provides improvement of the public trust; or (2) such disposition can be made “without detriment to the public interest in the lands and waters remaining.”⁶⁵

Despite earlier decisions conflicting on the question of where the boundary separating jus privatum title interests falls (i.e., as between state-owned submerged bottomland and adjacent public or privately owned shoreland),⁶⁶ the caselaw establishing these elements of Michigan’s public trust doctrine has been remarkably consistent. The *Glass* decision reaffirmed the applicability and robustness of the public trust doctrine to Michigan’s Great Lakes shores, reaffirmed that shoreland properties are subject to naturally moveable freeholds along their lakefront

64. *Nedtweg v. Wallace*, 208 N.W. 51, 52 (Mich. 1926). The U.S. Supreme Court, in construing the public trust doctrine and its implications regarding state public trust duties vis-à-vis private shoreland property rights, has similarly stated:

The state can no more abdicate its trust over property in which the whole people are interested ... so as to leave them entirely under the use and control of private parties, except ... for the improvement of the navigation and use of the waters, or when parcels can be disposed of without impairment of the public interest in what remains, any more than it can abdicate its police powers of the administration of government and the preservation of the peace. *Illinois Central*, 146 US at 453.

See also Melissa Scanlan, *Shifting Sands: A Meta-Theory for Public Access and Private Property*, 65 S.C. L. REV. 295, 338 (2014) (characterizing the Michigan Supreme Court’s decision in *Glass* as recognizing a constraint on state sovereignty and arguing that, as such, the State cannot convey public trust interests “because the state cannot abdicate its trustee responsibilities to protect public rights in the Great Lakes and its beaches up to the [OHWM] even if the state had issued patents to private parties that extended below the high-water mark”).

65. *Obrecht v. National Gypsum Co.*, 105 N.W.2d 143, 149 (Mich. 1960). This decision and others cited here raise the question of how the state’s ownership interests in public trust resources should be treated vis-à-vis shoreland property owners’ interests in their shoreland properties under the public trust doctrine and the common law regarding surface waters, submerged lands, and riparian (littoral) property rights—that is, whether both are equally on par or, alternatively, one should always (or by default) be treated as superior to the other. While that question has implications regarding the precise duties imposed on the state under the public trust doctrine, it arises more directly in the context of what private property interests and rights are protected constitutionally and by common law, and we discuss it more fully below; *see infra* discussion in Part III.B.2.a.

66. Specifically, *see* *Kavanaugh v. Rabior*, 192 N.W. 623, 624 (Mich. 1921); *see also* *Kavanaugh v. Baird*, 217 N.W. 2, 6 (Mich. 1928), both of which fixed that title boundary at the surveyed meander line permanently, and both of which were reversed in 1930 by *Hilt v. Weber*, 233 N.W. 159, 160 (Mich. 1930), in favor of recognizing the moveable freehold boundary at the water’s edge.

boundaries,⁶⁷ and provided two significant clarifications to that body of law. First, it affirmed that public access to and recreational navigation along Great Lakes beaches lakeward of the OHWM are public trust interests that stand superior to private shoreland property rights.⁶⁸ Second, it affirmed the relevance of the ordinary high-water mark (OHWM) along Great Lakes shores, because those shores, like ocean coastal shores, are periodically submerged and then exposed in an ongoing cycle, albeit across longer time frames than diurnal tidal cycles.

In doing the latter, the *Glass* court recognized two different concepts and corresponding methods for marking ordinary high water. First, the court acknowledged the existence of an elevation-based method for discerning the OHWM on a Great Lakes shore, established in state statutory law, which is discussed more below.⁶⁹ That elevation-based method (hereinafter, the “elevation OHWM”) serves to mark the landward reach of state regulatory authorities pursuant to state statutory law.⁷⁰ Second, acknowledging the long-established public custom of strolling along the nearshore but dry-sand portions of Great Lakes beaches, the court also recognized a second common law mark for discerning how far landward of the water’s edge the public has a right to walk. Specifically, that mark (hereinafter, the “natural OHWM”) is that place along the shore where the past presence of water is discernible.⁷¹ In other words, the public has the right to stroll along the beach where water has clearly been present in the relatively recent past—the portion of the beach submerged during prior periods of ordinary high water—but not on the upland portions of the beach that have not been so submerged. That natural OHWM is discernible physically by topography and the existence of longer-lived vegetation like shrubs and trees that would have been washed away during high-water periods.

The majority and the dissenters on the *Glass* court agreed on all aspects of Michigan’s public trust doctrine save for how far landward the State’s full jus publicum interests and duties extend, and correspondingly, how far landward the public has the right to walk on a Great Lakes beach. On that issue, Justice Markman would have found the lakeward boundary of the jus privatum title interest of a shoreland property to be coincident with both the state’s jus privatum and its jus

67. All of the court’s justices acknowledged the existence of a moveable freehold along Great Lakes shorelines, including the dissents. See *Glass*, 703 N.W.2d at 91 (Markman, J., dissenting).

68. Specifically, the court limited its analysis to whether the public has a right to walk along the shore, an activity the court accepted as long-established custom. The court did not address expressly other recreational uses such as stationary fishing, sunbathing, or picnicking, but such activities would likely be viewed less favorably by the courts for not being so well-established by custom and more akin to trespass.

69. *Glass*, 703 N.W.2d at 67 (citing MICH. COMP. LAWS § 324.32501 (2022)). The elevation OHWM is set by the Great Lakes Submerged Lands Act, MICH. COMP. LAWS § 324.32502 (2022).

70. The Michigan Court of Appeals further clarified *Glass* on this point in *Burleson v. Dep’t of Env’t Quality*, 808 N.W.2d 792, 798 (Mich. Ct. App. 2011).

71. Specifically, the court in *Glass* adopted for Michigan the same definition of the (natural) OHWM as adopted by the State of Wisconsin under its public trust doctrine; that is, as the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation, or other easily recognized characteristic.... (703 N.W.2d at 72 (citing *Diana Shooting Club v. Husting*, 145 N.W. 816 (1914)).

publicum dominion interests for the purposes of beach walking, and he would have placed all of them at the water's edge, encompassing the wet-sand beach.⁷² Justice Young would have placed those boundaries strictly at the water's edge.⁷³ Neither justice would have recognized a natural OHWM as defined by the court in *Glass*, where there is overlapping jus privatum and jus publicum interests for beach walking purposes during low-water periods; they would have recognized only the right to walk along the wet-sand portion of the beach, or the walkable portion submerged, respectively.

While accepting the existence and relevance of an elevation OHWM for marking the reach of the state's regulatory authorities, both dissenters feared that a natural OHWM would not be all that discernible such that permissible beach walking could and would too easily become shoreland trespass. Ironically, because of the unique beach dynamics that come with Great Lakes water level fluctuations, the natural OHWM is in fact both more readily discernible and more stable over time than is the elevation OHWM.⁷⁴ Nonetheless, hard shoreline armoring ultimately destroys the entire natural portion of a beach, scours away the shallow nearshore submerged bottomland, and thus eliminates all walkable public access to the natural beach, whether dry-sand, wet-sand, or submerged but still walkable.⁷⁵ Such armoring also arrests the natural and dynamic transition of submerged bottomland to dry shoreland and vice-versa, making the natural moveable freehold no longer moveable.⁷⁶ These natural Great Lakes shoreline dynamics, multiple concepts of the OHWM, and uncertainties about how to discern them, especially regarding the reach of regulatory authorities based on them, will undoubtedly play into the adjudication of conflicts over shoreline armoring, but their full implications are not entirely clear—as discussed more below.⁷⁷

3. Synthesis of Doctrinal and Constitutional Authorities and Duties

Taken altogether, Michigan's police power doctrine, public trust doctrine, and 1963 Mich. Const. art. 4, § 52, make at least three things clear. First, the people of the State of Michigan hold paramount public trust interests in the public use, protection, and conservation of natural Great Lakes coastal shoreland resources. Second, the State has at least some duty to safeguard those interests. Third, shoreland property owners along shorelines that are naturally accreting own naturally expanding properties, while those along shorelines that are naturally receding own naturally diminishing properties. Recognizing those broad doctrinal and

72. *Glass*, 703 N.W.2d at 81 (Markman, J., concurring in part and dissenting in part).

73. *Id.* at 79 (Young, J., concurring in part and dissenting in part).

74. Richard K. Norton et al., *The Deceptively Complicated "Elevation Ordinary High Water Mark" and the Problem with Using it on a Great Lakes Shore*, 39 J. GREAT LAKES RSCH. 527, 534 (2013).

75. *See supra* Part I.

76. *Id.*

77. *See infra* Part III.

constitutional principles, the question remains, precisely what duties do they impose on the State generally and as contemplated by the Michigan courts, especially as trustee of the State's public trust coastal resources and given the ongoing dynamic and natural transformations of those resources.

In general, a trusteeship is a relationship whereby the trust property is managed for beneficiaries by a trustee, who owns and holds the property subject to fiduciary obligations to manage the trust property strictly for the benefit of the beneficiaries.⁷⁸ The fiduciary obligations that come with a public trusteeship can be grouped into substantive and procedural duties.⁷⁹ Most relevantly, the substantive obligations include:

- The duty of protection (i.e., not necessarily from all public or private use, but to proactively protect the resource from substantial impairment because of that use);
- The duty against waste (i.e., conserving the resource from irreparable damage or depletion for the benefit of future generations of beneficiaries);
- The duty to maximize the value of public trust resources (i.e., safeguarding the highest-value public uses, and prioritizing public purposes over private purposes);
- The duty to restore public trust resources when damaged (i.e., because of changed conditions or a breach of the duty of protection); and
- The duty against privatizing public trust resources (i.e., allowing privatization only when doing so serves a public interest—an interest benefiting the public as a whole, not conceived as whatever public benefits may come from private ownership and development—and when doing so will not substantially impair the resources remaining).

Setting aside conflicts over legislation implementing common or constitutional law, the Michigan courts have addressed these fiduciary obligations through the adjudication of cases speaking directly to public trust doctrinal authorities, police power doctrinal authorities, and constitutional authorities. It is not always clear, however, whether the decisions rendered were tethered uniquely to any one of those sources. The full body of caselaw surveyed above regarding Michigan's public trust doctrine, for example, speaks in one way or another to all of the substantive fiduciary duties that the State, as public trustee, owes to its people as beneficiaries of public trust interests in Great Lakes waters, submerged bottomlands, and coastal shoreland resources. In other cases, the courts have similarly upheld

78. See Quirke, *supra* note 39, at 1–2.

79. *Id.*, at 12–21. Corresponding procedural obligations, worth noting but not treating further here, include: the duty of loyalty (i.e., to the beneficiaries); the duty to supervise agents (i.e., through effective oversight of administrative agencies); the duty of good faith and reasonable skill (i.e., a basic standard of competence, diligence, and prudence); the duty of precaution (i.e., exercising reasonable caution in protecting and maximizing the trust resource); and the duty of accounting (i.e., furnishing trust beneficiaries with sufficient and reasonable information regarding the health of the trust resource). *Id.*

public regulations constraining the private use of public trust Great Lakes resources, enacted in order to protect and conserve those resources. They have done so, however, based on the state's inherent police power authority to regulate for public health and welfare, without reference specifically to the public trust doctrine.⁸⁰ In any case, regardless of the precise authority recognized, the reasoning and principles behind the existence of public trust coastal resources and the State's duties to protect and conserve them effectively converge.

In sum, despite complaints by some commenters that the historical roots of the public trust doctrine are somehow suspect,⁸¹ careful historical and doctrinal analysis confirms the following: both the police power doctrine and the public trust doctrine, as well as protections of private property rights, all trace their roots to English common law and even ancient Roman law; both the police power and public trust doctrines are today distinctly American doctrines, first fully articulated and then developed over time in the context of unique American institutions, values, and conflicts; both doctrines—in addition to state constitutional protections of natural resources broadly—are aptly applied to Michigan's Great Lakes coasts; and each doctrine—along with the state constitutional duty to protect the environment and natural resources—enjoys a historical and doctrinal pedigree equally robust as common law, statutory, and constitutional protections for private property rights.⁸² In terms of organic sovereign constitutional and doctrinal authority, therefore, the State of Michigan clearly enjoys the prerogative—and bears the duty—to enact and administer laws and regulations for the protection and conservation of Michigan's Great Lakes waters, submerged bottomlands, and coastal shorelands. Even so, some inherent conflicts between the principles presented here, and less-than-full consideration of their implications in caselaw to date, leaves some uncertainty.

4. State Statutory and Administrative Regulatory Laws

The Michigan legislature has enacted several laws that flow from doctrinal law and constitutional provisions and speak specifically to Great Lakes coastal shorelands, including the installation of hard shoreline armoring structures along Great Lakes shorelines. All of those statutes were consolidated in 1994 into the Michigan Natural Resources and Environmental Protection Act (NREPA).⁸³ Most broadly, Part 17 of that act (conventionally referred to as the Michigan Environmental Protection Act or MEPA)⁸⁴ authorizes the “attorney general or any

80. *See, e.g.*, *People v. Brooks*, 59 N.W. 444, 444–45 (Mich. 1894) (upholding state law regulating the use of nets for fishing in the Great Lakes as a valid exercise of the police power, without reference to the public trust doctrine); *Osborn v. Charlevoix Circuit Judge*, 72 N.W. 982, 985 (Mich. 1897) (upholding state law regulating fishing in the Great Lakes as a valid exercise of the police power, without reference to the public trust doctrine).

81. *See supra* notes 39–41 and accompanying text.

82. *See Norton & Welsh, supra* note 33, at 456–61.

83. Public Act 451 of 1994 (codified at MICH. COMP. LAWS § 324.101 *et seq.* (2022)).

84. MICH. COMP. LAWS §§ 324.1701–.1706 (2022).

person [to] maintain an action ... for declaratory and equitable relief against any person for the protection of air, water, and other natural resources and the public trust in these resources from pollution, impairment, or destruction.”⁸⁵

The Michigan Supreme Court recognized early on that MEPA, enacted in 1970,⁸⁶ flows from the police power doctrine, the public trust doctrine, and 1963 Mich. Const. art. 4, § 52.⁸⁷ The Michigan Court of Appeals similarly held that both art. 4, § 52 and MEPA mandate protecting and conserving the state’s natural resources and not protecting “the development of natural resources” (i.e., despite reference to the public interest in development of natural resources in art. 4, § 52).⁸⁸ In addition, the Michigan Supreme Court recognized that MEPA was necessitated by the legislature’s “realistic policy decision that the stimulus of possible litigation is now practically necessary to expedite what the ideal of *laissez faire* has been too slow in accomplishing” (i.e., adequate environmental protection and remediation),⁸⁹ that judicial review of agency action was appropriate because not all public agencies had proven to be “diligent and dedicated defenders of the environment,”⁹⁰ and that MEPA from its very enactment was acknowledged as notably innovative and expansive.⁹¹

MEPA imposes a duty on public and private actors to “prevent or minimize degradation of the environment,” and it provides a procedural cause of action and standing for public and private actors to seek equitable relief against actions that are causing—or that are likely to cause—pollution, impairment, or destruction of the state’s environment and natural resources.⁹² Procedurally, MEPA provides that if and when a plaintiff makes a *prima facie* showing that a defendant has “polluted, impaired, or destroyed ... the air, water, or other natural resources or the public trust in these resources,” or is likely to do so,⁹³ the defendant can either rebut that showing with evidence or raise the affirmative defense that, first, “there is no feasible and prudent alternative” and, second, that defendant’s conduct is “consistent with the promotion of the public health, safety, and welfare in light of the state’s paramount concern for the protection of its natural resources from pollution, impairment, or destruction.”⁹⁴

85. *Id.* § 324.1701(1).

86. See generally STATE BAR OF MICH., ENV’T L. SECTION, MICHIGAN ENVIRONMENTAL LAW DESKBOOK CH. 14 (JEFFREY K. HAYNES ET AL. EDS., 2018), <https://connect.michbar.org/envlaw/reports/deskbook/chapter14> (last visited Feb. 14, 2023) (providing overview and analysis of MEPA provisions).

87. State Highway Comm’n v. Vanderkloot, 220 N.W.2d 416, 424–30 (Mich. 1974).

88. Whittaker & Gooding Co. v. Scio Twp., 323 N.W.2d 574, 575 (Mich. Ct. App. 1982).

89. Daniels v. Allen Industries, Inc., 216 N.W.2d 762, 768 (Mich. 1974) (emphasis in original).

90. Ray v. Mason Cnty. Drain Comm’r, 224 N.W.2d 883, 887 (Mich. 1975).

91. *Id.*

92. Ray, 224 N.W.2d at 888. See also Vanderkloot, 220 N.W.2d at 428.

93. MICH. COMP. LAWS § 324.1703(1) (2022).

94. *Id.*

Substantively, a court must determine first whether a defendant's conduct does, or is likely to, pollute, impair, or destroy the state's natural resources; if so, it must next determine whether the defendant cannot raise an affirmative defense because there are reasonable alternatives to the proposed conduct, because the conduct is not consistent with 1963 Mich. Const. art. 4, § 52 protections, or both. If it reaches such a determination, then the court can grant either temporary or permanent equitable relief, or it can impose conditions on the defendant necessary to ensure those protections.⁹⁵

As noted, the Michigan Supreme Court held through early adjudication that 1963 Mich. Const. art. 4, § 52 establishes a mandatory requirement that the state legislature take action to protect and conserve the state's natural resources, holding that MEPA satisfied that requirement, and that environmental protection measures need not be incorporated into every and all state acts otherwise.⁹⁶ Thus MEPA, standing by itself, provides environmental protections for the people of the state and supplements protections in state law where they exist.⁹⁷ Consistent with that posture, MEPA is not administered by a state agency or through statute-specific administrative rules, but it interacts with other free-standing state statutes, administrative rules, and administrative actions.

It provides, for example, that if state standards apply to the conduct in question, a court granting relief may determine the "validity, applicability, and reasonableness" of those standards and, if found deficient, remedy that deficiency.⁹⁸ Similarly, it provides that if administrative rules or proceedings apply to a defendant's conduct, the court may direct parties to seek relief through those proceedings while retaining jurisdiction over them, and then, upon completion of those proceedings, adjudicate their adequacy.⁹⁹ Finally, it provides that if state agency administrative proceedings and judicial review of those proceedings are available, the agency or court may permit the attorney general or other persons to intervene in those proceedings to assert that the "proceeding or action for judicial review involves conduct that has, or is likely to have, the effect of polluting, impairing, or destroying the air, water or other natural resources or the public trust in these resources,"¹⁰⁰ and that neither the agency shall authorize nor a court shall

95. *Id.* § 324.1704(1).

96. *Vanderkloot*, 220 N.W.2d at 419.

97. *Id.* at 427; MICH. COMP. LAWS § 324.1706 (2022).

98. MICH. COMP. LAWS § 324.1701(2) (2022). This provision refers specifically to a "pollution control standard," but subsequent adjudication suggests that the courts would interpret it more widely to encompass any standard speaking to the pollution, destruction, or impairment of natural resources broadly. *Nemeth v. Abonmarche Dev., Inc.*, 576 N.W.2d 641, 648 (Mich. 1998); *Mich. Citizens for Water Conservation v. Nestlé Waters N. Am., Inc.*, 709 N.W.2d 174, 214–15 (Mich. Ct. App. 2005) (*aff'd in part and rev'd in part on other grounds*, 737 N.W.2d 447, 452–53 (Mich. 2007)) (in determining the applicability of section 1701(2), if the "purposes [of statutes other than MEPA] are to protect natural resources or to prevent pollution and environmental degradation, then the statutes are pollution control standards.").

99. MICH. COMP. LAWS §§ 324.1704(2)–(3) (2002).

100. *Id.* § 324.1705(1).

approve conduct “that has or is likely to have such an effect if there is a feasible and prudent alternative consistent with the reasonable requirements of the public health, safety, and welfare.”¹⁰¹ In sum, not only does MEPA create a cause of action against any actor who is engaging in conduct that yields or could yield unlawful environmental harms, including both private and governmental actors, it also creates multiple mechanisms for independent judicial review under MEPA of governmental administrative proceedings that could authorize such conduct, both during and following their completion.¹⁰²

Given MEPA’s citizen suit enforcement structure and the broad approach employed for its provisions, the Michigan courts have started to build a body of “common law of environmental quality” through adjudication of MEPA claims.¹⁰³ In doing so, the courts have adjudicated the interaction of MEPA with other state statutory law in context of the claims raised. Before addressing how Michigan appellate court interpretations of MEPA might inform claims related to Great Lakes shorelines, it is helpful to first contemplate other state laws that speak to Great Lakes shorelines directly, particularly regarding armoring.

Beyond MEPA, three additional parts of NREPA directly speak to the placement of armor structures along Great Lakes shorelines. One part addresses soil erosion and sedimentation control, the second addresses Great Lakes submerged bottomlands, and the third addresses state-designated high-risk erosion areas.¹⁰⁴

101. *Id.* § 324.1705(2).

102. A 2004 Michigan Supreme Court decision, *Pres. the Dunes, Inc. v. Mich. Dep’t of Env’t Quality*, 684 N.W.2d 847 (Mich. 2004), has created confusion about whether MEPA provides a cause of action against an agency permitting action. The court ruled in that case that State determinations regarding the eligibility of an applicant to obtain a permit under Part 637 of NREPA (Sand Dune Mining) are not subject to MEPA, *See id.* at 524. But that decision has been widely interpreted to mean more broadly that State issuance of a permit itself is not conduct that causes environmental harm and thus not subject to MEPA, *see, e.g., Lakeshore Grp. v. State*, No. 341310, 2018 WL 6624870, at *2 (Mich. Ct. App. Dec. 18, 2018) (per curiam) (citing *Preserve the Dunes* for the proposition that “an administrative decision, such as the issuance of a permit,” is not enough to violate MEPA). That reasoning is perplexing because the act on its face provides for intervention and interlocutory appeals of “administrative, licensing, or other proceedings,” MICH. COMP. LAWS § 324.1705(1) (2022), broadly, with no limiting qualification as to its applicability to permitting-related administrative proceedings. Recently, the Michigan Supreme Court declined to revisit the question of whether *Preserve the Dunes* had the effect of immunizing agency permitting actions from MEPA review. *Lakeshore Grp. v. State*, 977 N.W.2d 789, 789 (Mich. 2022) (mem.); *see also id.* at 789 (Bernstein, J., concurring) (“I am troubled by some of the uncertainty and inconsistency in the interpretation of MEPA. However, there are a few reasons why this case does not present the proper vehicle for resolving those issues.”). For more discussion of this issue and the adjudication of MEPA claims generally, *see infra* notes 328–338 and accompanying text.

103. *Ray*, 224 N.W. at 888.

104. In addition to these provisions, NREPA includes parts on sand dune area protection and management (Part 353) and coastal beach erosion (Parts 333 and 337). The latter parts, speaking to coastal beach erosion, do not address shoreline armoring directly, except they authorize local governments to spend general fund moneys to study issues related to coastal beach erosion or protection, MICH. COMP. LAWS § 324.33301 (2022), and to acquire shorelands for beach erosion control projects, *id.* §§ 324.33701, 33708 (2022). NREPA Part 353 (Sand Dunes Protection and Management), which includes provisions speaking to state-designated Critical Dune Areas (CDAs), *e.g.*, MICH. COMP. LAWS § 324.35303(1) (2022), has more limited scope with regard to shorelines. It becomes relevant, however, especially during periods of high water when pressures to armor are high, when structures are proposed lakeward of the crest of a protected dune, *id.* § 324.35304(4), and those structures would impact slopes steeper than 1 on

NREPA Part 91 (Soil Erosion and Sedimentation Control)¹⁰⁵ directs the Michigan Department of Environment, Great Lakes, and Energy (EGLE),¹⁰⁶ counties, and delegated municipal enforcement agencies to regulate “earth change” activities that can yield “soil erosion” or “sedimentation” into waters of the state (including Great Lakes waters), as defined by the act,¹⁰⁷ generally where those activities disturb one or more acres of land or occur within 500 feet of a lake or stream.¹⁰⁸ That part speaks specifically to the installation of seawalls (presumably adjacent to any water of the state) only by exempting property owners who are engaging in “seawall maintenance” activities from the requirement to obtain a permit, when those activities do not exceed 100 square feet and when certain specified erosion and sedimentation controls are employed.¹⁰⁹

The Michigan Supreme Court has recognized erosion and sedimentation together as a type of pollution that implicates the environmental protections provided by MEPA, although the animating purpose of Part 91, and the court’s focus, was on protecting waters of the state from erosion, soils, and other sediments that are harmful to those waters and that, in turn, are caused especially by agricultural and construction-related activities.¹¹⁰ The act does not speak directly to natural erosional processes along Great Lakes shores beyond impliedly recognizing that natural erosion occurs by regulating expressly human activities that “contribute to” background soil erosion and sedimentation processes.¹¹¹ Nor does it speak to harms caused by human activities that might interfere with those natural erosional processes by artificially arresting them, as well as by “contributing to” or accelerating them.

Of the remaining two NREPA parts that address directly Great Lakes shorelands, the oldest and most expansive spatially is Part 325 (Great Lakes

3, *id.* § 324.35316(1)(b). Project petitioners for permits in CDAs must obtain a waiver under Part 91 (sedimentation and erosion control), MICH. COMP. LAWS § 324.35313(1)(a) (2022), and must show a practical difficulty (*e.g.*, critical infrastructure is threatened) to obtain a permit. *See id.* § 324.35317(1). During the most recent period of high water around 2020, the State issued a number of armoring permits in CDAs pursuant to these provisions, although it also denied several requested permits. At the time of this writing, those later decisions have been appealed by the property owners. Email Correspondence with Kate Lederle, Env’t Quality Specialist, Mich. Dep’t of Env’t, Great Lakes & Energy (Oct. 2022).

105. MICH. COMP. LAWS § 324.9101 *et seq.* (2022).

106. Various parts of NREPA, including Parts 91, 323, and 325, refer generically to “the department” or the “department of environmental quality.” *E.g.*, MICH. COMP. LAWS §§ 324.32501(a)–(b) (2022). The current configuration of that department is now the Michigan Department of Environment, Great Lakes, and Energy (EGLE). For this article, we refer specifically to EGLE when discussing departmental administrative authorities and duties. Mich. Exec. Order No. 2019-06, at 2 (changing the name of the Department of Environmental Quality to the Department of Environment, Great Lakes, and Energy).

107. MICH. COMP. LAWS §§ 324.9101(9), (16), (17), (20) (2022).

108. *See Soil Erosion and Sedimentation Control Program (SESC)*, DEP’T OF ENV’T, GREAT LAKES & ENERGY, https://www.michigan.gov/egle/0,9429,7-135-3311_4113-8844--,00.html (last visited March 1, 2022).

109. MICH. COMP. LAWS § 324.9115a(2)(e)(v) (2022).

110. *Nemeth v. Abonmarche Dev., Inc.*, 576 N.W.2d 641, 647 (Mich. 1998).

111. MICH. COMP. LAWS § 324.9101(9) (2022).

Submerged Lands).¹¹² Enacted in 1955 as the Great Lakes Submerged Lands Act (GLSLA), Part 325 begins by providing, in part:

This part shall be construed so as to preserve and protect the interests of the general public in the lands and waters described in this section, to provide for the sale, lease, exchange, or other disposition of unpatented lands and the private or public use of waters over patented and unpatented lands, and to permit the filling in of patented submerged lands wherever it is determined by the department that the private or public use of those lands and waters will not substantially affect the public use of those lands and waters for hunting, fishing, swimming, pleasure boating, or navigation or that the public trust in the state will not be impaired by those agreements for use, sales, lease, or other disposition.¹¹³

Other key provisions of the act relate to the transfer or lease of submerged bottomlands to private ownership, to filling submerged bottomlands, and to placement of “spoil or other material” on submerged bottomlands otherwise (including seawalls, groins, revetments, and other hard armor structures placed at or lakeward of the elevation OHWM specified by the act).¹¹⁴ Those provisions include the following:

- EGLE may “enter into agreements pertaining to waters over and the filling in of submerged patented lands, or to lease or deed unpatented lands,” but only after “finding that the public trust in the waters will not be impaired or substantially affected.”¹¹⁵
- EGLE may permit, “by lease or agreement, the filling in of patented and unpatented submerged lands and permit permanent improvements and structures after finding that the public trust will not be impaired or substantially injured.”¹¹⁶

112. *Id.* § 324.32501 *et seq.* The provisions of this part address submerged bottomlands bordering all of Michigan’s approximately 3,200 miles of Great Lakes shoreline, and to that extent they are extensive spatially, especially relative to the regulation of high-risk erosion areas. *See infra*, notes 138–146 and accompanying text. Even so, the GLSLA also extends only to shorelands lakeward of the elevation-based ordinary high water mark, *Glass v. Goekel*, 703 N.W.2d 58, 67 (Mich. 2005), and to that extent its provisions are quite limited spatially.

113. MICH. COMP. LAWS § 324.32502 (2022).

114. In addition to providing guidance on construing the act, Section 324.32502 also provides lake-specific elevations for determining the landward reach of the regulatory authorities established by the act, where the landward incidence of the elevation on the shore ‘marks’ ordinary high water, and thus the landward extent of regulatory authority as well. *Glass*, 703 N.W.2d at 67; *Burleson v. Dep’t of Env’t Quality*, 808 N.W.2d 792, 801 (Mich. Ct. App. 2011). *See also* Norton *et al.*, *supra* note 74, at 529.

115. MICH. COMP. LAWS § 324.32503(1) (2022).

116. *Id.* at § 324.32505(2). Subsection (3) further provides that EGLE may issue deeds or lease unpatented submerged bottomlands that “have been artificially filled in or are proposed to be changed...by filling, sheet piling, shoring, or by any other means” from conditions as they existed in 1955, the original date of enactment, if “the lands are used or to be used or occupied in whole or in part for uses other than

- “Unless a permit has been granted by [EGLE] or authorization has been granted by the legislature ... a person shall not ... place spoil or other material on bottomland.”¹¹⁷
- If EGLE determines that a project for which a permit is required “will not injure the public trust or interest including fish and game habitat, that the project conforms to the requirements of law for sanitation, and that no material injury to the rights of any riparian owners on any body of water affected will result, [EGLE] shall issue the permit....”¹¹⁸
- Any person who “fills or in any manner alters or modifies any of the land or waters subject to this part without the approval of [EGLE] is guilty of a misdemeanor....”¹¹⁹

Finally, in addition to these direct provisions, the state legislature amended the GLSLA in 2003 to direct EGLE to identify and issue “general permits” for activities that it determines are “similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects on the environment.”¹²⁰ EGLE issued a set of 28 general permits most recently in August of 2021, none of which speak to Great Lakes

existing, lawful riparian or littoral purposes.” *Id.* § 324.32505(3). This provision is perplexing. It could be interpreted to allow for new ‘additional lawful littoral uses,’ in addition to existing lawful uses, by ‘passively filling’ submerged bottomlands through the installation of armoring structures, permitted or not; that is, transferring *jus privatum* interest strictly for private gain, rather than public trust purposes. Or it could be interpreted to reward shoreland property owners who arrested natural movement of the shoreline through unpermitted filling or armoring, expressly for the purpose of protecting unlawful uses of the shoreland (and perhaps existing lawful uses), by allowing the transfer of ownership of the artificially converted shoreland to them. Either proposition arguably contradicts the public trust doctrine broadly and the purposes of the GLSLA stated in Section 324.32502 specifically. We know of no Michigan cases that have prompted the courts to interpret this provision. Similarly, Subsection (5) addresses the amount to be paid to the state should a permit request be made to acquire or lease shoreland for the purposes of, among other things, “shore erosion control ... or to straighten irregular shore lines,” a proposition again arguably at odds both with the public trust doctrine more broadly and the purposes of the GLSLA specifically.

117. MICH. COMP. LAWS § 324.32512(1)(c) (2022). Section 324.32513 specifies the elements to be provided in order to obtain such a permit along with a schedule of fees to be charged by EGLE for processing permit applications, including permits for “major projects” that include, among other things, “[s]eawalls, bulkheads or revetment of 500 feet or more,” *id.* § 32513(2)(d)(iii), and “[s]hore protection, such as groins and underwater stabilizers, that extend 150 feet or more on Great Lakes bottomlands,” *id.* § 32513(2)(d)(vii).

118. *Id.* § 324.32515. This section speaks specifically to a permit for enlarging a waterway, but presumably the courts would read it to include other purposes for which permits are required under this and prior sections.

119. *Id.* § 324.32510(1). This includes a person who either fails to obtain a permit or violates the terms of an issued permit. *Id.* § 324.32510(3). Section 324.32510(1) provides further that land “altered or modified in violation of this part shall not be sold to any person convicted under this section at less than fair, cash market value.” *Id.* § 324.32510(1).

120. *Id.* § 321.32312a(2). This provision was added by Public Act 12 of 2003. H.B. 4257, 92d Leg., Reg. Sess. (Mich. 2003) .

shoreline armor structures.¹²¹ The legislature, however, further amended the GLSLA in 2012, directing EGLE to establish categories of “minor permits” for activities that are, again, “similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effects on the environment.”¹²² EGLE also issued in August of 2021 a set of 54 different minor permit categories, including among these: “31. Maintenance and Repair of Serviceable Structures” (i.e., including shoreline armor structures); “42. Replacement of Existing Seawalls;” “46. Riprap Shoreline Protection;” and “47. Sandbags for Temporary Shoreline Protection During High Water.”¹²³

Beyond issuing general permits and establishing minor permit categories, EGLE has also enacted rules to administer the GLSLA’s provisions more generally.¹²⁴ Key administrative provisions from those rules include the following:

- The term “bottomland” is defined as land underlying Great Lakes waters lakeward of the OHWM;¹²⁵ the “ordinary high water mark” as that place on the shore corresponding to the elevations set by the GLSLA;¹²⁶ and “other materials” as human-made structures including, for example, bulkheads, groins, riprap, and so on.¹²⁷
- The “public trust,” by definition, means “the perpetual duty of the state to secure to its people the prevention of pollution, impairment or destruction of its natural resources, and rights of navigation, fishing, hunting, and use of its lands and water for other purposes.”¹²⁸
- A shoreland property owner “shall obtain a permit from [EGLE] before ... placing spoil or other materials on bottomlands.”¹²⁹
- EGLE may require a number of permit conditions “as it deems reasonable and necessary to protect the public trust and private [littoral] interests,”¹³⁰

121. MICH. DEP’T OF ENV’T, GREAT LAKES & ENERGY, GENERAL PERMIT CATEGORIES IN THE STATE OF MICHIGAN (2021), <https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Programs/WRD/Wetlands/General-Permit-Categories.pdf?rev=e7fc28cb17e14c7b821b7595f6aa585d>.

122. MICH. COMP. LAWS § 324.32512a(1) (2022). This provision was added by Public Act 247 of 2012. S.B. 1052, 96th Leg., Reg. Sess. (Mich. 2012).

123. MICH. DEP’T OF ENV’T, GREAT LAKES & ENERGY, MINOR PROJECT CATEGORIES IN THE STATE OF MICHIGAN §§ 31, 42, 46, 47 (2021), <https://www.michigan.gov/-/media/Project/Websites/egle/Documents/Programs/WRD/Wetlands/Minor-Project-Categories.pdf?rev=c0e17657e1484b20afe47010a67a6999>.

124. MICH. ADMIN. CODE r. 322.1001 *et seq.* (1982).

125. *Id.* § 322.1001(e).

126. *Id.* § 322.1001(j); *See* MICH. COMP. LAWS § 324.32502 (1994). This definition further clarifies that “When the soil, configuration of the surface, or vegetation has been altered by man’s activity, the ordinary high water mark shall be located where it would have been if this alteration had not occurred.” *Id.*

127. MICH ADMIN. CODE § 322.1001(k) (1982).

128. *Id.* § 322.1001(m).

129. *Id.* § 322.1008(1).

130. *Id.* § 322.1011(1).

including: the posting of a surety bond or other guarantee for “projects with the potential for significant environmental impact;”¹³¹ the requirement that placing materials on bottomlands “shall be conducted in a manner which will cause the least damage to the public trust and least disruption to the littoral drift and longshore processes,” or that placing materials will “enhance the public trust or interests,” or that the permittee “mitigate damages;”¹³² the requirement that a permittee monitor to “assure that injury to the natural resources or to the [littoral] interests of adjacent property owners does not occur, including specifically monitoring the littoral drift in the project areas;”¹³³ and the requirement that the project “be in compliance with local zoning ordinances.”¹³⁴

- EGLE shall not grant approval for any permit, lease, deed, or other agreement for bottomland unless the department determines both that any “adverse effects to the environment, public trust, and riparian interests of adjacent owners are minimal and will be mitigated to the extent possible,” and that “there is no feasible and prudent alternative to the applicant’s proposed activity which is consistent with the reasonable requirements of the public health, safety, and welfare.”¹³⁵
- Issuance of a permit by EGLE does not “obviate the necessity of receiving approval from the United States Army Corps of Engineers and, where applicable, other federal, state, or local units of government.”¹³⁶
- EGLE may hold a public hearing when a “proposed project appears to be controversial, where additional information is desired..., or upon request,” and “persons aggrieved by an action or inaction” of EGLE may invoke the provisions of the Michigan Administrative Procedures Act for a contested case hearing and judicial review.¹³⁷

In addition to GLSLA, the third part of NREPA that includes provisions directly addressing the installation of structures like hard armor is Part 323, Shorelands Protection and Management (referred to here as the SPMA). The SPMA does so specifically through its regulation of coastal shoreland development within state-designated high-risk erosion areas.¹³⁸ It first defines “high-risk area” as that area so determined “by the department on the basis of studies and surveys to be subject

131. *Id.* § 322.1011(1)(a).

132. *Id.* § 322.1011(1)(c).

133. *Id.* § 322.1011(1)(d).

134. *Id.* § 322.1011(1)(e).

135. *Id.* § 322.1015.

136. *Id.* § 322.1011(4).

137. *Id.* § 322.1017.

138. MICH COMP. LAWS § 324.32301 *et seq.* (2022). This part was originally enacted in 1970 as the Shorelands Protection and Management Act.

to erosion,”¹³⁹ and it then directs “the department [to conduct] an engineering study of the shoreland to determine ... [t]he high-risk areas,”¹⁴⁰ to determine based on that study “if the use of a high-risk area shall be regulated to prevent property loss or if suitable methods of protection shall be installed to prevent property loss,”¹⁴¹ and to promulgate rules that regulate the uses and development of high-risk areas “to implement the purposes of this part.”¹⁴²

As originally enacted, the SPMA further directs that “the department shall, in compliance with the purposes of this part, prepare a plan for the use and management of the shoreland,” one that includes, but is not necessarily limited to, the “identification of the high-risk ... areas that need protection”¹⁴³ along with recommendations that: provide criteria for “the protection of shorelands from erosion or inundation, for aquatic recreation, for shore growth and cover, for low-lying areas, and for fish and game management;” further provide criteria “for shoreland layout for residential, industrial, and commercial development, and shoreline alteration control;” and provide “for building setbacks from the water.”¹⁴⁴ Finally, the act provides for local zoning of shoreland areas subject to the act,¹⁴⁵ and it requires that any locality with a zoning code that regulates high-risk areas submit the code to EGLE for review to ensure that the code’s protections for private property and coastal resources are consistent with the act.¹⁴⁶

Through the rules currently administered by EGLE according to all of these various statutory directives,¹⁴⁷ the department defines “high-risk erosion areas” (HREAs) as those lengths of shoreland where the shoreline is receding landward by one or more feet per year on average, over a minimum period of 15 years.¹⁴⁸ Within those designated HREAs, the rules establish setbacks for habitable homes, accessory structures like garages, and other small and large “permanent structures” as defined by the act based on projected 30-year and 60-year recession distances.¹⁴⁹

139. MICH COMP. LAWS § 324.32301(c) (2022).

140. *Id.* § 324.32302(a).

141. *Id.* § 324.32305.

142. *Id.* § 324.32312(1).

143. *Id.* § 324.32313(1)(f).

144. *Id.* §§ 324.32313(1)(g)(iv)–(vi).

145. *Id.* § 324.32308–32310.

146. *Id.* § 324.32311.

147. MICH ADMIN. CODE § 281.21 *et seq.* (2000) The discussion presented here focuses on the placement of armoring structures in designated high-risk erosion areas, which is where the vast majority of permitted structures are placed. This rule also requires a permit for placement of a permanent structure within a state-designated Environmental Area (EA) (*see id.* § 281.23(6)(d)). Mostly found on Lakes Huron or Superior, EAs are typically wetlands. There are relatively few such sites, however, and they are not areas for which armoring is typically proposed. Email Correspondence with Kate Lederle, Env’t Quality Specialist, Mich. Dep’t of Env’t, Great Lakes & Energy (information conveyed to authors Oct. 2022).

148. MICH ADMIN. CODE § 281.22(2) (1992).

149. *Id.* §§ 281.22(2)–(22).

Under the terms of the rules, shoreline armor structures become relevant because they can be used to modify the applicable setbacks. Specifically, the rules direct EGLE to allow permanent structures to be built lakeward of the applicable setbacks under certain conditions, including the erection of a “shore protection structure,” if *inter alia* that structure is designed to meet certain performance standards and it complies with permitting requirements under the GLSLA for placement of structures on submerged bottomlands, as applicable.¹⁵⁰ In addition, the rules further require specifically waiving setback requirements for, and allowing the installation of, “an approved shore protection project,” if *all* of a number of conditions are met, including the same requirements just noted and, *inter alia*, the following additional requirements:

(c) A favorable finding is made by the local agency, with input by the department, that a greater public good exists to support the use of a shore protection structure rather than a natural shoreline in terms of all of the following:

- (i) The preservation of fish and wildlife habitat.
- (ii) The value to the entire community of a natural shoreline as opposed to the value to the entire community of additional development that is made possible by the shore protection.
- (iii) The impact of the loss of sand movement along the shoreline.
- (iv) The impact on erosion of land in the immediate area of the shore protection structure....

(d) A favorable finding is made by the department that a greater public good exists to support the use of a shore protection structure rather than a natural shoreline in terms of all of the following:

- (i) The preservation of fish and wildlife habitat.
- (ii) Protection of the public trust.
- (iii) The impact of the loss of sand movement along the shoreline.
- (iv) The impact on the erosion of land in the immediate area of the shore protection structure.

...

