

Waterfront Property Rights: The Potential Impact of Government Projects



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About the Author



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About the Virginia Coastal Policy Center

The Virginia Coastal Policy Center (VCPC) at the College of William & Mary Law School provides science-based legal and policy analysis of ecological issues affecting the state's coastal resources, providing education and advice to a host of Virginia's decision-makers, from government officials and legal scholars to non-profit and business leaders.

With two nationally prominent science partners – the Virginia Institute of Marine Science and Virginia Sea Grant – VCPC works with scientists, local and state political figures, community leaders, the military, and others to integrate the latest science with legal and policy analysis to solve coastal resource management issues. VCPC activities are inherently interdisciplinary, drawing on scientific, economic, public policy, sociological, and other expertise from within the University and across the country. With access to internationally recognized scientists at VIMS, to Sea Grant's national network of legal and science scholars, and to elected and appointed officials across the nation, VCPC engages in a host of information exchanges and collaborative partnerships.

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VCPC grounds its pedagogical goals in the law school's philosophy of the citizen lawyer. VCPC students' highly diverse interactions beyond the borders of the legal community provide the framework for their efforts in solving the complex coastal resource management issues that currently face Virginia and the nation.

INTRODUCTION

There is a growing consensus that the Earth is warming due to human activity and that, because of this heating, sea levels are rising.¹ Federal and state governments might seek to build a variety of projects, either in the water or on the shoreline, that could affect coastal communities, such as protections against shoreline erosion or recreational amenities. These projects, however, might need to be built on, or connect to, privately- or locality-owned lands, bringing about a variety of legal issues. Localities have an interest in protecting their own rights and lands as well as ensuring that property rights of citizens are not diminished. In order to address these legal issues, it is important to look at the underlying scientific and legal doctrines and to examine projects on a case-by-case basis.

Part I of this paper will explain the basis of sea level rise, particularly in the Hampton Roads region of Virginia. It will explore the implications of sea level rise and recurrent flooding that the region has already seen and will look at what the future might hold. It will then discuss various projects that state and local governments may choose to invest in that might assist them in adapting to the effects of sea level rise.

Part II of this paper will examine the public trust doctrine and what it requires from states and localities in regard to public use. This part will also explain where the property of waterfront landowners ends and state-owned land begins.

Part III will briefly explain what an unconstitutional taking of property is, and what kinds of takings powers are delegated to the federal and state government. Here, the paper will explain when a state government may take property from a private landowner or a locality. The paper also will look at the powers of federal agencies, such as the U.S. Army Corps of Engineers, to take land.

Finally, Part IV will look at specific examples of projects and explain how Virginia case law might influence ownership and takings associated with such projects.

¹ John Cook et al., *Consensus on consensus: a synthesis of consensus estimates on human-caused global warming*, 11 ENVTL. RES. LETTERS 1 (2016), <http://iopscience.iop.org/article/10.1088/1748-9326/11/4/048002/pdf> (last visited Dec. 1, 2017).

I. SEA LEVEL RISE

“Global climate change has and will lead to substantial rises in global sea levels.”² Globally, there has been over three inches of sea level rise in the last three decades.³ Coastal communities, particularly on the East Coast, have seen dramatic increases in the number of annual floods due to this rise.⁴ For instance, some coastal cities have seen seven inches of sea level rise since 1970 and are having six times as many days with flooding.⁵ These floods can be disruptive and expensive, wiping out roads and causing damage to buildings, and are expected to be 300 to 900 percent more frequent in the coming decades.⁶ In Virginia, there are three main drivers of sea level rise. First, as global temperatures rise, so do global ocean temperatures, which causes the water to expand.⁷ Second, the world’s glaciers and ice sheets are melting at increased rates.⁸ Finally, “[t]he southern Chesapeake Bay region is experiencing land subsidence,”⁹ which adds to increases in relative sea level rise. Land subsidence is the “gradual settling or sudden sinking of the Earth’s surface owing to subsurface movement of earth materials.”¹⁰ Hampton Roads and the Chesapeake region are particularly affected by land subsidence because homes and industries are withdrawing groundwater from the Potomac Aquifer, causing the land to sink.¹¹

As mentioned above, sea level rise and recurrent flooding have been very impactful to the East Coast, and the Hampton Roads region of Virginia is not immune to this environmental catastrophe. In fact, “[r]ecurrent flooding is a problem throughout Tidewater Virginia, both in coastal areas (typically due to storm surge) and in inland areas (typically due to heavy rainfall).”¹²

Hampton Roads is the sole large urban center in the southern Chesapeake Bay region, consists of 13 communities, and has a population of 1.7 million people. Hampton Roads is home to one of the largest ports on the east coast of the United States and many military bases The southern Chesapeake Bay region also contains valuable natural and historical sites that are vulnerable to land subsidence and sea-level rise.¹³

² J. Peter Byrne, *The Cathedral Engulfed: Sea-Level Rise, Property Rights, and Time*, 73 LA. L. R. 69, 69 (2012), <http://scholarship.law.georgetown.edu/cgi/viewcontent.cgi?article=2136&context=facpub>.

³ ERIKA SPANGER-SIEGFRIED ET AL., UNION OF CONCERNED SCIENTISTS, ENCREACHING TIDES: HOW SEA LEVEL RISE AND TIDAL FLOODING THREATEN U.S. EAST AND GULF COAST COMMUNITIES OVER THE NEXT 30 YEARS 10 (2014), <https://www.ucsusa.org/sites/default/files/attach/2014/10/encroaching-tides-full-report.pdf>.

⁴ *Id.* at 1.

⁵ *Id.* at 10.

⁶ *Is sea level rising?*, NAT’L OCEAN & ATMOSPHERIC ADMIN. (last visited Oct. 10, 2017), <https://oceanservice.noaa.gov/facts/sealevel.html>.

⁷ *Id.*

⁸ *Id.*

⁹ JACK EGGLESTON & JASON POPE, LAND SUBSIDENCE AND RELATIVE SEA-LEVEL RISE IN THE SOUTHERN CHESAPEAKE BAY REGION 1 (2013), <https://pubs.usgs.gov/circ/1392/pdf/circ1392.pdf>.

¹⁰ *Land Subsidence*, U.S. GEOLOGICAL SUR., <https://water.usgs.gov/ogw/subsidence.html> (last visited Nov. 16, 2017).

¹¹ SUSTAINABLE WATER INITIATIVE FOR TOMORROW, LAND SUBSIDENCE: EASTERN VIRGINIA’S INCREASING VULNERABILITY TO SEA LEVEL RISE 1 (2017), <http://swiftva.com/wp-content/uploads/2017/03/LandSubsidence.pdf> (last visited Nov. 16, 2017).

¹² VA. INST. OF MARINE SCIENCE, RECURRENT FLOODING STUDY FOR TIDEWATER VIRGINIA, vi (2013), http://ccrm.vims.edu/recurrent_flooding/Recurrent_Flooding_Study_web.pdf [hereinafter RECURRENT FLOODING].

¹³ EGGLESTON & POPE, *supra* note 9, at 3.

The City of Norfolk has seen an eight-inch increase in sea level rise since 1970,¹⁴ and models estimate that the city will experience close to fifty flooding events per year by 2030 and about 180 events per year by 2045.¹⁵ Because Norfolk is home to the largest Naval base in the world, any such increase in sea levels or flooding events could have devastating impacts. Norfolk is not the only locality in Hampton Roads that could be impacted by sea level rise, however. If global sea levels were to rise at the predicted 6.6 feet, more than a third of the land in Norfolk, Portsmouth, and Virginia Beach would be under water a few dozen times by 2100.¹⁶ Ninety-eight percent of Poquoson would be “swamped” every other week by that time.¹⁷ Finally, while Newport News is not as low-lying and will not suffer as much, the city could still “hav[e] about \$375,000 in annual flood damage with a two-and-a-half foot sea-level rise.”¹⁸