(f) Shore protection is already a common feature of the shoreline lying within 1,000 feet of the proposed shore protection structure.¹⁵¹

150. *Id.* §§ 281.22(9)–(10).

151. *Id.* § 281.22(11). This provision may have been adopted out of concern for fairness to shoreland property owners where neighboring owners have already armored. It has the effect of accelerating and worsening the impairment and destruction of natural coastal resources, however, by adding cumulatively to the complete armoring of the shore and the complete starvation of the sediment source needed to continually replenish natural beaches. *See supra* Part I. To the knowledge of department staff, no local governments have invoked Rule 281.22(11) to allow waiver of setback requirements since the rule was

Finally, the rules establish an administrative review process for any “aggrieved party who contests the designation of a high-risk erosion area, the disapproval of a permit application, or the increase in a projected recession distance,”¹⁵² although they make no provision expressly for such review for any parties who might oppose the issuance of a permit.¹⁵³

5. Summary and Conclusions: State Authorities and Duties

As a matter of constitutional and doctrinal law originating from state sovereignty, the State of Michigan owns the submerged bottomlands of the Great Lakes, up to the ambulatory water’s edge or the *jus privatum* title interest. It has broad police power authority to enact regulations and adopt programs designed to promote the public health, safety, and general welfare through the conservation of those submerged bottomlands and adjacent coastal shorelands, and it has a constitutional duty to provide for the protection of those natural resources from pollution, impairment, and destruction. It also has a public trust duty to safeguard Great Lakes waters and to maintain ownership and control of submerged bottomlands perpetually in trust for the benefit of the public, except where transfer of those bottomlands advances and maintains public trust interests (i.e., *jus publicum* dominion interests, comprised of true public interests not premised solely on any benefits that might come from the privatization of coastal resources). And finally, it has a public trust duty to safeguard public interests in accessing and navigating along Great Lakes nearshore waters and shorelands—including shorelands alternately submerged and exposed over time up to the natural OHWM—for commerce, fishing, fowling, and recreation, including beach walking (also *jus publicum* interests). The constitutional and *jus publicum* duties cannot be abrogated by the State.

The State has codified and implemented those authorities and duties through statutory law, including primarily the Michigan Environmental Protection Act (MEPA), Great Lakes Submerged Lands Act (GLSLA), and Shoreland Protection and Management Act (SPMA), all now consolidated as separate parts of the Natural Resources and Environmental Protection Act (Parts 17, 325, and 323 of NREPA, respectively). The MEPA codifies constitutional protections by providing an independent, citizen-suit cause of action to ensure that the state’s natural resources (including its coastal resources) are protected from pollution, impairment, and destruction. The GLSLA codifies expressly the public trust doctrine and serves to preserve and protect Michigan’s Great Lakes public trust resources. It allows for the

adopted, although the State has issued several permits with adjusted setback requirements based on Rule 281.22(10). Email Correspondence with Kate Lederle, Env’t Quality Specialist, Mich. Dep’t of Env’t, Great Lakes & Energy (information conveyed to authors Oct. 2022).

152. MICH. ADMIN. CODE § 281.22(20) (1992).

153. Because this section does not expressly provide a cause of action for review when a party contests the issuance of a permit, such a party—if able to establish standing—would presumably have a cause of action pursuant to the Michigan Administrative Procedures Act. MICH COMP. LAWS § 24.306(1) (2022).

public and private use of those resources and the disposition of state-owned submerged bottom lands to private ownership through lease or sale, but only where public use of those resources and public trust interests in them more broadly are not impaired. Finally, the SPMA expressly authorizes and requires the State to adopt regulations for coastal shoreland areas that are designed to prevent both property loss and damage to natural resources within high-risk erosion areas (i.e., shorelines receding by one foot or more per year), primarily through the establishment of building setbacks from the shoreline.¹⁵⁴

Of course, it would not be practical—if even possible—to rope off Michigan’s entire coastal shoreline resources to preserve them, and all these constitutional, doctrinal, and statutory protections envision active use of coastal shorelands and shorelines. As noted, for example, the GLSLA clearly envisions the transfer of state-owned submerged bottomlands to private interests while the SPMA clearly contemplates the installation of hard shoreline armoring to protect private property within high-risk areas; both are allowed, but only when natural coastal resources and public trust interests will not be unduly impaired. Moreover, the administrative rules implementing those acts go further, allowing “minor” permits for shoreline armoring under the GLSLA and the use of shoreline armoring to adjust setbacks in HREAs under the SPMA. There is also some ambiguity within these acts regarding the permissibility of passive filling of submerged bottomlands through the installation of armoring that arrests natural shoreline recession (at least temporarily), as well as regarding the status of those lands in terms of *jus publicum* interests and duties once passively filled.

Despite these somewhat contradictory provisions and ambiguities, there is no Michigan caselaw directly on point regarding whether the GLSLA, SPMA, or the administrative rules implementing those acts comport with constitutional and doctrinal mandates to adequately conserve and protect Great Lakes natural coastal resources. Conversely, there is no caselaw directly on point contesting state decisions not to allow hard shoreline armoring. There are cases brought under MEPA, however, that speak to the point at which constitutional and statutory mandates to protect the environment and natural resources from pollution, impairment, and destruction become applicable. These cases provide some insight as to how courts might adjudicate further claims brought under MEPA, GLSLA, or SPMA regarding shoreline armoring. Before addressing those cases and questions, we survey a final set of State authorities that exist to regulate coastal shoreland uses and structures—those delegated by the State to its local units of government.

154. The SPMA also addresses development management within designated flood control and environmental areas, not addressed in detail here because of this article’s focus on shoreline armoring. While the express purpose of the SPMA is to provide for the protection and management of Great Lakes shorelands, neither the original act nor the current NREPA part clearly identify the constitutional or doctrinal authority upon which the act is based. Nonetheless, the language of the act and its implementing rules appear to speak to and draw from all the constitutional, police power, and public trust authorities and duties described here taken altogether. *See supra* Part II.A.3. We address EGLE’s current administration of the GLSLA and SPMA rules in the context of likely litigation, *infra* Part III.

B. Local Authorities to Regulate Great Lakes Coastal Resources

Local units of government are political subdivisions of the State. They are created by the state; enabled to develop programs, services, and regulations as needed to promote the general welfare at the local level; and sometimes pre-empted or constrained otherwise in the exercise of those authorities.¹⁵⁵ In Michigan, those local units of government include counties, townships, cities, and villages.¹⁵⁶ Counties do not enjoy police power authorities generally, but they do enjoy such authorities when specifically granted to them by state statute.¹⁵⁷ As such, counties enjoy limited authority to adopt master plans and zoning codes,¹⁵⁸ but no authority to regulate the subdivision of lands. In contrast, townships, cities, and villages all enjoy general police power authorities,¹⁵⁹ all have been further enabled to regulate land use through planning and zoning,¹⁶⁰ and all have been enabled to regulate the subdivision of land.¹⁶¹

Given these authorizations, we address four questions regarding the local regulation of coastal shorelands generally and of coastal shoreline armoring in particular: first, whether these several local authorities are broad enough to

155. See generally Citizens Rsch. Council of Mich., Rep. No. 326, A Bird's Eye View of Michigan Local Government at the End of the Twentieth Century (1999).

156. See MICH. CONST. art. VII, § 1 (counties), § 17 (townships), § 21 (cities and villages), and related provisions. Counties (all but Wayne County), townships, and villages are so-called "general law" or general purpose units of government. All cities are charter or "home-rule" units of government, with more expansive authorities and responsibilities, and townships and villages may adopt charters similarly.

157. See MICH. COMP. LAWS § 41.1 *et seq.* (2022).

158. See *id.* § 125.3102(w). Counties are not authorized to adopt zoning codes that apply in incorporated cities or villages, or in townships where the township has adopted its own zoning, but they can regulate through zoning in townships otherwise. In general, counties exercise that authority when requested by townships to do so.

159. The Michigan Supreme Court has held that while the police power is incapable of precise definition, see *G.F. Redmond & Co. v. Mich. Sec. Comm'n*, 192 N.W. 688, 689 (Mich. 1923), in *People v. Sell*, it described the power as "a power or organization of a system of regulations tending to the health, order, convenience, and comfort of the people and to the prevention and punishment of injuries and offenses to the public." 17 N.W.2d 193, 196 (Mich. 1945). See also *People v. Brazee*, 149 N.W. 1053 (Mich. 1914), *aff'd* 241 U.S. 340 (1915). The State confers police power authority on townships, MICH. COMP. LAWS §§ 41.181, 42.15 (2022) (general law and charter townships); cities and villages at MICH. CONST. art. VII, § 22.

160. See Michigan Planning Enabling Act of 2008 (codified as amended at MICH. COMP. LAWS § 125.3801 *et seq.* (2022)); Michigan Zoning Enabling Act of 2006 (codified as amended at Mich. Comp. Laws § 125.3101 *et seq.* (2022)). See generally, Fisher, et al., Michigan Zoning, Planning, and Land Use (2021) (detailing how local governments use their zoning and planning powers).

161. Land Division Act of 1967 (codified at MICH. COMP. LAWS § 560.101 *et seq.* (2022)). A locality might conceivably use its subdivision ordinance authorized by this act to impose shoreline armoring conditions through the subdivision platting and approval process, such as requiring maintenance of natural beaches (or, conversely, prohibiting installation of armoring structures), should a shoreland property owner seek to subdivide a large coastal shoreland property. Nothing in the act speaks expressly to shoreline armor structures like seawalls or revetments, however, and the authority for the act originates in the state's broader police powers, as with the Michigan planning and zoning enabling acts. We focus our assessment of local authorities exercised pursuant to police power and zoning regulations, accordingly, with the expectation that any litigation arising from a local subdivision ordinance would be treated by the courts in the same way as one related to a police power or zoning ordinance.

encompass the prerogative to limit or prohibit the installation of shoreline armoring structures; second, whether there are limits on local authority to adopt such regulatory constraints through police power regulations versus zoning regulations; third, whether local governments have the authority to compel the removal of illegal or nonconforming shoreline armoring structures; and finally, whether any local regulatory authorities regarding shoreland use and shoreline armoring have been preempted or otherwise limited by state law.

1. Reach of Local Regulatory Authorities

The State of Michigan delegates broad police power authorities most clearly to home-rule cities and villages.¹⁶² It provides those same powers to townships, if somewhat less expansively.¹⁶³ In either case, the Michigan Constitution provides that “[t]he provisions of this constitution and law concerning counties, townships, cities and villages shall be liberally construed in their favor. Powers granted to counties and townships by this constitution and by law shall include those fairly implied and not prohibited by this constitution.”¹⁶⁴ Moreover, the Michigan Supreme Court, through statutory construction and review of the legislative histories of both the constitution and the State’s township enabling laws, has interpreted township police power regulatory authorities expansively.¹⁶⁵ Given those broad delegations of authority and the broad purposes for which those authorities may be exercised in general, it is axiomatic that the protection of the environment and the conservation of natural resources—including the state’s Great Lakes coastal shoreland resources—are valid purposes for which local police power regulations may be enacted.¹⁶⁶ It is

162. *Sell*, 17 N.W.2d at 196; *Belle Isle Grill Corp. v. City of Detroit*, 666 N.W.2d 271, 281–82 (Mich. Ct. App. 2003); *see also* MICH. CONST. art. VII, § 22. This is true even though the Michigan Supreme Court has also explained that “local governments derive their authority from the Legislature. We have held that local governments have no inherent jurisdiction to make laws or adopt regulations of government; they are governments of enumerated powers, acting by a delegated authority; so that while the State legislature may exercise such powers of government coming within a proper designation of legislative power as are not expressly or impliedly prohibited, the local authorities can exercise those only which are expressly or impliedly conferred, and subject to such regulations or restrictions as are annexed to the grant.” *City of Taylor v. Detroit Edison Co.*, 715 N.W.2d 28, 31–32 (Mich. 2006), quoting *City of Kalamazoo v. Titus*, 175 N.W. 480, 483 (Mich. 1919) (internal quotation marks omitted).

163. *See* MICH. CONST. art. VII, § 17 (townships shall have only those “powers and immunities provided by law”).

164. MICH. CONST. art. VII, § 34. *See also* MICH. COMP. LAWS § 41.181 (2022) (townships, both general law and charter, “may adopt ordinances regulating the public health, safety, and general welfare of persons and property”); *id.* § 67.1 (general law villages may enact ordinances “for the safety and good government of the village and the general welfare of its inhabitants.”); *id.* § 117.4j (a home rule city in its charter may provide “for any act to advance the interests of the city, the good government and prosperity of the municipality and its inhabitants and through its regularly constituted authority to pass all laws and ordinances relating to its municipal concerns subject to the constitution and general laws of this state”).

165. *Square Lake Hills Condominium Ass’n v. Bloomfield Twp.*, 471 N.W.2d 321, 325–26 (Mich. 1991).

166. *See Hess v. West Bloomfield Twp.*, 486 N.W.2d 628, 634–35 (Mich. 1992), where the Michigan Supreme Court held that the authorities delegated to townships through the precursor to the current Michigan Zoning Enabling Act—a special application of broader police power authorities (*see infra*

also reasonable to expect that the courts would not differentiate between townships, cities, or villages regarding this application of such delegated police powers.¹⁶⁷

Despite the constitutional directive to interpret local powers broadly, the Michigan Supreme Court has held that local authority to regulate the development and use of land specifically represents a special application of the state's broad police power authorities that must be delegated expressly to local units of government.¹⁶⁸ The state legislature has delegated such authorities extensively to local governments since the early 20th century. Those authorities were consolidated in the Michigan Planning Enabling Act (MPEA)¹⁶⁹ and Michigan Zoning Enabling Act (MZEA),¹⁷⁰ enacted in 2008 and 2006 respectively. Through those acts, the State has clearly and expansively delegated the authority to regulate land development, uses, and activities specifically for the purpose of protecting the environment and conserving natural resources, among other things. Those authorities are expansive, first, because they expressly extend to townships, cities, and villages equally, as well as to counties under more limited conditions.¹⁷¹ Second, in addition to authorizing the enactment of zoning broadly in ways that "promote public health, safety, and welfare,"¹⁷² the Michigan Zoning Enabling Act also provides:

note 176)—advanced the mandate established by the Michigan Constitution of 1963 (*i.e.*, art. 4, § 52) that the environment and natural resources are of paramount concern to the people of the state. Note too that the United States Supreme Court has held that "[l]egislation designed to free from pollution the very air that people breathe clearly falls within the exercise of even the most traditional concept of what is compendiously known as the police power." *Huron Portland Cement Co. v. City of Detroit*, 362 U.S. 440, 442 (1960). We have found no Michigan cases addressing the question of whether local regulations adopted pursuant to delegated general police power authorities for the purpose of protecting natural coastal shoreland resources specifically from pollution, impairment, or destruction might somehow exceed the reach of those authorities, but we conclude based on the courts' adjudication of related cases that they would almost certainly not reach such a holding.

167. The courts have recognized broad authority to regulate pursuant to police power authorities specifically for both cities (*e.g.*, *Rental Prop. Owners Ass'n of Kent Cnty. v. City of Grand Rapids*, 566 N.W.2d 514, 517 (Mich. 1997)) and townships (*e.g.*, *Square Lake Hills Condo. Ass'n v. Bloomfield Twp*, 471 N.W.2d 321, 325–26 (Mich. 1991)), although the authority for townships in particular is arguably somewhat more constrained; *see Howell Twp. v. Rooto Corp*, 670 N.W.2d 713, 716 (Mich. Ct. App. 2003) ("While the provisions of the Constitution and law regarding counties, townships, cities, and villages must be liberally construed in their favor, the powers granted to townships by the Constitution and by law must include only those fairly implied and not prohibited by the Constitution") (citation deleted).

168. *Clements v. McCabe*, 177 N.W. 722, 726 (Mich. 1920).

169. MICH. COMP. LAWS § 125.3801 *et seq.* (2022).

170. *Id.* § 125.3101 *et seq.*

171. The MPEA and MZEA both define 'local unit of government' as encompassing counties, townships, cities, and villages, *id.* §§ 125.3803(f) (MPEA), 125.3102(o) (MZEA), and they grant essentially equivalent authorities to townships, cities, and villages (and for counties that are authorized to zone) with regard to the issues addressed by this assessment.

172. "A local unit of government may provide by zoning ordinance for the regulation of land development and ... the use of land and structures to meet the needs of the state's citizens for ... natural resources ... and to promote public health, safety, and welfare." *Id.* §125.3201(1). "A zoning ordinance shall be based upon a plan designed to promote the public health, safety, and general welfare, ... to conserve natural resources and energy, ... to meet the needs of the state's residents for ... other natural resources, ... [and] to reduce hazards to life and property.... A zoning ordinance shall be made with reasonable consideration of the characteristic of each district, its peculiar suitability for particular purposes, [and] the conservation of property values and natural resources...." *Id.* § 125.3203(1). The Michigan courts

A local unit of government may provide under the zoning ordinance for the regulation of land development and the establishment of districts which apply only to land areas and activities involved in a special program to achieve specific land management objectives and avert or solve specific land use problems, including the regulation of land development and the establishment of districts in areas subject to damage from flooding or beach erosion.¹⁷³

Citing to these purposes, the Michigan Supreme Court has found that by granting local governments “the authority to promote the public health, safety, and general welfare through enactment of zoning ordinances, the Legislature was complying with [the 1963 Mich. Const. art. 4, § 52] constitutional mandate to protect the environment, including bodies of water, from impairment or destruction.”¹⁷⁴ Finally, as detailed above, local governments are authorized to implement the State’s shoreland management provisions of NREPA (Part 323) through their zoning authorities. If their zoning ordinance addresses coastal shorelands in regulated settings otherwise, they must submit them to EGLE to ensure consistency with those state provisions.¹⁷⁵ Like MEPA, the MPEA and MZEA (and presumably the other several state statutes granting local governments broad police power authorities) represent state legislative acts that serve, in part, to safeguard the state’s paramount interests in protecting and conserving its natural resources.¹⁷⁶

Thus, taken altogether, Michigan doctrinal law, constitutional provisions, state legislative acts, and caselaw clearly establish that local governments may adopt regulations for the purpose of protecting the environment and conserving natural

have repeatedly upheld this grant of authority and its broad reach (including through the interpretation of earlier versions of it that were consolidated into the MZEA in 2006). *See, e.g., Kirk v. Tyrone Twp.*, 247 N.W.2d 848, 852 (Mich. 1976); *Zaagman, Inc. v. Kentwood*, 277 N.W.2d 475, 477 (Mich. 1979); *Kyser v. Kasson Twp.*, 786 N.W.2d 543, 548 (Mich. 2010).

173. MICH. COMP. LAWS § 125.3201(3) (2022). *See also* *Frericks v. Highland Twp.*, 579 N.W.2d 441, 450–51 (Mich. Ct. App. 1998) (upholding the township’s authority to exclude from “buildable areas” certain “natural hazard areas,” including “lake margins” among others, as a “proper subject of zoning”); *Twp. of Burt v. Dep’t of Nat. Res.*, 593 N.W.2d 534, 537 (Mich. 1999) (construing an earlier version of the current MZEA authorizing townships to regulate land development to meet the needs of the state’s citizens for recreation (codified at MICH. COMP. LAWS § 125.3201(1) (2006)), in combination with an earlier version of the MPEA authorizing the township to adopt a zoning plan that addresses, among other things, “waterways and waterfront development” (codified at MICH. COMP. LAWS § 125.3833(2)(b) (2010)), as providing “townships with extensive authority to regulate the use and development of land within their borders, including waterfront property.”).

174. *Hess v. West Bloomfield Twp.*, 486 N.W.2d 628, 634 (Mich. 1992). The Michigan courts have upheld similar zoning code regulations adopted to protect the environment and natural resources. *See, e.g., Frericks v. Highland Twp.*, 579 N.W.2d 441 (Mich. Ct. App. 1998) (finding that the regulation of uses and activities within high hazard and environmentally sensitive areas was a valid exercise of zoning authorities).

175. *See supra* Part II.A.4.

176. *Id.*

resources. Those same authorities would almost certainly extend to regulations addressing the use of Great Lakes coastal shorelands and the installation of armoring structures on those shorelands. If properly enacted and administered procedurally otherwise, and setting aside preemption for now, the courts are not likely to find local shoreland regulations to be *ultra vires*. The next question is whether localities can adopt such regulations through both general police power ordinances and zoning ordinances or must adopt them expressly in one form or the other.

2. Regulating Shorelands Through Police Power versus Zoning Ordinances

Because zoning represents a special application of the state's police power authorities, localities may enact zoning ordinances only for the purposes provided through the MZEA, and they must do so following extensive notice, comment, and other procedures specified by the MZEA.¹⁷⁷ In addition, unlike with general police power regulations, when the amendment or enactment of a zoning ordinance prohibits existing land uses or structures that were otherwise lawful prior to the ordinance, those uses and structures are given "nonconforming" status and allowed to continue indefinitely, under certain conditions.¹⁷⁸

Local zoning in Michigan is essentially permissive: it is not required of localities as a general matter. Nonetheless, localities must use zoning when they set out to regulate under certain circumstances, rather than using a general police power ordinance. First, when regulating the development and *use* of land, a locality must do so through the MZEA.¹⁷⁹ Second, because localities must establish zoning districts and apply requirements within those districts uniformly when regulating through zoning,¹⁸⁰ the courts have held, conversely, that if a locality attempts to regulate by establishing districts and specifying allowable uses uniformly within those districts,¹⁸¹ or in a way designed to effectuate a "general zoning plan,"¹⁸² then it must adopt and administer that regulation pursuant to the MZEA.

Because of this structure, when a locality is regulating the use of land through a zoning ordinance enacted pursuant to the MZEA, the locality may also

177. See generally FISHER, ET AL., *supra* note 160, Ch. 1. Beyond more extensive enactment requirements, zoning ordinances are expressly required to be based upon extensive and formal local planning efforts. MICH. COMP. LAWS § 125.3203(1) (2010). In practical terms, that means enacting a zoning ordinance is typically more time-consuming and perhaps more difficult than enacting a general police power ordinance, albeit perhaps more legally defensible as well for being based upon thorough planning.

178. MICH. COMP. LAWS § 125.3208 (2022). See *infra* Part II.B.3.

179. Forest Hill Energy-Fowler Farms, L.L.C. v. Twp. of Bengal, No. 319134, 2014 WL 6861254, at *3 (Mich. Ct. App. Dec. 4, 2014).

180. MICH. COMP. LAWS § 125.3201 (2006).

181. Nat. Aggregates Corp. v. Brighton Twp., 539 N.W.2d 761, 764–768 (Mich. Ct. App. 1995)

182. Square Lake Hills Condominium Ass'n v. Bloomfield Twp., 471 N.W.2d 321, 326–327 (Mich. 1991).

regulate activities on the land through the zoning ordinance that occur in conjunction with the regulated uses of those properties (e.g., via setback requirements, height restrictions, landscaping requirements, and so on).¹⁸³ In contrast, if a locality is looking to regulate only *activities* on the land as they may occur anywhere within a jurisdiction (or, at least, not merely within specified districts) and that are not necessarily related to a particular land *use*, and in a way not clearly tied to a general zoning plan, then it may do so by enacting a general police power regulation rather than through a zoning ordinance. While recognizing that “the distinction between a zoning ordinance and a regulatory ordinance cannot depend on whether the purpose is to promote the public good because both types of ordinances may have that purpose,”¹⁸⁴ the courts have grappled with the distinction between “use” and “activity.”

The caselaw on this point is not extensive, but several cases provide instruction. In *Natural Aggregates Corp. v. Brighton Twp.*, the Michigan Court of Appeals recognized a township “soil removal ordinance” that required obtaining a permit when quarrying minerals, applicable jurisdiction-wide, as a valid general police power ordinance.¹⁸⁵ In *Square Lake Hills Condominium Ass’n v. Bloomfield Twp.*, the Michigan Supreme Court similarly found a local ordinance that limited the ability to dock boats along an inland lake according to the length of a property’s lake frontage—but not according to or within an established lakefront district—to be a valid general police power ordinance. The courts concluded in both instances that the ordinances advanced valid public health and safety purposes, that they regulated activities as they occurred on the land rather than uses of the land, and neither did so through the creation of districts¹⁸⁶—even though, in the latter case, boat docking occurs only in certain places (i.e., along the shores of the lake).

Two more recent unpublished decisions do not establish precedential authority as such but speak further to distinctions between ‘activity’ and ‘use’ in ways that suggest how a court might view regulations on shoreline armoring. In *City of Bloomfield Hills v. Froling*,¹⁸⁷ property owners situated at the lowest point of a subdivision and subject to flooding installed a sump pump and a berm (or garden wall) to alleviate that flooding. The sump pump violated the township’s wastewater ordinance, while the berm violated its grading and stormwater management ordinances, all adopted as general police power regulations. The court of appeals found all the ordinances to be valid, and regarding the berm specifically (i.e., the modification most like a seawall or other shoreline armoring structure), it found that

183. See *supra* notes 170–171 and accompanying text.

184. *Nat. Aggregates Corp.*, 539 N.W.2d at 768.

185. *Id.* at 769.

186. Brighton Township, for example, did not create a ‘mining district’ and designate quarrying as an allowable use within that district. Similarly, Bloomfield Township did not create a ‘lakefront district’ and specify ‘boating’ or ‘boat docking’ as an allowable use or activity, respectively, within that district.

187. *City of Bloomfield Hills v. Froling*, No. 288766, 2010 Mich. App. LEXIS 763 at *1–2 (Ct. App. Apr. 27, 2010) (unpublished decision).

avoiding “irreparable harm” and “damage” that a berm might cause to neighboring properties by diverting stormwater was a valid purpose for the regulation.¹⁸⁸

In contrast, in *Forest Hill Energy-Fowler Farms, L.L.C. v. Twp. of Bengal*,¹⁸⁹ four townships adopted general police power ordinances that effectively prohibited the installation of wind turbines for energy production. Reasoning through “whether the ordinances involve matters subject to zoning,” the court of appeals concluded that the “construction of an infrastructure of wind turbines as part of a wind energy system is not merely an activity on the land, but rather relates to a permanent use of the land.”¹⁹⁰ The townships, the court concluded, were not attempting to regulate merely activities but rather the use of the properties (i.e., constraining their use for wind generation purposes) by limiting the construction of towers (“structures,” “systems,” or “activities”) as a fundamental constraint on use.¹⁹¹

In sum, and again setting aside the question of preemption, existing constitutional provisions, statutory authorities, and caselaw clearly provide local authority to regulate seawalls and other shoreline armoring structures, when done in conjunction with the local regulation of shoreland use through zoning. The courts also would very likely support the regulation of those structures through general police power ordinances if: they recognize an armoring structure to be an “activity” rather than a fundamental use of the property;¹⁹² the ordinance is designed to advance valid public health, safety, and general welfare purposes;¹⁹³ and the ordinance is not fashioned so as to apply those regulations through established districts.

188. *Id.*, at *2–3.

189. No. 319134, 2014 WL 6861254 (Mich. Ct. App. Dec. 4, 2014). In another unpublished decision, the U.S. District Court for the Eastern District of Michigan followed the Michigan Court of Appeals in finding that Ellington Township had improperly attempted to place a moratorium on wind energy project permits through a general police power regulation, rather than through a zoning ordinance as required by the MZEA. *Tuscola Wind III, LLC v. Ellington Twp.*, No. 17-CV-11025, 2018 WL 1291161, at *5 (E.D. Mich. Mar. 13, 2018).

190. No. 319134, 2014 WL 6861254 (Mich. Ct. App. Dec. 4, 2014) at *5. This case was complicated by the fact that the county within which the townships were located had enacted provisions regulating wind energy generation through its zoning ordinance, applicable to properties located within the townships. Aside from the question of preemption, the *Forest Hill* court further reasoned that, while the townships’ ordinances themselves did not regulate according to districts, the applicability of those several township ordinances were in fact constrained to districts already established through the county zoning ordinance. *Id.*

191. *Id.* Based on this reasoning, the court of appeals affirmed the circuit court’s ruling that the township ordinances had not been enacted properly pursuant to the MZEA, and because the county had adopted a valid zoning ordinance regulating the use of properties for wind generation, the County’s zoning ordinance was controlling as to the use of the properties for wind energy systems. *Id.* at *7.

192. That is, based on relatively limited caselaw such as it is, the courts are more likely to recognize armoring structures to be ‘activities’ properly regulated through a general police power ordinance to the extent that those structures are incidental to any allowable use of a property—residential, commercial, or otherwise—such as a stormwater diversion berm or wall, rather than as structures that are fundamentally inherent to the use of the property, such as wind turbines that comprise the wind energy systems necessarily required to use the property for wind energy generation or use.

193. For example, restrictions designed to provide protection of the environment, conservation of natural resources, and protection of adjacent shoreland properties. *See supra* notes 165–166 and accompanying text.

3. Removal of Illegal or Nonconforming Armor Structures; Vested Rights in Them

As detailed in Part I, coastal shoreline armoring structures can cause substantial environmental harms by scouring sediments away from the nearshore zone, destroying directly natural shoreline habitat, and accelerating erosion of adjacent shorelines. Moreover, when they ultimately fail, they create hazards to on- and offshore navigation from the remaining debris.¹⁹⁴ The mitigation and abatement of those harms therefore represent valid public health, safety, and general welfare purposes that may warrant prohibiting the installation of such structures, either through general police power or zoning ordinances.¹⁹⁵ That raises the question, however, of whether—and if so when—a locality can compel the removal of an existing armoring structure, either because it violates the terms of an ordinance or because it is causing nuisance-like environmental harms.

The Michigan Supreme Court has held that localities can validly enact and enforce general police power ordinances to prohibit and abate public nuisances,¹⁹⁶ and that they can use police power regulations enacted for public health, safety, and welfare purposes more broadly to compel the removal of nuisance structures based on an amortization scheme.¹⁹⁷ Setting aside questions of preemption, Michigan caselaw suggests the courts would likely uphold a local general police power ordinance compelling the removal of shoreline armoring structures deemed to be public nuisances or compelling their removal over time such as through use of an amortization scheme or based on other conditions (e.g., some cumulative disrepair or catastrophic damage threshold).¹⁹⁸ It is not clear whether a locality could compel

194. *See supra* Part I.

195. *See supra* Part II.B.1.

196. *Rental Prop. Owners Ass'n v. City of Grand Rapids*, 566 N.W.2d 514, 518 (1997). The City of Grand Rapids declared properties used for illegal drugs and prostitution to be public nuisances and authorized padlocking those properties as a means to abate those nuisances. The authority to abate a nuisance was not a focus of the court's analysis; the key question the court addressed was whether state law that prohibits public nuisances (including the same activities as addressed by Grand Rapids) and provides for equitable relief to abate and permanently enjoin those nuisances (Revised Judicature Act of 1961, MICH. COMP. LAWS §§ 600.3801–3805 (2015)) had preempted Grand Rapids' ordinance (concluding that it had not). *See also* *Rockenbach v. Apostle*, 330 Mich. 338, 352 (1951) (sustaining an injunction prohibiting the establishment and operation of a funeral home in a residential district because doing so would yield a public nuisance, even though that use was allowed pursuant to the city's zoning code). *See generally* JUERGENSMEYER ET AL., *supra* note 35, § 4.40; CLAN CRAWFORD, JR., MICHIGAN ZONING AND PLANNING, § 17.04 (1988).

197. *Adams Outdoor Adver. v. City of E. Lansing*, 483 N.W.2d 38, 42–43 (1992). This regulation compelled the removal of billboards for public safety (traffic) and general welfare (aesthetic) purposes over time using an amortization scheme.

198. Sanctions authorized by state law in general for violation of local general police power ordinances differ by type of local government. *See, e.g.*, MICH. COMP. LAWS § 42.21 (1947) (townships, providing only for limited fines and jail time); MICH. COMP. LAWS § 117.4(l) (1909) and MICH. COMP. LAWS § 78.25(a) (1909) (cities and villages, limiting penalties to “municipal civil infractions”). Nonetheless, the Michigan Supreme Court has recognized local government authority to enact and enforce police power ordinances to abate public nuisances, including orders or actions that directly abate or enjoin those nuisances (*i.e.*, such as padlocking a property to discontinue its use), beyond merely fining or

the removal of such structures merely because they are illegal under the terms of the newly enacted ordinance,¹⁹⁹ but nothing in the cases addressing the abatement of public nuisances suggests that the locality would be precluded from doing so once the structures begin to clearly yield environmental or resource conservation harms, or accelerated erosion to neighboring properties.

Should a locality regulate shoreline armoring structures through a zoning code, and in particular, should the initial enactment or amendment of a zoning code make unlawful such structures that already exist, then those structures would take on the status of “nonconforming” structures under the terms of the MZEA.²⁰⁰ The tensions that exist between promoting the vision of appropriate land development and use embodied within a zoning code, on the one hand, and providing fairness to property owners using (or maintaining structures on) their properties in ways that were lawful but became unlawful when an ordinance took effect, on the other hand, has been recognized since the original enactment of zoning laws in the early 20th century. In general, the approach to resolving those tensions has been to allow such nonconforming uses and structures to continue indefinitely but to disfavor them by not allowing their expansion and by requiring their discontinuation under certain conditions—generally destruction or abandonment.²⁰¹

The MZEA provides, as an initial matter, that existing lawful uses and structures made unlawful by a local zoning ordinance may be continued even though those uses or structures no longer conform to the zoning code’s provisions.²⁰² It also recognizes that nonconforming uses and structures are disfavored by zoning, and it provides two mechanisms to constrain or eliminate them. First, the act provides that a zoning ordinance enacted pursuant to it may provide for “the completion, resumption, restoration, reconstruction, extension, or substitution of nonconforming uses or structures upon terms and conditions provided in the zoning ordinance,” thus also allowing the establishment of conditions under which uses or structures may not be completed, resumed, restored, reconstructed, and so on.²⁰³ Second, the act provides for a locality to exercise the power of eminent domain to condemn and acquire nonconforming uses or structures in order to remove them.²⁰⁴

otherwise penalizing the property owner. *See* Rental Prop. Owners, 455 Mich. at 272), although courts may require proof of conditions yielding a nuisance in fact (*i.e.*, as opposed to mere violation of the ordinance)—*see* Ypsilanti Charter Twp. v. Kircher, 281 Mich. App. 251 at ***26 (2008). For discussion of whether such actions might amount to a regulatory taking, *see infra* Part III.B.2.c.

199. The court of appeals’ reasoning in its unpublished decision of *Froling*, *supra* note 186 and accompanying text, suggests that mere violation of an ordinance would justify local action to compel removal of the offending structure, but that decision was not precedential.

200. *See generally* FISHER, ET AL., *supra* note 160, § 1.9; JUERGENSMEYER ET AL., *supra* note 35, Chapter 4, Part 6.

201. JUERGENSMEYER ET AL., *supra* note 35, Chapter 4, Part 6.

202. MICH. COMP. LAWS § 125.3208 (2008). To be sure, any armoring structures in existence at the enactment of a zoning ordinance provision prohibiting such structures, if they were not lawfully installed initially, would not enjoy nonconforming status.

203. MICH. COMP. LAWS §§ 125.3208(2) (2008).

204. MICH. COMP. LAWS §§ 125.3208(3)–(4) (2008).

Given these MZEA provisions, localities typically include provisions in their zoning ordinances allowing for general maintenance and basic repairs of nonconforming uses and structures but prohibiting their expansion, and requiring that they be discontinued if abandoned for some period of time.²⁰⁵ Local zoning ordinances also typically provide that structures substantially damaged by catastrophic events like fire or floods may be restored, but only if the damage amounts to something less than their substantial value (e.g., where restoration would cost 50% or less of the fair market value of the structure). If the damage is substantial, then the structure might be restored only in complete compliance with the ordinance or not at all if such structures are prohibited altogether.²⁰⁶ Should a coastal locality regulate shoreline armoring structures through zoning, accordingly, it might allow for basic maintenance of existing nonconforming structures but properly prohibit any expansion of them. And while it makes little sense to contemplate abandoning a shoreline armoring structure, a locality prohibiting the installation of such structures, thus making existing structures nonconforming, could conceivably require that those existing nonconforming structures be removed entirely, once degraded or damaged beyond some threshold level by ongoing wave action or storm dynamics.

A situation where a locality enacts or amends an ordinance to prohibit establishing a structure after that structure was expressly permitted under prior law, but before the structure was actually built, raises the question of whether the property owner enjoys vested rights in that structure, such that the owner should be allowed to proceed with construction (and effectively create a nonconforming use or structure).²⁰⁷ This situation can arise especially in the context of zoning, which typically entails site plan approvals for uses allowed by right, at the very least, if not requiring approvals for special exception uses or otherwise. By extension, an order to remove an existing nonconforming armoring structure may also raise the question of whether there exist any continuing vested rights in that structure. In any case, however, the courts have held that protected property interests do not extend to the right to maintain a nuisance, such that there are no vested rights in a structure generating a nuisance—even structures otherwise enjoying nonconforming use status pursuant to the MZEA and a local zoning ordinance.²⁰⁸ Thus, while there may be

205. See, e.g., Chikaming Township Zoning Ordinance, Article 8 (2020); Ann Arbor City Unified Development Code, Chapter 55 (2018) (Zoning), Article 6.

206. See, e.g., Chikaming Township Zoning Ordinance, § 8.04(A)(6)(a) (2021), prohibiting rebuilding, repairing, or reconstructing nonconforming structures damaged by “fire, flood, or other catastrophe in excess of ... 75% of the structure’s pre-catastrophic fair market value” except in complete conformity with the code; Ann Arbor City Zoning Code, UDC Chapter 55, § 5.32.2(D) (2018), providing that a nonconforming structure “shall not be replaced after damage or destruction ... if the estimated expense of reconstruction exceeds 75% of the appraised value...” of the structure.

207. See generally CRAWFORD, *supra* note 196, Chapter 5; FISHER, ET AL., *supra* note 160, § 10.7; JUERGENSEMEYER ET AL., *supra* note 35, § 5.28. In addition to having obtained clear governmental permission for a project, such as through issuance of site plan approval or a special exception use permit, courts also typically require that the property owner proceed with substantial construction activities in reliance on the permit in order for rights to vest. *Id.*

208. See CRAWFORD, *supra* note 196, §§ 15.07 and 17.04. The MZEA provides, in part: “Except as otherwise provided by law, the use of a ... structure ... used, erected, altered, razed, or converted in

some question as to whether existing armoring structures that are in place but have no discernable effects on natural systems or neighboring properties may enjoy vested rights following enactment of a regulation prohibiting them,²⁰⁹ the courts would not likely find such rights to exist if in fact the presence of those armoring structures is yielding nuisance-like harms. As such, they would be subject to abatement through removal.

Finally, the adjudication of claims brought against local zoning regulations constraining the continued use of nonconforming structures depends on the precise terms of the particular ordinance, as well as the broader provisions of the MZEA and caselaw addressing both. Caselaw speaking generally to nonconforming use provisions—particularly regarding prohibitions on the restoration of structures—has been somewhat mixed.²¹⁰ While the Michigan Supreme Court has upheld a local zoning ordinance that prohibited reconstruction of a building substantially damaged by fire when that building served a nonconforming use,²¹¹ the courts have not distinguished clearly or consistently otherwise between alterations that do not change the inherent features of a structure²¹² or that amount to regular maintenance²¹³ (i.e., alterations that generally retain nonconforming status) from those that amount to substantial modification or repairs²¹⁴ (i.e., those for which nonconforming status is lost). For all these reasons, it is not clear how courts would treat existing armor structures should a locality constrain or prohibit their use (i.e., structures enjoying nonconforming use status under the MZEA), particularly in terms of the extent to which they might be repaired or replaced when damaged beyond some threshold by

violation of a zoning ordinance ... is a nuisance per se,” and that a “court shall order the nuisance abated...” MICH. COMP. LAWS § 125.3407 (2008). The courts have held that, because of this provision, violation of the ordinance constitutes a nuisance per se, and a locality need not show a nuisance in fact to be entitled to relief. *Independence Twp. v. Skibowski*, 355 N.W.2d 903 (1984). A shoreline armoring structure installed unlawfully subsequent to the enactment of a zoning ordinance provision prohibiting such structures would therefore be subject to abatement as a nuisance per se. Even an existing structure, furthermore, would not be subject to abatement as a nuisance per se because of its nonconforming status, would nonetheless be subject to enjoinder to the extent it generates a nuisance in fact. *See, e.g., Adams v. Kalamazoo Ice & Fuel Co.*, 222 N.W.2d 86 (1928) (nonconforming ice retail establishment enjoined for disruptions to a neighborhood); *Civic Ass’n v. Horowitz*, 28 N.W.2d 97 (1947) (nonconforming carnival enjoined for disruptions to a neighborhood); *Norton Shores v. Carr*, 265 N.W.2d 802 (1978) (nonconforming junkyard enjoined for disruptions to a neighborhood).

209. That is, given other considerations regarding the establishment of vested rights in the first place; *see supra* note 207.

210. *See generally* CRAWFORD, *supra* note 195, § 5.06.

211. *Austin v. Older*, 278 N.W.2d 727, 729 (Mich. 1938) (upholding city’s denial of permission to repair and upgrade a nonconforming gas station).

212. *Paye v. Grosse Point*, 271 N.W.2d 826, 827 (Mich. 1937) (enjoining city from preventing replacement of the storefront of a nonconforming business).

213. *Madison Heights v. Manto*, 102 N.W.2d 182, 185 (Mich. 1960) (finding that repair of a degraded septic tank serving a mobile home park constituted ordinary maintenance and did not result in loss of nonconforming status).

214. *Cole v. Battle Creek*, 298 N.W.2d 466, 468 (Mich. 1941) (upholding city’s denial of permission to repair and upgrade existing nonconforming, non-serviceable greenhouse buildings).

Great Lakes storms and ongoing wave action but not necessarily creating nuisance-like harms.

4. State Preemption of Local Authorities to Regulate Shoreline Armoring

Given this assessment, townships, cities, and villages in Michigan, along with counties to a more limited extent, have the prerogative to regulate their coastal shorelands both through broad police power authorities and the more specific planning and zoning authorities delegated to them by the State. The final question to address, then, is whether those local authorities to regulate coastal shorelands generally, or the installation of coastal shoreline armoring specifically, have been preempted or are somehow limited otherwise by state law. More precisely, we address here three questions: first, whether localities are limited in terms of the purposes for which they may exercise the authorities delegated to them, specifically regarding the public trust doctrine; second, whether localities are limited spatially in terms of the lakeward extent of their authorities; and third, whether local authority to regulate shorelands or shorelines has been preempted specifically by state law otherwise.