Many scientists agree that “by 2100 global sea level will be between 8 inches and 6.6 feet above the level in 1992.”¹⁹ The projected sea level rise could have a severe impact on coastal infrastructure and may be difficult, if not impossible, to mitigate after a certain point.²⁰ However, sea level rise might be manageable if certain adaptation and mitigation measures are put into place. The Virginia Institute of Marine Science (VIMS) has outlined three potential adaptation strategies: management/retreat; accommodation; and protection.²¹ “Management/Retreat actions include zoning policies aimed at preventing development in high risk areas, policies aimed at discouraging rebuilding in high risk areas, and the reclamation or abandonment of highly flood prone lands.”²² Examples of these types of projects include rolling easements, redevelopment restrictions, and government buyout of at-risk properties.²³ These actions may be preferred for their environmentally friendly nature—management and retreat encourage long-term conservation of natural coastal resources that are typically at a high risk for development.²⁴ Next is the most common adaptation strategy in Virginia—Accommodation. “[Accommodation actions] include raising buildings and roads above flood levels, established evacuation routes and warning systems, and the creation or enhancement of stormwater system capacity.”²⁵ While accommodation is very common in Virginia, these strategies can require extensive temporal and spatial planning—raising buildings and roads takes a long time to implement and evacuation routes span a lot of space.²⁶

¹⁴ SPANGER-SIEGFRIED ET AL., *supra* note 3, at 10.

¹⁵ *Id.* at 17.

¹⁶ Dave Mayfield, *Some new reports help picture the threat of sea level rise in Hampton Roads*, VIRGINIAN-PILOT, July 14, 2017, https://pilotonline.com/news/local/environment/some-new-reports-help-picture-the-threat-of-sea-level/article_9b5edd32-a886-53d0-9159-2cc173a748e0.html (citing *When Rising Seas Hit Home: An Analysis by the Union of Concerned Scientists*, UNION OF CONCERNED SCIENTISTS, UNION OF CONCERNED SCIENTISTS, <https://ucsusa.maps.arcgis.com/apps/MapSeries/index.html?appid=64b2cbd03a3d4b87aaddaf65f6b33332>).

¹⁷ *Id.*

¹⁸ Reema Amin, *Newport News is looking at flooding, sees sea level rise as regional issue*, DAILY PRESS, Dec. 27, 2016, <http://www.dailypress.com/news/science/dp-nws-evg-sea-level-newport-news-20161223-story.html> (citing an interview with Virginia Institute of Marine Science assistant research scientist Derek Loftis).

¹⁹ EGGLESTON & POPE, *supra* note 9, at 12.

²⁰ See SPANGER-SIEGFRIED ET AL., *supra* note 3, at 13 (“Officials in Norfolk, VA, have identified at least \$ 1 billion in needed infrastructural improvements to protect the city from flooding.”); *Id.*

²¹ RECURRENT FLOODING, *supra* note 12, at 14–41.

²² *Id.* at 14.

²³ *Id.* at 14–15.

²⁴ *Id.* at 16.

²⁵ *Id.* at 14.

²⁶ *Id.* at 20.

However, some adaptation measures are both expensive to develop and to maintain.²⁷ Finally, “[p]rotection measures typically involve some form of engineering to protect existing land uses.”²⁸ Examples include hard protection measures, such as levees and breakwaters, as well as soft structures, such as the creation of dunes and wetlands.²⁹ Each of these adaptation strategies would help to alleviate the dangers Hampton Roads could see from sea level rise. However, some questions arise: Who will build such structures—Localities? The state government of Virginia? The federal government? And who will maintain these structures once they are built?

II. PUBLIC TRUST DOCTRINE

According to the Public Trust Doctrine, “lands were held by the state, as they were by the king, in trust for the public uses of navigation and fishery, and the erection thereon of wharves, piers, light-houses, beacons, and other facilities of navigation and commerce.”³⁰ Put more simply, states have a responsibility to preserve and protect public lands for the use of their citizens.³¹ This doctrine is rooted in both state and federal common law, as well as state and federal constitutions.³² While all states are required under this doctrine to protect public lands, they have some leeway in defining what constitutes state-owned land versus privately-owned land.