First, as detailed above, the State of Michigan has recognized the applicability of the public trust doctrine to its Great Lakes shores almost since Michigan became a state. All the caselaw surveyed, along with 1963 Mich. Const. art. 4, § 52 and the several parts of NREPA that implement both (most notably the GLSLA and SPMA), make clear that the doctrine and corresponding federal and state laws furthering it both impose fiduciary duties on the State and authorize the State to act in the performance of those duties. Nothing in that body of law envisions public trust-related authorities or duties at the local government level. It is reasonable to conclude, therefore, that local units of government in Michigan do not bear public trust responsibilities, nor do they enjoy public trust authorities. This lack of delegated authority is most relevant regarding the ownership and obligations of State public trust *jus publicum* and *jus privatum* interests in submerged bottomlands.

Nonetheless, localities do enjoy delegated police power and related authorities. These powers may be exercised broadly for the purpose of protecting the environment and natural resources from pollution, impairment, and destruction. In practical effect, therefore, localities appear to have the authority to regulate the various uses of and activities on their shorelands generally, including the installation of shoreline armoring. That broad authority, however, is based solely on their delegated police power, constitutional, and statutory authorities to protect and conserve natural resources for the public health, safety, and general welfare, not by operation the public trust doctrine.

The next question is whether the lakeward reach of the regulatory authorities of coastal localities is limited either because of the jurisdictional boundaries of their authorities, or because Great Lakes submerged bottomlands are owned by the State pursuant to the public trust doctrine. The state legislature sets

the territorial jurisdictions of local units of government in Michigan. Counties and townships were originally surveyed throughout the state between 1815 and 1860,²¹⁵ and their original boundaries were enacted through state law.²¹⁶ In doing so, Michigan set the lakeward boundaries for county and township jurisdictions adjacent to the Great Lakes at the shoreline.²¹⁷ In contrast, the boundaries of incorporated municipalities—cities and villages—are established when those units of government incorporate under state law.²¹⁸ Even so, municipal incorporation has the effect of annexing jurisdictional area from a township into the city or village, such that the lakeward boundary of a newly incorporated coastal city or village similarly extends at most to the shoreline, depending on the precise terms of the particular annexation. The jurisdictional boundary for South Haven, for example, runs fully to the shoreline of Lake Michigan, while that of Douglas, also on Lake Michigan, extends only to the OHWM.²¹⁹ In either case, these local jurisdictional boundaries naturally shift lakeward and landward over time by operation of the moveable freehold under the public trust doctrine, given natural Great Lakes shoreline dynamics. Similarly, on receding shorelines, the jurisdictional areas of coastal localities are naturally diminishing over time (albeit, minutely so compared to their total areas).

In general, local governments do not have extraterritorial powers beyond their jurisdictional boundaries without express state legislative authority.²²⁰ The MZEA provides that a local unit of government's authority to adopt a zoning ordinance extends only to the locality's zoning jurisdictional boundaries, defined as the legal boundaries of the unit of government.²²¹ Regarding police power regulatory

215. Original records of Michigan state territorial surveys from 1816–1860 have been preserved as digital images by the Michigan History Center. See Michigan Department of Natural Resources Real Estate Division, *RG 87-155 GLO Survey Maps*, MICHIGANOLOGY.ORG, https://michiganology.org/uncategorized/SO_a01f9671-8ed4-46c0-b00e-120c6d2921da/ (last visited Feb. 24, 2023).

216. *People v. Bouchard*, 82 Mich. 156, 159–160 (1890).

217. *Id.*

218. *Residents of W. Side of Wayburn St. v. City of Detroit*, 311 N.W.2d 765, 767 (Mich. App. 1981) (“The fixing of municipal boundaries is a legislative function.”). See MICH. COMP. LAWS § 117.7 (1955) (home rule cities); see also MICH. COMP. LAWS § 78.5 (1948) (home rule villages); see also MICH. COMP. LAWS § 74.6 (1948) (general law villages). Boundary changes are administered by the State Boundary Commission pursuant to MICH. COMP. LAWS § 123.1005 (1988). The state Legislature may also delegate the power to establish municipal boundaries to local governments themselves or administrative bodies. *Hempel ex rel. Mich. Limestone & Chem. Co. v. Rogers Twp.*, 313 Mich. 1, 10 (1945) (“In the absence of constitutional inhibition the Legislature may submit the determination of boundaries to courts, or to municipal authorities, or to the qualified electors.”).

219. See CHARTER OF THE CITY OF SOUTH HAVEN (1991), available at https://cms3.revize.com/revize/southhavenmi/document_center/City%20Charter2.pdf (accessed February 2023). See Charter of the City of the Village of Douglas (2004), available at https://codelibrary.amlegal.com/codes/douglas/latest/douglas_mi/0-0-0-10473 (accessed February 2023). It is not clear from the Douglas charter whether the lakeward boundary is the natural OHWM or the elevation OHWM, see *supra* notes 68–72 and accompanying text.

220. See 18 MICH. CIV. JUR. MUN. CORP. § 21; see also *Sabaugh v. City of Dearborn*, 185 N.W.2d 363, 370 (Mich. 1971) (Adams, J. dissenting, citing to and quoting this section).

221. See MICH. COMP. LAWS § 125.3102(x) (2010) (“Zoning Jurisdiction’ means the area encompassed by the legal boundaries of a city or village or the area encompassed by the legal boundaries

authorities more broadly, and as enjoyed by Great Lakes coastal localities specifically, the Michigan Supreme Court held in its 1890 decision of *People v. Bouchard* that a state police power regulation did not apply lakeward beyond a township's jurisdictional boundary at the shoreline.²²² The law in question was a state law requiring businesses selling alcohol within any township (or a city or village) to pay a tax to that township, and the question was whether it applied to a boat selling liquor that was anchored a short distance offshore. The *Bouchard* Court was most concerned that extending the reach of the statute in question without express legislative authorization to do so would amount to extending a township's jurisdictional boundary through judicial edict. That would implicate further questions the court was ill-prepared to resolve, such as how far into the lake such an extension should go or how to reconcile overlapping boundaries in the water given the often-irregular shape of Great Lakes shorelines.

The *Bouchard* Court did not raise as a factor in its analysis the fact that Great Lakes submerged bottomlands are owned by the State because of the public trust doctrine. In more recent jurisprudence, however, the courts have held that state-owned lands are not inherently immune from local government regulation; they are only immune when there is clear legislative intent to have made them so.²²³ We discuss below whether relevant portions of NREPA could be construed as immunizing state-owned submerged bottomlands from local regulation or, stated another way, preempting local regulatory authority over submerged bottomlands periodically exposed when lake levels are low.²²⁴ Finally, perhaps in response to the *Bouchard* decision, the state legislature has enabled cities and villages that enjoy boundaries along Great Lakes shorelines (but not townships) with the authority to enforce concurrently state criminal laws over Great Lakes waters, making clear that that grant of authority does not establish local governmental authority to regulate Great Lakes waters otherwise.²²⁵

of a county or township outside the limits of incorporated cities and villages. The zoning jurisdiction of a county does not include the areas subject to a township zoning ordinance.”). Local authorities to plan under the MPEA are similarly limited to the locality's jurisdictional boundaries, *see* MICH. COMP. LAWS § 125.3803(j) (2010), although cities, villages, and certain townships may extend their planning boundaries to encompass areas that are “related to the planning of” the unit of government. *See* MICH. COMP. LAWS § 125.3831(1)(b) (2010).

222. *Bouchard*, 82 Mich. at 158–60. Because of that holding, the conviction of the defendant, who had been selling alcohol from a boat anchored a short distance offshore from the township, was set aside. *Id.* at 157, 160. The Michigan Supreme Court invited the state legislature to “remed[y]” that “apparent slip in the statute,” *id.* at 160, which apparently it has, at least for cities and villages, by subsequent act, *see infra* note 222 and accompanying text.

223. *See, e.g.,* Dearden v. City of Detroit, 403 Mich. 257, 264, 266–67 (1978); Twp. of Burt v. State, Dep’t of Nat. Res., 459 Mich. 659, 663, 666, 669 (1999); Pittsfield Charter Twp. v. Washtenaw Cty, 468 Mich 702, 709 (2003); Herman v. County of Berrien, 481 Mich. 352, 359, 366 (2008); Crystal Lake Prop. Rights Ass’n. v. Benzie County, 280 Mich. App. 603, 609–11 (2008).

224. *See infra* notes 237–241 and accompanying text.

225. Public Act 191 of 1965 (Jurisdiction Over Great Lakes Waters) provides that a “city or incorporated village, having a boundary running to the shoreline of any of the Great Lakes or connecting waters...may exercise concurrent jurisdiction as to such waters to enforce any criminal law of this state applicable to the conduct of persons in, on or over such waters which extend ½ mile lakeward from such

In sum, Great Lakes coastal localities are limited in terms of the lakeward reach of their regulatory authorities—both those derived under police power authorities in general and as zoning authorities more particularly. This is not because of the public trust doctrine *per se* or the fact that submerged bottomlands are owned by the State under that doctrine, but rather because their jurisdictional boundaries along a Great Lake extend only so far as the lake shoreline. That said, reference to the “shoreline” of a Great Lake is somewhat ambiguous given that state law recognizes two ordinary high-water marks (OHWMs) along Great Lakes shores, the elevation OHWM delineating the reach of the state regulatory authorities under the GLSLA and the natural OHWM delineating the reach of the public trust interests for beach walking.²²⁶

Specifically, it is not entirely clear whether reference to the shoreline means that a coastal locality’s jurisdictional boundary extends to the water’s edge, to the elevation OHWM, or to the natural OHWM, and we have found no Michigan caselaw directly on point. Nonetheless, following the logic employed by the Michigan Supreme Court in holding that a shoreland property owner’s title interest extends all the way to the water’s edge, even if title to that property identifies a survey meander line as the lakeward boundary,²²⁷ the courts would most likely find that a locality’s jurisdictional boundary similarly extends to the water’s edge, coincident with a shoreland property owner’s *jus privatum* interest. As such, when standing lake water levels are below the ordinary high, such that previously submerged shorelands are exposed, those shorelands would be subject concurrently to State *jus publicum* regulatory authorities lakeward of the elevation OHWM and to the *jus publicum* beach walking servitude lakeward of the natural OHWM (i.e., as are *jus privatum* shoreland property interests)—as well as being situated within the local unit of government’s jurisdictional boundaries.

Recognizing the nature and extent of local regulatory authorities in general, the third and final question regarding the reach of those authorities is whether they

boundary....” MICH. COMP. LAWS § 780.51(2022). The Act provides further, however, that this particular authorization does not by itself provide any additional authorities to coastal localities: “This act shall not be construed as granting any authority to regulate or control the erection, maintenance, or destruction of any structure in, on or over such waters as may be covered by state law, or to grant a power to alter any federal or state law, rule or regulation pertaining to navigation, hunting or fishing.” *See* MICH. COMP. LAWS § 780.52 (2022).

226. *See supra* notes 69–73 and accompanying text.

227. *Hilt v. Weber*, 252 Mich. 198, 206, 233 N.W. 159 (1930). Meander lines were commonly used in surveying shorefront properties to note the approximate locations of those boundaries for the purpose of the survey. The Supreme Court in *Hilt* reversed a prior court ruling that titles showing ownership to the meander line fixed the shoreland property owner’s interest at that line, not allowing for the property line to move lakeward in the event of accretion. The *Hilt* Court concluded that long-established expectations were that a shoreland property owner’s title ran to the water’s edge, even if referring to a meander line, unless the title provided a map or description clearly placing the boundary at a fixed location (e.g., through a parcel map). By extension, even in instances where a city charter fixes a lakeward boundary line at the OHWM (*see, e.g.*, the Douglas charter, *supra* note 219 and accompanying text), courts could reasonably conclude that such a jurisdictional boundary extends to the water’s edge, so as to avoid ambiguity and confusion regarding the status of shorelands privately owned albeit periodically subject to State public trust regulation and servitude.

have been preempted by state law. The Michigan courts have held that local governments are preempted from regulating through local ordinance when state legislation itself provides that it is to be exclusive, when “the ordinance is in direct conflict with the state statutory scheme,” or if the state statutory scheme is so pervasive as to “occupy the field of regulation.”²²⁸ The Michigan Supreme Court has referred to these as “express preemption,” “conflict preemption,” and “field preemption,” respectively.²²⁹ In determining whether express preemption applies, the courts look both to the language of the state law itself and to the legislative history behind that law.²³⁰ In determining whether field preemption applies, the courts consider further whether such a finding is required either because of the pervasiveness of the state regulatory scheme or given the nature of the regulated subject matter (i.e., one that demands exclusive state regulation “to achieve the uniformity necessary to serve the state’s purpose or interest”).²³¹

With regard to conflict preemption, the Michigan Supreme Court has explained that, in general, a local ordinance is in direct conflict with a state statute when “the ordinance permits what the statute prohibits or the ordinance prohibits what the statute permits.”²³² Importantly, however, the courts have also recognized that the “mere fact that the State, in the exercise of the police power, has made certain regulations does not prohibit a municipality from exacting additional requirements.”²³³ Rather, as a general rule, “additional regulation to that of a State law does not constitute a conflict therewith,”²³⁴ although local regulation that absolutely prohibits something conditionally allowed by state law might.²³⁵ Following that line of reasoning, the courts have found that local ordinances imposing more strict requirements than applicable state law (and even prohibiting entirely on a particular petitioner’s property what would have been allowed otherwise

228. *People v. Llewellyn*, 401 Mich. 314, 322–23 (1997).

229. *DeRuiter v. Twp. Of Byron*, 505 Mich. 130, 140 (2020).

230. *Llewellyn*, 401 Mich. at 323.

231. *Id.* at 324–325.

232. *Id.* at 334.

233. *Miller v. Fabius Twp. Bd., St. Joseph Cnty.*, 114 N.W.2d 205, 207–208, (Mich. 1962). The court explained further that:

“Where both an ordinance and a statute are prohibitory and the only difference between them is that the ordinance goes further in its prohibition, but not counter to the prohibition under the statute, and the municipality does not attempt to authorize by ordinance what the legislature has forbidden or forbid what the legislature has expressly licensed, authorized, or required, there is nothing contradictory between the provisions of the statute and the ordinance because of which they cannot coexist and be effective. Unless legislative provisions are contradictory in the sense that they cannot coexist, they are not deemed inconsistent because of mere lack of uniformity in detail.” *Id.* at 208.

234. *DeRuiter*, 505 Mich. at 147, n.12. (quotations and citations omitted).

235. *Id.* at 208.

under state law) were not in conflict when the state law expressly authorized or acknowledged potentially applicable local regulation.²³⁶

The most relevant state statutory schemes that might operate to preempt local regulation of shorelands, and specifically the installation of shoreline armoring, include the permitting provisions for buildings and corresponding armoring structures within HREAs under NREPA Part 323 (SPMA) and the permitting provisions for armoring structures placed on submerged bottomlands under Part 325 (GLSLA). Neither part expressly states a clear legislative intent to exclude local regulation, and indeed both provisions and their corresponding administrative rules acknowledge the existence and potential applicability of local regulation.²³⁷ Accordingly, the courts would likely not find either express or field preemption by either part.

That leaves the possibility of conflict preemption. Local police power or zoning regulations addressing the installation of shoreline armoring clearly would conflict with state law if they purported to allow what the State had prohibited through denial of a permit, pursuant to Parts 325, 323, or both. We know of no local ordinances that attempt to do so.²³⁸ Moreover, there would be little reason for a locality to merely replicate state regulatory requirements through a separate local regulatory scheme.

It is conceivable, however, that a local government might seek to prohibit, through additional local regulatory requirements or constraints, the installation of shoreline armoring structures in settings where they otherwise might be permitted by the State. In state designated HREAs subject to NREPA Part 323 and corresponding rules, for example, a locality might seek to deny a local permit to site a building or to install armoring structures lakeward of otherwise applicable HREA setbacks. Similarly, along any given stretch of Great Lakes shoreline, a locality might

236. *Palmer v. Twp. of Superior*, 233 N.W.2d 14, 21–23 (Mich. App. 1975) (finding that the township's denial of a zoning approval for a mobile home park was not preempted by State law regulating mobile home parks because that State law acknowledged the applicability of more stringent local regulations not in conflict with the act); *City of Howell v. Kaal*, 67 N.W.2d 704, 11 (Mich. 1954) (upholding the city's injunction against a 'trailer camp,' in part, for the same reason).

237. R 322.1011(1)(e), implementing the GLSLA (NREPA Part 325), for example, allows EGLE to place conditions on a permit, including the condition that a project be in compliance with a local zoning ordinance, while R 322.1011(4) provides that issuance of a permit by EGLE does not "obviate the necessity of receiving approval from the United States army corps of engineers and, where applicable, other federal, state, or local units of government." Similarly, Part 323 (SPMA) provides for local zoning of shoreland areas subject to the act, MICH. COMP. LAWS §§ 324.32308–32310 (2015), and it requires that any locality with a zoning code that regulates high-risk areas submit the code to EGLE for review to ensure consistency with the act, MICH. COMP. LAWS § 324.32311 (2015). The rules administering that act provide further that setbacks for HREAs not be waived, and armoring structures not be allowed, unless the 'local agency' finds that a greater public good exists to support the use of a shore protection structure rather than a natural shoreline with regard to fish and wildlife habitat, the value of the natural shore to the community, and other related considerations. R 281.22.

238. See, e.g., Richard K. Norton, Oday Salim, Michael Friese, and Everett Secor, *Local Zoning in Michigan for Great Lakes Coastal Shoreline Management: Initial Findings and Guidance*, NORTHWEST LOWER MICHIGAN COASTAL RESILIENCE ATLAS, 1082–1094 (2019), http://www.resilientmichigan.org/nw_atlas.asp (last visited April 2022).

seek to deny a local permit to install armoring structures landward of the water's edge (i.e., within the locality's shoreline jurisdictional boundary) but lakeward of the elevation OHWM (i.e., along shoreline subject to state regulation pursuant to the GLSLA).²³⁹

The question the courts would confront in either case is whether State law acknowledges the applicability of, or directly authorizes, local regulation in such a way as to resolve a conflict. On this question, the provisions pertaining to HREAs clearly recognize the applicability of local regulation by authorizing localities to administer through their zoning ordinances the State provisions, by acknowledging and allowing local zoning within State-designated HREAs separately otherwise (i.e., so long as the local ordinance is consistent with State provisions), and by establishing clearly that permits to waive setbacks and allow the installation of armoring structures should not be granted upon a finding by the local government that such structures would be unduly harmful to the natural shoreline.²⁴⁰ Similarly, the rule provisions pertaining to the issuance of permits for the placement of materials on submerged bottomlands lakeward of the elevation OHWM under the GLSLA clearly acknowledge the potential applicability of local zoning ordinances and state that the State issuance of a permit does not obviate obligations to comply with local laws.²⁴¹ Should a locality provide additional constraints on the installation of shoreline armoring in these settings (including, presumably, prohibiting their installation altogether), the courts would most likely find no conflict preemption with either of these state laws.

5. Summary and Conclusions: Local Authorities, Duties, and Limitations

Recent research suggests that coastal localities in Michigan are doing relatively little through their planning or zoning authorities to manage coastal shoreland development and use.²⁴² We know of no localities at this time—save one—that have prohibited the placement of shoreline armoring structures directly, either through a zoning ordinance or a general police power regulation.²⁴³ Despite that

239. Because the courts have emphasized that the State's regulatory authority under the GLSLA extends landward only to the elevation OHWM (*see supra* notes 69–73 and accompanying text), they would not likely hold that any stretch of beach that might exist landward of that state regulatory boundary but lakeward of the natural OHWM would be immune from local regulatory authority or, stated another way, that the beach walking servitude represents a state law that preempts local regulation, especially where the local regulation would presumably facilitate continued beach walking.

240. *See supra* note 236 and accompanying text.

241. *Id.*

242. Norton et al., *supra* note 16; Norton et al., *supra* note 238.

243. Chikaming Township, MI enacted a general police power ordinance in February 2021, Ordinance No. 147, prohibiting the installation of permanent shoreline armoring structures. Chikaming Township, Mich., Ordinance No. 147 (2021), <https://www.chikamingtownship.org/ordinances>. That ordinance does allow for the temporary placement of geotextile tubes under certain conditions. Several other Lake Michigan localities, notably St. Joseph City and Grand Haven City, have similarly adopted setbacks that are tied specifically to shoreline dynamics and that prohibit installation of armoring structures lakeward of the setback, but those requirements are the exception rather than the rule. Most

limited attention to date, coastal localities in Michigan clearly have substantial police power and zoning authorities to regulate the general use of, as well as the engagement of various activities on, coastal shorelands for the purposes of protecting coastal resources from pollution, impairment, or destruction and in order to promote public health, safety, and general welfare (albeit, not to safeguard public trust interests in submerged bottomlands or coastal shorelands). Those authorities extend fully to their lake “shoreline” boundaries, which the courts would likely interpret to mean the water’s edge.

Thus, Great Lakes coastal localities also have the authority to regulate the installation of shoreline armoring structures. That authority extends lakeward at least to the elevation OHWM (i.e., marking the boundary of the State’s regulatory authority over submerged bottomlands pursuant to the GLSLA), and it likely extends lakeward of that boundary to the water’s edge as well, when standing lake levels (and thus local jurisdictional boundaries) fall below and lakeward of the elevation OHWM boundary.²⁴⁴ Localities might exercise that authority either through general police power regulations, if regulating structures as activities not associated with particular land uses or districts, or through zoning ordinances that establish districts and regulate such structures in conjunction with allowable land uses. Finally, review of applicable state statutory laws and corresponding administrative rules, primarily through the GLSLA and SPMA parts of NREPA, suggest that the courts would likely find that local authority to regulate shoreline armoring are not precluded by express, field, or conflict preemption.

C. *Potential State Legislative Modification of Statutory Law*

The preceding presents a survey of Michigan common, constitutional, statutory, and administrative law as it currently exists at both the state and local levels. It summarizes the authorities and duties that that body of law collectively establishes to regulate uses of and activities on Great Lakes coastal shorelands generally and to regulate the placement of armoring structures along Great Lakes shorelines specifically. Given the lack of caselaw on point, the law itself is likely to evolve, or at least to be clarified, through adjudication of claims that set public trust interests directly in tension with private property rights, which we discuss in the following section. In addition to such litigation, the state legislature might also modify statutory law either to prohibit shoreline armoring altogether or to allow it

localities appear to be deferring to the State with regard to issuing permits for shoreline armoring. See Norton et al., *supra* note 237.

244. Similarly, a locality’s authority to regulate likely extends only to the water’s edge during periods of high lake levels, when those levels fall above and landward of the elevation OHWM, to the extent that local jurisdictions reach lakeward only as far as the ‘shoreline’—that is, the water’s edge. None of these questions regarding local jurisdictional and regulatory boundaries have been tested through appellate judicial review beyond the cases discussed *supra*, Parts II.B.1 and 4.

more clearly and permissively than existing law currently provides,²⁴⁵ which we address here.

In the first instance, the legislature could modify the GLSLA, for example, to expressly prohibit the installation of permanent hard shoreline armoring altogether, as the states of Maine and South Carolina have done along their ocean coasts;²⁴⁶ or by imposing additional constraints regarding its installation; or by directing EGLE not to grant minor permits for the installation, maintenance, or repair of armoring structures through its administrative rules; or by prohibiting expressly the passive filling of submerged bottomlands through armoring that arrests natural erosional processes and shoreline recession.²⁴⁷ Doing any of those things would raise the question of whether the public trust doctrine, or provisions of the Michigan Constitution of 1963 that speak to that question (including in particular natural resource protections mandated by art. 4, § 52), provide sufficient enabling authority to the state legislature to enact such reforms.

While numerous Michigan cases have addressed directly Great Lakes submerged bottomlands and shorelines under the public trust doctrine, few speak specifically to the relationships between the GLSLA, the public trust doctrine, and 1963 Mich. Const. art. 4, § 52 protections.²⁴⁸ The case that does so most directly was decided by the Michigan Court of Appeals in 1972, *People ex rel. MacMullan v. Babcock*.²⁴⁹ That case involved a proposed landfill on submerged bottomlands of Lake St. Clair. The property owners and landfill proponents raised two principle claims: first, that the original patent for the shoreland property excluded that property from the public trust doctrine; and second, that in any event the proponents' riparian

245. Given extreme high water levels leading up to 2020, proponents of shoreline armoring indeed lobbied the state legislature to modify shoreline armor permitting requirements. The Michigan House of Representative Committee on Natural Resources and Outdoor Recreation, for example, held hearings to consider modifications to shoreland-related provisions of the NREPA (*see infra* note 286 and accompanying discussion regarding recent litigation over State permitting). Similarly, legislation was introduced into the Michigan Senate (SB 1020 (2020)) that would have expressly exempted shoreline armoring, among other activities, landward of the ordinary high water mark from State permitting requirements. That proposed legislation was not acted upon. S.B. 1020, 100th Leg. Reg. Sess. (Mich. 2020).

246. ME. DEPT. OF ENV'T PROT. COASTAL SAND DUNE RULES, Chapter 355, § 5.E; S.C. CODE ANN. § 48-39-290. North Carolina has also banned the installation of hardened shoreline armoring, but it allows the installation of temporary geotextile tubes (large sandbags), which once installed are allowed to remain, such that the coast is being armored by sandbags rather than rock revetments, thus yielding the same impacts. N.C. GEN. STAT. §§ 113.A-115.1. *See generally* SURFRIDER FOUNDATION, STATE OF THE BEACH REPORT CARD 2017.

247. These modifications would most likely be made to the GLSLA. To the extent modified setbacks in HREAs under the SPMA require compliance with the GLSLA, the SPMA itself would presumably not require similar modification, although parallel provisions might be added there as well. *See infra* Part III.A.3 for more discussion regarding passive filling.

248. *Glass*, for example, while providing an extensive history of the public trust doctrine and its applicability along Great Lakes beaches, does not refer to the 1963 Michigan Constitution art. 4, § 52. Even so, the *Glass* court likely did not draw that connection because the court was addressing an issue speaking solely to public rights of access to the shore, not to actions by a shoreland property owner that might impair or destroy coastal resources. *See supra* note 54.

249. 196 N.W.2d 489 (1972).

(littoral) rights of ownership along the lake superseded the State's public trust interest in the submerged bottomlands of the lake.²⁵⁰ After concluding that the parcels in question were subject to the public trust doctrine, the court stated expressly that the importance of Great Lakes submerged bottomlands as public trust resources is recognized by 1963 Mich. Const. art. 4, § 52, and it then stated further, in language worth reporting in full, that,

When lands are owned by the state for the public trust, it is the state's duty to protect the trust and not surrender the rights thereto. It is thus the public policy of this state with respect to submerged lands in the Great Lakes that they may be disposed of only when the Department of Conservation determines that such lands are of no substantial public value for hunting, fishing, swimming, pleasure boating, or navigation and that the general public interest will not be impaired.²⁵¹

The importance of protecting our natural resources for the public's enjoyment has been brought into sharp focus by the ecology movement. These are precious assets to be preserved for present and future generations. This is an appropriate opportunity to reiterate the language used by Justice Holmes and reiterated by Michigan Supreme Court Justice Eugene Black:

This public interest is omnipresent wherever there is a State, and grows more pressing as population grows. It is fundamental, and we are of opinion that the private property of riparian proprietors cannot be supposed to have deeper roots. Whether it be said that such an interest justifies the cutting down by statute, without compensation, in the exercise of the police power, of what otherwise would be private rights of property, or that apart from statute those rights do not go to the height of what the defendant seeks to do, the result is the same. * * * The private right to

250. Because multiple parcels and lawsuits were involved, this case also paid considerable attention to questions of consolidation and *res judicata*, not relevant to issues addressed here. The question of whether the property at hand was subject to the public trust doctrine in the first place arose out of the Michigan Supreme Court's earlier decision in *Klais*, where the court held that patents made by the U.S. Government before Michigan became a state, and when the lakeward boundaries of such patents were fixed and discernable, were not subject to Michigan's public trust doctrine. Given more recent U.S. Supreme Court decisions recognizing the applicability of the public trust doctrine to properties patented by the U.S. prior to state incorporation, the continued force of the *Klais* decision is questionable. *See supra* note 49 and accompanying text.

251. *MacMullan*, 38 Mich. App. at 497 (citing *People ex rel. Director of Conservation v Broedell*, 365 Mich. At 201 (1961) and *Obrecht v. National Gypsum Co.*, 361 Mich. At 399 (1960)).

appropriate is subject not only to the rights of lower owners but to the initial limitation that it may not substantially diminish one of the great foundations of public welfare and health.

The supreme court held further in this case that a State has constitutional power to insist that its natural advantages shall remain unimpaired, and that when that State ‘finds itself in possession of what all admit to be a great public good,’ it may as against such asserted claim of a riparian retain what it has ‘and give no one a reason for its will.’²⁵²

Following that analysis and precedent, it is hard to imagine that the Michigan courts would find that the state legislature lacks the authority to modify existing statutory law to expressly prohibit the installation of shoreline armoring, or constrain its use more so than already provided, given Michigan’s constitutional mandates to protect public safety, health, welfare, the environment, and natural resources, the pedigree and robustness of the police power and public trust doctrines under Michigan law, and the Michigan courts’ affirmation and connection of those doctrines and constitutional protections.²⁵³

In the second instance, the state legislature could alternatively amend statutory provisions under the GLSLA (or the SPMA) that currently prioritize protection of coastal resources to prioritize the protection of private shoreland properties instead, either through provisions doing so directly or by directing EGLE to do so through administrative rules. Given the duties established by Michigan’s common law public trust doctrine and 1963 Mich. Const. art. 4, § 52, the enabling question we address here is whether the state legislature has the authority to modify the common law public trust doctrine through statutory reform specifically regarding the duties it imposes on the state—that is, the duty to protect public trust coastal resources from impairment and the duty not to convey *jus privatum* interests in them to private shoreland property owners unless doing so serves larger public trust interests.²⁵⁴

In addition to establishing duties to protect public health, safety, welfare, the environment, and natural resources, the Michigan Constitution of 1963 art. 3, § 7 provides, “[t]he common law and the statute laws now in force, not repugnant to

252. *Id.* at 351–352 (quoting *Obrecht*, 361 Mich. at 414–415). *Obrecht* involved a challenge to the GLSLA, which the court adjudicated with reference to the public trust doctrine, but without reference to 1963 MICH. CONST. art. 4, § 52. The *MacMullan* court then connected those constitutional protections to the GLSLA and the public trust doctrine by reference to and reliance on *Obrecht*.

253. Having addressed that initial question regarding authorities, we address below whether the courts might find that doing so could nonetheless yield constitutional violations of due process, equal protection, or regulatory takings. *See infra* Part III.B.

254. *See supra* Part II.A. We address below whether either such statutory reform or existing statutory and related regulatory law might be found unconstitutional or otherwise unlawful for failing to adequately vindicate those duties. *See infra* Part III.A.

this constitution, shall remain in force until they expire by their own limitations, or are changed, amended or repealed.” This provision speaks directly to the common law public trust doctrine, recognized from Michigan’s establishment as a state, and the GLSLA, enacted in 1955. Clearly, the legislature has the authority to amend the common law and the GLSLA as a general matter. The question addressed here is the extent to which the state legislature has the authority to reform the common law public trust doctrine specifically.

When contemplating whether a state legislative act has modified the common law, the courts ask two general questions: first, whether the legislature intended that the statute modify the common law; and second, whether the legislature had the authority to do so. The Michigan Supreme Court has noted that “[t]he legislature may alter or abrogate the common law through its legislative authority [but] the mere existence of a statute does not necessarily mean that the Legislature has exercised that authority.”²⁵⁵ Presumably, should the legislature amend the GLSLA or SPMA to make the installation of shoreline armoring more clearly or readily permitted, it would make clear its intent to accordingly modify the common law public trust doctrine. The principal question, then, would be to what extent the state legislature has the authority to modify the public trust doctrine through statute.

The Michigan Supreme Court has spoken most recently to the relationships between common law, statutory law, and constitutional protections in its decision of *Rafaeli, LLC v. Oakland Cnty.*²⁵⁶ This case involved government foreclosure on tax liens, where state statutory law authorized local governments to compel foreclosure on a real property for which taxes had not been paid and to retain all receipts from that tax foreclosure process, including any receipts in excess of the taxes actually owed (i.e., the “surplus proceeds”).²⁵⁷ The court concluded that the statutory law did not violate due process protections. It focused its analysis on whether the seizure of

255. *Murphy v. Inman*, 983 N.W.2d 354, 365 (2022) (citing *Rafaeli, LLC v. Oakland Co.*, 505 Mich. 429, 473 (2020)). The Michigan Supreme Court explained further in its decision of *Velez v. Tuma*, 821 N.W.2d 432, 436–437 (2012) that:

“Whether the Legislature has abrogated, amended, or preempted the common law is a question of legislative intent (*Wold Architects & Engineers v. Strat*, 474 Mich 223, 233; 713 N.W.2d 750 (2006)). We will not lightly presume that the Legislature has abrogated the common law (*id.*) Nor will we extend a statute by implication to abrogate established rules of common law (*Rusinek v. Schultz, Snyder & Steele Lumber Co.*, 411 Mich 502, 507–508; 309 N.W.2d 163 (1981)). ‘Rather, the Legislature “should speak in no uncertain terms” when it exercises its authority to modify the common law’ (*Dawe v. Dr. Reuven Bar-Lev & Assocs, PC*, 485 Mich 20, 28; 780 N.W.2d 272 (2010)), quoting *Hoerstman Gen Contracting, Inc v. Hahn*, 474 Mich 66, 74; 711 N.W.2d 340 (2006).”

256. *See Rafaeli*, 505 Mich. 429 (2020).

257. *Id.* at 437–448.

surplus proceeds nonetheless constituted a regulatory taking in violation of U.S. and Michigan constitutional protections of private property.²⁵⁸

The crux of the court's analysis turned on several related questions: whether owners of real property enjoy a vested property interest in surplus proceeds from tax foreclosures under Michigan common law; whether in turn Michigan's constitutional protections of private property encompass that common law property right; and, if so, whether the state legislature has the authority to abrogate that common law property right through statutory act.²⁵⁹ The court acknowledged that the state legislature has the authority to amend the common law through statutory action as a general matter, and it accepted that the legislature had intended to do so in this case, such that the key question was whether the legislature had the authority to do so.²⁶⁰ Noting that 1963 Mich. Const. art. 3, § 7 provides that common law "not repugnant to this constitution" remains in force until amended or repealed, the court concluded that the state legislature did not have that authority in this case because, "[w]hile the Legislature is typically free to abrogate the common law, it is powerless to override a right protected by [the Michigan Constitution]."²⁶¹

Several aspects of the *Rafaeli* court's analysis are especially relevant here. First, the court recognized that owners of real property enjoy constitutional protections of that property when the rights in question are vested property rights under state law.²⁶² Moreover, citing to and quoting the U.S. Supreme Court, the court observed that, "[b]ecause the Constitution protects rather than creates property interests, the existence of a property interest is determined by reference to existing rules or understandings that stem from an independent source such as state law,"²⁶³ such that a court's objective in interpreting a constitutional provision such as Michigan's takings clause is "to determine the text's original meaning to the ratifiers, the people, at the time of the ratification."²⁶⁴

The court reviewed the historical origins of property interests in surplus proceeds from tax foreclosures under English common law and as incorporated into Michigan common law, along with the history of property rights protections under Michigan constitutional law.²⁶⁵ In doing so, it concluded that Michigan common law recognizes a property owner's right to surplus proceeds,²⁶⁶ that that right is "vested'

258. *Id.* at 448–473.

259. *Id.* at 456–473. The court noted that, if indeed the state legislature had the authority to abrogate the common law property right to excess proceeds, then the statutory act that did so would not effect a regulatory taking of those proceeds. *Id.* At 472.

260. *Id.* at 472–473.

261. *Id.* at 473 (citation omitted).

262. *Id.* at 455, 952.

263. *Id.* (quoting *Philips v. Washington Legal Foundation*, 524 U.S. 156, 164 (1998)).

264. *Id.* at 456 (quoting *Wayne Cnty. v. Hathcock*, 471 Mich. 445, 468 (2004)).

265. *Id.* at 456–470.

266. *Id.* at 470.

such that the right is to remain free from governmental interference,”²⁶⁷ that “the ratifiers would have commonly understood this common-law property right to be protected under Michigan’s takings clause at the time of the ratification of the Michigan Constitution in 1963,”²⁶⁸ and finally that, “[b]ecause this common-law property right is constitutionally protected...the Legislature’s amendments [by statutory act] could not abrogate it.”²⁶⁹

While the *Rafaeli* court vindicated a private property right as against governmental abuse through state statutory law, a law that purportedly amended private property interests established under a common law property rights doctrine, its analysis in doing so is instructive on how a court might analyze potential state legislative amendments more clearly authorizing Great Lakes shoreline armoring, implicating public trust interests established under the common law public trust doctrine. Specifically, if the State were to enact such amendments (e.g., to the GLSLA) and if they were challenged, the courts might conclude that such amendments unlawfully purport to modify the common law public trust doctrine (i.e., in violation of 1963 Mich. Const. art. 3, § 7 for enacting statutory law repugnant to the constitution) if they determine that that doctrine long ago established public trust interests in unimpaired shorelines retained by the State in trust for the people, that those interests are vested, and that the ratifiers would have recognized those protected interests when ratifying art. 4, § 52 of the Michigan Constitution of 1963. Alternatively, if the courts conclude that any of those elements do not apply to the public trust doctrine, or to the extent that any do not fully apply, they might conclude that the state legislature could enact statutory amendments to the doctrine lawfully.

The Michigan Supreme Court has recognized that the public trust doctrine is not merely a common law doctrine reflecting “the accumulated expressions of the various judicial tribunals in their efforts to ascertain what is right and just,”²⁷⁰ but rather that it is an “essential power of government,” one the State cannot surrender “any more than it can abdicate the police power.”²⁷¹ Moreover, both the Michigan State legislature and the courts have recognized that 1963 Mich. Const. art. 4, § 52 protections extend to public trust interests in general, and in particular to those addressing Great Lakes submerged bottomlands and shorelines, if only indirectly.²⁷²

267. *Id.* at 471.

268. *Id.* at 472.

269. *Id.* at 473.

270. *Id.* at 472 (quoting *Price v. High Pointe Oil Co., Inc.*, 493 Mich. 238, 242 (2013)).

271. *Nedtweg*, 237 Mich. At 17. *See supra* note 64 and accompanying text.

272. While 1963 Michigan Constitution art. 4, § 52 itself does not use the term “public interest,” MEPA, which clearly implements that constitutional provision, does use that term expressly. Justice Levy in his concurring opinion in *State Highway Commission v. Vanderkloot*, 392 Mich. 159, 194 (1974) (Levy, J., concurring), noted that modification of MEPA might be unconstitutional. *See also* *Oscoda Chapter of PBB Action Comm., Inc., v. Dep’t of Nat. Resources*, 403 Mich 215, 231 (1978) (plurality opinion). The courts might similarly conclude that the weakening of public trust coastal resource protections by permitting enhanced protection of private property through hard shoreline armoring might similarly be unconstitutional. At the same time, while the court of appeals in *MacMullan* recognized the connection between the public trust doctrine and protections afforded by art. 4, § 52 (*see supra* notes 250–251 and

At the same time, the courts would need to conclude that those interests are sufficiently robust, as are private property interests in surplus proceeds to tax foreclosures, that they have vested as such, and that the ratifiers of the 1963 Michigan Constitution would have recognized them to be constitutionally protected as such. These conclusions might be viewed skeptically by courts that view private property rights as “sacred” rights to be held “in the highest regard.”²⁷³ Nonetheless, the courts would be most likely to do so if they reason that the public trust doctrine protects *public* property interests in shorelands that are similarly viewed as sacred property rights, vis-à-vis private property interests, rather than being more akin to public police power protections of natural resources that impinge upon private use of private property rights—a perspective well-supported by the numerous appellate decisions that have addressed Michigan’s public trust doctrine.²⁷⁴

Given the robust and long-standing pedigree of the public trust doctrine historically, and in combination with protections of natural resources provided expressly by 1963 Mich. Const. art. 4, § 52, it is hard to imagine that the courts would not find the public trust interests established by that common law doctrine to be constitutionally protected, on par with the constitutional protections for surplus proceeds recognized by the *Rafaeli* court. As such, it is hard to imagine that the courts would conclude that the state legislature has the authority to abrogate those public trust interests by statute.

That said, 1963 Mich. Const. art. 4, § 52 cannot be read to freeze all nature in place to the exclusion of all development, or to exclude reasonable efforts to safeguard that development; people could not live on the land if so. Given that recognition, the Michigan courts have parsed the meaning of MEPA in a way so as to allow some amount of development without causing statutory or constitutional violations, even though that development results in tangible impacts to the environment and natural resources. They might use similar reasoning in evaluating whether existing state law that allows hard armoring on Great Lakes shorelines, or statutory amendments to existing law making such armoring more clearly and readily permissible, could be constitutionally permissible as well. We evaluate that possibility in the context of our analysis of potential future litigation below.²⁷⁵

accompanying text), the more recent supreme court decision in *Glass* did not make that connection expressly. See *Glass*, 703 N.W.2d 58. Nonetheless, the *Glass* court likely omitted reference to art. 4, § 52 because the court was addressing an issue speaking solely to public rights of access to the shore for strolling, not to actions by a shoreland property owner that might impair or destroy coastal resources. See *Id.*

273. *Rafaeli*, 505 Mich. at 462 (holding the “right to private property is a sacred right” (quoting 2 COOLEY, CONSTITUTIONAL LIMITATIONS (8TH ED.), p. 745)); see also *Id.* at 462 (holding “the Magna Carta ‘guaranteed’ the protection of private property against government overreach”) (quoting COOLEY, CONSTITUTIONAL LIMITATIONS, pp. 733–734).

274. See Sax, *supra* note 39, at 644 (“As an owner, the state’s legal position might be more favorable than its position as a regulator.”); *supra* Part II.A.2.

275. See *infra* Parts III.A. and B.

D. Conclusions: Public Trust Interests versus Private Shoreland Interests under Current Michigan Law

In sum, hard shoreline armoring structures have been and may continue to be permitted by the State along Great Lakes submerged bottomlands lakeward of the OHWM and on coastal shorelands within HREAs, under EGLE administrative regulatory authorities adopted pursuant to Parts 325 (submerged bottomlands) and 323 (high-risk erosion areas) of NREPA,²⁷⁶ respectively, in combination with permits issued pursuant to Part 91 (erosion and sediment control) to the extent applicable. Similarly, the courts might find that MEPA would allow the installation of hard shoreline armoring considering the “pollution control standards” created by Parts 325 and 323, should they conclude that those standards are not deficient²⁷⁷ or that there are no “feasible and prudent alternative[s] consistent with the reasonable requirements of the public health, safety, and welfare.”²⁷⁸ Finally, localities have substantial state-delegated general police power, zoning, and other local regulatory authorities that they could exercise to limit the installation of shoreline armoring structures, but they are not required to do so, and very few have.²⁷⁹

Even if not placed below the elevation OHWM that defines the landward reach of EGLE’s regulatory authority under the GLSLA, permitted armor structures almost certainly have been and could continue to be placed below the natural OHWM defined by the *Glass* decision. Moreover, because many stretches of Great Lakes shorelines are receding irrepressibly, and because there are few, if any, restrictions placed on the installation of shoreline armor structures landward of the current OHWM (i.e., not recognizing that the OHWM naturally recedes landward over time too), it is just a matter of time before lake waters reach those structures. When they do, those structures will interfere with natural shoreline dynamics, ultimately yielding the same outcomes as if they had been permitted expressly under current law. As such, armor structures could be situated along much of Michigan’s Great Lakes shorelines, whether permitted by the State, coastal locality, or both, in

276. The key rule provisions doing so include: R 322.1015 (authorized by Part 325), which allows for (if not requires) the issuance of a permit for shoreline armoring when (1) that armoring will cause only “minimal” harm and is mitigated to the extent possible, and (2) there are no “feasible” and “prudent” alternatives to the armoring (consistent with public health, safety, and welfare), MICH. ADMIN. CODE R. 322.1015, at 9; along with R 281.22 (authorized by Part 323), which effectively requires that EGLE issue a permit and waive setback requirements within state-designated HREAs when a property owner seeks to install shoreline armoring, *see* MICH. ADMIN. CODE R. 281.22, at 4. *See also supra* Part II.A.4, at 29. We discuss EGLE’s current administration of these rules in practice in the context of like litigation, *see infra* Part III.A.

277. MICH. COMP. LAWS § 324.1701(2) (2021). (“If there is a standard for pollution or for an antipollution device or procedure ... the court may ... determine the validity ... and reasonableness of the standard. (b) If a court finds a standard to be deficient, direct the adoption of a standard approved and specified by the court.”).

278. MICH. COMP. LAWS § 1705(2) (2021). *See supra* note 100 and accompanying text. We discuss the potential adjudication of such claims more fully below; *see infra* Part III.A.

279. *See supra* Part II.B.

a way that could: impede the public trust interest in traversing beaches; ultimately arrest the natural recession of those shorelines; destroy the natural shorelines lakeward of those structures; and passively fill submerged bottomlands by arresting the natural transition of shorelands to bottomlands that would otherwise occur, but for the installation of the armoring structures.²⁸⁰

Our assessment of existing Michigan law speaking to Great Lakes coastal shores leads us to conclude that Michigan's courts, state legislature, and people—acting through the state's constitution and the public trust doctrine—have consistently and clearly prioritized protecting and conserving Great Lakes natural coastal resources above developing and impairing them for the sake of private use, except when that development truly serves larger public trust interests, at least from a state-level perspective. The State's execution of the GLSLA and SPMA, however, especially through its administrative rules adopted pursuant to those acts, appears to prioritize protecting private property first, even at the expense of destroying the natural beach and impairing other public trust interests. Similarly, Michigan's coastal localities have largely deferred to the State, thereby prioritizing implicitly the protection of private shoreland property over the protection and conservation of natural coastal resources.²⁸¹ If the current legal regime addressing Michigan's Great Lakes coastal shorelines remains, then Michigan will likely see much of its shorelines armored and much of its natural coastal beaches and other public trust resources substantially impaired, if not destroyed.

The State's current approach to executing state doctrinal, constitutional, statutory, and administrative law was not inevitable, and indeed it may be unlawful. Even so, that approach, along with the prevailing local acquiescence to it, has created expectations on the part of shoreland property owners, heightening the likelihood of litigation—both by environmental interest groups and shoreland property owners looking to bolster state and local protections of natural coastal resources, and by coastal shoreland property owners and associations should such enhanced environmental protection efforts succeed.

280. See *supra* Part I. Armor has been and almost certainly would be placed in a way that yields such outcomes because it would not be worth the expense to install such structures on stable shorelines that are not actively receding, or that are likely to actively recede in the foreseeable future, while placing them so as to be effective on a receding shore would require situating them relatively close to the water's edge (*i.e.*, on the dry-sand portion of the naturally walkable beach). As such, even if situated landward of the elevation OHWM, such structures would affect Great Lakes public trust coastal resources eventually, if not immediately, and implicate the public trust doctrine at that point; see *infra* discussion of competing property rights over time, Part III.B.2.a.

281. It could be argued, indeed, that the people when acting through their local legislatures have been more amenable to protecting private property rights than when acting through the state constitution and legislature. To the extent localities support armoring projects and local residents do not object, that may be a fair characterization. Nonetheless, in the few places where local regulation of shoreline armoring has come to the fore and prompted community engagement on the topic, to the authors' knowledge, the localities have chosen to adopt regulations that provide greater protection of natural shorelines. See discussion of contemporary local regulatory efforts, see *supra* Part II.B.5 on discussion of contemporary local regulatory efforts.

III. LIKELY LITIGATION AND POTENTIAL ADJUDICATION OF SHORELAND CONFLICTS

The key parties to disputes likely to arise along Michigan's Great Lakes shorelines as those shorelines continue to recede landward will include: environmental interest groups seeking to enjoin armoring as it is currently permitted under existing law (or possibly contesting statutory enactments by the state legislature to permit hard shoreline armoring more so than currently allowed, should they be made²⁸²); shoreland property owners or nearshore owners with ready access to the beach who are unhappy that the permitting of armoring structures by neighboring owners has or could accelerate the erosion of their shoreland properties, destroy natural beaches, and curtail beach access, seeking accordingly to enjoin such permitting and armoring; shoreland property owners seeking to armor in order to protect their properties by arresting shoreline erosion and recession, should their efforts to do so be prevented by governmental regulation; coastal localities, seeking either to prevent armoring because of its potential harms or to facilitate it for the sake of maintaining shoreland property (or as defendants); agents of state government, similarly seeking either to prevent or to facilitate armoring (or similarly as defendants); and, possibly, private property rights interest groups seeking to ensure that shoreline armoring be allowed.²⁸³

Several attributes of both the police power and public trust doctrines under Michigan law, as well as constitutional constraints on those authorities, are well settled, as detailed above. There yet remains some uncertainty about how the courts might address conflicts over receding Great Lakes shorelines. This is in part because of changing physical conditions and development pressures that the courts have not expressly addressed, and because of the intricacies of the doctrines and their relationships to one another.

Key physical and development dynamics that the Michigan courts have not yet fully contemplated, and that are at the core of issues likely to arise, include the following: (1) Great Lakes shorelands do not merely shift alternately lakeward and landward over time as lake levels rise and fall but are slowly receding landward on average over time in most places, a phenomenon none of Michigan's public trust cases to date fully acknowledge; (2) that process will almost surely be accelerated and exacerbated by climate change,²⁸⁴ another phenomenon not yet considered by the courts; (3) the increased bulk and linear extent of shoreline armoring currently being permitted and built, and its correspondingly heightened potential to degrade and eliminate natural shorelines cumulatively for long periods of time, arguably exceeds

282. *See supra* Part II.C.

283. For this article, we focus on the substantive constitutional and statutory claims that might arise given conflicts over coastal shoreline dynamics and shoreline armoring, setting aside important but more tangential questions such as standing, statutes of limitations, collateral estoppel, and other related litigation issues.

284. *See generally supra* note 6 and accompanying text.

conditions experienced before; and (4) the extent of development pressures putting shoreland property investments at risk, particularly in the form of large, permanent residential structures, arguably exceeds conditions experienced before.²⁸⁵ None of these phenomena appear to be abating, and all point to the unavoidable dilemma the State confronts looking forward over whether to armor receding shorelines or withdraw from them.

Although the extent of permitted shoreline armoring (and likely unpermitted armoring) increased dramatically with rising lake water levels between roughly 2014 through 2020, we know of no systematic analysis of EGLE's administration of the permitting process, particularly regarding the evidence it requires to justify granting a permit. Anecdotally, however, that practice appears to have allowed shoreland property owners to submit applications asserting that no feasible alternative to armoring is available, that the designed revetment or other armoring will be minimally disruptive to the environment, and that the shoreline will recover when lake levels again fall. Once those assertions are made by a project proponent (usually by the contractor who designed and will install the structure on the property owner's behalf), EGLE staff and the local government then have to analyze the accuracy of those assertions, usually without extensive site-specific or regional data or analysis.²⁸⁶ As a result, project proponents effectively enjoy the default presumption that their armoring structures are necessary and will yield minimal harm. The government then bears the burden of refuting that presumption through additional analysis, such that permits are issued absent such evidence and analysis. Given that approach, numerous permits have been issued by EGLE that, in fact, will likely contribute to the substantial degradation and loss of Michigan's natural coastal shorelines.²⁸⁷

EGLE has reversed that presumption in at least one documented case, in part based on a summary of the best available science documenting the substantial evidence of the harms that shoreline armoring causes along Great Lakes shorelines, which EGLE staff reviewed and applied in denying the permit.²⁸⁸ EGLE thus

285. *See supra* Part I.

286. The observations were made by the lead authors to this article of EGLE administrative proceedings and through informal consultations with various EGLE staff.

287. *See supra* Part I.

288. *See* Richard K. Norton and Guy A. Meadows, Opinion Letter Regarding Long-Term Effects of Armoring Structures on Great Lakes Shorelines," Letter to the Water Resources Division, Michigan Department of Environment, Great Lakes, and Energy, October 7, 2022.

A slightly modified version of this letter was subsequently submitted to the Committee on Natural Resources and Outdoor Recreation, Michigan House of Representatives, December 2, 2020 (available at: https://www.house.mi.gov/Document/?Path=2019_2020_session/committee/house/standing/natural_resources_and_outdoor_recreation/meetings/2020-12-03-1/documents/testimony/guymeadowsrichardnorton.pdf, accessed November 2022). The information provided by this letter was incorporated into a decision to deny a requested special exception to Michigan's critical dune area regulations by the State (EGLE Critical Dune Project Review Report Special Exception Application Denial, Site 11-14144 Swift Lane-Lakeside, Submission Number HPY-YMJV=SKPT2, Applicant Randy Berlin, 3/16/2021).

effectively reversed the burden of proof in that instance, starting with the presumption that the armoring proposed was not necessary and that it would yield substantial harms, and it placed the burden on the permittee to provide the data and analysis needed to refute those presumptions. It is not clear whether that shift represents a formal administrative policy shift by EGLE or merely a case-specific outcome.

Given all that and based on the analysis presented in Part II, the Michigan courts would almost certainly dismiss a claim that the State acting through EGLE lacks the authority to administer a regulatory program for the management of coastal bottomlands and shorelands, or to issue permits pursuant to that program as a general matter, or even to prohibit the installation of hard shoreline armoring on a Great Lakes shore lakeward of the elevation OHWM specifically. It is somewhat less clear, however, whether the courts might be persuaded that the State has a *duty* to prohibit hard shoreline armoring more so than it currently does (i.e., one that could be compelled through litigation), that the exercise of existing authorities runs afoul of the precise regulatory authorities granted, or that doing so runs afoul of constitutional protections of private shoreland property owners.

Adjudicating any of those claims will necessarily require balancing public and private interests along at least two distinct dimensions: first, balancing the public trust and constitutional interests in protecting natural coastal resources vis-à-vis safeguarding private shoreland property interests from governmental abuse; and second, balancing public trust property interests in submerged bottomlands vis-à-vis private shoreland property interests in adjacent littoral properties, the latter complicated especially by the moveable freehold boundary that separates them. Different balancing constructs have been established already at different institutional levels under current law. Table 1 summarizes those constructs for reference throughout this section.²⁸⁹ With that framing, we address two groupings of potential litigation that speak to the dilemma Michigan faces along its Great Lakes coasts, including arguments for prohibiting shoreline armoring altogether, and arguments for increased (or relaxed) permitting of shoreline armoring. We refer to the information summarized by Table 1 throughout those analyses where appropriate.

289. Consistent with our discussion of state statutory and administrative authorities, *see supra* Part II.A.4, this table focuses on the authorities provided by MEPA (NREPA Part 17), GLSLA (NREPA Part 325), and the high-risk erosion area provisions of SPMA (NREPA Part 323). It is important to note that provisions of the Sand Dunes Protection and Management Act addressing State-designated critical dune areas (NREPA Part 353) may apply to armoring structures as well, should a property owner seek a permit to place a structure on a protected dune—most likely to occur during a period of extreme high water (*see supra* note 104).

TABLE 1. Comparison of Balancing Approaches and Prioritization of Public Trust versus Private Ownership Interests for Great Lakes Submerged Bottomlands and Shorelands by Institution		
INSTITUTION	PROTECTION OF NATURAL COASTAL RESOURCES FROM POLLUTION, IMPAIRMENT, AND DESTRUCTION	PROTECTION OF PUBLIC PROPRIETARY (JUS PRIVATUM) AND PUBLIC SOVEREIGN (JUS PUBLICUM) INTERESTS IN COASTAL RESOURCES
PUBLIC TRUST DOCTRINE (Judicial)	The public trust doctrine prioritizes public interests in the protection and conservation of Great Lakes submerged bottomlands (including periodically submerged shorelands) superior to private property use and ownership rights, including the public right to walk along Great Lakes shores lakeward of the OHWM, although it recognizes littoral property rights to wharfage over submerged bottomlands and shoreland property owners' right to exclude beyond the public right to beach walk. ²⁹⁰ Beyond wharfage, private use of bottomlands, or conveyance of jus publicum interests in bottomlands, is lawful only for two exceptional reasons: when doing so will improve the public trust; or when it can be accomplished without detriment to the public interest in lands and waters remaining. ²⁹¹	
CONSTITUTIONAL	The Michigan Constitution mandates action by the legislature for the protection of public health, safety, and general welfare ²⁹² and for protection of the environment and natural resources from pollution, impairment, and destruction. ²⁹³ The Michigan courts have recognized these mandates as encompassing public trust resources. ²⁹⁴ The Michigan Constitution also recognizes generally rights to due process ²⁹⁵ and equal protection ²⁹⁶ when governments regulate, and it recognizes specifically protection of private property rights in the context of governmental exercise of the power of eminent domain. ²⁹⁷	

290. See *supra* notes 54–64 and 75–76, and accompanying text. See also *supra* Part I. See also *supra* Part I and *infra* discussion Part III.B.2.a.

291. *Obrecht*, 361 Mich. at 412–413. See *supra* note 64 and accompanying text.

292. MICH. CONST. art. 4, §§ 51–52. See generally Part II.A.1.

293. MICH. CONST. art. 4, §§ 51–52. See *supra* Part II.A.1.

294. *People ex rel. MacMullan v. Babcock*, 196 N.W.2d 489, 497 (Mich. App. 1972).

295. MICH. CONST. art. 1, § 17. See generally *infra* Part III.B.2.

296. MICH. CONST. art. 1, § 2. See generally *infra* Part III.B.2.

297. See MICH. CONST. art. 10, § 2. See generally *supra* Part III.B.2.

TABLE 1. Comparison of Balancing Approaches and Prioritization of Public Trust versus Private Ownership Interests for Great Lakes Submerged Bottomlands and Shorelands by Institution		
INSTITUTION	PROTECTION OF NATURAL COASTAL RESOURCES FROM POLLUTION, IMPAIRMENT, AND DESTRUCTION	PROTECTION OF PUBLIC PROPRIETARY (JUS PRIVATUM) AND PUBLIC SOVEREIGN (JUS PUBLICUM) INTERESTS IN COASTAL RESOURCES
STATUTORY (Legislative)	MEPA establishes a cause of action to ensure protection of the environment and natural resources from pollution, impairment, and destruction, apparently prioritizing those interests over private land use development rights, except when there are no “feasible and prudent alternative[s] consistent with the reasonable requirements of the public health, safety, and welfare.” ²⁹⁸ GLSLA appears to prioritize public trust interests over private shoreland use rights by permitting private shoreland activities only when public trust interests will not be impaired or substantially affected or injured, ²⁹⁹ including allowing minor permits for activities (such as armoring) only when such activities will cause only minimal adverse environmental harms individually and cumulatively. ³⁰⁰	GLSLA appears to prioritize public trust interests over private property interests by allowing filling of submerged bottomlands or conveyance to and private use of public trust resources only upon a finding that public trust resources will not be impaired or substantially affected. ³⁰¹

298. MICH. COMP. LAWS § 324.1705(2) (1994). *See generally* discussion of MEPA, *supra* Part II.A.4.

299. *See generally* discussion of GLSLA, Part II.A.4. *See also supra* notes 113–116 and accompanying text.

300. *See generally* discussion of GLSLA, Part II.A.4. *See also supra* notes 114–119 and accompanying text.

301. *See generally* discussion of MEPA, Part II.A.4. *See also supra* note 112 and accompanying text.

TABLE 1. Comparison of Balancing Approaches and Prioritization of Public Trust versus Private Ownership Interests for Great Lakes Submerged Bottomlands and Shorelands by Institution		
INSTITUTION	PROTECTION OF NATURAL COASTAL RESOURCES FROM POLLUTION, IMPAIRMENT, AND DESTRUCTION	PROTECTION OF PUBLIC PROPRIETARY (JUS PRIVATUM) AND PUBLIC SOVEREIGN (JUS PUBLICUM) INTERESTS IN COASTAL RESOURCES
ADMINISTRATIVE RULE (Executive)	<p>GLSLA rules incorporate provisions requiring protection of public trust resources, through the definition of “public trust”³⁰² and permitting requirements,³⁰³ but they allow issuance for permits for structures (and related activities) when “impacts are minimal and mitigated” and there are “no feasible and prudent alternatives” to such structures consistent with public health, safety, and welfare,³⁰⁴ thus prioritizing private property ownership rights over resource protection when private properties are threatened by natural forces.</p> <p>SPMA rules allow permitting of “shore protection structures” within State-designated high-risk erosion areas that are compliant with the GLSLA,³⁰⁵ but only when doing so will provide a “greater good” relative to the benefits of conserving natural resources.³⁰⁶</p>	
ADJUDICATORY (Judicial)	<p>MEPA common law of environmental quality recognizes the broad applicability of MEPA (and constitutional) protections for the environment and natural resources, and it acknowledges the potential for impacts to natural resources broadly, but it recognizes the applicability of MEPA protections regarding potential impacts only when those impacts rise to the level of “substantial impairment”.³⁰⁷</p>	<p>The courts have ruled in public trust doctrine cases that private use of bottomlands, or conveyance of jus publicum interests in bottomlands, is lawful only for two exceptional reasons.</p> <p>Those exceptions are when doing so will improve the public trust, and when doing so can be accomplished without detriment to the public interest</p>

302. See discussion of GLSLA, Part II.A.4..

303. See discussion of GLSLA, Part II.A.4.

304. See discussion of GLSLA, Part II.A.4.

305. See discussion of SPMA, Part II.A.4.

306. See discussion of SPMA, Part II.A.4.

307. See *infra* Part III.A.2.

TABLE 1. Comparison of Balancing Approaches and Prioritization of Public Trust versus Private Ownership Interests for Great Lakes Submerged Bottomlands and Shorelands by Institution		
INSTITUTION	PROTECTION OF NATURAL COASTAL RESOURCES FROM POLLUTION, IMPAIRMENT, AND DESTRUCTION	PROTECTION OF PUBLIC PROPRIETARY (JUS PRIVATUM) AND PUBLIC SOVEREIGN (JUS PUBLICUM) INTERESTS IN COASTAL RESOURCES
	<p>There are no cases directly on point regarding shoreline armoring under GLSLA or SPMA; but see the courts' reasoning regarding liability for modifications of natural Great Lakes shoreline coastal processes.³⁰⁸</p> <p>Adjudication of claims of constitutional violations of due process, equal protection, and regulatory takings in general require balancing the public health, safety, and general welfare interests served by public regulation against the burdens imposed by those regulations on private property rights.³⁰⁹</p>	<p>in lands and waters remaining.³¹⁰</p> <p>There are no cases directly on point regarding shoreline armoring (or conveyance of public trust interests via passive filling); but see the courts' reasoning in the context of statutory modifications to constitutionally protected common law rights³¹¹ and the lawful public taking of private property through eminent domain.³¹²</p>

A. Armoring Great Lakes Shorelines Should Not Be Allowed

The State of Michigan has a constitutional duty to protect the state's environment and natural resources from pollution, impairment, and destruction, and it has a public trust doctrinal and constitutional duty to retain and protect Great Lakes coastal resources in trust for the people.³¹³ As illustrated by TABLE 1, those duties speak to two interrelated but nonetheless distinct tensions between public and

308. *Id.*

309. *See infra* Part III.B.2.

310. *Obrecht*, 361 Mich. at 412–413. *See supra* note 64 and accompanying text.

311. *See supra* Part II.C.

312. *See infra* Part III.A.3.

313. *See supra* Part II.A.3.

private interests: first, the need to balance the general public welfare through regulations designed to protect and conserve natural coastal resources, set against protections of private property rights from abusive governmental regulation; and second, the need to balance public trust *jus privatum* and *jus publicum* interests in Great Lakes submerged bottomlands, including interests in real shoreland properties periodically submerged, set against the real property interests of shoreland property owners.³¹⁴

Given those duties, parties arguing that Great Lakes shorelines should not be armored would most likely assert that current administrative rules are unlawful because they are not enabled by statutory law, to the extent they allow shoreline armoring at odds with proscriptions in those acts regarding public trust interests,³¹⁵ or that current statutory laws (or any potential statutory amendments further allowing armoring) are unlawful to the extent they abrogate public trust doctrinal and constitutional provisions,³¹⁶ or both. More precisely, we anticipate that litigation advancing the argument that the State (or coastal localities) should not permit the installation of hard shoreline armoring on a Great Lakes shore would most likely be framed along one or more of three distinct theories: first, that the current administrative rules allowing the permitting of hard shoreline armoring are *ultra vires*; second, that shoreline armoring results in the unlawful pollution, impairment, and destruction of Great Lakes natural coastal resources; and third, that shoreline armoring results in the unlawful conversion of public trust interests in submerged bottomlands to private shoreland ownership.

314. The tensions between public regulation to protect the environment versus constitutional protection from governmental abuse flow most directly from state police power authorities and duties in combination with the 1963 Michigan Constitution art. 4, §§ 51 and 52 provisions, the state statutory laws enacted pursuant to those authorities (including primarily MEPA, GLSLA, and SPMA), and regulatory authorities delegated to local governments by the state (including primarily police power, planning, zoning, and related authorities). The tensions between public trust interests in Great Lakes coastal resources versus private shoreland property interests flow directly from *jus privatum* and *jus publicum* interests and duties arising from the public trust doctrine in combination with 1963 Michigan Constitution art. 4, § 52 provisions, implemented statutorily at the state level primarily through the GLSLA but not delegated to local governments. These two tensions are distinct given the different sources of the authorities and the purposes for which they are exercised, but they are interrelated to the extent that the public trust doctrine and art. 4, § 52 protections encompass both protecting coastal resources from impairment and prohibiting their conveyance to private ownership. *See also* the discussion *infra* regarding competing property interests in Great Lakes submerged bottomlands and littoral shoreland properties at common law.

315. *See supra* TABLE 1, notes 118–134 and accompanying text (rules adopted pursuant to the GLSLA), and notes 144–150 and accompanying text (rules adopted pursuant to the SPMA).

316. *See supra* TABLE 1, notes 109–117 and accompanying text (GLSLA provisions allowing placement of structures so long as public trust resources are not substantially impaired), and notes 135–143 and accompanying text (SPMA provisions authorizing the permitting of shoreline protection structures). *See also supra* Part II.C (discussing potential statutory modification of the common law public trust doctrine).

1. Administrative Rules Allowing Shoreline Armoring Are *Ultra Vires*

The provisions of the GLSLA for transferring title of *jus privatum* submerged bottomlands from public to private ownership (i.e., leasing or patenting unpatented lands), and modifying *jus privatum* lands subject to the *jus publicum* (e.g., filling patented or unpatented submerged bottomlands), allow doing so in both instances only if public trust interests in those resources will not be impaired or substantially injured, as required by and consistent with well-settled elements of Michigan's public trust doctrine and 1963 Mich. Const. art. 4, § 52.³¹⁷ At the same time, it is important to acknowledge that both Parts 325 and 323 of NREPA (i.e., the GLSLA and SPMA, respectively) inject some ambiguity into the exact meaning and extent of those doctrinal and constitutional mandates to safeguard public trust resources by at least contemplating in several instances the issuance of permits for the installment of shoreline armoring structures, and possibly for allowing transfer of title for submerged lands "passively filled" by the installation of shoreline armoring.³¹⁸

Acknowledging that ambiguity, the administrative rules adopted by EGLE pursuant to the GLSLA and SPMA generally extend from and animate the statutory requirements authorizing them, and they are generally consistent with them, but both nonetheless expressly establish opportunities for installing shoreline armoring in ways arguably at odds with the broad purposes of those parts and the doctrinal and constitutional provisions underlying them. Specifically, the rule provisions that arguably go too far include: the mandate that EGLE issue a permit for the placement of "other materials" like shoreline armoring on submerged bottomlands if it determines that the environmental impacts of doing so will be minimized and that there is no "feasible and prudent alternative;"³¹⁹ the identification of a number of shoreline armoring structures within several minor permit categories, thus both clearly allowing the installation of armoring on submerged bottomlands and providing for expedited review of those permit applications;³²⁰ and the mandate that

317. See *supra* TABLE 1 and supporting analysis cited there.

318. See *supra* TABLE 1, notes 79–81, 102, and 104–105, and accompanying text. See also *supra* note 15 and accompanying text regarding the concept of "passive filling." This confusion also arises because the public trust doctrine encompasses multiple dimensions of the tensions between public and private interests, muddying the task of discerning how to resolve those tensions appropriately; see *supra* note 281. The relationships between passive filling and public trust interests in submerged bottomlands are addressed *infra*, Part III.A.3. We approach our analysis here in terms of whether the administrative rules adopted pursuant to the GLSLA or SPMA might be found *ultra vires* for violating proscriptions against impairing public trust interests. Nonetheless, the argument that these statutory laws might similarly be unlawful for abrogating public trust duties would essentially follow the same reasoning applied here.

319. There are no provisions of the GLSLA itself that direct EGLE to contemplate such a trade-off through this formulation as between public trust interests and private property rights when making a permitting decision.

320. While the amended GLSLA directs EGLE to establish categories of activities warranting 'minor permits' rather than major permits, nothing in that provision directs EGLE to include shoreline armoring structures in those categories. The GLSLA does, however, expressly recognize the possibility of

EGLE waive setbacks and permit the installation of armoring within HREAs, potentially on submerged bottomlands.³²¹

Arguably, none of these administrative rule provisions comport with the central mandate of the public trust doctrine as consistently found by the Michigan courts, further required by 1963 Mich. Const. art. 4, § 52, clearly stated early in GLSLA provisions, and even embedded within the rule's own definition of the public trust authorized under that part;³²² that is, the mandate that activities that could pollute, impair, or destroy Great Lakes public trust resources should not be authorized or approved unless those activities would in fact not impair, or would enhance, public trust interests.

In other words, the public trust doctrine, in conjunction with Michigan constitutional protections, consistently calls for balancing the various public trust interests at hand regarding the potential use of public trust coastal resources as against one another, asking whether conservation or development of those resources would better serve larger public trust interests (e.g., comparing the public trust interests to be served by conserving the natural shoreline versus allowing hard shoreline armoring that protects a water-dependent power plant, marina, or other utility serving the general public). The administrative rules adopted by EGLE pursuant to the GLSLA and SPMA, in contrast, balance public trust interests against private interests. They further expressly require that private interest prevail when shoreland property owners proffer no feasible alternatives to their proposed actions.

This raises the question of whether the administrative rules adopted pursuant to the GLSLA and SPMA are *ultra vires* for contravening Michigan's public trust doctrine, 1963 Mich. Const. art. 4, § 52, and the express provisions of those acts, engaging a balancing calculation not called for by either—and indeed arguably at odds with the balancing calculus expressly called for. While balancing public interests versus private interests is appropriate and relevant in the context of adjudicating whether governmental action violates constitutionally protected private property rights through the adjudication of due process and other constitutional claims,³²³ it is arguably not apt when adjudicating the prior question of whether the state is enabled in the first place to issue permits that either transfer *jus privatum*

issuing 'major project' permits for larger shoreline armoring structures by including a schedule of permit application fees for them.

321. See the summary provided in TABLE 1.

322. The SPMA does not provide a statement of purpose, and it cites indirectly to coastal shoreland protection as an animating purpose, but at least to the extent that its provisions addressing 'shoreline protection' reference the need to comply with the GLSLA and its corresponding rules, as applicable, it incorporates the purposes of those authorities as well.

323. These protections are discussed *infra* in Part III.B. It could be that the rule provisions noted were adopted specifically to address such potential constitutional concerns, such as by ensuring continued use of shoreland properties to avoid regulatory takings claims. As addressed below, however, a good argument can be made that such constitutional claims would not be viable because of the public trust doctrine in the first place, such that prioritizing private shoreland property rights over public trust interests through administrative rule is both unnecessary and violative of public trust doctrinal and constitutional protections of those public trust interests.

property rights along coastal shores or impair or destroy public trust resources—or indeed whether it has a duty *not* to do so—under the terms of the public trust doctrine and the Michigan constitution.

The questions of whether the current administrative rules were duly enabled, or whether they contravene statutory, constitutional, or doctrinal proscriptions, are essentially enabling questions. To answer them, it will also likely be necessary to address more substantive questions regarding the ways in which hard shoreline armoring might run afoul of public trust and constitutional imperatives, either by destroying public trust resources or converting them from public to private ownership. Litigants opposed to the hard shoreline armoring of Great Lakes shores will need to frame their arguments along one or both of those two substantive theories as well, either standing alone or in conjunction with the assertion that current administrative rules are *ultra vires*.

2. Shoreline Armoring Unlawfully Destroys Natural Coastal Resources

Should a party assert that the State should not issue a permit to allow the installation of hard armoring on a Great Lakes shoreline³²⁴ based on the theory that doing so would unlawfully impair or destroy public trust interests in natural coastal resources, either in general or with regard to current administrative rule provisions, that party would need to demonstrate both that shoreline armoring would indeed have those effects and that the level of impairment or destruction caused would amount to something more than *de minimus* harms.

While no Michigan appellate cases have specifically addressed issues related to shoreline armoring in the context of statutory or constitutional protections of Great Lakes shoreland coastal resources, the courts have considered the dynamic nature of Great Lakes shorelands and potential impacts to them from armoring or armor-like structures in two cases: *Peterman v. Michigan Department of Natural Resources*,³²⁵ decided by the Michigan Supreme Court in 1994, and *Howard v. Glenn Haven Shores*, decided by the Michigan Court of Appeals in 2018.³²⁶ Both cases involved claims brought by shoreland property owners against a neighbor and alleged that actions taken by defendants on their property changed natural dynamics in such a way as to cause damage and loss of plaintiffs' properties.

324. The same line of reasoning discussed here would also follow should a party assert that the State should require that armoring previously permitted should be removed, *see supra* Parts II.A.1–4, or—if a locality were to address shoreline armoring through a police power or zoning ordinance—should a party assert that the locality should not issue a permit, or that it should require removal of armoring previously permitted, *see supra* Parts II.B.1–3 and *infra* Part III.B.2.a.

325. *See Peterman v. Mich. Dept. of Nat. Resources*, 521 N.W.2d 499 (Mich. 1994). The Michigan Supreme Court also addressed the potential impacts of the installation of wharfage on the submerged bottomlands of Lake Huron directly in *Obrecht*, which can influence sediment movement on shorelands in a way akin to armoring structures. *See infra* note 403 and accompanying text (discussing *Obrecht* with regard to overlapping property interests).

326. *Howard v. Glen Haven Shores Ass'n*, No. 340174, Mich. App. LEXIS 2935 (Mich. Ct. App. July 26, 2018).

Specifically, *Peterman* involved a claim that the State's installation of a public boat launch ramp and jetties on state-owned parkland caused the loss of plaintiff's adjacent privately owned beach below the OHWM, and of fastland above it, from erosion. *Howard* involved a claim that a homeowner association's negligent use of stormwater management features (and apparently a seawall of some kind) on its lakefront property caused the erosion of defendants' beaches and properties. Given the nature of the claims made, neither referenced the public trust doctrine. Nonetheless, in both cases the courts recognized that Great Lakes shorelines are dynamic and that the installation of artificial structures that alter the natural flows of sediments and waters can yield unlawful harms to neighboring properties.³²⁷ The reasoning employed by the courts in both cases suggests some precedent for concluding that armoring structures that alter the natural flow of sediments on a Great Lakes shoreline can cause impairment or destruction to the coastal resource, both to neighboring properties and to the coastal resource more broadly itself (i.e., akin to if not constituting a public nuisance).

Building from that precedent, parties asserting that the State should not allow shoreline armoring at a particular site would need to show thorough, sufficient, and well-supported evidence that such armoring does or could reasonably be expected to impair if not destroy natural coastal resources at that site. Given the already extensive and growing physical evidence that armoring yields such impacts in general, it should not be difficult to make out such a showing—at least as an initial or default finding sufficient to be dispositive, absent site-specific and compelling evidence otherwise.³²⁸

The more challenging showing would likely be that such harms amount to something more than *de minimis* impacts to implicate public trust doctrinal and constitutional protections. This consideration stems not from caselaw relating to litigation regarding the public trust doctrine and impacts from armoring the

327. Because the defendant in *Peterman* was the State, the claim was fashioned as an unconstitutional de facto taking or 'inverse condemnation' of plaintiff's property; see discussion of this doctrine *infra* Part III.B.2.c. The court reasoned that the unnecessary erosion of beach below the OHWM (i.e., because of poor design) and the loss of 'fastland' beach above the OHWM (i.e., beach the court believed would have been replaced by natural sediment movement but for the State-installed structures) both amounted to the conversion of privately-owned upland to State-owned submerged bottomland, akin to the State's physical occupation of the privately-owned upland. The court thus found that the State had taken the private shoreland property and awarded compensation. The court of appeals held in *Howard* that, while the owner of an upland property has no duty to mitigate the natural flow of water to a lower property, the upland owner does have a duty "not to engage in unreasonable or negligent conduct that diverts or increases the natural flow of waters so as to cause injury to plaintiffs' properties in the form of erosion that otherwise would not have occurred." *Howard*, No. 340174, Mich. App. LEXIS 2935 at *17–20. The court did not directly address the apparent impact from an alleged seawall, or the implications of that seawall, and it upheld the trial court's dismissal of plaintiffs' claim on a motion for summary disposition because plaintiffs failed to submit sufficient evidence to demonstrate a genuine dispute over material facts.

328. See *supra* Part III, TABLE 1, and notes 280–281 regarding current EGLE administration of permits under GLSLA and SPMA rules. See also *infra* discussion in Part III.B.2 regarding evidentiary requirements that would apply to potential substantive due process and related claims against state or local regulations prohibiting the installation of hard shoreline armoring.

shoreline, but rather from caselaw related to the applicability of MEPA, the state statutory act that most directly implements 1963 Mich. Const. art. 4, § 52 protections. As detailed above,³²⁹ the state legislature enacted MEPA in 1970 directly in response to that constitutional mandate to protect the state's environment and natural resources from pollution, impairment, and destruction. The courts have subsequently established a body of "common law of environmental quality" through adjudication of MEPA claims, confirming that MEPA applies to all the state's natural resources, including those lands impressed by a public trust interest or right of public access and those not.³³⁰ It applies broadly, encompassing, for example, state waters,³³¹ fish populations,³³² wetlands,³³³ wildlife and wildlife habitat,³³⁴ and sand and gravel.³³⁵ It applies to public trust resources specifically by its text,³³⁶ and it has been recognized by the courts as applying to submerged bottomlands owned by the state,³³⁷ as well as to state-owned recreational areas.³³⁸

Given the broad reach of MEPA and the caselaw speaking to its applicability in context, should a party bring a claim against the State (or a locality) to enjoin the permitting of shoreline armoring either under the GLSLA independently, or in conjunction with the provisions of the MEPA,³³⁹ the courts

329. See *supra* Parts II.A.1–4.

330. See *Stevens v. Creek*, 328 N.W.2d 672, 674–75 (Mich. Ct. App. 1982). Given its broad applicability, as detailed here, there is no reason to conclude that the courts would find MEPA not to apply equally to privately-owned Great Lakes shorelands, including those impressed with the public trust interests and those not.

331. See *Dwyer v. City of Ann Arbor*, 261 N.W.2d 231, 233 (Mich. Ct. App. 1977).

332. See *Mich. United Conservation Clubs v. Anthony*, 280 N.W.2d 883, 886 (Mich. Ct. App. 1979).

333. See *Citizens Disposal, Inc. v. Dep't of Nat. Res.*, 432 N.W.2d 315, 316–17 (Mich. Ct. App. 1988).

334. See *W. Mich. Env't Action Council, Inc., v. Nat. Res. Comm'n*, 275 N.W.2d 538, 539 (Mich. 1979).

335. See *Preserve the Dunes, Inc. v. Dep't of Env't Quality* (on remand), 690 N.W.2d 487, 492 (Mich. Ct. App. 2004). See also *Whittaker & Gooding Co., v. Scio Twp.*, 323 N.W.2d 574, 574 (Mich. Ct. App. 1982). MEPA does not apply to the human social and cultural environment. *Poletown Neighborhood Council v. City of Detroit*, 304 N.W.2d 445, 457 (Mich. 1981), overruled on other grounds by *Wayne Cnty. v. Hathcock*, 684 N.W.2d 765, 772–88 (Mich. 2004) (concurrency), and it applies to groundwater only when groundwater withdrawal affects surface waters. See *Mich. Citizens for Water Conservation v. Nestle Waters North America, Inc.*, 737 N.W.2d 447 at 451, 457 (Mich. 2007)).

336. MICH. COMP. LAWS § 324.1701(1) (2015).

337. *Superior Public Rights, Inc. v. Dep't of Nat. Res.*, 263 N.W.2d 290 (Mich. Ct. App. 1977) (finding MEPA applicable regarding easements granted across submerged bottomlands to serve an electrical power generating plant).

338. *Highland Recreation Defense Foundation v. Nat. Res. Comm'n*, 446 N.W.2d 895 (1989) (finding MEPA applicable regarding issuance of a use permit for a short-term camping convention held at a State-owned recreational area).

339. The text of MEPA applies its provisions to permit actions taken by state agencies via MICH. COMP. LAWS § 324.1701(2) (2015), and to judicial review of those actions pursuant to MICH. COMP. LAWS § 324.1705(2) (2015). The Michigan Supreme Court held in 1979 that MEPA authorizes review of an administrative action that precedes issuance of a permit, such as a consent order, if issuance of the permit will be an "inevitable consequence" of that action, and that MEPA authorizes review of the issuance of permits by an administrative agency as well as the conduct of persons allowed by the permits. *WMEAC*,

would likely analyze the viability of that claim as it has approached MEPA claims to date. Most relevant for purposes here, just as the courts have long recognized that not all regulations that diminish the economic value of a property violate constitutional protections of private property or warrant compensation for those losses,³⁴⁰ the courts have also recognized through early adjudication of MEPA claims that not all activities affecting the environment and natural resources implicate 1963 Mich. Const. art. 4, § 52 protections or should be enjoined. As the Michigan Supreme Court observed in *West Michigan Environmental Action Council (WMEAC)*, “virtually all human activities can be found to adversely impact resources in some way or other. The real question before us is when does such impact rise to the level of impairment or destruction?”³⁴¹

Not long after the Michigan Supreme Court’s decision in *WMEAC*, the Michigan Court of Appeals handed down a series of decisions that attempted to distinguish environmental impacts not implicated by MEPA directly (or by 1963 Mich. Const. art. 4, § 52 protections more indirectly) from those constituting “substantial impairment or destruction” and thus subject to statutory and constitutional protections. In 1982, the court found in *Kimberly Hills Neighborhood Ass’n v. Dion*³⁴² that a proposed residential development would yield only local impacts. It ruled that MEPA applicability requires impacts important from a statewide perspective (e.g., harms to biologically unique or endangered species). Two years later, however, the court ruled in *City of Portage v. Kalamazoo Cnty. Road Comm’n*³⁴³ that demonstrating harms on a statewide perspective is not always necessary to make out a prima facie violation of MEPA.³⁴⁴ It articulated instead four

405 Mich. At 750–751. The courts have since adjudicated agency actions involving the issuance of permits or similar actions otherwise (e.g., *Highland Recreation*, 446 N.W.2d at 896 in 1989, *supra* note 338, regarding issuance of a use permit), and they have confirmed that assessment when adjudicating MEPA claims (e.g., *Comm for Sensible Land Use v. Garfield Twp.*, 335 N.W.2d 216, 218 (Mich. Ct. App. 1983) (building permit would be reviewable); *Wortelboer v. Benzie Cnty.*, 537 N.W.2d 603, 609 (Mich. Ct. App. 1995) (administrative action that leads directly to conduct)). Nonetheless, adjudicating a MEPA claim in combination with the Sand Dune Mining Act (SDMA), MICH. COMP. LAWS § 324.6701(1) (2015) etc., and clearly concerned that MEPA not subsume the SDMA (which specifically permits sand mining), the Michigan Supreme Court held that MEPA does not apply to sand dune mining permits issued pursuant to the SDMA (MICH. COMP. LAWS § 324.63702(1) (2015)) when the claim is premised on a procedural aspect of the SDMA that has nothing to do with conduct related to potential impairment of the environment. *Preserve the Dunes*, 684 N.W.2d at 855. The State of Michigan has since asserted that that holding has exempted state permitting actions entirely from review under MEPA. That assertion is currently under review through litigation before the Michigan Supreme Court at the time of this writing. Specifically, the court denied an application for leave to appeal the appellate court’s decision, *Lakeshore Grp. V. State*, 977 N.W.2d 789 (Mich.), reconsideration denied, 979 N.W.2d 330 (Mich. 2022), but it has not acted on a subsequent motion by the plaintiff for reconsideration, August 18, 2022.

340. *See, e.g.*, *K & K Constr. Inc., v. Dep’t of Nat. Res.*, 575 N.W.2d 531, 534–35 (Mich. 1998); *K & K Constr. V. Dep’t of Env’t Quality*, 705 N.W.2d 365, 367–68 (Mich. Ct. App. 2005).

341. *W. Mich Env’t Action*, N.W.2d at 545.

342. *Kimberly Hills Neighborhood Assoc. v. Dion*, 320 N.W.2d 668, 673–74 (Mich. Ct. App. 1982).

343. *City of Portage v. Kalamazoo Cnty. Rd Comm’n*, 355 N.W.2d 913 (Mich. Ct. App. 1984).

344. *Id.* at 916, n.2.

factors to be applied in determining whether impacts to the environment or natural resources constitute unlawful pollution, impairment, or destruction. Those factors include: (1) whether the resources affected are rare, unique, endangered, or have historical significance otherwise; (2) whether the resource is “easily replaceable” (e.g., by tree replanting or fish restocking); (3) whether the action in question will have significant effects on other resources (e.g., habitat loss); and (4) whether direct impacts will affect a critical number of animals or vegetation, considering the nature and location of wildlife affected.³⁴⁵

A number of courts of appeals decisions have since applied these *Portage* factors in adjudicating MEPA claims.³⁴⁶ Nonetheless, the Michigan Supreme Court in its 1998 decision *Nemeth v. Abonmarche Dev., Inc.*,³⁴⁷ upon reviewing the lower court’s use of the *Portage* factors to dismiss an alleged MEPA violation, noted that the use of the “*Portage* factors may be appropriate or relevant in some cases [but that] their use in every case has stifled the development of the ‘common law of environmental quality,’” and it held that when deciding MEPA cases, those “factors are not mandatory, exclusive, or dispositive.”³⁴⁸ Rather, under MEPA, the courts are to review alleged violations independently, without deferring to administrative agency opinions or assertions regarding the applicability of MEPA, and they are to do so: in the context of the alleged violation and the particular “pollution control standard” relevant to that alleged violation; without requiring strict application of the *Portage* factors; and without necessarily having to conclude that the resources affected are important from a statewide perspective generally, that some critical threshold number of species or amount of resources would be harmed, that multiple resources would be harmed, or that the those resources are unique or rare.³⁴⁹

345. *Id.* at 916. Applying those criteria, the court concluded that loss of trees at issue was not subject to MEPA because that loss did not amount to substantial impairment or destruction of natural resources.

346. *See, e.g.*, *Rush v. Sterner*, 373 N.W.2d 183, 186 (Mich. Ct. App. 1985) (rejecting the proposition that a statewide perspective is necessary, but applying the *Portage* criteria to find that the flooding of a streamshed by rehabilitation of a dam would not engender impacts to adjacent lands and resources, making out a prima facie case under MEPA). Similarly, the court applied the *Portage* factors in *Rochow v. Spring Arbor Twp.*, 394 N.W.2d 102, 104 (Mich. Ct. App. 1986) (cutting roadside trees); *Kent Cnty. Rd. Comm’n v. Hunting*, 428 N.W.2d 353 (1988) (cutting roadside trees); and *Highland Recreation Def. Found. v. Nat. Res. Comm’n*, 446 N.W.2d 895, 898 (Mich. Ct. App. 1989) (removing trees in state recreation area).

347. 576 N.W.2d 641.

348. *Nemeth v. Abonmarche Dev., Inc.*, 576 N.W.2d 641, 651 (Mich. 1998). In its decision, the court also revisited earlier decisions suggesting that the courts should engage analysis of ‘environmental risk’ when adjudicating MEPA claims, which had informed the *Portage* court’s articulation of factors (*Id.* at 645, citing *Dafter Sanitary Landfill v. Superior Sanitation Service*, 499 N.W.2d 383 (Mich. Ct. App. 1983); *see also* *Oscoda Chap. Of PBB Action Committee, Inc., v. Dept. of Nat. Res.*, 268 N.W.2d 240, 247 (Mich. 1978) (impliedly rejecting strict application of *Portage*-like formulation as well and instead focusing on environmental risk calculation). The use of stringent *Portage*-like thresholds is also not supported by review of the legislative history of MEPA. *See* Robert H. Abrams, *Thresholds of Harm in Environmental Litigation: The Michigan Environmental Protection Act as a Model of a Minimal Requirement*, 7 HARV. ENVTL. L. REV. 107, 110–15 (1983).

349. *Nemeth*, 576 N.W.2d at 648–50. *Nemeth* involved the construction of a marina, condominium project, and hotel in barrier dunes at the mouth of Manistee River on Lake Michigan, and the court adjudicated MEPA in conjunction with SESC. Applying the *Portage* factors, the court of appeals had ruled

Given this body of caselaw, the Michigan courts could go either way in assessing whether the actual or potential harms caused by hard shoreline armoring of a Great Lakes shore—either in a given setting or as a general matter—amount to substantial impairment or destruction of Great Lakes natural coastal resources implicating the protections afforded by MEPA, GLSLA, the public trust doctrine, and 1963 Mich. Const. art. 4, § 52, such that those protections should prevail over private shoreland property interests.³⁵⁰ Parallel to the courts' reasoning regarding potential statutory modification of common law doctrine,³⁵¹ the early and influential Michigan Supreme Court decisions discussed above suggest the need to strictly apply public trust principles and constitutional provisions. As such, that caselaw would support a conclusion that the permitting and actual installation of shoreline armoring violates doctrinal and constitutional protections—should future courts look to and rely upon those early decisions.³⁵² Alternatively, the courts may be dissuaded from reaching that conclusion, mindful of the implications for private shoreland properties, and they might instead temper the doctrinal, constitutional, and statutory protections of coastal resources by concluding that the impacts from armoring do not amount to substantial impairment or destruction of coastal resources—should they look to other appellate decisions deploying that approach (mostly those of the court of appeals).³⁵³

3. Shoreline Armoring Unlawfully Converts Public Trust Interests to Private Ownership

The second substantive theory that parties seeking to prevent the hardened armoring on Great Lakes shorelines are likely to raise is that the installation of such

that the violation of the SESC was a 'technical' violation that did not cause substantial impairment to natural resources. The supreme court reversed based on the reasoning and analysis noted, holding that the requirements of a pollution control statute (in this case, the SESC) equates to a 'pollution control standard' under MEPA and that violation of such a statute constitutes a prima facie violation of MEPA. In addition to this decision, the court of appeals has since held that when assessing whether a statute (like GLSLA) contains a pollution control standard, courts should determine whether the statutory purposes are to "protect our natural resources or to prevent pollution and environmental degradation" (Michigan Citizens for Water Conservation v. Nestle Waters North America, Inc., 709 N.W.2d 174, 213 (2005), aff'd in part and rev'd in part on other grounds, 737 N.W.2d 447 (2007)). Thus, by extension, violation of provisions of the GLSLA or SPMA might similarly be found to constitute substantial impairment.

350. See *supra* TABLE 1.

351. See *supra* Part II.C.

352. See in addition to the public trust cases, *e.g.*, the Michigan Supreme Court's analysis of MEPA through its decisions in *Vanderkloot*, *Whittaker*, *Daniels*, and *Ray*, *supra* notes 87–90 and accompanying text, along with its decisions in *WMEAC* and *Nemeth*, *supra* notes 341 and 347 and accompanying text. See also the court of appeal's decision in *Nestle*, discussed *supra* note 349.

353. Such an outcome is more likely to occur especially on a case-by-case basis if those cases are analyzed in isolation from nearby conditions or over time, which could yield substantial coastal resource harms cumulatively, even if a court recites first the importance and broad reach of doctrinal, constitutional, and statutory protections. See, *e.g.*, discussion of the court of appeal's reasoning in its decisions in *Kimberly Hills*, *Portage*, *Rush*, *Rochow*, *Hunting*, and *Highland Recreation*, *supra* notes 341–346 and accompanying text.

armoring unlawfully converts public trust interests to private ownership.³⁵⁴ Armoring hampers public trust interests directly and immediately, and also more indirectly over time. Directly and immediately, armoring structures diminish public access to coastal beaches, hindering the ability to traverse the beach in order to exercise the variety of public trust purposes long recognized under the doctrine (e.g., navigation, fishing, strolling). Armoring structures have that effect both because the structures themselves are often impassable, and because they scour away sand lakeward of them such that traversing in shallow water is no longer possible.³⁵⁵ Figure 2 provides a photograph of hard shoreline armoring installed along Lake Michigan to protect a beach house built close to the shore, illustrating this phenomenon. This practical physical demotion of public trust interests in favor of private shoreland use and exclusion would become a permanent legal reality if allowed by the courts.

More indirectly and over the longer term, hard armoring structures arrest natural shoreline erosion and recessional processes, fixing the moveable freehold recognized under the public trust doctrine in place, so long as the armoring structures are maintained. Doing so results in the artificial or human-caused conversion of shorelands that would normally and naturally be state-owned submerged bottomlands into privately owned upland, a process we describe above as “passive filling.”³⁵⁶

354. See TABLE 1.

355. See *supra* Part I.

356. *Id.*



FIGURE 2. Image of property at the Michigan-Indiana border illustrating interruption to the ability to traverse a Great Lakes beach caused by the installation of hard armoring structures. (Credit: Photo taken by Norton, June 2022.)

Figure 3 illustrates that process across three hypothetical time periods. It shows during Time Period 2 the effects of installing a seawall and actively filling submerged bottomlands landward of that seawall, along with the effects of installing a hard shoreline armoring structure (such as a revetment) at the water's edge. The seawall and active fill of lands behind it clearly results in the conversion of submerged bottomland to dry upland during Time Period 2, while the revetment does not. Maintaining both modifications through Time Period 3, however, results in the presence of filled shorelands that were (or would have been) submerged bottomland but for the structures. While the filling of lands behind the armoring structure is passive in that it occurs because the shoreline is prevented from naturally receding landward (i.e., not by the active placement of fill), the only real difference in the end is the timing of the placement of the armoring structure. That is, the eventual presence of filled upland on submerged bottomland is exactly the same in both cases, with both resulting from the human-caused placement of armoring structures.

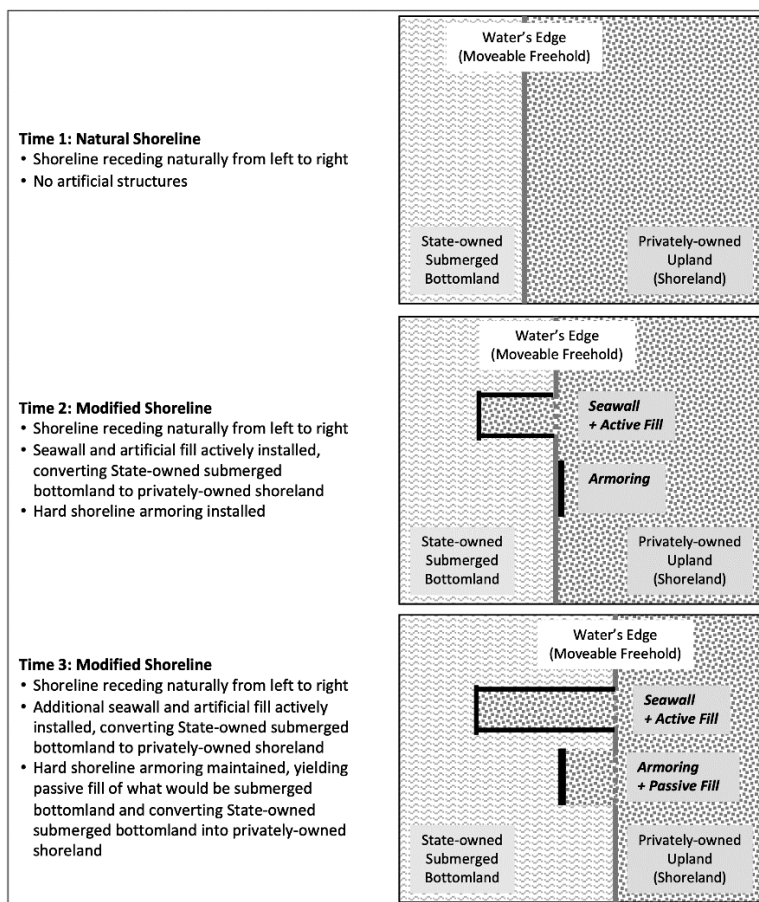


FIGURE 3. Conceptual diagram of a naturally receding Great Lakes shoreline, illustrating the effects of installing structures on submerged bottoms and maintaining them over time.

Whether the artificial persistence of upland through armoring causes an unlawful conversion of state-owned public trust coastal resources into privately owned coastal resources will likely hinge on how the courts resolve two questions. The first question is whether the courts recognize the physical dynamics at play and the ultimate physical effects of those dynamics as just described. If they do, the second question is whether the courts are likely to find that that process amounts to a violation of doctrinal and constitutional protections of the state's Great Lakes public trust interests.

Regarding the first question, and as discussed above, the Michigan Supreme Court in *Peterman* reasoned that the State's construction of a boat launch and jetties on the Lake Michigan shoreline had the effect of altering natural Great Lakes shoreline dynamics, such that courts might reasonably conclude that hard shoreline armoring substantially impairs and destroys natural public trust coastal resources.

More to the point here, the Michigan Supreme Court in *Peterman* also found that the State's armor-like structures had the effect of converting privately-owned shoreland into state-owned submerged bottomland because of the disruptions they caused to natural shoreline dynamics.³⁵⁷ Moreover, the Michigan Court of Appeals in *Howard* recently noted that the placement of structures on shoreland properties that alter natural shoreline dynamics could result in the compensable loss of neighboring property owners' shorelands.³⁵⁸ For the same reasons, the courts might similarly conclude that the installation of a hard shoreline armoring structure on privately-owned shoreland has the same effect but in reverse—that in fact it unnaturally converts lands that would have been (or eventually will be) state-owned submerged bottomland into privately-owned upland by disrupting natural shoreline dynamics.

Nonetheless, neither of these cases is dispositive on the precise question. The Michigan Supreme Court in *Peterman*, for example, recognized that structures on the shore cause disruption to natural shoreline dynamics, but it did not acknowledge expressly the long-term effects of shoreline recession, the moveable freehold, or the natural transition of shoreland to submerged bottomland over time.³⁵⁹ Similarly, while the Michigan Court of Appeals in *Howard* noted in dicta that artificial structures could cause compensable harms by altering natural shoreline dynamics, it did not rule specifically on the impacts of the seawall that the defendants had installed in that case or issue a holding on point regarding the impacts of seawalls accordingly. It is not entirely out of the question that courts might decline to recognize the concept of passive filling given the lack of prior decisions directly on point, although it is hard to imagine how they would justify such a conclusion—at least regarding the realities of Great Lakes physical coastal shoreline dynamics.

357. See *supra* notes 324–326 and accompanying text.

358. See *supra* notes 325–327 and accompanying text.

359. The *Peterman* court found the State's structures effected a de facto taking and awarded compensation for both the loss of fastland above the OHWM and the lost beach lakeward of the OHWM, 446 Mich. at 208, although Justice Griffin in dissent would not have compensated for the latter. Citing to the court's prior public trust doctrinal decisions, Justice Griffin concluded that the navigational improvements provided by the State's boat launch facilities enhanced the public trust interest and thus were paramount, such that the plaintiff was not owed compensation, 446 Mich. at 213–215 (Griffin, J., dissenting). The court also analyzed the implications of sediment movement and the filtration of sand from the water with regard to the trespass-nuisance exception to sovereign immunity, concluding that the presence of pure water (*i.e.*, from which sand had been 'filtered' by the armor structures), did not amount to a trespass-nuisance exception under that doctrine, 446 Mich. at 208. It is not clear whether the court's reasoning on that question would be relevant to or instructive for a suit seeking to enjoin the installation of armoring by a private shoreland property owner. Finally, the court did not provide guidance for determining how much compensation should be awarded (*i.e.*, particularly in terms of the loss of shoreland that would likely erode away eventually under natural conditions). Altogether, it is not clear whether the court failed to note the full extent of Great Lakes shoreline processes or corresponding doctrinal rules because they were not relevant for the case at hand (*e.g.*, either because the stretch of shoreline at issue is relatively stable or the timeline involved was too short), or because the relevant facts regarding these dynamics were not put before the court through the litigation, or because those facts were before the court but the court did not find them persuasive or worth acknowledging otherwise.

Regarding the second question, however, while courts are more likely to accept as a factual matter that hard shoreline armoring can result in the unnatural perpetuation of shoreland as upland rather than allowing its natural conversion to submerged bottomland, they might not so readily conclude that that outcome necessarily implicates doctrinal or constitutional protections of public trust interests. As detailed above, the GLSLA, SPMA, and their implementing rules expressly allow for the disposition and active filling of state-owned submerged bottomlands, when doing so will not substantially impair the public trust interests remaining or would enhance those public trust interests.³⁶⁰ Depending on the particular facts of a given case, courts might review the physical impacts from a shoreline armoring structure and simply conclude that, despite any passive filling or limited public access that such a structure creates, it does not yield substantial impairment to the public trust interests remaining, particularly if the project is viewed in isolation of the cumulative impacts that are likely to occur given any other nearby structures. For example, courts might reach such a conclusion if they follow the same reasoning used in the line of decisions adjudicating the applicability of MEPA and concluding that evident impacts to the environment did not amount to the substantial impairment or destruction of natural resources; or alternatively, they could follow other decisions reaching the opposite conclusion and go the other way.³⁶¹

Courts might similarly conclude that there are instances when hard shoreline armoring, and any passive filling it creates, can indeed enhance public trust interests, raising the question of how courts might rationalize such a determination. Again, there are no Michigan appellate cases that address that question directly. There is, however, a body of caselaw coming from the other direction. Rather than speaking to the question of when the State can lawfully *give* doctrinally and constitutionally protected state-owned property interests to a private owner, it addresses questions of when the State can lawfully *take* constitutionally protected property and transfer private ownership. The latter addresses specifically the protections afforded to private property under 1963 Mich. Const. art. 10, § 2, which provides, in part: “[p]rivate property shall not be taken for public use without just compensation therefore being first made or secured in a manner prescribed by law....” (referred to hereafter as “Michigan’s takings clause”).³⁶²

The most recent and instructive Michigan Supreme Court decision regarding that provision for purposes here is *County of Wayne v. Hathcock*,³⁶³ decided in 2004.

360. See *supra* Part II.A.4.

361. See *supra* notes 350–352 and accompanying text.

362. MICH. CONST. art X, § 2. This provision parallels the same protection afforded by the 5th Amendment to the U.S. Constitution, U.S. CONST. amend. V, cl. 3 (“...nor shall private property be taken for public use, without just compensation”), although Michigan’s doctrine provides more protection for private property owners than does the federal doctrine for conceptualizing the meaning of ‘public use’ more narrowly than under federal law. See *Kelo v. City of New London*, 545 U.S. 469 (2005).

363. *County of Wayne v. Hathcock*, 684 N.W.2d 765, 769 (Mich. 2004).

Hathcock involved Wayne County's exercise of the power of eminent domain under state statutory law³⁶⁴ and Michigan's takings clause to condemn private property located in the vicinity of the Detroit Metropolitan Airport. The county intended to convey title to that property (along with others) to a private economic development corporation for the purpose of developing a business and technology park associated with the airport. Relying on the Michigan Supreme Court's prior decision in *Poletown Neighborhood Council v. Detroit*,³⁶⁵ Wayne County asserted that the public purpose served by the potential economic benefits of the proposed business park satisfied the public use element of Michigan's takings clause. The *Hathcock* court reviewed extensively the history of the power of eminent domain under Michigan law and concluded that, while Wayne County's actions were authorized by state statute,³⁶⁶ they violated Michigan's takings clause nonetheless,³⁶⁷ overruling the *Poletown* holding on that issue.³⁶⁸

It is axiomatic under both the Michigan and federal takings doctrines that the public use requirement is satisfied when government actually takes land for public use, such as to create a new public park, build a public road, or site a new town hall.³⁶⁹ The more difficult question, addressed by *Hathcock* and relevant for purposes here, is under what circumstances the public use requirement is satisfied when the government takes the title interest to real private property from private owner A and gives it to a second private property owner B. That formulation parallels the question of under what circumstances the public trust doctrinal mandate to safeguard public trust interests in submerged bottomlands would be satisfied when the State in effect "takes" public trust *jus privatum* interests from public ownership (*public* proprietary/trustee owner A) and gives it to a private shoreland property owner (private owner B).

The *Hathcock* court ruled that condemning private owner A's property and conveying it to private owner B is constitutionally valid under Michigan's takings clause only when doing so clearly serves a public purpose that comports closely with the notion of public use. It provided guidance on conditions that satisfy that concept: first, acquiring land for use by a common carrier (private owner B), such as a railroad company, "where 'public necessity of the extreme sort'" requires collective action (e.g., obtaining land in the direct path of the railroad needed for its completion);

364. See MICH. COMP. LAWS § 213.51 *et seq.*

365. *Poletown Neighborhood Council v. City of Detroit*, 304 N.W.2d 455 (Mich. 1981).

366. *Hathcock*, 684 N.W.2d at 774.

367. *Id.* at 787.

368. *Id.*

369. JOHN G. CAMERON, JR., MICHIGAN REAL PROPERTY LAW § 24.3 (ICLE 3d ed. 2022). Of course, the State of Michigan (or coastal localities acting under delegated authorities) could lawfully condemn private shoreland properties—including or especially those armored—to remove the armoring and put the restored shoreline directly into public use, if it provides appropriate just compensation in doing so. The question addressed here, however, is when public purposes might be adequately served by allowing private shoreland owners to retain ownership and control of shorelands that in fact comprise State-owned submerged bottomlands by virtue of the public trust doctrine and natural shoreline dynamics.

second, acquiring land for use by a public utility or other entity (private owner B) where “the property remains subject to public oversight after transfer to [the] private entity” (e.g., a regulated gas utility line); and third, acquiring land and conveying it to one or more private owners B where “the property is selected because of ‘facts of independent public significance,’ rather than the interests of the private entity to which the property is eventually transferred” (e.g., for slum clearance purposes).³⁷⁰

By analogy, courts might conclude that fixing and passively filling receding shorelines through hard shoreline armoring and allowing the *jus privatum* title interests in them to remain in the ownership of the shoreland property owner can constitute enhancing public trust interests under certain public-use-like conditions. Aside from armoring to protect publicly owned infrastructure like roads (i.e., where the shoreland in question was and remains in public ownership and use, albeit at the expense of losing natural shoreline), allowing passive filling might be doctrinally and constitutionally valid under several other parallel conditions. For example, passive filling might be acceptable to protect privately-owned but public-serving marinas, utilities, common carriers (e.g., privately owned but publicly used roads) or other water-dependent business and commercial activities generating significant public benefits like substantial employment. It might also be appropriate where the density of developed shorelands is so great that the potential impacts to the larger community from losing that development is substantial—that is, a condition of independent public significance not premised on the private property owners’ individual interests in question, akin to but the opposite of slum clearance (i.e., preventing the destruction of publicly valuable property, rather than restoring such property already destroyed).

In all these cases, while private shoreland property interests might benefit by the installation of hard shoreline armoring and the passive filling of shorelands behind them, that benefit would be only ancillary and secondary to the public trust interests enhanced, focusing on the balancing of different public interests against one another as called for by the public trust doctrine, rather than public trust interests versus private property rights.³⁷¹ In contrast, allowing the passive filling of submerged lands primarily to expand or safeguard private shoreland property interests, under the assertion that doing so somehow also enhances public interests either individually or through aggregation alone, would arguably contradict the public trust doctrine and 1963 Mich. Const. art. 4, § 52 (i.e., if that reasoning was sound, there would be no reason for those protections in the first place).

4. Summary and Conclusions: Arguments Against Armoring

In sum, on a claim that the State should not permit hard shoreline armoring of privately owned shorelands—either pursuant to current administrative rules or

370. *Hathcock*, 684 N.W.2d at 781–83.

371. See *infra* TABLE 1 and discussion in Part III.A.1.

under the GLSLA and SPMA in general—because doing so unlawfully impairs and destroys public trust resources and unlawfully converts state-owned submerged bottomland to privately-owned upland, courts would need to conclude the following: first, that armoring has the effect of destroying public trust resources and passively filling submerged bottomlands over time, and second, that allowing either phenomenon to occur would amount to an abrogation of public trust duties and a corresponding violation of constitutional protections. Courts would likely rule that armoring indeed has the physical effects of impairing and passively filling submerged bottomlands, given Great Lakes shoreline dynamics, the best available scientific evidence, and widespread experience demonstrating that outcome, but there are no cases directly creating clear precedent for either ruling.

It is less clear whether the courts would conclude, either as applied or in general, that allowing those phenomena to occur would constitute substantial impairment to the public trust interests remaining nonetheless, and there is analogous caselaw available to support a ruling either way. Similarly, there are no cases providing direct guidance on when public trust interests might be enhanced by allowing passive filling to occur, which could satisfy the State's public trust duties. Even so, Michigan's taking doctrine provides guidance on the conditions under which taking property from one private owner and giving it to another private property owner are constitutionally lawful, suggesting in a parallel way reasoning to decide when the giving of public trust proprietary interests in submerged bottomlands to a private shoreland property owner might be doctrinally and constitutionally lawful as well. We follow that logic in terms of policymaking going forward in the concluding section of this article, but first we consider potential claims that might be brought to enjoin the regulation of shoreline armoring next.

B. *Armoring Great Lakes Shorelines Should Be Allowed*

Parties arguing that the State and local governments should allow shoreland property owners to install hard shoreline armoring would likely do so as plaintiffs suing the State or a coastal locality, in either case seeking to enjoin regulations preventing the installation or maintenance of such a structure. As discussed, it is difficult to imagine that the courts would find that the State or a coastal locality lacks sufficient authority to further constrain the installation of hard shoreline armoring given their police power authorities, the public trust doctrine, constitutional protections for natural resources, and the implementation of those authorities through the GLSLA and SMPA, should the government act to exercise those authorities on its own initiative.

In a lawsuit brought by a third party to compel the government to exercise those authorities, however, the opposing party would be the government itself, and possibly intervening shoreland property owners, asserting that none of those authorities establish a duty on the government to impose further constraints on armoring than already exist. In such a case, those parties would likely need to counter

the arguments against armoring discussed above by asserting that armoring causes minimal harm or that it serves larger public trust interests. Beyond that, opponents of governmental regulatory action, whether undertaken by government on its own initiative or in response to litigation compelling it to act, would likely assert that any regulation prohibiting the installation and maintenance of hard shoreline armoring would violate constitutional protections of shoreland owners' private property rights.

1. Shoreline Armoring Yields Minimal Harms and Advances Public Trust Interests

Advocates of shoreland armoring would likely argue that the administrative rules that the State has adopted, under which permits for armoring structures are currently allowed, are fully enabled by the public trust doctrinal principles, constitutional provisions, and statutory laws upon which they are based, and that they comport with the principles and mandates of those various provisions by properly balancing public trust interests and private property rights.³⁷²

As discussed, it would be difficult to assert and demonstrate that armoring structures do not substantially affect coastal resources by altering shoreline dynamics, especially when considering the cumulative impacts of such structures over time. Nonetheless, armoring advocates might find courts sympathetic to the argument that such impacts are not the kind of substantial impairment or destruction that implicates the protection of those resources provided by public trust doctrinal principles and constitutional provisions, especially if courts focus only on local and isolated impacts from those structures.³⁷³

Similarly, it would be difficult to assert and demonstrate that armoring structures do not result in the passive filling of submerged bottom lands as a factual matter (i.e., retaining the lands in question as upland by preventing the natural conversion of those lands to bottomland from shoreline recession). Nonetheless, armoring advocates might find the courts sympathetic to the argument that passive filling—as opposed to active filling—is not subject to public trust doctrinal protections, or that allowing the protection of developed private shoreland property yields sufficient public benefits by itself, satisfying the requirement that public trust interests be enhanced.³⁷⁴

As detailed above, there are no precedential Michigan appellate decisions for any of these questions. There are, however, decisions speaking to closely related issues, including the effects of modifications to natural Great Lakes shoreline dynamics and the applicability of MEPA to purported impacts to the environment and natural resources.³⁷⁵ Courts could well turn to those decisions as instructive

372. See *supra* TABLE 1 and discussion in Part III.A.1.

373. See *supra* TABLE 1 and discussion in Part III.A.2.

374. See *supra* TABLE 1 and discussion in Part III.A.3.

375. See cases cited and corresponding analysis *supra* notes 330–332 and accompanying text.

should they be asked to adjudicate disputes over Great Lakes shoreline armoring. Not surprisingly, that body of caselaw—including especially contrasting decisions regarding the applicability of MEPA—could be used to support rulings either way.

2. Prohibiting Shoreline Armoring Violates Constitutional Protections of Private Property

The final set of questions we address flow from the argument property owners and other armoring advocates are likely to raise first. That is, that even if duly enabled, state or local regulation of shoreland properties intended to constrain or even prohibit altogether the installation of hard armoring structures on Great Lakes shores would be a constitutional violation of private property rights.

The U.S. and Michigan Constitutions first establish and empower the U.S. and State of Michigan governments, respectively, and they then provide protections against governmental abuse of individual rights. Invoking those constitutional protections of rights requires: first, determining whether there is a governmental action subject to constitutional constraint; second, establishing whether there is a right warranting constitutional protection; and, if so, third, determining whether that governmental action unconstitutionally violates that protected right. State and local regulations constraining the installation of armoring structures would clearly constitute governmental action subject to constitutional constraints. The more difficult questions for purposes here are determining what interests are constitutionally protected and what protections are afforded by the state and federal Constitutions.

The U.S. and Michigan Constitutions protect both liberty and property interests in the context of land use regulations;³⁷⁶ we focus on the latter. The real challenge in determining property interests protected in a dynamic coastal setting relate back to the balancing considerations detailed in TABLE 1 and discussed above. Those considerations include rights to use and to protect private property interests from governmental abuse, on the one hand, and the right to protect private property from the impacts of natural forces, on the other. The latter is relevant for constitutional litigation particularly where protecting private property rights implicates competing public trust property rights.

The constitutional claims most likely to be raised by shoreland property owners, as in most development management disputes,³⁷⁷ are those speaking to due process, or the right to reasonably use property free from unreasonable, arbitrary,

376. U.S. CONST. amend. V, XIV; MICH. CONST. art. 1, § 17. Liberty interests include, generally, the rights to freedom from bodily restraint and freedom to exercise religion, free speech, assembly, marriage, raising a family, and so on. *Bd. of Regents v. Roth*, 408 U.S. 564, 572 (1972). None of these interests would likely be implicated by a governmental constraint on the installation or maintenance of hard shoreline armoring.

377. *See generally*, JUERGENSMEYER ET AL., *supra* note 35, at Ch. 10; FISHER ET AL., *supra* note 159, at Ch. 8.

and capricious regulation;³⁷⁸ equal protection, or the right of a class of persons not to be treated differently from those similarly situated;³⁷⁹ and regulatory takings, or the right to occupy and use land free from regulations that effectively oust the property owner or appropriate the property without just compensation.³⁸⁰ Because it is exceptionally hard to make out facial claims against State and local regulations, such claims are likely to be adjudicated as as-applied challenges.³⁸¹ They will almost surely be highly fact specific, given the particulars of the setting, natural dynamics, content of the regulation, and way in which the regulation itself was enacted and applied.

We focus on substantive due process concerns and set aside potential procedural due process concerns, which will hinge largely on how a particular regulation was enacted or applied in a particular case. We also presume that any regulations challenged are designed to make classifications based on physical shoreland conditions (e.g., distinguishing between naturally rocky shores and highly erodible shores) and various relevant uses of those shorelands (i.e., not the owners of those properties, beyond distinguishing between properties owned by a government versus those privately owned). We do not address claims premised on the argument that a regulation, or its application, may have been motivated by animus or ill will toward the personal identity, race, or other such classifications of the property owner, which would raise due process and equal protection concerns not at issue for purposes here.

Before addressing constitutional protections afforded and potential governmental liability under those protections, we address first the preliminary question of whether the installation and maintenance of hard shoreline armoring qualify as property interests that enjoy common law and constitutional protections in the first place.

378. See *Kropf v. Sterling Heights*, 391 Mich. 139, 215 N.W.2d 179 (1974).

379. See *Arlington Heights v. Metropolitan Hous. Dev. Corp.*, 429 U.S. 252 (1977).

380. See *Lingle v. Chevron USA Inc.*, 544 U.S. 538, 547 (2005); see also *K & K Constr., Inc. v. Dept. of Nat. Res.*, 575 N.W.2d 531 (Mich. 1998), appeal after remand, 705 N.W.2d 365 (Mich. Ct. App. 2005).

381. Contemplating both facial and as-applied challenges to local ordinances, for example, the Michigan Supreme Court has explained that while an as-applied challenge attacks application of the ordinance to his or her property, not the ordinance in general, a party challenging the facial constitutionality of an ordinance “faces an extremely rigorous standard.” *Bonner v. City of Brighton*, 848 N.W.2d 380, 389 (Mich. 2014). A plaintiff must establish that “no set of circumstances exists under which the [ordinance] would be valid,” and it is insufficient to show that an ordinance “might operate unconstitutionally under some conceivable set of circumstances” to render an ordinance invalid. *Id.* An ordinance will not be struck down on a facial challenge “if any state of facts reasonably can be conceived that would sustain [the ordinance].” *Id.* Facial attacks are independent of the attendant facts, and so facts specific to a “plaintiffs’ claim are inapposite.” *Id.*

a. *Constitutionally Protected Property Rights Along Great Lakes Shores*

i. Property Rights Protected from Governmental Abuse

When invoking protection of a real property right, a claimant must demonstrate both the legitimacy of the source of that right and a legitimate expectation of entitlement to it. As explained by the U.S. Supreme Court in *Board of Regents v. Roth*,³⁸² the constitutional protection of due process “is a safeguard of the security of interests that a person has already acquired in specific benefits.” Further,

[t]o have a property interest in a benefit, a person clearly must have more than an abstract need or desire for it. He must have more than a unilateral expectation of it. He must, instead, have a legitimate claim of entitlement to it. It is a purpose of the ancient institution of property to protect those claims upon which people rely in their daily lives, reliance that must not be arbitrarily undermined.³⁸³

The Michigan Court of Appeals, quoting from *Roth*, has similarly explained that a “protected property interest is present where an individual has a reasonable expectation of entitlement deriving from ‘existing rules or understandings that stem from an independent source such as state law.’”³⁸⁴

Although the ultimate sources and key definitional concepts of property rights are remarkably vague and contested, it is axiomatic that, under the common law and in the broadest sense, owning real property includes owning the rights to: use it reasonably for productive purposes; exclude others reasonably from it; protect it reasonably from impairment or destruction; and transfer interests in it to others.³⁸⁵ These traditional attributes of real property ownership warrant protection from impairment by others under the common law of property (i.e., via nuisance, trespass, and estates), and in general they warrant constitutional protection.³⁸⁶ That is, a Great Lakes shoreland property owner has the right to make some reasonable use of her

382. 408 U.S. 564, 576 (1972).

383. *Id.* at 577.

384. *Mettler Walloon, LLC v. Melrose Twp.*, 761 N.W.2d 293, 310 (Mich. Ct. App. 2008). *See also Bethel v. Jenkins*, 988 F.3d 931, 942 (6th Cir. 2021) (explaining that an individual must “have a legitimate claim of entitlement” to a property interest, one established by state law rather than the Constitution, for that interest to be protected by the Constitution); discussion of the common law origins of property rights regarding statutory modification of those rights, *supra* Part III.B.2.a; discussion of property interested protected under the regulatory takings doctrine, *infra* Part III.B.2.c.

385. *See, e.g.*, JUERGENSMEYER ET AL., *supra* note 35, at Ch. 10; RUTHERFORD H. PLATT, LAND USE AND SOCIETY: GEOGRAPHY, LAW, AND PUBLIC POLICY 156–72 (3d ed., 2014).

386. *See generally* JOHN E. NOWAK & RONALD D. ROTUNDA, CONSTITUTIONAL LAW, Ch. 13.5(a) (8th ed. 2010).

property and to take some reasonable steps to protect it.³⁸⁷ In general, therefore, state or local regulations that prohibit *entirely* uses of or any activities on a property give rise to valid constitutional claims, while regulations that merely constrain certain uses or protections may not.

Whether a particular use or activity such as the installation of hard shoreline armoring warrants constitutional protection hinges further on the question of whether some governmental action has established a legitimate expectation to exercise that use or activity. Disputes regarding governmental action and legitimate property owner expectations typically play out at the local level regarding zoning regulation, such that most of the relevant cases have been decided in that context. A zoning or regulatory scheme that expressly contemplates and permits the installation of hard shoreline armoring by right could conceivably establish a legitimate expectation to the right to install such armoring, although a property owner may not retain a legitimate expectation should the law change before she acts.³⁸⁸ Moreover, the courts have generally held that a zoning or other regulatory scheme that allows a particular use or activity by permit, particularly where the decision-maker has discretion to issue that permit, does not establish a legitimate expectation (i.e., a constitutionally protected right) to engage in that use or activity. Rather, in order for a particular right to be constitutionally protected, it must have vested.³⁸⁹ Under

387. See *Richardson v. Twp. of Brady*, 218 F.3d 508 (6th Cir. 2000); *ACC Indus, Inc. v. Charter Twp. of Munday*, No 242392, 2004 WL 345419 (Mich. Ct. App. Feb. 24, 2004) (unpublished opinion).

388. In other words, a constitutional claim would likely not be dismissed immediately for failing to address a constitutionally protected interest if a use is allowed by right but somehow prohibited in application, such as through denial of a site plan. By contrast, a property owner does not have a protected property interest in an existing zoning classification that would preclude a locality from rezoning the property in a way that prohibits a use that had previously been allowed. See, e.g., *Dorman v. Twp. of Clinton*, 714 N.W.2d 350 (Mich. Ct. App. 2006). Moreover, where no such by-right expectation is established expressly by the regulation, the fact that a property owner might unilaterally conceive of the possibility of installing such armoring might not be sufficient. See *Mettler Walloon*, *supra* note 384. Finally, the courts have consistently held that a property owner enjoys no legitimate expectation—and hence no constitutionally protected right—to a rezoning or other change in regulation that would permit a desired land use or activity. See, e.g., *Silver v. Franklin Twp., Bd. of Zoning Appeals*, 966 F.2d 1031, 1036 (6th Cir. 1992). For all these reasons, the courts would likely find that a shoreland property owner does not enjoy a constitutionally protected right to install hard shoreline armoring where it is currently prohibited, or to a desired change in regulation that would allow her to do so.

389. The Sixth Circuit, for example, has recognized in the context of a liquor license that there is a property interest in the *holder* of a license, but not in a first-time applicant for a license, when a substantive due process claim was brought for the denial of a transfer of an entertainment permit. See *Wojcik v. City of Romulus*, 257 F.3d 600, 609–10 (6th Cir. 2001). The Sixth Circuit has similarly recognized that where a city has granted discretion to a zoning board to approve or deny building permits, an applicant does not have a constitutionally protected interest in the permit. *Brown v. City of Ecorse*, 322 Fed.App'x 443, 444 (6th Cir. 2009). See also *Mich. Env't Res. Assocs., Inc. v. Cnty. of Macomb*, No. 87–2029, 1989 WL 54116, at *4 (6th Cir. May 23, 1989) (unpublished opinion) (holding no property interest in permit where board had discretion to reject, despite committee's prior approval). The Michigan Courts do not recognize a property interest in a yet unobtained permit where there is discretion to deny the permit. *EJS Properties, LLC v. City of Toledo*, 698 F.3d 845, 856 (6th Cir. 2012). *But see Nasierowski Bros. Inv. Co. v. City of Sterling Heights*, 949 F.2d 890, 897 (6th Cir. 1991) (property owners may have a property interest in the existing zoning classification for their property); *Buckeye Cnty. Hope Found. v. City of Cuyahoga Falls*, 263 F.3d 627, 642 (6th Cir. 2001) (there is a property interest in a discretionary benefit, "such as a rezoning ordinance, after it is conferred.").

Michigan law, the right to engage in a particular land use or activity—especially when subject to regulation involving a discretionary permit—vests when the government has issued a permit and the property owner has acted in reliance on that permit to her substantial detriment, generally by undertaking actual construction activities beyond mere project design or site clearing.³⁹⁰

This issue is relevant here primarily because the State of Michigan, through existing statutes and corresponding administrative rules, authorizes the issuance of permits to install hard shoreline armoring under certain conditions,³⁹¹ as do many coastal localities through their zoning or related ordinances.³⁹² Given Michigan caselaw, the courts would likely rule that the mere provision of those authorities in general does not create a constitutionally protected right for a particular property owner in a given setting to install armoring, and further that denial of a permit would not give rise to a valid constitutional claim as well (i.e., assuming all required procedures were followed properly), since the right to armor would not yet have vested. Where the state or a coastal locality has issued a permit to install armoring and then revoked it, however, or has otherwise changed the law following issuance of a permit in a way that would prohibit its construction, a property owner might be able to properly assert a viable constitutional claim.

In any case, it is important to note that a shoreland property owner has no legal right to create or maintain a nuisance on her property in the first place.³⁹³ The courts would presumably rule, therefore, that a state or local regulation that prohibits the installation of a hard armoring structure, or even a governmental order compelling the removal of such a structure, would not implicate a constitutionally protected right to armor where such a structure would or clearly is causing nuisance-

390. See generally FISHER ET AL., *supra* note 159, at Ch. 8. The Michigan Court of Appeals explained in *Chicago Area Council, Inc. v. Blue Lake Twp.* that a “landowner does not possess a vested property interest in a particular zoning classification unless the landowner holds a valid building permit and has completed substantial construction.” No. 285691, 2010 WL 986500 (Mich. Ct. App. Mar. 18, 2010) (unpublished opinion). There is some confusion here between the common law doctrine of vested rights, which has its historical origins in constitutional due process protections, and the due process doctrine itself. See JUERGENSMAYER ET AL., *supra* note 35, at Ch. 10(E). The former speaks more directly to whether a permittee has the right to proceed with a project once a permit has been issued but the law has changed in a way that prohibits that project before work on it has begun, while the latter might be contemplated more broadly. Under Michigan law (and that of other states), the concept of vested rights has evolved primarily in the narrower context of local zoning and permitting, and it is not clear whether the courts might recognize constitutionally protected rights more broadly. See, e.g., FISHER ET AL., *supra* note 160, at 277, regarding reasonable investment-backed expectations in the context of a regulatory takings analysis. Nonetheless, the considerations behind both appear to converge under Michigan law in the context of establishing a constitutionally protected right to an activity or use that is only allowed by discretionary permit.

391. See *supra* Part II.A.4.

392. See *supra* Part II.B.

393. See *Keystone Bituminous Coal Ass’n. v. DeBenedictis*, 480 U.S. 470, 491 n.20 (1987) (finding no constitutionally protected right to mine coal in such a way as to create a public nuisance from land subsidence); *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1022–23 (1992) (finding no constitutionally protected right to engage uses or activities prohibited by background principles of state property and nuisance law); *Ypsilanti Charter Twp. v. Kircher*, 761 N.W.2d 761, 775 (Mich. Ct. App. 2008) (finding no constitutionally protected right to maintain a nuisance).

like harms. Stated another way, courts would presumably rule that regulations realizing the government's duty not to allow hard shoreline armoring structures or any other activities on public trust resources that would cause substantial pollution, impairment, or destruction to coastal resources—that is, harms akin to common law nuisance and counter to Michigan's constitutional protections afforded to those resources³⁹⁴—would not raise viable constitutional challenges by shoreland property owners, because property owners do not have the constitutionally protected right to engage in activities causing such harms in the first place.

ii. Overlapping Private and Public Property Rights

The propositions just discussed regarding the rights to use and engage in various activities on private property, and the constitutional protection of those rights from governmental abuse, make the most sense where the property in question is real upland or “fastland” property (i.e., land that does not change in its boundaries or attributes over time because of flowing surface waters and other natural forces acting upon it).³⁹⁵ Things are more complicated when the property in question is subject to those natural forces, however, such as along Great Lakes coastal shores. In such settings, courts might find that shoreland property owners do not have a constitutionally protected right to install hard shoreline armoring to safeguard that property from natural forces, not because they generate nuisance-like harms to the environment but because they have the effect of taking the property rights of others.

The key distinction relevant here is that under common law, littoral (large lake) shorefront property owners—like riparian (river and small inland lake) shorefront property owners—own moveable freeholds, where the lakeward boundary of their properties naturally move horizontally lakeward or landward through the processes of erosion, inundation, accretion, and reliction (as well as moving vertically, in a sense, as beach profiles are inflated or scoured by those same processes).³⁹⁶ The

394. See *supra* Parts II.A and III.A.2.

395. See, e.g., Richard K. Norton, *Dynamic Coastal Shoreland Zoning: Adapting Fastland Zoning for Naturally Shifting Coastal Shorelands*, 37 ZONING PRACTICE 2 (2020).

396. See discussions of physical dynamics along Great Lakes shores, *supra* Part I, and of the moveable freehold under Michigan's public trust doctrine, *supra* Part II.A.2. Erosion describes the process of wave action scouring sediments away gradually and converting shoreland to submerged bottomland; inundation the loss of shoreland as it is covered by rising water levels; accretion the gain of new shoreland by the deposition of sediments from wave action; and reliction the appearance of land by the withdraw of lowering water levels. Erosion and inundation result in the movement of the shoreline landward over time, or recession. See generally ADLER ET AL., *supra* note 50, at 77. At common law, avulsion, or the sudden shift in a water course and loss of land by a single storm event, was held not to effect changes in boundaries. Along Great Lakes shores, however, like oceans shores, the shorelines are constantly shifting both landward and lakeward in ways that are readily discernable, including erosive events that can cause substantial shifts. Because some of that land may return through accretion during periods of low water, especially on the Great Lakes, while some of the shore is permanently lost to submerged bottomland, see *supra* Part I, the concept of avulsion and the notion that boundaries do not change from avulsive events makes no sense on the Great Lakes. The long-term shifts in boundaries are more accurately characterized as changes that occur because of recession or accretion over the long-term, regardless of any sudden shifts

dynamic nature of that ambulatory boundary, and its legal significance, are long-recognized and well-settled under both federal and state common law. As explained by the U.S. Supreme Court in 1874, for example, “[t]he maxim ‘*qui sentit onus debet sentire commodum*’ [‘he who bears the burden ought also to enjoy the benefit’] lies at [the] foundation [of the right to accretion]. The owner takes the chances of injury and of benefit arising from the situation of the property. If there be a gradual loss, he must bear it; if a gradual gain, it is his.”³⁹⁷ As discussed above, the Michigan Supreme Court has similarly and consistently held that shorefront property owners along the Great lakes own moveable freeholds based on the same common law principles of littoral property rights.³⁹⁸ In the case of the Great Lakes, however, by operation of Michigan’s public trust doctrine, the ambulatory boundary does not separate one private property owner from another.³⁹⁹ Rather, it separates the submerged bottomlands of the lakes owned by the State as proprietary trustee from the dry upland of the shoreland property owner.⁴⁰⁰

Given those starting propositions, the key quandaries the courts have struggled with include: first, discerning whether either of those competing interests—public trust or private—always trumps the other, and if so which one prevails; second, if neither always controls, determining under which conditions one should prevail over the other; and third, given those principles, concluding whether and to what extent the owner of either interest can take actions that arrest natural dynamics, thereby taking from or giving to the property interests of the other.

In response to those questions, the Michigan courts have consistently held that, as an initial matter, both the state’s public trust interests and the private shoreland property owner’s interests are on par; that is, in a sense, each is supreme

in the near-term that might otherwise be characterized as avulsive. *See, e.g.,* Joseph L. Sax, *The Accretion/Avulsion Puzzle: Its Past Revealed, Its Future Proposed*, 23 TUL. ENV’T L.J. 305 (2009).

397. *St. Clair Cnty. v. Lovington*, 90 U.S. 46, 68–69 (1874). *See also* U.S. v. Milner, 583 F.3d 1174, 1186–88 (9th Cir. 2009) (quoting and citing *Lovington* in adjudicating a suit brought by the government on behalf of the government and an Indian Tribe to compel removal of hard shoreline armoring by waterfront owners that fixed a shoreline adjacent to submerged bottomlands owned by the Tribe, finding the armoring unlawful); *Nebraska v. Iowa*, 143 U.S. 359, 360–61 (1892) (“Every proprietor whose land is thus bounded [by water] is subject to loss by the same means which may add to his territory; and, as he is without remedy for his loss in this way, he cannot be held accountable for his gain.” (quoting *New Orleans v. United States*, 35 U.S. 662 (1836))); *Bonelli Cattle Co. v. Arizona*, 414 U.S. 313, 326 (1973) (“Since a riparian owner is subject to losing land by erosion beyond his control, he should benefit from any addition to his lands by the accretions thereto which are equally beyond his control.”).

398. *See supra* Part II.A.2.

399. Under riparian law, where private riverfront property owners on either side of a river own to the center thread of the river, movement of the river horizontally by processes of accretion and erosion, for example, may have the effect of shifting the boundaries between those two river-adjacent private property owners.

400. “The fee of the soil lying beneath the waters of the Great Lakes is in the State, and the right of the riparian owner is limited to the enjoyment of those easements that were at common law incident to the ownership of land bordering on navigable streams.” 25 MICH. CIV. JUR. WATER § 63 (2023); *see* *People v. Silberwood*, 67 N.W. 1087 (Mich. 1896). The accretion or alluvium to land bordering on the Great Lakes belongs to the owner of the land, and the title to land along the shore of Lake Michigan is the same whether it was formed by accession or reliction. 25 MICH. CIV. JUR. WATER § 68 (2021).

as against the other and yet neither as a general matter always prevails over the other. The State's trustee ownership interest of submerged bottomlands, for example, is preeminent regarding control over the modification, development, and use of those lands and regarding the duty to safeguard the benefits those coastal resources provide for the public.⁴⁰¹ At the same time, the shoreland property owner's interests in the adjacent shoreland is preeminent regarding her rights to use the property, to exclude others from it, and to take reasonable actions to protect it.⁴⁰² Both of those interests overlap conceptually and physically, however, and they are both subject to constant change.

Regarding overlapping interests and coming from the lakeward side, while the State's interests in submerged bottomlands are supreme as a general matter, adjacent shoreland property owners enjoy the littoral property ownership rights of access to the water and wharfage over the water; both must be permitted by the State, although both can be reasonably regulated.⁴⁰³ Conversely, from the landward side,

401. See, e.g., *Glass v. Goeckel*, 703 N.W.2d 58, 73 n.24 (Mich. 2005) ("... we have long recognized the value of riparian rights, but those rights remain ever subject to the 'paramount' public trust."). See also *Obrecht v. Nat'l Gypsum Co.*, 105 N.W.2d 143, 150 (Mich. 1960), quoting with approval and at length U.S. Supreme Court Justice Holmes from *Hudson Cnty. Water Co. v. McCarter*, 209 U.S. 349, 356 (1908):

"This public interest is omnipresent wherever there is a state, and grows more pressing as population grows. It is fundamental, and we are of opinion that the private property of riparian proprietors cannot be supposed to have deeper roots. Whether it be said that such an interest justifies the cutting down by statute, without compensation, in the exercise of the police power, of what otherwise would be private rights of property, or that, apart from statute, those rights do not go to the height of what the defendant seeks to do, the result is the same. * * * The private right to appropriate is subject not only to the rights of lower owners, but to the initial limitation that it may not substantially diminish one of the great foundations of public welfare and health."

402. See, e.g., *Glass*, 703 N.W.2d at 75: ("By no means does our public trust doctrine permit every use of the trust lands and waters. Rather, this doctrine protects only *limited public rights*, and it *does not create an unlimited public right* to access private land below the ordinary high-water mark. See *Ryan v. Brown*, 18 Mich. 196, 209 (1869). The public trust doctrine cannot serve to justify trespass on private property."). See also *Nedtwed v. Wallace*, 208 N.W. 51, 53 (Mich. 1926) ("The riparian proprietor has private rights . . . but such rights are subordinate, at all times, to the public rights of navigation and other rights inherent in the people. . . . The lessees . . . rights are subordinate to the rights of the public *to the same extent and on the same principle as are the rights of riparian proprietors.*") (emphasis added).

403. See, e.g., *Obrecht*, 105 N.W.2d at 151:

In the cases before us Michigan's great natural resource, providing as it does general public enjoyment of the pure blue waters of these incomparable inland seas, is subtly threatened by a projected rule of the common law — the riparian right to wharf out. *We recognize the rule and the right, yet hold them subject to reasonable regulation by the State.* In effect and in sum, this Court is asked by National Gypsum and recent intervening parties to grant such rule an untrammelled legal beachhead on this limited part of Tawas Bay. Convinced that any such grant would open our shoal waters *and renowned miles of sandy beaches to ruthless and uncontrolled exploitation*, we are not so inclined.

while the shoreland property owner's rights to use and exclude are supreme as a general matter, those rights are subject to the public right of reasonable access along the shore for traditional public trust or common use purposes (including walking), but—again—those public access rights are nonetheless limited and cannot be used to justify nuisance or trespass on private property.⁴⁰⁴

Regarding constant change, not only does the concept of the moveable freehold at common law recognize that the boundary separating submerged bottomland from upland is ambulatory, but it also recognizes that the owners of the lands on either side of that shifting boundary have vested rights in them. Moreover, not only are those rights vested at any given time, but they also encompass the vested right to the gains from changes in the boundary. Following on the logic of the moveable freehold noted above, for example, the Michigan Supreme Court in *Peterman* found the State liable for a physical taking of private shoreland property not because the plaintiff's shorefront property boundary was moveable but because the structures the State installed *interrupted* sediment movement to the plaintiff's detriment. That is, the property owner enjoyed—in a tangible sense—a vested right to the anticipation of future natural changes to conditions, including the deposit of sediments that would maintain the beach and might yield accretion (while also bearing the burden of potentially diminished shoreland from natural erosion).⁴⁰⁵

The Michigan courts have not directly addressed the impacts of hard shoreline armoring on the State's vested interest in expectations regarding submerged bottomlands. The U.S. Court of Appeals for the Ninth Circuit did so in its 2009 decision in *Milner*,⁴⁰⁶ however, applying the same common law doctrine of littoral property rights and the moveable freehold as recognized by the Michigan courts. In that case, the U.S. Government sued on behalf of itself and as trustee of an Indian tribe to have waterfront homeowners remove their hard shore defense structures. The suit was brought under theories of common law trespass and for violations of the Rivers and Harbors Appropriation Act (RHA) and Clean Water Act.⁴⁰⁷ The homeowners had erected a variety of structures—riprap and landward bulkheads—to limit erosion and dissipate wave energy. The land where the structures were built had once been leased from the Indian tribe to the homeowner organization, but the lease had not been renewed. "Over time, the . . . shoreline has eroded significantly, so that . . . some of the Homeowners' shore defense structures sat seaward of the MHW [mean high water] line⁴⁰⁸ and within the [Indian Tribes']

404. See *supra* note 385.

405. See discussion of the *Peterman* decision, *supra* notes 324–327 and accompanying text.

406. *United States v. Milner* 583 F.3d 1174 (9th Cir. 2009).

407. *Id.* at 1180.

408. MHW is the upper boundary of tidelands under federal law. *Id.* at 1181. This is the equivalent of the OHWM in Michigan for determining where public trust interests are implicated.

tidelands.”⁴⁰⁹ The trial court issued an injunction under the RHA to remove the shoreline defense structures.⁴¹⁰

In addressing the trespass claim, the Ninth Circuit court cited the Restatement (Second) of Torts § 158 (2009): “a person is liable for trespass ‘if he intentionally ... causes a thing [to enter land in the possession of another], ... [or] fails to remove from the land a thing which he is under a duty to remove.’”⁴¹¹ The court dismissed each of the homeowners’ arguments, the most pertinent here being that “because their structures were lawfully built landward of the MHW line—that is, on the Homeowners’ property—they cannot be liable for trespass, despite the movement of the tideland boundary.”⁴¹² The court then noted that the common law is often in tension regarding riparian and littoral rights:

On the one hand, courts have long recognized that an owner of riparian or littoral property must accept that the property boundary is ambulatory, subject to gradual loss or gain depending on the whims of the sea. . . . On the other hand, the common law also supports the owner’s right to build structures upon the land to protect against erosion.⁴¹³

The crucial language and decision of the court found that the homeowners had essentially fixed the ambulatory tideland boundary.

In this case, the Homeowners’ land has eroded away so dramatically that the ambulatory tideland boundary has reached and become fixed at their shore defense structures. While the Homeowners cannot be faulted for wanting to prevent their land from eroding away, we conclude that because both the upland and tideland owners have a vested right to gains from the ambulation of the boundary, the Homeowners cannot permanently fix the property boundary, thereby depriving the [tribe] of tidelands that they would otherwise gain.⁴¹⁴

The court simultaneously recognized the right of riparian landowners to protect their property from encroaching water, while also emphasizing how that right is not superior to the right of the Indian Tribe (through the U.S. government in trust) to gain from the changing boundary, and the land gains and losses associated

409. *Id.*

410. *Id.* at 1182.

411. *Id.* at 1183.

412. *Id.*

413. *Id.* at 1186.

414. *Id.* at 1187.

with such movements. There is a reciprocal relationship between littoral landowners and the tideland owner. The court explained that the “uplands owner loses title in favor of the tideland owner—often the state—when land is lost to the sea by erosion or submergence” and that the “converse of this proposition is that the littoral property owner gains when land is gradually added through accretion, the accumulation of deposits, or reliction, the exposure of previously submerged land.”⁴¹⁵ An upland owner has a vested right to accretions, “justified in large part because the upland owner’s land is subject to erosion.”⁴¹⁶ Rounding out this reasoning, the court held that both the tideland and upland owner had a right to an ambulatory boundary, and each

...has a vested right in the potential gains that accrue from the movement of the boundary line.... The relationship between the tideland and upland owners is reciprocal: *any loss experienced by one is a gain made by the other, and it would be inherently unfair to the tideland owner to privilege the forces of accretion over those of erosion.* Indeed, the fairness rationale underlying courts' adoption of the rule of accretion *assumes* that uplands already are subject to erosion for which the owner otherwise has no remedy.⁴¹⁷

While the Michigan courts have not addressed this issue specifically, it is hard to imagine that they would not follow the same logic in adjudicating a claim regarding hard shoreline armoring on the state’s Great Lakes shores.⁴¹⁸ As such, it is

415. *Id.*

416. *Id.*

417. *Id.* at 1188 (emphasis added).

418. This analysis relates specifically to the State’s ownership of submerged bottomlands, but it is important to recall that the State has public trust ownership of the full enjoyment of the Great Lakes waters as well. *See supra* Part II.A.2. Relating to those public trust rights, the Michigan Supreme Court adjudicated a claim in 1946 seeking a declaratory action that the hard shoreline armoring installed on an inland lake by one property owner unlawfully deprived the other owners of their riparian rights. *Burt v. Munger*, 23 N.W.2d 117 (Mich. 1946). The court reasoned that,

...[the] defendant has the right to the use of the entire surface of the waters in St. Marys Lake for boating and fishing purposes. If plaintiffs are permitted to construct their proposed wall on the bed of the lake and fill in between such wall and the shore line *such action will necessarily constitute an interference with defendant's rights of boating and fishing on the entire surface of the lake in its natural condition.* The size of the lake will be diminished to the extent of the lake bottom occupied by the wall and the fill. *Plaintiffs' shore property will, of course, be increased in like measure....* The desire of plaintiffs to protect and improve their property is quite natural, but *they are not entitled to accomplish such purpose by means constituting an invasion of the rights of the defendant.*

hard to imagine they would find that the people of the state do not have a vested right to the expected conversion of upland to submerged bottomland, including shorelands periodically submerged below the natural OHWM, by dynamic natural shoreline processes.⁴¹⁹

Beyond notions of overlapping property rights, shoreland owners are also likely to assert the common enemy defense to justify installing hard shoreline armoring. As explained by the Ninth Circuit in *Milner*, “[t]ypically, the common enemy doctrine applies as a defense to nuisance or trespass actions where a property owner has caused surface waters—the ‘common enemy’ of all landowners—to invade a neighbor’s property.”⁴²⁰ The court, however, rejected the homeowners’ common enemy doctrine defense in that case.⁴²¹ The complaint was not due to casting water onto a neighbor’s land causing erosion, the court reasoned, but rather maintaining a structure on a neighbor’s land (i.e., tideland). Moreover, even if the common enemy defense were implicated, it would not apply.

Id. at 120 (emphasis added). While this particular effect would be trivial on the Great Lakes given the volumes of lake areas involved, the principle nonetheless parallels that regarding public trust rights to submerged bottomlands.

419. This analysis comports with that of Robin Craig, *What The Public Trust Doctrine Can Teach Us About The Police Power, Penn Central, And The Public Interest In Natural Resource Regulation: A Tribute To Joe Sax*, 45 ENV’T L. 519, 535 (2015), based on her analysis of *Milner*:

Milner demonstrates the instructional power of recognizing that when a government holds title to submerged lands, the government is an actual property owner entitled to have its rights preserved and protected just like private property rights. However, Milner also underscores the additional impetus for protecting the government’s property when the government holds that property in trust for someone else — the Lummi Nation in *Milner*, or the public more generally in the more typical submerged lands case. As the Ninth Circuit explicitly recognized, “in most other areas, the tidelands are held by the state in trust for the public,” which is an important reason for not considering private uplands to be more important or more valuable than tidelands and submerged lands.

See also Sax, *supra* notes 274 and 396. Thus, the common law of accretion, erosion, and the moveable freehold does not work one way, allowing property owners to enjoy the gains from accretion but voiding the loss of property from the effects of erosion. *Id.* The Michigan Supreme Court, even so, in the process of adjudicating the implications of grants to Great Lakes shoreland property made by the U.S. Government prior to Michigan becoming a state, provided analysis suggesting that the public trust doctrine could indeed mean just that—that property owners gain from accretion but do not lose from erosion. *Klais v. Danowski*, 129 N.W.2d 414, 422–23 (Mich. 1964). Nonetheless, the holding from that case appears to have been in error given subsequent U.S. Supreme Court decisions regarding U.S. patents, state public trust doctrines, and shoreland property ownership. *See supra* note 49. Moreover, the reasoning used by the court to conclude that the public trust doctrine works only one way, always in favor of the shoreland property owner, appears to have relied on a highly selective reading of prior caselaw and tortured logic at odds with accepted common law doctrine. The Michigan courts looking forward could conceivably rely on the *Klais* decision in order to provide more extensive constitutional protections to shoreland property owners, but if so that outcome would be based on similarly questionable historical and logical pedigree.

420. *Milner*, 583 F.3d at 1189.

421. *Id.*

The tide line is an inherent attribute of the properties at issue, since it dictates where the tidelands end and the uplands begin. That the boundary is ambulatory *does not make it a common enemy*, since *any movement seaward or landward is to the benefit of one party and the detriment of the other*. It is unfortunate that the boundary line increasingly has encroached on the Homeowners' property, but they cannot claim that the common enemy doctrine allows them to fix permanently the tideland boundary.⁴²²

Again, as with the reasoning discussed above, it is hard to imagine that the Michigan courts would not follow the same logic. As such, the courts are more likely to find that the common enemy rule cannot be used by a shoreland property owner to justify armoring a Great Lakes shore, particularly when that armoring has the effect of taking the State's proprietary trust ownership of submerged bottomlands, just as the State's need to install jetties to protect a public boat launch ramp did not preclude liability for taking the adjacent shoreland property owner's beach.⁴²³

iii. Summary: Property Rights Constitutionally Protected

Neither the U.S. Constitution nor Michigan's Constitution creates property rights. Rather, such rights extend from expectations long established by other sources, including background principles of state property and nuisance law in general and Michigan's public trust doctrine in particular. Thus, along Great Lakes shores in the State of Michigan, those rights encompass shoreland property owners' legitimate expectations to reasonably use, protect, and exclude others from their properties, subject to the principle constraints that, first, no shoreland property has a legitimate expectation to install armoring that creates a public nuisance or a private nuisance to neighboring shoreland properties, and second, the public enjoys the public trust right to traverse Great Lakes shores lakeward of the natural OHWM.⁴²⁴

The courts would likely find, therefore, that a state or local regulation prohibiting entirely a property owner's ability to use her property or to protect it

422. *Id.* (emphasis added).

423. See discussion of the Peterman decision, *supra* notes 325 & 327 and accompanying text. Moreover, it would seem that Michigan has abandoned the common enemy rule and adopted the "reasonable use rule" instead, under which landowners can be found liable if the actions taken to protect their own property result in interference on a neighboring property owner's land that are "unreasonable." See Wendy Davis, *Reasonable Use Has Become The Common Enemy: An Overview Of The Standards Applied To Diffused Surface Water And The Resulting Depletion Of Aquifers*, 9 ALB. L. ENV'T OUTLOOK J. 1, 8 (2004).

424. The Michigan Supreme Court made clear in *Glass* that the public enjoys the public trust right to traverse a Great Lakes shore below the OHWM (*i.e.*, during periods when lake levels are below their ordinary high levels). See *supra* note 54, at 704. Even so, it did not address—and we know of no other case that has addressed—the question of whether that right encompasses the ability to traverse along a *natural* shore, or whether the public right to traverse might be satisfied by, for example, installation of a revetment that includes as a feature a walkway designed to allow the public to continue traversing along the shore where the natural beach would have been but for the armoring structure itself.

from natural forces would implicate constitutionally protected rights, such that the courts would turn next to determining what constitutional protections are afforded (as discussed in the next section). If state or local law allows some reasonable use of the property and some reasonable efforts to provide protection against natural forces, however (e.g., through installation of temporary sand bags or other such features when lake levels are extremely high), the courts would likely rule that a shoreland property owner does not enjoy a constitutionally protected right to install or maintain hard shoreline armoring under several conditions, including: where the regulation does not allow hard shoreline armoring altogether; where it would allow hard armoring by discretionary permit but no permit has been issued; or in any case where armoring clearly would cause or is causing nuisance-like harms (and possibly where armoring has obstructed the public's ability to traverse the shore). As such, the courts would likely rule that a governmental denial of permission to armor, or an order compelling the removal of armor, would not be subject to a viable constitutional claim brought by the shoreland property owner.

Furthermore, our review of federal and state common law suggests that the Michigan courts would likely find that the State's public trust ownership interests in submerged bottomlands, on the one hand, and private shoreland ownership interests in uplands, on the other, are on par but overlapping; neither one necessarily trumps the other under all conditions. Therefore, neither party can take actions that have the effect of actively taking or capturing the rights of the other, including actions that fix the natural ambulation of the moveable freehold boundary.

Moreover, the natural ambulation of the moveable freehold boundary does not take the opposing property owner's interests but rather naturally converts one equally vital property ownership interest to the other as the shoreline naturally shifts lakeward and landward.⁴²⁵ Actions that interrupt the natural ambulation of that moveable freehold, however, unlawfully take vested rights to the anticipated change in natural sediment flows, shoreline movements, and corresponding changes in public

425. In a parallel way and as discussed below in the context of litigation over alleged governmental takings of private property, *see infra* Part III.B.2.c, the courts have consistently held that government cannot be held liable for losses to private property from flooding that the government was in no way responsible for causing. *See e.g.*, *United States v. Sponenbarger*, 308 U.S. 256, 265 (1939),

[T]o hold the Government responsible for such floods would be to say that the Fifth Amendment requires the Government to pay a landowner for damages which may result from conjectural major floods, even though the same floods and the same damages would occur had the Government undertaken no work of any kind. So to hold would far exceed even the 'extremest' conception of a 'taking' by flooding within the meaning of that Amendment. For the Government would thereby be required to compensate a private property owner for flood damages which it in no way caused.

In contrast, *see United States v. Lynah*, 188 U.S. 445 (1903) (holding where government, by construction of dam or other public works, so floods lands belonging to individual as to substantially destroy its value, there is taking within scope of Fifth Amendment); *Pumpelly v. Green Bay Co.*, 80 U.S. 166 (1872) (holding backup of water on land due to government project to be taking).

and private property interests.⁴²⁶ It follows logically that because shoreland property owners do not have the right to take steps to protect their properties from lake dynamics by fixing the moveable freehold through the installation of hard shoreline armoring, State or local regulations that prohibit alteration of the natural processes and ambulation of the moveable freehold do not take property interests, and as such they do not implicate constitutional protections of property rights.

Three conclusions follow from this review of Michigan law. First, where shoreline armoring structures are not allowed altogether or have not been permitted through a discretionary permitting process lakeward of the OHWM, shoreland property owners do not have a legitimate expectation or vested right to install them (i.e., they can be denied permission to do so, without losing a constitutionally protected right). Second, where the State or a local government has permitted the installation of an armoring structure and the property owner has taken substantial steps to install that structure, if not completed construction, the shoreland property owner may have vested rights in them that afford constitutional protections of them (discussed more below). Finally, shoreland property owners who install structures above the OHWM on fast shoreland lawfully (whether specifically permitted or not) enjoy private property rights in those structures, but they arguably lose those rights over time if the upland becomes submerged bottomland by natural forces (or would have become bottomland, but for the structure)—both because they cause a public nuisance and because they take State proprietary interests in property in the form of submerged bottomlands held in trust for the people.

In the alternative, where a shoreland property owner can demonstrate that she enjoys a constitutionally protected right to install a hard shoreline armoring structure or maintain an existing hard shoreline armoring structure, the courts will turn next to determining what protections the U.S. and Michigan Constitutions afford.

b. Due Process and Equal Protection

i. Purposes and Standards of Review

Section One of the Fourteenth Amendment to the U.S. Constitution states that “[n]o State shall . . . deprive any person of life, liberty, or property, without due process of law; nor deny to any person within its jurisdiction the equal protection of the laws.”⁴²⁷ Similarly, art. 1, § 17 of the Michigan Constitution of 1963 states that “[n]o person shall . . . be deprived of life, liberty or property, without due process of law,” while art. 1, § 2 states that “[n]o person shall be denied the equal protection of the laws.” In general, Michigan’s due process and equal protection doctrines are

426. See discussion of the *Peterman* decision, *supra* notes 325 and 327 and accompanying text.

427. U.S. CONST. amend. XIV, § 1.

treated by the courts as coextensive with the corresponding federal doctrines.⁴²⁸ As noted above, this article only discusses potential as-applied substantive due process and equal protection claims.

The purpose of due process is to protect property interests from governmental abuse.⁴²⁹ It does not preclude all state and local regulation of property interests or even necessarily proscribe regulations that greatly impact a property owner. Rather, it serves to ensure that the governmental regulation is not unreasonable, arbitrary, or capricious.⁴³⁰ In general, to satisfy due process, a regulation must allow some reasonable use of the land,⁴³¹ and it must bear “a reasonable relation to a permissible legislative objective.”⁴³² Compared to due process, which addresses the reasonableness of any regulation of a constitutionally protected right broadly, the equal protection clauses are narrower. In a land use context, equal protection serves to ensure that “all persons similarly situated should be treated alike”⁴³³ and that, where different properties similarly situated are treated differently, there is some rational basis for that difference in treatment.⁴³⁴

For both due process and equal protection claims, when a regulation implicates a fundamental constitutional right or suspect classification respectively, the courts will apply heightened judicial scrutiny and assess whether a land use regulation is narrowly tailored to serve a compelling governmental interest in general or with regard to the suspect class.⁴³⁵ Fundamental rights speak to personal rights such as freedom of religion and speech, while suspect classifications speak primarily to those based on race or ethnicity.⁴³⁶ Private property rights are constitutionally protected in general, but the courts have never recognized them as fundamental rights warranting heightened judicial scrutiny, so heightened scrutiny will not play a

428. *Gora v. City of Ferndale*, 456 Mich. 704, 576 N.W.2d 141, 146 (1998) (equal protection); *Neal v. Oakwood Hosp. Corp.*, 575 N.W.2d 68, 76 (Mich. Ct. App. 1997) (equal protection); *Cummins v. Robinson Twp.*, 770 N.W.2d 421, 438 (Mich. Ct. App. 2009) (due process); *Orco Investments, Inc. v. City of Romulus*, No. 303744, 2012 WL 2402599, at *8–9 (Mich. Ct. App. June 26, 2012) (equal protection and due process).

429. *See People v. Sierb*, 581 N.W.2d 219, 221 (Mich. 1998) (“The underlying purpose of substantive due process is to secure the individual from the arbitrary exercise of governmental power.”).

430. *Id.* *See generally* FISHER ET AL., *supra* note 160, Ch. 8.V.

431. *Plum Hollow Golf & Country Club v. Southfield*, 67 N.W.2d 122, 123 (Mich. 1954) (due process in the context of a local zoning regulation). In addition, to be reasonable, a zoning ordinance should not restrict allowable uses of land only to those for which a property is inherently unsuitable. *Grand Trunk W.R.R. Co., v. Detroit*, 40 N.W.2d 195, 197–200 (Mich. 1949).

432. *Kyser v. Kasson Twp.*, 786 N.W.2d 543, 548 (Mich. 2010) (quoting *Shavers v. Att’y Gen.*, 267 N.W.2d 72, 97 (Mich. 1978)).

433. *City of Cleburne v. Cleburne Living Ctr., Inc.*, 473 U.S. 432, 439 (1985). The Michigan Court of Appeals stated in *Risko v. Grand Haven Charter Twp. Zoning Bd. of Appeals*, that “[u]nder the federal and Michigan constitutions, similarly situated persons must be treated equally.” 773 N.W.2d 730,738 (Mich. Ct. App. 2009).

434. *Warren v. City of Athens*, 411 F.3d 697, 710 (6th Cir. 2005).

435. *Shapiro v. Thompson*, 394 U.S. 618, 638 (1969). This heightened level of analysis is referred to as the strict scrutiny standard.

436. *Id.*

role in this article's analysis.⁴³⁷ Similarly, we set aside potential claims that a particular state or local regulation of shoreline armoring is arguably based on the race or ethnicity of the shoreland property owner, either on its face or as applied to that particular property owner, and potential claims that the administration of a regulation may have been motivated by personal animus or ill-will. Given those considerations, the analyses employed by the courts to adjudicate both due process and equal protection claims are essentially the same: rational basis review.⁴³⁸

Rational basis review reflects the courts' deferential posture toward state and local regulation of land use given the long-standing judicial recognition that, while public officials may make better or worse policy decisions, constitutional adjudication is not the appropriate method for overturning unwise policy. As stated by the Michigan Supreme Court in its 1957 decision in *Brae Burn, Inc. v. City of Bloomfield Hills* (citing numerous authorities and referring specifically to the local regulation of land use),

With the wisdom or lack of wisdom of the determination we are not concerned. The people of the community, through their appropriate legislative body, and not the courts, govern its growth and its life. Let us state the proposition as clearly as may be: It is not our function to approve the ordinance before us as to wisdom or desirability.⁴³⁹

Moreover, speaking specifically on the separation of powers, the Michigan Supreme Court has similarly observed that "Michigan's constitution directs the Legislature, not the judiciary, to provide for the protection and management of the state's natural resources,"⁴⁴⁰ and that "[w]hile it may be appropriate for this court to review statutes and ordinances to discern whether there is a rational basis for such laws, this court 'does not substitute our judgment for that of the legislative body

437. See generally JUERGENSMEYER ET AL., *supra* note 35, at Ch. 10.12(D).

438. See, e.g., *Conlin v. Scio Twp.*, 686 N.W.2d 16, 23 (Mich. App. 2004); *Pearson v. Grand Blanc*, 961 F.2d 1211, 1223 (6th Cir. 1992). This standard or test is also commonly referred to as rational relationship review. In the context of local zoning ordinances specifically, the Michigan Supreme Court has noted the parallel reasoning of the 'reasonableness test' used to adjudicate zoning regulations and the 'rational basis standard of review' used to test the constitutionality of legislation under due process and equal protection claims, where fundamental rights and suspect classes are not involved. *Kyser*, 768 N.W.2d at 548 n.2. As the court explained, "rational basis review does not test the wisdom, need, or appropriateness of the legislation, [but rather] only whether the legislation is reasonably related to a legitimate governmental interest. The legislation will pass constitutional muster if the legislative judgment is supported by any set of facts, either known or which could reasonably be assumed, even if such facts may be debatable." *Id.* (quotations and citations omitted).

439. 86 N.W.2d 166, 169 (Mich. 1957). See also *Cummins*, 770 N.W.2d at 439 (Mich. Ct. App. 2009) ("the Due Process Clause is not a guarantee against incorrect or ill-advised [governmental] decisions").

440. *Kyser*, 786 N.W.2d at 556 (citing art. 4, § 52 of MICH. CONST. OF 1963). See discussion *supra* Part II.A.1.

charged with the duty and responsibility in the premises.”⁴⁴¹ Indeed, the U.S. Sixth Circuit Court of Appeals has stated that the courts generally disfavor substantive due process attacks on land use cases, observing that its decisions have “cast a dim light on the prospect that . . . ‘substantive due process should have any place in’” such cases.⁴⁴²

Given that deferential posture under rational basis review, the starting premises of a court’s analysis are that the regulation in question is presumed to be valid, that the property owner complaining of the regulation bears the burden of proving it violates constitutional protections, and that that burden is a heavy one.⁴⁴³ Because the rational basis test queries whether a regulation is reasonably related to a legitimate governmental interest, a regulation may be found to be irrational (and hence violative of due process or equal protection) either because it does not advance a legitimate governmental interest or because it does so unreasonably.⁴⁴⁴ To prove either, however, the property owner must demonstrate that there is *no* conceivable legitimate goal related to the public’s health, safety, and welfare that is served by the regulation or that the means used to achieve that goal are *wholly* arbitrary and capricious. In making such a showing, it is not sufficient for a property owner to raise a “debatable question” as to the legitimacy or reasonableness of the regulation; rather, the courts will strike down a regulation only if the owner can prove that that regulation “constitutes ‘an arbitrary fiat, a whimsical *ipse dixit*, and . . . there is no room for a legitimate difference of opinion concerning its [un]reasonableness.”⁴⁴⁵ Similarly, in the context of an administrative decision, such as whether to grant or deny a permit, the courts will find a due process violation only when the administrator’s conduct is truly extraordinary and outrageous, such that it is so arbitrary and capricious as to “shock the conscience.”⁴⁴⁶

441. *Kyser*, 786 N.W.2d at 556 (quoting *Brae Burn, Inc., v. Bloomfield Hills*, 86 N.W.2d 166, 169 (Mich. 1957)).

442. *Warren v. City of Athens*, 411 F.3d 697, 705–06 (6th Cir. 2005) (quoting *Montgomery v. Carter County*, 226 F.3d 758, 768–69 (6th Cir. 2000)).

443. *Bonner v. City of Brighton*, 848 N.W.2d 380, 389 (Mich. 2014). *See also* *Frericks v. Highland Twp.*, 579 N.W.2d 441, 451 (Mich. Ct. App. 1998); *Kropf v. Sterling Heights*, 215 N.W.2d 179, 186 (Mich. 1974); *Alderton v. City of Saginaw*, 116 N.W.2d 53, 55–56 (Mich. 1962).

444. *Conlin v. Scio Twp.*, 686 N.W.2d 16, 23–24 (Mich. Ct. App. 2004).

445. *Kyser*, 786 N.W.2d at 548 (quoting *Brae Burn Inc. v. Bloomfield Hills*, 86 N.W.2d 166, 171–72 (Mich. 1957)).

446. *Cummins v. Robinson Twp.*, 770 N.W.2d 421, 438 (Mich. Ct. App. 2009) (quoting *Mettler Walloon, LLC v. Melrose Twp.*, 761 N.W.2d 293, 307 (Mich. Ct. App. 2008)). *See also* *EJS Prop., LLC v. City of Toledo*, 698 F.3d 845, 855 (6th Cir. 2012); *Pittsfield Inv., LLC, v. Pittsfield Charter Twp.*, No. 304087, 2013 Mich. App. LEXIS 516, *14–15 (Mich. Ct. App. Mar. 21, 2013) (distinguishing between the “shocks the conscious” standard, applicable to actions taken in administration of a regulation, and the “rational relationship” standard, applicable to regulation itself).

ii. Analysis

Even if a court finds that a shoreland property owner has a constitutionally protected interest in hard shoreline armoring subject to due process and equal protection as a general matter, it is hard to imagine that the court would find further that a state or local government regulation constraining the installation of such armoring either fails to advance any legitimate governmental purpose, or that it amounts to a wholly arbitrary and capricious means for doing so (i.e., that it violates those constitutional protections), given, first, the courts' deferential judicial posture under well-settled federal and state constitutional law; second, Michigan's constitutional mandate to safeguard the state's natural resources from pollution, impairment, and destruction (i.e., a legitimate governmental purpose);⁴⁴⁷ third, the State's public trust duty to safeguard Great Lakes coastal resources and not to transfer public trust interests in those resources to private ownership except when the larger public trust is served by doing so (i.e., a related but distinct governmental purpose);⁴⁴⁸ and finally, the compelling and growing evidence that hard shoreline armoring ultimately yields harms to coastal resources and the passive filling of submerged bottomlands (i.e., speaking to reasonably inferred if not well-established facts establishing the reasonableness of such regulation).⁴⁴⁹

A court might be receptive to the argument that armoring would not be destructive or that it would not yield passive filling of submerged bottomlands in a particular instance, but the (heavy) burden would be on the property owner to prove so beyond debate. It would be especially difficult to make such a showing in the kind of setting where the property owner would be most willing to spend the funds required to install armoring—that is, along a shore subject to active erosion and shoreline recession where hard shoreline armoring will be most necessary for protecting the owner's property but also cause the most harm to the shoreline. Courts are therefore unlikely to conclude that a state or local regulation that substantially constrains the installation or maintenance of hard shoreline armoring on dynamic Great Lakes shores violates either due process or equal protection under either federal or Michigan law, especially where the government documents the need for and appropriateness of such constraints.

iii. Additional Considerations Regarding Equal Protection

Beyond rational basis review, property owners might make several additional arguments regarding equal protection. First, a shoreland property owner might assert that shoreland properties should be considered similarly situated to all other properties in the community, such that shoreline armoring regulations

447. See *supra* Part II.A.1.

448. See *supra* Part II.A.2.

449. See *supra* Part I.

applicable to shoreland properties alone as a class violate equal protection. The relevant classification here, however, would be similarly situated coastal shoreland properties, not all properties generally, where the basis for the distinction drawn between shoreland properties and other inland properties is entirely rational, based on natural features and dynamics present uniquely along coastal shorelines and thus meriting particular regulatory approaches.⁴⁵⁰

Second, even though shoreline armoring regulations properly apply only to shoreland properties, and those properties are thus similarly situated as a class, there may be instances where the State or a local government permits some shoreland property owners to install hard armoring but not others based, for example, on the public versus the private ownership of the different shorelands in question or the extent of existing development on those shorelands. In such situations, equal protection might not be implicated so much by the government's classification as by the different regulation of (arguably) similarly situated property owners. In this case, the argument would be that the government is allowing some property owners to engage in activities that cause public harms while prohibiting others from doing so; why should those others not be allowed to armor as well?

Here, such a claim would likely be raised as a class of one equal protection case. The U.S. Supreme Court, in *Village of Willowbrook v. Olech*, held that a plaintiff can bring an equal protection claim where "the plaintiff alleges that she has been intentionally treated differently from others similarly situated and that there is no rational basis for the difference in treatment."⁴⁵¹ Even so, to prevail on such a claim, the burden on the plaintiff is quite high. It requires a plaintiff to either "negat[e]

⁴⁵⁰ In general, if a regulation

distinguishes between who may and who may not exercise a right, then judicial review of the law falls under the equal protection guarantee because the issue now becomes whether the distinction between these persons is legitimate. The classification employed is the "means" used to achieve some end. Thus, the Court reviews the issue of whether the classification rationally relates to a legitimate end under the equal protection guarantees.

RONALD D. ROTUNDA & JOHN E. NOWAK, 2 TREATISE ON CONSTITUTIONAL LAW—SUBSTANCE AND PROCEDURE § 14.7 (5th ed. 2022). In Michigan, the courts assess whether a classification that distinguishes between properties violates equal protection because of that distinction by determining, in part, whether the regulation's classification is "based on natural distinguishing characteristics ... [that] bear a reasonable relationship to the object of the legislation." *Houdek v. Centerville Twp.*, 741 N.W.2d 587, 598–99 (Mich. Ct. App. 2007). State or local regulations that distinguish between inland and shoreland properties based on the natural lake dynamics that affect the latter would presumably be found to be reasonable and legitimate.

⁴⁵¹ 528 U.S. 562, 564 (2000) (per curiam). Thus, under *Olech*, a single plaintiff can bring an equal protection claim if that person has been treated in an "irrational and wholly arbitrary" way, even if the plaintiff does not allege and cannot prove membership in a larger group or class that has been treated differently as a whole. *Id.* at 565. The U.S. District Court for the Eastern District of Michigan has similarly explained that when raising a class of one claim, a plaintiff must show both "that he has been intentionally treated differently from others who are similarly situated and that there is no rational basis for the difference in treatment." *Sinclair v. City of Ecorse*, 561 F.Supp.2d 804, 810 (E.D. Mich. 2008) (citing *Rifkin Scrap Iron and Metal Co. v. Ogemaw Cnty.*, No. 06-12351-BC, 2008 WL 2157067, at *9 (E.D. Mich. May 21, 2008)).

every conceivable basis which might support the government action” or show that “the challenged government action was motivated by animus or ill-will.”⁴⁵²

If there are instances where the State or a local government cannot provide any credible reason to justify not issuing a permit to one shoreland property owner having permitted others, that property owner might have a viable claim. Such a situation might arise, for example, should the State process permit applications to install hard shoreline armoring without consistent reference to appropriate standards, thereby issuing permits to some but not to others without clear and justifiable reasons for doing so. It might similarly arise at the local level if, for example, zoning prohibited the installation of hard shoreline armoring but the zoning board of appeals (ZBA) granted a variance allowing a particular property owner to do so nonetheless or made such variance decisions inconsistently. We address both situations in our discussion of appropriate governmental actions looking forward.⁴⁵³

In any situation where the government can provide a credible justification for denying a permit to armor to one property owner after issuing permits to others, however, an equal protection claim would likely fail. A government might reasonably deny a permit, for example, because new information is available that better demonstrates the harms caused by armoring, or because cumulative harms caused by other structures have become so severe as to warrant prohibiting additional structures, or given unique site conditions indicating that installation of armoring at the location in question would be more harmful in kind or degree than in other settings where armoring was previously allowed.⁴⁵⁴ Or, parallel to conditions under which the State might lawfully convey public trust interests in submerged bottomlands to private ownership without contravening the public trust doctrine, it might also reasonably allow armoring under certain circumstances but not in others without violating equal protection given the reasonable justification for the exclusions. It might, for example, prohibit the installation of hard armoring generally while allowing it only in specific instances where larger public interests are served by doing so, such as to protect publicly owned infrastructure like roads, privately owned but publicly used infrastructure such as marinas, or in situations where armoring serves larger public interests beyond protecting individual private properties alone.⁴⁵⁵

Third and finally, the Michigan courts have ruled in the context of equal protection that when a regulation completely excludes a particular use that would be well-adapted to the land in question, the burden shifts to the government to prove

452. See *Rifkin Scrap Iron and Metal Co. v. Ogemaw County*, No. 06-12351-BC, 2008 WL 2157067, at *9 (E.D. Mich. May 21, 2008).

453. See *infra* Conclusions and Next Steps.

454. See also *Long Island Ct. Homeowners Ass'n v. Methner*, 254 N.W.2d 57, 60 (Mich. Ct. App. 1977) (“Viewed as a means of controlling a nuisance, the 1971 judgment does not deny defendant equal protection since it prohibits expansion of all of the marinas in the area. A classification exempting existing uses from restrictions placed on future uses does not deny equal protection.”).

455. See *supra* Part III.B.2.

the reasonableness of that regulation.⁴⁵⁶ A shoreland property owner might assert under those rulings, along with the general premise that the constitution requires allowing *some* reasonable use of land (and by analogy some reasonable efforts to protect the property), that a regulation prohibiting entirely the installation of hard shoreline armoring is constitutionally unlawful, either under equal protection or due process or both. Alternatively, the owner might at least assert that the burden should shift to the government to demonstrate the reasonableness of the regulation, such that the presumption of its validity should shift against it as well.

Even so, as discussed above in the context of local regulation,⁴⁵⁷ it is not entirely clear whether the courts would consider hard shoreline armoring to be a viable “use” of shoreland property or merely an activity that might be conducted on the property. And, even if they did, the courts have also emphasized that, while the burden shifts to the government when it prohibits a given use (or potentially and land protection activity) entirely, the standard of review remains the rational basis test, such that a regulation will be found valid “if the exclusion has a reasonable relationship to the health, safety, or general welfare of the community.”⁴⁵⁸ Again, given the compelling and growing evidence of the harms that hard shoreline armoring causes, it would not be difficult for the government to demonstrate that such a prohibition is reasonable. As such, it is hard to imagine the courts would find that an equal protection or due process violation arises from such a total prohibition, even if the burden of proving reasonableness rests with the government.

c. Regulatory Taking

i. Purposes, Initial Premises, and Standards of Review

The Fifth Amendment to the U.S. Constitution, made applicable to the states through the Fourteenth Amendment,⁴⁵⁹ provides in part, “nor shall private property be taken for public use, without just compensation.” Similarly, art. 10, § 2 of the Michigan Constitution of 1963 provides, “[p]rivate property shall not be taken for public use without just compensation therefore being first made in a manner prescribed by law.”⁴⁶⁰ These federal and Michigan provisions are generally

456. *Landon Holdings, Inc. v. Grattan Twp.*, 667 N.W.2d 93, 105 (Mich. Ct. App. 2003) (where a zoning ordinance “totally exclude[s] a use . . . the burden [is] on the defendant to present evidence that it was reasonably related to a legitimate governmental interest.”); *see also* *Countrywalk Condominiums, Inc. v. City of Orchard Lake Village*, 561 N.W.2d 405, 407 (Mich. Ct. App. 1997) (“However, an ordinance which totally excludes a use recognized by the constitution or other laws of the state, carries a strong taint of unlawful discrimination and a denial of equal protection of the law.”).

457. *See supra* Part II.B.1–2.

458. *Countrywalk Condominiums*, 561 N.W.2d at 407.

459. *See* *Chicago, B&Q R.R. Co. v. Chicago*, 166 U.S. 226, 234 (1897).

460. The Uniform Condemnation Procedures Act, MICH. COMP. LAWS § 213.51 et seq (1996), provides the procedures to be followed by government under Michigan law for exercising the power of eminent domain to condemn private property for public use.

coextensive,⁴⁶¹ although the Michigan provision “has been interpreted to afford property owners greater protection than its federal counterpart” when it comes to eminent domain.⁴⁶² The takings clauses do not “prohibit the taking of private property, but instead place[] a condition on the exercise of that power.”⁴⁶³

At the country’s founding, the takings clause in the U.S. Constitution (and by implication the later, parallel clause in Michigan’s constitution) was understood to reach only a “‘direct appropriation’ of property or the functional equivalent of a ‘practical ouster of [the owner’s] possession’” (i.e., a governmental condemnation of private property through eminent domain or an inverse condemnation by government through direct occupation); it did not afford protection from constraints imposed on the use of private property through regulation.⁴⁶⁴ In 1922, however, the U.S. Supreme Court first articulated the regulatory takings doctrine as such through its decision in *Pennsylvania Coal Co. v. Mahon*,⁴⁶⁵ where the court held that, when a regulation “goes too far,” it will be deemed by the courts to be a taking. Thus, a taking is an action made by a legislature or executive to take title to private property, exercising the power of eminent domain, whereas both a physical taking and a regulatory taking (detailed below) are determinations made by a *court* that a governmental regulation has effectively taken the property through such extensive constraint that the protections afforded by the takings clauses (federal and state) should apply.⁴⁶⁶

461. The U.S. Court of Appeals for the Sixth Circuit and the Michigan courts have noted that the Michigan and federal clause are practically indistinguishable. *See Anderson v. Charter Twp. of Ypsilanti*, 266 F.3d 487 (6th Cir. 2001); *Adams Outdoor Advert. v. City of E. Lansing*, 614 N.W.2d 634 (Mich. 2000); *K & K Constr., Inc. v. Department of Env’t Quality*, 705 N.W.2d 365 (Mich. Ct. App. 2005). In *Peterman v. State Dep’t of Nat. Res.*, 521 N.W.2d 499, 504 n.10 (Mich. 1994), the Michigan Supreme Court noted that, “because the federal guarantee is no more protective than the state guarantee in the instant case, we do not examine the provision separately.”

462. *Rafaelli, LLC v. Oakland County*, 952 N.W.2d 434, 449–50 (Mich. 2020).

463. *First English Evangelical Lutheran Church of Glendale v. County of Los Angeles*, 482 U.S. 304, 314 (1987).

464. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1014 (1992) (citations omitted).

465. 260 U.S. 393, 415 (1922).

466. In addition to takings made through condemnation by the government pursuant to MICH. CONST. OF 1963 art. 10, § 2 and the Uniform Condemnation Procedures Act, MICH. COMP. LAWS § 213.51 *et seq.* (1996), the Michigan courts recognize ‘physical’ and ‘regulatory’ takings that occur when a property is overburdened by regulation, as detailed here, as well as ‘de facto’ takings effected by some other governmental action. Specifically, the courts recognize a cause of action allowing a property owner to bring an ‘inverse condemnation’ proceeding seeking compensation for a ‘de facto taking’ when the government fails to follow the procedures for condemnation provided by law. *Dorman v. Twp. of Clinton*, 714 N.W.2d 350, 356–57 (Mich. Ct. App. 2006) (citing *Merkur Steel Supply, Inc., v. City of Detroit*, 680 N.W.2d 485, 494–95 (Mich. Ct. App. 2004); *Peterman*, 521 N.W.2d at 505–06; *Hinojosa v. Dep’t. of Nat. Res.*, 556–57 (Mich. Ct. App. 2004)). A claim is properly analyzed as a de facto taking when the government has taken some direct or overt action that had the effect of physically taking the property unlawfully, as opposed to acting through allegedly burdensome regulation. *Merkur*, 680 N.W.2d at 495. Such actions might include, for example, the State’s installation of a structure causing the accelerated erosion of shoreland property and thus prematurely converting that private property to State-owned submerged bottomland (*see Peterman, supra* notes 325 and 327 and accompanying text), or local actions clearly intended to devalue property in anticipation of condemning it for public acquisition (*Merkur*, 680 N.W.2d at 500). To make out a de facto taking claim, the plaintiff must “prove ‘that the government’s

As commonly recited today, the regulatory takings doctrine serves 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.”⁴⁶⁷ Depending on the pleadings, courts are to determine first whether a regulation is constitutionally valid as against a substantive due process challenge⁴⁶⁸ and then, if so, whether the regulation nonetheless constitutes a regulatory taking by determining whether that regulation “goes too far;” that is, whether it is “so onerous that its effect is tantamount to a direct appropriation or ouster.”⁴⁶⁹

Shoreland property owners denied permission to armor their shores, or ordered to remove existing but failing or environmentally destructive armoring, would almost certainly assert that such an order constitutes a regulatory taking and that they should be compensated for their losses accordingly.⁴⁷⁰ It should be noted

actions were a *substantial* cause of the decline of his property’s value’ and also ‘establish the government abused its legitimate powers in affirmative actions directly aimed at the plaintiff’s property.’” *Hinojosa*, 688 N.W.2d at 556–57 (citing and quoting *Heinrich v. Detroit*, 282 N.W.2d 448, 451–52 (Mich. Ct. App. 1979) (emphasis in original)). In assessing de facto takings claims, the courts evaluate the totality of the defendant-government’s actions for their legitimacy (*Merkur*, 680 N.W.2d at 496), and they are not to find a taking unless government took some overt, affirmative action that was the proximate cause of the loss to plaintiff (*Hinojosa*, 688 N.W.2d at 557). The logic behind and application of these doctrines (*i.e.*, de facto, physical, and regulatory takings) is sometimes confusing given the nature of the claims made and the courts’ imprecise references to prior caselaw. *See, e.g.*, *Stomber v. Sanilac Cnty. Drain Comm’r.*, 2019 Mich. App. LEXIS 8193, *15–*18 (Mich. Ct. App. Dec. 19, 2019) (unpublished opinion) (discussing the regulatory takings doctrine in the context of a de facto taking analysis); *Cummins v. Robinson Twp.*, 770 N.W.2d 421, 442 (Mich. Ct. App. 2009) (discussing the de facto takings doctrine in the context of a regulatory takings analysis, albeit regarding a regulation alleged to have been used to depress the market value of plaintiff’s property). Nonetheless, we presume that State or local regulations constraining or prohibiting hard shoreline armoring would be treated by the courts as physical or regulatory takings, rather than de facto takings, given the distinctions noted here.

467. *Armstrong v. United States*, 364 U.S. 40, 49 (1960); *see also Lingle v. Chevron*, 544 U.S. 528, 536–37 (2005).

468. *Lingle*, 544 U.S. at 540–548. The U.S. Supreme Court clarified in its 2005 decision of *Lingle* at 540–545 that the determination of whether a regulation substantially advances a legitimate interest, and thus whether it effects a ‘due process type taking,’ has no place in a regulatory takings analysis. That distinction was subsequently recognized by the Michigan Court of Appeals in *Dorman v. Twp. of Clinton*, 714 N.W.2d 350, 357–58 (Mich. Ct. App. 2006). *See also Richfield Landfill, Inc. v. State, DNR*, No. 272519, 2008 WL 2439892, at *5 (Mich. Ct. App. June 17, 2008) (The “substantially advances” prong “is not a valid method of identifying compensable regulatory takings, but rather, is a due process test, which has no place in takings jurisprudence”).

469. *Lingle*, 544 U.S. at 537.

470. As with the regulatory takings doctrine in general, the applicability of that doctrine—particularly in the context of coastal settings and given global climate change—has also drawn considerable attention by commenters. *See, e.g.*, Marion Burke, *Building A Wall To Keep Out The Sea: Superstorm Sandy And The Takings Doctrine*, 18 U. PA. J. CONST. L. 1231 (2016); Christopher Serkin, *Passive Takings: The State’s Affirmative Duty to Protect Property*, 113 MICH. L. REV. 345 (2014); Nicholas R. Williams, *Coastal TDRs and Takings in a Changing Climate*, 46 URB. LAW. 139 (2014); Michael Allan Wolf, *Strategies For Making Sea-Level Rise Adaptation Tools “Takings-Proof”*, 28 J. LAND USE & ENV’T L. 157 (2013); J. Peter Byrne, *The Cathedral Engulfed: Sea-Level Rise, Property Rights, and Time*, 73 LA. L. REV. 69 (2012); Robin Kundis Craig, *Public Trust and Property Necessity Defenses to Takings Liability for Sea Level Rise Responses on the Gulf Coast*, 26(2) J. LAND USE & ENV’T L. 395 (2011); Margaret E. Peloso & Margaret R. Caldwell, *Dynamic Property Rights: The Public Trust Doctrine and Takings in a Changing Climate*, 30 STAN. ENV’T L.J. 51 (2011); Elizabeth B. Wydra, *Constitutional Problems with Judicial Takings Doctrine and the Supreme Court’s Decision in Stop the Beach Renourishment*, 29 UCLA J. ENV’T L. & POL’Y 109 (2011); J. Peter Byrne, *Rising*

again at the outset that the courts have consistently held that the property interests protected by the U.S. and Michigan takings clauses (and the regulatory takings doctrine) are a function of state law.⁴⁷¹ As such, if a property owner engages a use or activity that can be shown to cause a nuisance, then there can be no regulatory taking resulting from a prohibition of that use or activity. As explained by the Michigan Court of Appeals,

[T]he nuisance exception to the prohibition of unconstitutional takings provides that because no individual has the right to use his or her property so as to create a nuisance, “the State has not ‘taken’ anything when it asserts its power to enjoin [a] nuisance-like activity.” Indeed, “Courts have consistently held that a State need not provide compensation when it diminishes or destroys the value of property by stopping illegal activity or abating a public nuisance.⁴⁷²

By application of that rule, if hard shoreline armoring is shown to be causing a nuisance in fact or that it would do so if installed (i.e., not a nuisance merely for being defined as a such per se by ordinance), then no regulatory takings claim could proceed under any theory of regulatory taking requiring just compensation.

Moreover, also as discussed above⁴⁷³ and in more detail below regarding application of the regulatory takings doctrine under various tests, the courts would likely conclude that regulations that prohibit shoreline armoring because those structures would fix the naturally ambulatory boundary (i.e., the moveable freehold), and would thereby impermissibly convey State public trust proprietary interests in submerged bottomlands into private ownership, would not be subject to the regulatory takings doctrine. The doctrine would not apply because shoreland owners do not have the right to do just that in the first place under Michigan’s background principles of public trust and property law, even if long-term lake shoreline recession ultimately results in the loss of the shoreland property as it is naturally transformed from upland to submerged bottomland.⁴⁷⁴

Seas and Common Law Baselines: A Comment on Regulatory Takings Discourse Concerning Climate Change, 11 VT. J. ENV’T L. 625 (2010); Christopher T. Goodin, *The Role And Content Of The Character Of The Governmental Action Factor In A Partial Regulatory Takings Analysis*, 29 U. HAW. L. REV. 437 (2007); Daniel D. Barnhizer, *Givings Recapture: Funding Public Acquisition of Private Property Interests on the Coasts*, 27 HARV. ENV’T L. REV. 295 (2003).

471. See *supra* Part III.B.2.a.

472. See *e.g.*, *Ypsilanti Charter Twp. v. Kircher*, 761 N.W.2d 761, 775 (Mich. Ct. App. 2008) (quoting *Keystone Bituminous Coal Ass’n v. DeBenedictis*, 480 U.S. 470, 491 n.20 (1987)).

473. See *supra* Part III.A.3.

474. In other words, the prohibition of hard shoreline armoring would not be the proximate cause of the transformation of the shoreland property from fastland to submerged bottomland, and thus the proximate cause of the loss of use and economic value of the property; the proximate cause would be natural shoreline erosion and recessional processes. While we know of no Michigan caselaw directly on point, the reasoning underlying the requirement that a plaintiff must prove that a government’s deliberate

Finally, the U.S. and Michigan appellate courts have clearly established that courts must account for the whole property affected by a regulation, both spatially and over time, recognizing that a property owner may have the ability to use and earn income from property over space and time even though the proximate and near-term impact of a regulation is substantial.⁴⁷⁵ The issue of what portion of the property should be considered under a regulatory takings claim typically arises because property owners seek to segment their properties in order to focus judicial assessment only on the portion directly affected (i.e., either to individual parcels directly affected by the regulation where the owner owns multiple contiguous parcels, or to that portion within a given parcel directly affected), thereby increasing the weight of the regulation's impact on the property and the likelihood that it will be found to have gone too far. Nonetheless, the courts have consistently rejected attempts to do so.⁴⁷⁶ In the context of regulations constraining the installation of shoreline armoring, therefore, the relevant property to be examined would not be merely the strip of shoreline that would be (or has been) armored, but rather to the entire contiguous shoreland property.

Given those preliminary considerations, the U.S. Supreme Court has essentially established two bright-line categorical or per se tests and two fact-dependent balancing tests to determine whether a regulation effects a regulatory taking requiring just compensation, which are to be applied in sequence. The first categorical test, established by *Loretto v. Teleprompter Manhattan CATV Corp.*,⁴⁷⁷ is that a regulation that compels a property owner to accept a physical occupation on her property by a third party constitutes a taking per se, which *Lingle v. Chevron U.S.A. Inc.* described as the “functional equivalent of a ‘practical ouster of [the owner’s] possession.’”⁴⁷⁸ This is true regardless of the level of the burden imposed or

and overt action was the direct and substantial cause of plaintiff's alleged harms in order to make out a successful de facto taking claim would seem to apply to a regulatory taking claim as well. *See supra* note 466 and accompanying text; *Cummins v. Robinson Twp.*, 770 N.W.2d 421, 442 (Mich. Ct. App. 2009). *See also* Nathan Jacobsen, *Sand or Concrete at the Beach? Private Property Rights on Eroding Oceanfront Land*, 31 ENVIRONS ENV'T L. & POL'Y J. 217 (2008) (concluding that under California law shoreland property owners cannot claim that a governmental order to remove armoring structures, thus yielding erosion of their properties, would constitute a physical invasion because shoreland owners have no right to recover land lost to ‘normal’ erosion; only governmental actions that cause increased recession rates would justify such a claim).

475. *See* *Tahoe-Sierra Preservation Council v. Tahoe Regional Planning Agency*, 535 U.S. 302, 326–27 (2002); *Bevan v. Brandon Twp.*, 475 N.W.2d 37, 42–43 (Mich. 1991).

476. *See* *Tahoe-Sierra Preservation Council*, 535 U.S. at 326–27; *Bevan*, 475 N.W.2d at 42–43; *K & K Constr., Inc. v. Dep't of Nat. Res.*, 575 N.W.2d 531, 535–37 (Mich. 1998). This property-as-a-whole concept was reiterated most recently by the U.S. Supreme Court in *Murr v. Wisconsin*, 137 S. Ct. 1933, 1944 (2017), noting that it “has declined to limit the parcel in an artificial manner to the portion of property targeted by the challenged regulation.”

477. 458 U.S. 419, 434–435 (1982); *see also* *Dorman v. Twp. of Clinton*, 714 N.W.2d 350, 357 (Mich. 2006).

478. *Lingle v. Chevron USA Inc.*, 544 U.S. 528, 537 (2005) (internal citations omitted).

the corresponding level of compensation that might be due, and even if the ouster is only temporary.⁴⁷⁹ (This type of taking is often referred to as a physical taking.)

The second categorical test, established by *Lucas v. South Carolina Coastal Council*,⁴⁸⁰ (often referred to as a regulatory taking as distinct from a physical taking), speaks to regulations that “[adjust] the benefits and burdens of economic life to promote the common good.”⁴⁸¹ The *Lucas* Court held that when such a regulation yields the *total* deprivation of the economic value of a property, it categorically effects a regulatory taking *per se*,⁴⁸² except—as just noted—“to the extent that [state] ‘background principles of nuisance and property law’ independently restrict the owner’s intended use of the property.”⁴⁸³

If a regulation does not compel a physical ouster or yield a total deprivation, then the courts evaluate the effect of the regulation using an *ad hoc* balancing test. That test, established by *Penn Central Trans. Corp. v. New York City*,⁴⁸⁴ balances three factors: the character of the governmental action, the economic impact of the regulation on the property owner, and the property owner’s reasonable investment-backed expectations. Except for total economic deprivations, none of these factors by itself is dispositive, and each should be considered relative to the others.⁴⁸⁵

Finally, if the government places a condition upon the issuance of a land use regulatory permit, and if a court determines that the requirement imposed through that condition would—outside of the permitting context—be a taking (e.g., a demand for transfer of an easement without compensation), or that it would effect a regulatory taking (e.g. categorically or by application of the *Penn Central* *ad hoc* balancing test), then that demand amounts to an unconstitutional condition.⁴⁸⁶ In

479. See *Cedar Point Nursery v. Hassid*, 141 S. Ct. 2063, 2074–75 (2021).

480. 505 U.S. 1003, 1026 (1987); see also *Dorman v. Twp. of Clinton*, 714 N.W.2d 350, 356 (Mich. 2006).

481. *Penn Cent. Trans. Corp. v. New York City*, 438 U.S. 104, 124 (1978).

482. *Lucas*, 505 U.S. at 1019.

483. *Lingle*, 544 U.S. at 538 (citing *Lucas*, 505 U.S. at 1031).

484. 438 U.S. at 124.

485. *Palazzolo v. Rhode Island*, 533 U.S. 606, 633–36 (2001) (O’Connor, J., concurring); *Tahoe-Sierra Preservation Council v. Tahoe Reg’l Plan. Agency*, 535 U.S. 302, 305 n.10, 335–36 (2002).

486. See *Nollan v. California Coastal Comm’n*, 483 U.S. 825, 841 (1987) (holding that where the “actual conveyance of property is made a condition to the lifting of a land-use restriction,” the Court is particularly skeptical); *Dolan v. City of Tigard*, 512 U.S. 374, 385 (1994) (holding that where jurisdictions “condition . . . [an] application for a building permit on an individual parcel” and where “the conditions imposed [are] not simply a limitation on” individual use “but a requirement that [one] deed portions of the property to the city,” the doctrine of unconstitutional conditions applies); *City of Monterey v. Del Monte Dunes*, 526 U.S. 687, 702–03 (1999) (noting that the Court has applied the unconstitutional conditions doctrine only to “land-use decisions conditioning approval of development on the dedication of property to public use”); *Lingle*, 544 U.S. at 546–47 (holding that, in these cases, “the Court beg[ins] with the premise that, had the government simply appropriated the easement in question, this would have been *per se* physical taking” and that when the government “without paying the compensation that would otherwise be required upon effecting such a taking, demand[s] the easement as a condition for granting a . . . permit,” the unconstitutional conditions doctrine applies). The U.S. Supreme Court in *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595, 612 (2013), extended the unconstitutional conditions doctrine to apply when the government demands a payment of money, in certain situations, rather than

those situations, the courts are to apply heightened judicial scrutiny through a two-part ad hoc balancing test. That test serves to determine whether the condition imposed is constitutionally acceptable nonetheless—even though the demand made would clearly be unconstitutional standing alone but for the permit—because of the benefits that would accrue to the property owner from issuance of the permit. Applying the unconstitutional conditions test in that context, a court must determine, first, whether there is some essential nexus between the purpose underlying the permit requirement and the harm that would be caused by the proposed development,⁴⁸⁷ and second, whether the demand made is in some measure roughly proportional to that potential harm.⁴⁸⁸

ii. Analysis: *Loretto* and *Lucas* Per Se takings

The Michigan courts would likely conclude that a regulation that allows some continued use of a coastal shoreland property⁴⁸⁹ but that constrains the installation of hard shoreline armoring—and even one that prohibits such armoring altogether or compels its removal—does not effect either a categorical *Loretto* (physical invasion) or a categorical *Lucas* (total-deprivation) regulatory taking, for several reasons. First, as detailed above, hard shoreline armoring could constitute a public nuisance when it interferes with public rights of access and coastal resource enjoyment and a private nuisance when it accelerates erosion on neighboring properties. Such armoring can also impermissibly fix the naturally ambulatory moveable-freehold boundary separating private shoreland from public trust submerged bottomland property interests, in contravention of common law protections of property and Michigan constitutional protections of natural coastal resources.⁴⁹⁰ To that extent, a prohibition on such armoring in general would take nothing from a shoreland property owner that was not already restricted by

merely when it demands a dedication of a real property interest, and it clarified that the unconstitutional conditions doctrine applies even if the government ultimately denies a requested permit. *Id.* at 606. *See infra* section B.2.c.iv for more discussion of the unconstitutional conditions doctrine, including recent Michigan and U.S. Sixth Circuit appellate decisions regarding that doctrine.

487. *See, e.g., Nollan*, 483 U.S. at 837.

488. *Dolan*, 512 U.S. at 391.

489. *See, e.g., Cummins v. Robinson Twp.*, 770 N.W.2d 421, 443 (Mich. Ct. App. 2009) (holding that plaintiff's regulatory takings claim failed, even though the economic impact of the regulation was substantial, because plaintiff was still able to use the property as a residence and it retained some market value). It is important to note that while most if not all local regulations in Michigan provide for ongoing, remunerative uses of shoreland properties such as for residential development purposes, even state or local regulations that allow for ongoing uses short of full-scale residential development, like active recreational use (allowing, in turn, the construction of stairs, platforms, gazebos, and so on to facilitate that use), would presumably allow a shoreland property owner to retain some remunerative economic value in the property, such that a *Lucas* total-deprivation taking at the very least would not apply.

490. *See supra* Part III.A.3.

independent background principles of state nuisance and property law in the first place.⁴⁹¹

Second, even if shoreline armoring is prohibited specifically for the purpose of enabling continued public access and the ability to traverse along the Great Lakes shore, those public access rights—again—have been long recognized and accepted under Michigan’s public trust doctrine, a traditional background principle of state property law if ever there was one. As such, a shoreland property owner has no constitutionally protected right to interfere with those public access and coastal resource enjoyment rights in the first place, and a regulation safeguarding those public rights would not take a constitutionally protected private right from them, such that a *Loretto* physical taking would not apply.⁴⁹²

Third, should a court recognize some constitutionally protected right nonetheless, it is certainly true that a prohibition on the installation of hard shoreline armoring could conceivably influence the market value of a shoreland property by diminishing a potential purchaser’s investment-backed expectations because of diminished long-term use of the property given shoreline recession. Even so, recognizing that each regulatory takings claim is highly context-dependent, that loss in value would not be because of a constraint on use caused directly by the regulation (i.e., compared to, for example, a wetlands regulation that limits the buildable portion of a lot substantially while the entire parcel remains intact). Rather, it would result from recognition that natural processes—shoreline recession—will ultimately yield the conversion of that property to submerged bottomland, an outcome that will eventually occur even if the property is armored—just one delayed at great expense.⁴⁹³ Moreover, Great Lakes shoreland properties are popular places to own, regardless of whether developed or enjoyed more passively. As such, it is hard to imagine that a property of any substantial dimension would lose all economic value, even if not armored. Finally, it is hard to conceive of a shoreland property owner seeking to install armoring if the only portion of the property remaining would be consumed by the armoring itself (i.e., where the outcome, should armoring not be installed, could be the imminent loss of that remaining property to shoreline recession). But even in that case, if the property owner were allowed to armor, such armored shoreland property would almost certainly not be practically useful in any meaningful sense. And in either case (i.e., armored or not), the loss of use—and the

491. Indeed, by analogy, the only regulation that might directly yield a ‘taking’ of property would be one compelling a property owner to install armoring that *fixes* the ambulatory boundary and thus interferes with vested rights in natural shoreline change, such that the regulation would directly cause *active* intervention in natural processes that directly cause in turn the ‘taking’ of state public trust property rights and conveyance of them to private shoreland property ownership (i.e., by analogy, an unlawful regulatory ‘giving’ in contravention of the public trust doctrine). *Id.*

492. See discussion *supra* Part III.A.3.a. It is not clear whether the public trust doctrine compels protection of public rights of access to natural beaches or whether the permitting of hard armoring structures that are designed to allow the public to traverse along them would satisfy the doctrine, at least with regard to that particular public trust right.

493. See *supra* Part I.

potential total deprivation—would be the direct result of natural forces, not governmental regulation, such that a *Lucas* regulatory taking would not apply.

iii. Analysis: *Penn Central* and Regulatory Takings

Following much the same reasoning, the courts would be unlikely to conclude that a regulation constraining the installation of hard shoreline armoring would effect a *Penn Central* regulatory taking as well, unless the regulation was applied in a patently unfair way to a particular property owner. As noted, when an ordinance does not eliminate all value or economic benefit, but does diminish the value of the property, then the *Penn Central* ad hoc balancing test is applied. The factors to be considered by a court applying that test include: first, the character of the government action; second, the economic impact on the landowner; and third, whether the regulation interfered with landowner's reasonable "distinct investment-backed expectations."⁴⁹⁴ The U.S. Sixth Circuit has observed that, although it falls between the two extremes of *Loretto* and *Lucas*, a *Penn Central* regulatory taking claim "is not necessarily an easier standard to satisfy" and that it is "focused on identifying situations that approximate physical takings."⁴⁹⁵ In addition, both the U.S. and Michigan appellate courts have noted repeatedly that there is "no set formula" for determining when a taking has taken place under the *Penn Central* balancing test and that none of the three factors is dispositive individually.⁴⁹⁶

Regarding the character of the governmental action, the concern here is not balancing public welfare with the burden placed on the private property owner, but rather balancing the distribution of the benefits and burdens of the regulation across similarly situated property owners. Thus, although the analysis contemplates the legitimacy of the governmental regulation,⁴⁹⁷ it focuses primarily on the extent to which the regulated property owners enjoy reciprocity of advantage from the benefits provided (or harms avoided) by that regulation. As such, this factor of the ad hoc balancing test is akin to the rational basis review conducted for an equal protection analysis. So, beyond requiring at a minimum that the regulatory action be

494. *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978).

495. *Tenn. Scrap Recyclers Ass'n v. Bredesen*, 556 F.3d 442, 456 (6th Cir. 2009).

496. *K & K Constr. v. Dep't of Nat. Res.*, 575 N.W.2d 531, 540 (Mich. 1998) ("no set formula"); *Tahoe-Sierra Pres Council, Inc. v. Tahoe Reg'l Plan. Agency*, 535 U.S. 302, 336 (2002) ("we have eschewed any set formula") (cleaned up); *Murr v. Wisconsin*, 137 S. Ct. at 1942 ("the Court for the most part has refrained from elaborating this principle through definitive rules").

497. In *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470, 485–88 (1987), for example, the U.S. Supreme Court held that the character of the governmental action involved in that case leaned heavily against finding a taking because the State had "acted to arrest what it perceive[d] to be a significant threat to the common welfare," was serving "important public interests," and the legislature's purposes were "genuine, substantial, and legitimate." The Supreme Court of Michigan in *Adams Outdoor Adver. v. City of East Lansing*, 614 N.W.2d 634, 639 (Mich. 2000) similarly held that a city sign code which prohibited rooftop signs was not a *Penn Central* taking, in part because the Court concluded that the code was a reasonable police power regulation.

legitimate,⁴⁹⁸ the key element of the analysis is determining whether a regulation singles out a plaintiff to unfairly bear a burden for the public good or rather represents a comprehensive, broadly based regulatory scheme that fairly distributes the burden imposed across property owners similarly situated.⁴⁹⁹

Conceivably, shoreland property owners denied permission to install hard shoreline armoring will argue that they are singled out and bearing a burden for the public that the full public should bear. Nonetheless, while there are no Michigan cases directly on point, language and analysis consistently applied by the courts in related cases indicates that the correct analytical comparison is not between shoreland owners relative to the larger community but rather shoreland property owners relative to other similarly situated shoreland property owners.⁵⁰⁰ And as discussed above regarding equal protection analysis, as long as the regulation is not targeted at a specific person unreasonably or with animus, the character of the government action factor should weigh against finding a regulatory taking.⁵⁰¹ Indeed, in reviewing

498. As discussed *supra* note 470, an earlier form of the regulatory takings doctrine incorporated assessment of whether the regulation substantially advances a legitimate governmental interest. The *Lingle* Court rejected that analysis, however, noting that it is properly applied only in the context of a substantive due process challenge—not a regulatory takings analysis. 544 U.S. 528, 548 (2005). The assessment of the ‘legitimacy’ of the character of a governmental action for purposes of a regulatory takings challenge under *Penn Central*, therefore, would presumably be only as demanding as—or perhaps even less demanding than—that required for rational basis review of a due process challenge.

499. *K & K Constr., Inc. v. Dep’t. of Env’t Quality*, 705 N.W.2d 365, 384 (Mich. Ct. App. 2005) (the “relevant inquiries are whether the governmental regulation singles plaintiffs out to bear the burden for the public good [or] whether the regulatory act being challenged [] is a comprehensive, broadly based regulatory scheme that burdens and benefits all citizens relatively equally.”) In *Cummins*, 770 N.W.2d at 448, the Michigan Court of Appeals concluded that, because the township enforced the statewide building code and its provisions regarding flood-plain construction equally to all landowners with property similarly situated in flood-prone areas, the plaintiffs were both benefited and burdened like other similarly situated property owners. In *Chelsea Inv. Grp. LLC v. Chelsea*, 792 N.W.2d 781, 796 (Mich. Ct. App. 2010), the court found that when the State imposed a temporary moratorium on the issuance of water and sewer permits because of health and safety concerns arising from the capacity of the wastewater treatment plant during wet periods, the defendant city was temporarily precluded from issuing approvals and permits for plaintiff’s development. All developers in the area connecting to the water facilities at issue were subject to the same moratoriums, however, and thus plaintiff failed to establish that the State moratorium singled it out. Later cases that cite to *K & K Constr.*, *Cummins*, and *Chelsea* also look at the government action and ask whether it is a broad regulation or one that singles out parties relative to those similarly situated. See e.g., *Schmude Oil, Inc. v. Dep’t of Env’t Quality*, 856 N.W.2d 84, 94 (Mich. Ct. App. 2014) (“the prohibition on drilling . . . did not single out petitioners to bear the burden for the public good. Rather, the prohibition was a comprehensive scheme that applied to all landowners within the nondevelopment region.”); *Chicago Area Council, Inc. v. Blue Lake Twp.*, No. 285691, 2010 WL 986500, *12 (Mich. Ct. App. Mar. 18, 2010) (unreported) (recognizing zoning regulations are generally comprehensive and universal, and that property owners in a zoned area to whom a zoning regulation applied equally were equally burdened, not singled out, and equally benefited from preserving the land).

500. See *Blue Lake Twp.*, 2010 WL 986500 at *1. See also *Johnson v. Anderson*, Nos. 315397, 316024, 2014 WL 4087967, at *11 (Mich. Ct. App. Aug. 19, 2014) (“similarly situated property owners”); *Time Out, L.L.C. v. New Buffalo Twp.*, No. 278916, 2009 WL 50065, at *8 (Mich. Ct. App. Jan. 8, 2009) (unpublished) (“Because the ordinance here is one imposing traditional zoning as part of a comprehensive plan and plaintiffs are both benefited and burdened like other similarly situated property owners, ‘this factor weighs heavily against finding that a compensable regulatory taking has occurred here.’”).

501. See *supra* Part III.B.2.b. As with equal protection, this situation might arise if the state were to process permits to armor without using appropriate standards for doing so consistently, or if a locality were to prohibit armoring through a zoning code generally while its ZBA grants variances allowing

Michigan's wetlands protection laws, the Michigan Court of Appeals noted that, were it to find that those laws effected a regulatory taking of plaintiff's property, the court would in effect be singling out plaintiffs "to their benefit, because compensating [them] for the loss of value of their property...would be tantamount to making [them] exempt from the regulation of wetlands, to the detriment of others who bear the burden of wetland regulations throughout the state."⁵⁰²

Regarding the second factor of the *Penn Central* ad hoc balancing test, the economic impact on the property owner, courts look both to the diminution in value caused by the regulation and the extent to which the property retains some reasonable value. Property owners cannot rely on the fact that a diminution in value is substantial,⁵⁰³ that the property owner is precluded from making a profit she might have made absent the regulation,⁵⁰⁴ or that the regulation might have been fashioned in a less costly way.⁵⁰⁵ Rather, as explained by the Michigan Court of Appeals,

[T]he question of whether a regulation denies the owner economically viable use of his land requires at least a comparison of the value removed with the value that remains. A comparison of values before and after a regulation becomes effective is relevant in determining whether the regulation is so onerous as to constitute a 'taking,' but is by no means conclusive. [A] property owner must prove that the value of his land has been destroyed by

armoring to particular property owners, both situations addressed further below, *infra* Conclusions and Next Steps. See also, e.g., *Kalkman v. City of Village of Douglas*, No. 306051, 2012 WL 4215834, at *5 (Mich. Ct. App. Sept. 20, 2012) (unreported) (finding a taking where the zoning ordinance was found by the trial court to be directed solely at the plaintiff after the city had determined their setback complied with the existing regulatory scheme and then issued a stop work order).

502. *K & K Constr.*, 705 N.W. 2d at 385–86 (emphasis in the original). While any visitor to Michigan's Great Lakes shores enjoys the public trust right to traverse along those shores below the natural OHWM, the key beneficiaries of those rights—and probably those who enjoy them most—are the shoreland property owners themselves; they are most able to take advantage of the opportunity to beach walk, and by custom many if not most venture well beyond their own property boundaries. Maintaining passable beaches by prohibiting the installation of hard shoreline armoring, therefore, benefits shoreland property owners as a 'similarly situated' class as much or more so than the larger public.

503. See, e.g., *Dorman v. Township of Clinton*, 714 N.W.2d 350, 354–55 (Mich. Ct. App. 2006); *Grand/Sakwa of Northfield, LLC v. Township of Northfield*, 851 N.W.2d 574, 580, 582–84 (Mich. Ct. App. 2014). In *Chicago Area Council, Inc. v. Blue Lake Twp.*, the Court of Appeals explained that while a zoning change that effected a 36-percent diminution in value in plaintiff's property was "to be sure, a significant decline... [d]ecisions sustaining other land-use regulations, which, ... are reasonably related to the promotion of the general welfare, uniformly reject the proposition that diminution in property value, standing alone, can establish a 'taking[.]'" No. 285691, 2010 WL 986500, at *13 (Mich. Ct. App. Mar. 18, 2010) (unreported) (citing *Euclid v. Ambler Realty Co.*, 272 U.S. 365 (1926) (diminution in value caused by zoning law); *Hadacheck v. Sebastian*, 239 U.S. 394 (1915) (diminution in value)). See also *Johnson*, 2014 WL 4087967, at *12 (holding a reduction in value from \$2.57 million to \$1.67 million was insufficient alone to establish a regulatory taking).

504. See *Paragon Props. Co. v. Novi*, 550 N.W.2d 772, 776 n.13 (Mich. 1996) ("The Taking Clause does not guarantee property owners an economic profit from the use of their land.").

505. The Michigan Court of Appeals held in *Cummins*, for example, that the taking clause "does not guarantee that a property owner may choose the least costly building materials or methods to repair or rebuild property that has been damaged in a flood." 770 N.W.2d 421, 448 (Mich. Ct. App. 2009).

the regulation or that he is precluded from using the land as zoned. [A] mere diminution in property value which results from regulation does not amount to a taking. (cleaned up).⁵⁰⁶

Estimating with any confidence the economic impact of prohibiting hard shoreline armoring by comparing likely property values with and without such a prohibition in place would indeed be difficult and probably highly speculative. One would have to account for the facts that, for example, such properties are naturally diminishing over time because of natural shoreline recession, the costs of installing hard shoreline armoring are quite high, the alternative costs of moving structures back from the shore in lieu of armoring may be comparable to (if not less expensive than) armoring over time, and even unarmored properties are likely to retain some value until they do indeed succumb to the lake, when that eventually happens. Moreover and more importantly, as discussed regarding the potential for a *Lucas* regulatory taking claim, even though a regulation prohibiting the installation of armoring might have some effect on the value of the property, any ultimate substantial loss in value to the owner would be caused directly by natural shoreland dynamics, not the regulation.⁵⁰⁷ Thus, again recognizing that every regulatory takings claim is fact dependent, the economic impact from a prohibition on shoreland armoring specifically would not likely favor the property owner given these considerations.

Finally, the third factor of the *Penn Central* ad hoc balancing test, the property owner's reasonable investment-backed expectations in the property, requires the courts to determine what uses a landowner could have "reasonably expect[ed] to make of the land given the state of the land-use regulation at the time of acquisition," where part of that inquiry requires taking account of "whether the landowner knew, or should have known, of the land-use regulation at the time of purchase."⁵⁰⁸ As typically litigated, this factor contemplates at what point a property owner can rely on an existing land use regulation to establish a reasonable expectation of the right to use property in a particular manner (or alternatively when she can reasonably rely on that regulation not changing), or to what extent she can expect a government to change a regulation in order to accommodate her development plans.

506. *Chicago Area Council*, 2010 WL 986500, at *13. Because this case is unreported, it is not precedential. Nonetheless, it is a recent case that cites to prior reported cases and provides the concise summary of the correct analytical framework for this factor.

507. See *supra* note 493 and accompanying text. That is, the regulation is not forcing a property owner to bear a cost of installing equipment, or to take action that itself causes the loss of property. Rather, it is compelling a property owner to forebear in taking action that would itself cause a nuisance or passive filling of submerged bottomlands. The 'costs' from the regulation to the property owner, if anything, reflect the forgone profits of selling the land or otherwise profiting from it at some point in the future. But those costs are the result of natural forces, and to the extent they represent policy or legal action by the government, they are the result of prior constraints imposed from background principles of state property and nuisance law (*i.e.*, they are not constitutionally protected property rights).

508. *K & K Constr., Inc. v. Dep't of Env't Quality*, 705 N.W.2d 365, 368–69 (Mich. Ct. Ap. 2005).

However characterized, a key aspect of that reliance or expectation is that it must be objectively reasonable, not merely a unilateral expectation or abstract need.⁵⁰⁹

There are at least three dimensions of reasonable investment-backed expectations under Michigan law. The first dimension typically arises in the context of local zoning and is most apt when a property owner seeks to engage in some use or activity that was allowed by right but is no longer permitted because of a change in the law, or because the government refuses to rezone the property as requested by an applicant, or because the activity could be allowed by discretionary permit but is prohibited because a permit application was denied. In any of these cases, and in parallel with the initial analysis of whether a property owner enjoys constitutionally protected rights,⁵¹⁰ the courts have held that the reasonableness of a plaintiff's investment-backed expectations are greatly diminished if the asserted right has not vested.⁵¹¹

Second, reasonable reliance also speaks to what the property owner knew, or should have known, regarding physical conditions on a property when acquiring that property and what kinds of uses or activities might reasonably be feasible on the property accordingly. Third, it speaks to what the property owner knew, or should have known, regarding the existence of regulations or other legal constraints applicable to the property when acquiring the property.⁵¹²

Thus, the Michigan courts have concluded that the reasonableness of plaintiffs' claims to distinct investment-backed expectations justifying the finding of a regulatory taking were greatly diminished when they purchased lands were known to encompass regulated wetlands,⁵¹³ or to be situated within a "flood plain that

509. See 26 Am. Jur. 2d *Eminent Domain* § 14 (2023); *Cummins*, 770 N.W.2d at 448–49.

510. Specifically, when analyzing whether a property owner has a legitimate expectation to an asserted right; see *supra* Part III.B.2.a.

511. In such a context, the Michigan Court of Appeals has stated that a property owner can be found to have reasonably relied upon investment-backed expectations only when the right asserted has vested. "To claim a vested interest in a zoning classification, the property owner must 'hold[] a valid building permit and [have] completed substantial construction.' This Court has specifically declined to find a taking where a municipality rezoned property while the owner's application for a building permit was pending." *Dorman v. Twp. of Clinton*, 714 N.W.2d at 358–59 nn.30–31 (citing and quoting *Seguin v. Sterling Hgts.*, 968 F.2d 584, 590–591 (6th Cir. 1992) and *Schubiner v. West Bloomfield Twp.*, 351 N.W.2d 214, 217 (Mich. Ct. App. 1984)). It is not entirely clear whether the courts would look to the question of vesting only in the context of determining whether a property owner has a right to continue with a permitted land use despite a local government's rezoning action specifically, or more broadly in determining whether the property owner has a constitutionally protected right in general, or when determining whether a governmental action effected a regulatory taking more particularly. In any case, even if the courts determine that a property owner has a constitutionally protected right in general despite not yet having secured a discretionary permit and acted on it, the fact that her rights had not yet 'vested' would work against concluding that her investment-backed expectations were reasonable.

512. "People are presumed to know the law." *Adams Outdoor Advertising v. City of East Lansing*, 614 N.W.2d 634, 638 n.7 (Mich. 2000) (citing *Mudge v. Macomb Co.*, 580 N.W.2d 845, 856 n.22 (Mich. 1998)). By extension, given that property owners do not have vested, constitutionally protected rights in a given regulatory scheme, people are presumed to know that that existing regulatory scheme can change, such that they cannot have reasonable investment-backed expectations that the law will never change.

513. *K & K Constr.*, 705 N.W.2d at 383.

experiences frequent flooding,”⁵¹⁴ or “when the zoning regulation was consistent with the neighborhood and “[a] simple visual inspection of the area would have placed plaintiff on notice that his proposed development was inconsistent with the character of the neighborhood.”⁵¹⁵ Regarding knowledge of applicable regulations in particular, the U.S. Supreme Court has made clear that when regulations change and an affected property owner subsequently sells, that change in ownership does not automatically extinguish the purchaser’s ability to bring a viable regulatory takings claim.⁵¹⁶ Even so, to the extent that the regulation diminished the value of a property without effecting a total economic deprivation, the new owner is presumed to have folded the implications of that regulation into her investment-backed expectations, such that those expectations must be reasonably tempered accordingly.⁵¹⁷

Owners of shoreland properties along Michigan’s Great Lakes undoubtedly will have had distinct investment-backed expectations about what they might do with their properties when acquiring them. Whether their expectations regarding an asserted right to install hard shoreline armoring are reasonable, however, will hinge on the considerations just described. Considerations weighing against the reasonableness of a shoreland property owner’s expectations of a right to armor, for example, would include actual or presumed knowledge of the highly dynamic nature of coastal shorelines; actual or presumed knowledge of the harms that armoring can cause, especially in such highly dynamic settings; and actual or presumed knowledge of existing regulatory regimes that require obtaining a discretionary permit in order to install or maintain armoring (i.e., one that might be denied).

Likely the most prominent factor that would weigh in favor of the reasonableness of a property owner’s expectation of a right to armor, in contrast, would be the great extent to which the State has already permitted armoring along its Great Lakes shores, especially if the State were to stop issuing permits without legitimate justification for doing so (e.g., changed conditions such as increased storminess from climate change, improved knowledge of harms caused by armoring, excessive cumulative impacts from armoring, and so on). The courts might similarly be more inclined to find that a given shoreland property owner’s expectations of a right to armor were reasonable should the State (or a locality) prohibit that property owner from armoring while allowing other property owners to maintain armoring already installed without—again—providing good justification for doing so (e.g., because the existing armoring protects publicly owned or used infrastructure, whereas the proposed private armoring would not).

514. *Cummins*, 770 N.W.2d at 448.

515. *Id.* at 449 (citing and quoting *Dorman*, 714 N.W.2d at 358).

516. *Palazzolo v. Rhode Island*, 533 U.S. 606, 630 (2001).

517. *See id.* at 633 (O’Connor, J., concurring).

iv. Unconstitutional Conditions

In certain situations, the regulatory takings doctrine incorporates a special application of the unconstitutional conditions doctrine—the judicial doctrinal rule that, in general, government cannot condition approval of a regulatory permit on a demand that the permittee give up a constitutionally protected right.⁵¹⁸ In the land use regulatory context, the U.S. Supreme Court has essentially held that, despite that general rule, a condition imposed through a permitting process that would otherwise be unconstitutional (e.g., because it would clearly amount to an uncompensated taking outside of the permitting context) can nonetheless be found constitutionally acceptable if, first, there is an essential nexus between the permit condition imposed and a legitimate public goal (typically the avoidance of harms that would be caused by the proposed development) and, second, if there is some measure of rough proportionality between the burden placed on the property owner from the condition and the harms that would be avoided by fulfilling that condition.⁵¹⁹

A key element of the unconstitutional conditions doctrine is that it applies when the governmental demand made would constitute an “exaction.” At common law, an exaction was defined as a “wrongful act of an officer...in compelling payment of a fee or reward for his services, under color of his official authority, where no payment is due.”⁵²⁰ The U.S. Supreme Court decisions first announcing and then applying the unconstitutional conditions doctrine uniformly involved governmental demands that a property owner convey an easement for public access in order to obtain the requested permit (i.e., a demand that would clearly effect an unconstitutional physical taking of a real property interest standing alone).⁵²¹ Those decisions, and the most recent U.S. Court of Appeals’ decision directly on point

518. See discussion *supra* notes 484–488 and accompanying text.

519. See *Nollan v. California Coastal Comm’n*, 483 U.S. 825, 837 (1987) (essential nexus); *Dolan v. City of Tigard*, 512 U.S. 374, 391 (1994) (rough proportionality). The U.S. Supreme Court has consistently characterized this set of tests, taken together, as a special application of the unconstitutional conditions doctrine (*i.e.*, in the land use regulatory context where government demands an exaction in exchange for issuing a permit; see *e.g.*, *Nollan*, 483 U.S. at 841; *Dolan*, 512 U.S. at 385; *Lingle*, 544 U.S. at 546–547). This two-part test is also often characterized as heightened judicial review or “an independent layer of protection ‘in the special context of land-use exactions.’” *Koontz*, 570 U.S. at 621 (Kagan, J., dissenting, quoting *Lingle*, 544 U.S. at 538). Even so, because the underlying premise of an exaction is that it would clearly be an unconstitutional taking but for its imposition as a condition through a permitting process (see *infra* notes 520–523 and accompanying text), the application of *Nollan/Dolan* can be characterized equally well as an analysis required to determine whether an exception to the unconstitutional conditions doctrine is appropriate in the context of a permitting process under specific circumstances (*i.e.*, specifically only when the condition is an unconstitutional exaction that is, nonetheless, reasonable and roughly proportionate), rather than as “heightened judicial scrutiny” of a regulatory takings claim required for permitting decisions in general.

520. *Exaction*, BLACK’S LAW DICTIONARY (4th rev. ed. 1968).

521. See *Nollan*, 483 U.S. at 825 (easement demanded in exchange for a permit to expand a coastal shorefront home); *Dolan*, 512 U.S. at 374 (easement demanded in exchange for a permit to expand a hardware store). See also *City of Monterey v. Del Monte Dunes*, 526 U.S. 687, 702 (1999) (“[W]e have not extended [the unconstitutional conditions test] beyond the special context of exactions—land use decisions conditioning approval of development on *the dedication of property to public use*”) (emphasis added).

regarding the unconstitutional conditions doctrine,⁵²² suggest that that doctrine thus applies in a regulatory takings context only when the governmental condition or demand made for obtaining a permit—standing alone and outside of the permitting context—would itself effect an unconstitutional taking of a property interest (e.g., demand for an uncompensated conveyance of an easement for public access), or if the demand—again standing alone outside of the permitting context—would clearly effect a *Loretto* physical taking (involuntary occupation), or either a *Lucas* (total deprivation) or a *Penn Central* (ad hoc) regulatory taking.⁵²³

Despite that consistent caselaw, however, there has been some confusion among commenters and litigants regarding what precisely “exaction” means in the regulatory takings context, especially following the U.S. Supreme Court’s extension of the unconstitutional conditions doctrine through its 2013 decision of *Koontz v. St. Johns River Water Management District* to encompass “monetary exactions,” or demands made by government—under certain circumstances—that a property owner spend money as a condition for approval of a requested permit.⁵²⁴ Essentially relying

522. *Ballinger v. City of Oakland*, No. 19-16550, 2020 U.S. App. LEXIS 2862 (9th Cir. Feb. 1, 2022), *cert. denied*, 142 S. Ct. 2777 (2022).

523. That is, conditions that would be unconstitutional outside of the permitting context, not conditions that are deemed to be unconstitutional (or potentially unconstitutional) merely for having been made in a permitting context. *See Ballinger*, 2022 US App LEXIS 2862 at *21–*22; *see also supra* note 519. *Ballinger* involved an Oakland, CA, ordinance that applies to landlords upon retaking occupancy of their home when tenants are required to vacate the property upon expiration of the existing lease. In those situations, the ordinance requires landlords to pay the tenants a relocation fee. Plaintiffs, landlords subject to the ordinance, claimed, first, that the relocation fee amounted to an unconstitutional physical taking of their money for a private rather than a public purpose and, alternatively, that the relocation fee amounted to an unconstitutional exaction. The U.S. district court dismissed the lawsuit, and the U.S. Court of Appeals for the Ninth Circuit affirmed. In doing so, the Ninth Circuit first ruled that the relocation fee was a valid regulation of the landlord-tenant relationship, not an unconstitutional taking of a specific and identifiable property interest (for further discussion, *see infra* note 524). More importantly for the question addressed here, the court then ruled “the ‘starting point of our analysis’ of exactions claims is ... whether the substance of the condition ... would be a taking independent of the conditioned benefit [e.g., a benefit that would be enjoyed by issuance of a permit]. ... Here, the relocation fee is not a compensable taking, so [it] did not constitute an exaction.” *Ballinger*, 24 F.4th 1287, *22 (citations omitted).

524. 570 U.S. 595, 595, 612 (2013). This confusion existed even prior to the *Koontz* decision, where at least some commenters, litigants, and courts have interpreted “exaction” to encompass any demand made through a permitting process, regardless of the nature of that demand itself, thus requiring the application of heightened judicial scrutiny (*i.e.*, *Nollan/Dolan* review) whenever such a demand is made (*see* Mark Fenster, *Takings Formalism and Regulatory Formulas: Exactions and the Consequences of Clarity*, 92 CALIF. L. REV. 609, 635 (2004)). The Court in *Koontz* acknowledged that the application of the unconstitutional conditions doctrine to regulatory takings claims arose specifically in the context of demands made for the conveyance of an easement, 570 U.S. at 612, and it consistently referred to exactions as demands for “property” in explicating the doctrine, *e.g.*, 570 U.S. at 619. It also recognized, however, that “property” protected by the doctrine extends to more than just real property interests, encompassing specifically as well money in the form of a lien, or an income stream guaranteed to a beneficiary by a covenant, or a particular bank account, or other such specific and identified property interests. *Koontz*, 570 U.S. at 613–615 (*see also Koontz*, 570 U.S. at 624–625 (Kagan, J., dissenting)). The Court labeled such a demand a “monetary exaction,” *Koontz*, 570 U.S. at 612, and it distinguished such an exaction (*i.e.*, a demand subject to the unconstitutional conditions doctrine) from demands for money in the form of “property taxes, user fees, and similar laws and regulations that may impose financial burdens on property owners” (*Koontz*, 570 U.S. at 615) (*i.e.*, kinds of demands not subject to the unconstitutional conditions doctrine).

on that confusion and vaguely worded statements drawn from the *Koontz* decision, at least some litigants assert that the courts' reference to "exaction" should be taken to mean any governmental demand made in a permitting context (i.e., not just conditions or requirements that would effect regulatory takings standing alone), or any demand made for a payment of money as a condition for obtaining a permit, as was argued in a recent Michigan case decided by the U.S. Sixth Circuit Court of Appeals involving a township tree preservation ordinance—*F.P. Development v. Charter Township of Canton*.⁵²⁵

While the Sixth Circuit did not address what constitutes an "exaction" subject to the unconstitutional conditions doctrine under federal law in reaching its decision on that case, a parallel case involving the same ordinance decided yet more recently by the Michigan Court of Appeals, *Charter Township of Canton v. 446520, Inc.*, appears to have rejected such a broad interpretation of the term "exaction" under state law.⁵²⁶ In *44650*, the Court of Appeals held that tree replanting fees assessed

525. *F.P. Development v. Charter Township of Canton*, 16 F.4th 198 (6th Cir. 2021). In that decision, the U.S. Sixth Circuit Court of Appeals upheld a U.S. District Court ruling that the township's tree preservation ordinance effected a regulatory taking as applied under the unconstitutional conditions doctrine, because the ordinance required the property owner to either replant trees or pay into a tree replanting fund as a condition for receiving a tree removal permit. The District Court had applied the *Nollan/Dolan* test based on the plaintiff's mere assertion that the demand to replant trees amounted to an 'exaction,' without finding expressly that that demand—standing alone and but for the permitting context—would have effected an unconstitutional regulatory taking. *F.P. Dev, LLC v. Charter Twp. of Canton*, 456 F. Supp.3d 879, 892–95 (E.D. Mich. 2020). On appeal, an amicus curiae brief filed by the lead author of this article raised for the first time the argument that *Nollan/Dolan* should not have been applied to the township ordinance in question because the governmental demand did not in fact amount to an 'exaction.' Brief for Michigan Association of Planning and Michigan Environmental Council as Amici Curiae Supporting Defendant-Appellant at 24–28, *F.P. Dev., LLC v. Charter Twp. of Canton*, 456 F. Supp.3d 879 (E.D. Mich. 2020). In its decision, the Sixth Circuit set aside the preliminary question of whether *Nollan/Dolan* applied to the facts at hand because the parties themselves had not raised or briefed that argument. Whether it was the intent of the U.S. Supreme Court or not, and despite the seeming clarity of its precise holding in *Koontz* ("We hold that the government's demand for *property* from a land-use permit applicant must satisfy the requirements of *Nollan* and *Dolan* even when the government denies the permit and even when its demand is for money" 570 U.S. at 619, emphasis added), several other statements used by it in that decision can be drawn out of context to suggest that the unconstitutional conditions doctrine does apply to any demand made through the permitting process (e.g., a "reality" of the "permitting process [is that] land-use permit applicants are especially vulnerable to the type of coercion that the unconstitutional conditions doctrine prohibits because the government often has broad discretion to deny a permit that is worth far more than property it would like to take," 570 U.S. at 604–605), or at least that demands for money broadly implicate that doctrine, regardless of whether the money is in the form of a specific and identifiable property interest or some other form (e.g., "so-called 'in lieu of' fees are utterly commonplace...and functionally equivalent to other types of land use exactions," 570 U.S. at 612, citation omitted). Justice Kagan in dissent raised the concern that the Court's decision could lead to confusion regarding this issue for just these reasons (*Koontz*, 570 U.S. at 621–630), but Justice Alito writing for the Court dismissed that concern, concluding that it was not warranted (*Id.*, at 615–617).

526. Case No. 354309, issued April 13, 2023, slip op. at 16. In its decision, the Court of Appeals noted that the Sixth Circuit decision of *F.P. Development* had not addressed at all the preliminary question of whether the unconstitutional conditions doctrine should have been applied to that case, or by extension to *44650* (slip op. at 12). As a result, there is no clear holding on that question under federal law in the Sixth Circuit. The Court of Appeals also noted that no published Michigan caselaw has addressed the applicability of the unconstitutional conditions doctrine under the Michigan Constitution with regard to land-use permitting, such that claims made regarding that doctrine under Michigan law are analyzed coextensively with federal law (slip op. at 13).

by the township against the plaintiff did not effect an unconstitutional condition merely because the township demanded fees in-lieu of on-site mitigation, but rather because the amount of the fees imposed amounted clearly to a regulatory taking (i.e., the demand-for-money condition imposed was an unconstitutional regulatory taking outside of the permitting context, and thus subject to *Nollan/Dolan* review; it was not subject to *Nollan/Dolan* review merely for having been imposed through a permitting process or merely because it included a demand for money). The reasoning used by the court in reaching its holding on the law followed in a straightforward way U.S. Supreme Court and Ninth Circuit precedent, but its reasoning in applying that holding to the facts of the case was questionable, potentially leaving the door open for future courts to interpret the reach of the doctrine more broadly and thus to require heightened *Nollan/Dolan* judicial review of State and local land use permitting decisions more expansively than has occurred in Michigan to date.⁵²⁷

Given that potential, shoreland property owners required to obtain State or local permits to install hard shoreline armoring, or perhaps required as a condition for such a permit to make off-site coastal resource improvements or contribute money

527. The Court of Appeals concluded that the mere demand for a payment of money into the township's tree replanting fund alone did not require *Nollan/Dolan* review because "the predicate for an unconstitutional conditions claim is that the condition would constitute a taking of property without just compensation if the government imposed it on a property owner outside of the permitting context." 44650, slip op. at 16 (citing to *Nollan, Dolan, and Koontz*). The court then held, however, that because the amount of fees imposed by the township on the property owner totaled "more than the property's market value," it "is a taking of property without just compensation [and, as such] subject to the unconstitutional conditions doctrine of *Nollan* and *Dolan*." *Id.* While the court's reasoning and holding regarding the meaning of "exaction," and thus the applicability of the unconstitutional conditions doctrine, was entirely consistent with the explication of that doctrine as established by the U.S. Supreme Court's decisions of *Nollan, Dolan, Del Monte Dunes, Lingle*, and even *Koontz* (see *supra* notes 519–526), as well as with the Ninth Circuit's recent decision of *Ballinger* (*supra* notes 522–523), its reasoning in applying that holding in this particular case is questionable, for several reasons. First, the decision of the trial court under review was a motion for summary disposition, and the actual value of the property at the time of the litigation—after application of the tree preservation ordinance to the property owner—was not fully presented in evidence. While the fees demanded of the property owner exceeded the price the owner had paid to purchase the property several years prior, it was not clearly established that the value of the property interest remaining had in fact been totally extinguished, or even substantially diminished—as suggested by the Court of Appeals in its holding. Second, having proceeded through a *Nollan/Dolan* analysis and concluding from application of that analysis that the township's ordinance effected an unconstitutional conditions taking, the court declined to review the trial courts' rulings regarding the other remaining regulatory takings claim (i.e., speaking to total economic deprivation and ad hoc regulatory takings). In effect, then, the Court of Appeals found peremptorily, with little searching inquiry or applicable regulatory takings analysis, and without reviewing the trial court's regulatory takings analyses and rulings (which were also questionably reasoned and applied, see, e.g., Brief for Michigan Association of Planning as Amicus Curiae Supporting Appellant, Charter Twp. of Canton v. 44650, Inc., No. 354309 (Mich. Ct. App. filed Jul. 24, 2020)), that the ordinance effected an unconstitutional regulatory taking for the sake of applying the unconstitutional conditions doctrine, that the ordinance effected an unconstitutional conditions taking, and that because of that holding the court need not review whether the ordinance did indeed effect an unconstitutional regulatory taking. The point here is that regulatory takings and unconstitutional conditions doctrines are complicated and arcane, especially when raised in tandem, animated by ambiguities and prone to logical loopholes and traps. It is entirely possible that a future Michigan appellate court decision could interpret the meaning of "exaction" and the applicability of the unconstitutional conditions doctrine more expansively than did the Court of Appeals in 44650, despite the court's clear explication of the doctrine in stating the law, if not applying the law in that case itself.

toward such off-site improvements, might assert that the mere fact that they must obtain such a permit imposing any kind of requirement as a condition for receiving the permit (including especially payments of money) makes the unconstitutional conditions doctrine applicable to them. As such, the argument would go, the heightened *Nollan/Dolan* judicial review applied through that doctrine should yield a finding that those State and local permitting requirements, separately or together, effect unconstitutional regulatory takings warranting compensation. Nonetheless, even assuming *arguendo* that the courts apply the unconstitutional conditions doctrine to such State or to local regulatory permitting programs for shoreline armoring, they would likely conclude that those programs do not indeed yield regulatory takings, for several reasons.

First, as detailed above, the State's permitting programs that speak to shoreline armoring generally do not contemplate the imposition of demands made in exchange for issuance of a permit, other than compliance with mitigation requirements (e.g., demands to employ structural features designed to minimize harm to neighboring properties rather than demands to grant easements),⁵²⁸ such that there are no unconstitutional "exactions" or "conditions" being imposed. Second, even if the courts determine that compliance with mitigation requirements do constitute exactions subject to *Nollan/Dolan* review, those requirements would almost certainly satisfy the essential nexus and rough proportionality tests, given the harms that hard shoreline armoring cause and the nature of the corresponding mitigation requirements imposed. Third and finally, even if any regulatory requirements to mitigate the harms caused by armoring might run afoul of *Dolan's* rough proportionality requirement as currently applied by either the State or a coastal locality (as was the case in both *F.P. Development* and 44650), those governments are now on notice that the requirements they make, and the justifications they provide in doing so, might indeed be subject to rough proportionality analysis, such that they can take steps to ensure compliance with that requirement moving forward.

v. Summary: Regulatory Takings Claims

Should a State or local prohibition on the installation of hard shoreline armoring—or an order compelling the removal of such armoring—be litigated, the courts would likely find that neither of those regulatory actions effect a regulatory taking if: the State or locality conducts appropriate analysis and documents legitimate and reasonable justifications for doing so; applies those regulatory requirements broadly and uniformly to all shoreland property owners, except for

528. See *supra* Part II.A regarding the State's regulatory permitting program, and Part II.B *supra* regarding local shoreland regulatory authorities. As discussed *supra* Part III.A.3 and III.B.2.a, even if a permit were denied because installation of a hard shoreline armoring structure would interfere with public rights of shoreline access recognized pursuant to the public trust doctrine, those rights of access amount to background principles of state property law; they would not reflect the taking of an easement from a shoreline property owner because shoreline property owners do not enjoy the constitutionally protected right to interfere with public trust access rights in the first place.

allowing armoring where doing so clearly serves some larger public trust interests (i.e., not merely the interests of private shoreland property owners, individually or collectively); and requires that armoring already installed be removed once it causes nuisance-like harms or fixes the natural ambulation of the moveable freehold.

Under those conditions, the courts would most likely conclude that a prohibition of armoring would yield neither a *Loretto* physical ouster nor a *Lucas* total deprivation of private property because any subsequent changes to the property (i.e., including changes to shoreland areas open to public access and the transformation of upland into submerged bottomland) would be the result of natural forces, not the regulation. Moreover, a property owner's right to protect her property does not extend to maintaining a nuisance or taking the proprietary property interests of the State, especially those interests held in trust for the people. Similarly, under such conditions, the courts would also most likely conclude that a prohibition of armoring would not effect a *Penn Central* regulatory taking because it would not single out for unfair treatment some shoreland property owners relative to others similarly situated, the economic impacts to the property owner would again be caused by natural forces rather than the regulation itself, and no reasonable investment-backed expectations would be unduly frustrated. Finally, should the courts conclude that any regulations applied through a State or local permitting process are subject to the unconstitutional conditions doctrine, careful application of such a permitting program would very likely satisfy the heightened judicial review imposed by the *Nollan* and *Dolan* tests, given the harms that shoreline armoring cause and the contours of the regulatory decisions those programs contemplate.

d. Summary and Conclusions: Constitutional Claims in General

Stepping back, constitutional claims by shoreland property owners would depend first on whether those owners enjoy a constitutionally protected right to armor. Given the long history of Michigan's public trust doctrine and constitutional protections for coastal resources, especially the public trust right of access to traverse along the shore, the courts would likely conclude that armoring constraints imposed to safeguard public access rights do not implicate a property owner's right to exclude because property owners do not enjoy the right to do so—at least in terms of excluding beach walking below the natural OHWM. Similarly, so long as state and local regulations permit some reasonable uses of shoreland properties, prohibitions on armoring would not implicate a constitutionally protected right to reasonably use property because that right does not compel governments to allow any and all potential uses (i.e., if the courts even recognize armoring as a use of the property rather than an activity on the property in the first place).

The courts would likely contemplate more closely the question of whether constraints on hard shoreline armoring implicate a shoreland property owner's fundamental right to reasonably protect her property. The resolution of that question would hinge on whether the courts accept the proposition that such armoring

structures yield public and private nuisances, and that they fix the natural ambulation of the moveable freehold boundary that separates the State's propriety public trust interests in submerged bottomlands from private shoreland property owners' interests in their uplands. If the courts accept either of those propositions (both of which would be hard to deny given compelling and growing physical evidence that armoring structures yield exactly those impacts), then any constitutional claim brought against constraints on armoring would fail as an initial matter because property owners do not enjoy constitutionally protected rights to create and maintain nuisances or to take the property interests of others—including property interests of the State—under Michigan's common law, constitutional law, and public trust doctrine.

Alternatively, if the courts conclude either in general or in a particular instance that a shoreland property owner's right to protect her property (or use it or exclude from it) does conceivably extend to taking actions such as installing and maintaining hard shoreline armoring, then the next question the courts would address is whether governmental constraints on armoring offend constitutional protections of those rights. Of the claims property owners would be most likely to raise—due process, equal protection, and regulatory takings—allegations of substantive due process and equal protection violations would be the least likely to prevail (setting aside procedural due process considerations for purposes here).

Both due process and equal protection claims would likely fail because both would be adjudicated by the courts using rational basis review. The courts would apply rational basis review because of separation of powers concerns and longstanding judicial norms against legislating public policy from the bench—especially regarding natural resource protection policy as expressly reserved to the legislature by Michigan's constitution. Under such deferential judicial review, a property owner would almost certainly be unable to prove—beyond any debatable question—that *no* conceivable legitimate public purpose could be served by constraining the installation and maintenance of such armoring, or that such constraints on armoring would amount to a *wholly* arbitrary and capricious means of achieving legitimate public ends, again given the compelling and growing evidence of the harms that hard shoreline armoring structures cause to coastal resources generally and to State public trust interests specifically.

The courts might be more likely to entertain a shoreland property owner's claim that a state or local constraint on hard shoreline armoring could amount to a regulatory taking of that property. Indeed, that is the claim property owners are likely to assert most vigorously, if not first. But again, the regulatory takings doctrine—like both due process and equal protection—is essentially deferential. While property owners are often quick to threaten regulatory takings claims, and local officials are quick to fear them, the courts in general (or as a rule) do not find that a regulation has indeed effected a regulatory taking except in the most extreme circumstances. As such, the courts would be hard pressed to conclude that such a regulation indeed constitutes a regulatory taking, so long as the state or a coastal

locality conducts appropriate analysis and adequately documents legitimate and reasonable justifications for constraining hard shoreline armoring, applies those regulatory requirements broadly and uniformly to all shoreland property owners similarly situated, and requires that armoring already installed be removed once it causes nuisance-like harms or fixes the natural ambulation of the moveable freehold.

C. Summary and Conclusions: The Potential Adjudication of Likely Litigation

The most important consideration in potential armoring litigation is that, factually, there is compelling and growing evidence that hard shoreline armoring structures yield nuisance-like harms to coastal shoreline resources, and that they have the effect of passively filling submerged bottomlands by fixing the natural ambulation of the moveable freehold boundary separating bottomland from adjacent upland. To the extent that any claims litigated require a showing of such facts, the party or parties bearing that burden should have little difficulty doing so. The second aspect to note is that there are to date no Michigan appellate decisions speaking directly on point to the lawfulness of installing or maintaining hard shoreline armoring structures—or the lawfulness of governmental regulations that would prohibit or otherwise constrain such armoring. Third, U.S. and Michigan historical common law, statutory law, constitutional law, police power doctrinal law, and public trust doctrinal law establishing a public interest in the protection and conservation of Michigan's Great Lakes coastal resources are collectively robust and well-settled. Indeed, that body of law taken altogether establishes a strong public interest in the protection of coastal resources from substantial pollution, impairment, and destruction, and it provides clear authorities to take governmental action to do so. It also imposes a duty on the State not to convey public trust *jus privatum* and *jus publicum* interests in the submerged bottomlands of the lakes—including shorelands periodically submerged—into private ownership.

Given that body of law, should the State or a coastal locality decide on its own accord to exercise those authorities in order to constrain shoreline armoring, the courts would be hard pressed to find that either lacks the authority to do so. Should an environmental or other public interest group sue the State to compel it to constrain the installation or maintenance of armoring more so than it current does, however, it is not clear that such a suit would prevail. The arguments most likely put forward would be that the State's current rules for administering armoring permits pursuant to the GLSLA and SMPA are *ultra vires* for allowing armoring in ways and situations that those acts prohibit, or that both regulations and statutes are unlawful or enabling the pollution, impairment, and destruction of the state's public trust resources in contravention of the public trust doctrine and Michigan Constitution, or that they do the same by impermissibly allowing conveyance of the State's public trust interests in submerged bottomlands into private ownership, or all three.

There are established threads of Michigan caselaw that the courts could rely upon to find such arguments persuasive and dispositive, particularly those related to

the protections afforded by the Michigan Constitution, MEPA, and the public trust doctrine. Alternatively, the courts could rely on a contrary line of cases supporting the conclusion that, while hard shoreline armoring may cause some harms, those harms do not rise to a level sufficient to invoke MEPA, constitutional, or public trust doctrinal protections. It is difficult to predict which arguments would prevail.

In the opposite case, should the State or a locality decide to regulate armoring more extensively than current practice, a shoreland owner could file suit alleging that the government lacks the authority to prohibit armoring on its own initiative. That would be a difficult case to make because, as just noted, the courts would be hard-pressed to conclude that the State and coastal localities indeed lack the authority to do so.

Finally, as part of any conceivable litigation, shoreland property owners will almost certainly assert that any regulation constraining their ability to install hard shoreline armoring—and especially regulations prohibiting its installation altogether or compelling its removal—violate their constitutionally protected private property rights. For the reasons just summarized in the section above, it is hard to see such arguments prevailing, particularly regarding due process and equal protection claims, except perhaps in a particular instance if the governmental action in question was patently arbitrary and capricious or clearly motivated by animus or ill-will toward the property owner. Similarly, careful review of U.S. and Michigan caselaw suggests that the courts would most likely find that a constraint on the installation or maintenance of hard shoreline armoring does not effect a regulatory taking, especially if the regulation allows for some reasonable use of the property, although again the courts might be persuaded to find a regulatory taking in a particular instance given the set of facts at hand.

CONCLUSIONS AND NEXT STEPS: AVOIDING LITIGATION

The State of Michigan and its coastal localities face a wicked dilemma that cannot be escaped. Given the fact that much of Michigan's Great Lakes shorelines are composed of highly erodible sands and gravels, and the effects of natural wind and wave action along the shore, much of the state's Great Lakes coasts are slowly but remorselessly and irrepressibly receding landward over time. Because much of that shoreline is privately owned and given the lure of residing as close to the water's edge as possible, much has also been developed. Shoreland property owners are understandably distressed as shorelines recede, taking their properties and structures into the lake, and some understandably look to install armoring structures designed to arrest natural erosion and recession processes accordingly.

But the evidence is clear: hard shoreline armoring structures designed to arrest natural coastal erosion processes also necessarily destroy natural coastal resources in doing so, and they prevent the natural transition of upland into submerged bottomland, starving the coastal system of the sediment supply it needs to naturally restore ecologically (and aesthetically) functioning beaches and passively converting submerged bottomlands owned by the State in trust for the people into

private ownership. Given all those dynamics, it will rarely be possible to protect both the beach and the beach house; we must decide which to prioritize, recognizing that protecting one will ultimately and necessarily result in the loss of the other.

The State of Michigan has enacted coastal resource protections through statutory and regulatory law to constrain the placement of structures like hard armoring along its Great Lakes shores to safeguard public trust interests in those resources, and the state's coastal localities enjoy sufficient delegated police power authorities to regulate such structures as well—should they decide to exercise those authorities. Nonetheless, the armoring of Great Lakes shores continues apace, especially since the rapid rise in lake water levels that occurred within the past decade. Michigan appears by default to have made the decision to allow shoreland property owners to armor when push comes to shove, despite the impacts armoring structures are having.

As the public becomes increasingly aware of the losses occurring, the pressure to do more to protect coastal resources is likely to increase, increasing in turn the likelihood of litigation asserting that the government has a duty to do more under Michigan law. As governments respond, either on their own or in response to such litigation, shoreland property owners are increasingly likely to fight back, asserting both that the government lacks the authority to regulate armoring and that such regulations violate their constitutionally protected private property rights. In either case, the task of resolving the wicked dilemma of whether to protect the beach or the beach house will fall to the courts.

There are reasons to be concerned that the outcomes of such litigation will not fare well for any of the parties involved. Given the right facts, the courts could find that the State (or a locality) is not required—or, perhaps, even permitted—to do more than is currently being done to protect the natural functioning of the shorelines. Such a ruling, likely to be made through focused attention to a particular set of facts, would mandate the pro-armoring status quo, such that over the long term much of Michigan's natural Great Lakes shores will be armored. From our perspective, one concerned especially about the long-term ecological, economic, and social vitality of Michigan's Great Lakes coasts, such an outcome would not serve the people of Michigan or its shoreland property owners well, since all will lose the natural features that make residing along the coast so attractive.

Or, again given the right facts, the courts could be persuaded that constraints on hard shoreline armoring effect a regulatory taking of private shoreland property. Such a ruling would weaken State and local coastal resource protection efforts—should State or local officials decline to constrain armoring accordingly—whether or not the court acknowledges as much. That outcome again would likely lead to the degradation and ultimate loss of substantial reaches of the state's Great Lakes natural public trust coastal resources. At the same time, should the State or a given locality conclude that prohibitions on hard shoreline armoring are warranted, and should the courts conclude in turn that such prohibitions yield a regulatory taking requiring compensation, then the courts would effectively compel the State or

locality to indemnify private shoreland property owners for having made a poor investment decision; that is, the decision to invest in such a dynamic and high-risk setting, expecting the government to bear the burden when nature finally calls one way or the other (i.e., either suffering the loss of its public trust resources by allowing armoring, or paying off the property owner not to armor).

Any of these outcomes would arguably amount to supplanting an established legislative policy favoring coastal resource protection with a judicial policy favoring the rights of private shoreland property owners. Such an outcome would be unhappy for all involved and would diminish the State's ability to vindicate Michigan's constitutional and well-settled common law protections for the natural environment upon which all depend.

If possible, therefore, the State should pursue policies that, while protecting the natural lakeshore, are less likely to provoke litigation. Indeed, the plight Michigan today confronts because of long-term shoreline recession is much like the plight that the ocean coastal states confront because of sea level rise. Given those threats, considerable attention is being devoted by academics and practitioners both in the Great Lakes regions and along the ocean coasts to finding ways to resolve this wicked dilemma with the same goals in mind.⁵²⁹

Drawing from those sources and reflecting on the particulars of Michigan law just analyzed, the State and its localities might provide focused and increased education to the public in general, and to shoreland property owners in particular, about Great Lakes shoreline physical dynamics and legal doctrines. The state might similarly consider requiring that sellers of Great Lakes shoreland properties fully disclose the dynamic nature of their shorelines, as well as amending existing land surveying requirements and practice to ensure that surveys of shoreland properties clearly indicate the dynamic nature of the shoreline boundaries of those properties.

To be fully protective of the state's natural coastal resources, the State and its coastal localities should carefully consider formally adopting and fully enforcing a policy of prohibiting any new hard shoreline armoring structures along Great Lakes shores without exception (except as discussed below). In doing so, they might allow for the placement of temporary and readily removed flexible armoring (e.g., sandbags, geotextile tubes, or other similar systems) to provide reasonable protection to homes and other built structures during periods of exceptionally high water levels. Such temporary structures should be allowed, however, only until water levels recede and with the caveat that they be removed in any case if and when it becomes evident that they are causing nuisance-like harms or impermissibly fixing the natural recession of the shoreline (i.e., functioning like hard armoring structures).

529. See, e.g., *Resilient Cape Cod*, CAPE COD COMM'N, <https://www.capecodcommission.org/our-work/resilient-cape-cod/> (last visited Dec. 2022); *Managed Retreat Toolkit*, GEORGETOWN CLIMATE CENTER, <https://www.georgetownclimate.org/adaptation/toolkits/managed-retreat-toolkit/introduction.html> (last visited Dec. 2022); Norton (2022), *supra* note 1; Richard K. Norton, *Dynamic Coastal Shoreland Zoning: Adapting Fastland Zoning for Naturally Shifting Coastal Shorelands*, ZONING PRACTICE, March 2020, at 2.

Similarly, the State and its coastal localities should carefully consider formally adopting and fully enforcing a policy of requiring that shoreline armoring structures be removed when they create demonstrated harms like those just described (a policy that theoretically already exists in the form of common law nuisance). They should also contemplate a policy that requires the removal of structures on an amortization schedule or when they are damaged by coastal processes beyond some threshold point (i.e., akin to the removal of nonconforming uses under local zoning).

In terms of exceptions specific to structures that fix the natural ambulation of the moveable freehold boundary, thus passively filling state-owned submerged bottomland in violation of the public trust, the State might allow the installation and maintenance of hard shoreline armoring under several specified and limited circumstances—that is, allowing such armoring only where doing so would indeed serve larger public trust interests. It might allow armoring, for example, when the property is owned by the public and serves a public use (e.g., roadways and water-dependent facilities like water treatment plants), when the property is privately-owned but open for public use (e.g., marinas), or when the property is privately-owned but subject to public regulation for larger public interests (e.g., utilities, industrial facilities providing substantial employment). It might also allow armoring of exclusively private properties, but only when doing so serves truly larger public interests rather than merely the individual interests of the property owners themselves, separately or collectively (e.g., protecting densely settled neighborhoods and corresponding public infrastructure serving them, the mirror case of using eminent domain to transfer title interests in property to abate blight).

Beyond bare regulation, the State should also contemplate providing financial assistance to shoreland property owners to help them move residences or other built structures landward when threatened or by acquiring shoreland properties outright and removing structures. It should do so, however, only after carefully accounting for equity considerations and potentially applying means testing to account for a shoreland property owner's ability to pay and the potential for moral hazards (i.e., so as not to indemnify wealthy property owners in particular for having made imprudent investment and building decisions).

Finally and most importantly, the Michigan Legislature and the legislative bodies of Michigan's coastal localities, before doing any of these things, should convene legislative working groups with all parties affected—including shoreland property owners and the rest of the community more broadly. They should collect all the data and information currently available regarding shoreline dynamics, survey governmental authorities and limitations, and contemplate shoreland property owner rights and responsibilities under law. And they should deliberate carefully on what, if any, modifications to current statutes might be warranted—recognizing and fully vetting all the likely tradeoffs any decisions would implicate, both in terms of impacts to private shoreland properties and to the State's Great Lakes public trust coastal resources.