States hold title to the lands beneath navigable waters, meaning those lands are subject to the public trust doctrine.³³ These lands must be held “in trust for the people of the State, that they may enjoy the navigation of the waters, carry on commerce over them, and have liberty of fishing therein, freed from the obstruction of private parties.”³⁴ In Virginia, the rights of riparian owners adjacent to tidal waters extend to the mean low water line.³⁵ The mean low water line is “[t]he average of all the low water heights.”³⁶ Therefore, the state owns up to this intersection of the land and the water at the mean low water line.³⁷

²⁷ RECURRENT FLOODING, *supra* note 12, at 20–26.

²⁸ *Id.* at 14.

²⁹ *Id.* at 16.

³⁰ *Ill. Cent. R.R. Co. v. Illinois*, 146 U.S. 387, 457 (1892).

³¹ *See* VA. CONST. ART. XI, § 1 (“To the end that the people have clean air, pure water, and the use and enjoyment for recreation of adequate public lands, waters, and other natural resources, it shall be the policy of the Commonwealth to conserve, develop, and utilize its natural resources, its public lands, and its historical sites and buildings. Further, it shall be the Commonwealth’s policy to protect its atmosphere, lands, and waters from pollution, impairment, or destruction, for the benefit, enjoyment, and general welfare of the people of the Commonwealth.”)

³² Byrne, *supra* note 2, at 79.

³³ *See* VA. CODE ANN. § 28.2-1200 (2014) (stating that bottomlands are owned by the Commonwealth, but may be used by the people of the state for the purposes of “fishing, fowling, hunting, and taking and catching oysters and other shellfish.”)

³⁴ Robin Kundis Craig, *Public Trust and Public Necessity Defenses to Takings Liability for Sea Level Rise Responses on the Gulf Coast*, 26 J. LAND USE & ENVTL. L. 395, 403 (2011) (quoting *Ill. Cent. R.R. Co.*, 146 U.S. at 452), <http://www.jstor.org.proxy.wm.edu/stable/pdf/42842970.pdf>.

³⁵ VA. CODE ANN. § 28.2-1208 (2009).

³⁶ U.S. Dep’t of Comm., *Tide and Current Glossary*, 15 (2000), <https://tidesandcurrents.noaa.gov/publications/glossary2.pdf>.

³⁷ *Id.*

A. Local Regulation of State-Owned Lands

As noted above, submerged bottomlands are owned by the Commonwealth waterward from the mean low water mark.³⁸ In Virginia, local governments are heavily restricted by what is known as the Dillon Rule. “Dillon’s Rule is used in interpreting state law when there is a question of whether or not a local government has a certain power.”³⁹ According to this Rule, local governments have only three types of power: (1) “those granted in express words,” (2) “those necessarily or fairly implied in or incident to the powers expressly granted, and” (3) “those essential to the declared objects and purposes of the corporation, not simply convenient, but indispensable.”⁴⁰ Further, “if there is any reasonable doubt whether a power has been conferred on a local government, then the power has NOT been conferred.”⁴¹ This Rule tends to restrict what types of projects and facilities local governments might erect if the projects are in state waters or on state-owned bottomlands.

An Opinion of the Virginia Attorney General has previously noted, “The [Virginia] General Assembly has not granted specific authority to localities to extend their land use regulations to projects located on state-owned bottomlands or the waters above them.”⁴² Further, Virginia Code § 28.2-1203(A) establishes that the Virginia Marine Resources Commission (VMRC) holds the power to authorize use of state-owned bottomlands through a permitting process, and it is unlawful for any person to conduct activities on state-owned bottomland without such a permit unless an activity falls within one of the exceptions enumerated in the law.⁴³ Unless a locality has a permit, lease or easement issued by the VMRC, it cannot encroach upon the Commonwealth-owned bottomlands beyond the mean low water mark, even if they may be within the territorial jurisdiction of a locality.⁴⁴

³⁸ Additionally, the boundaries of localities on the Chesapeake Bay or the Atlantic Ocean include any “wharves, piers, docks and other structures, except bridges and tunnels that have been or may hereafter be erected along the waterfront of such locality.” VA. CODE ANN. § 15.2-3105 (1997).

³⁹ “Dillon’s Rule [says] that municipal corporations have only those powers expressly granted, those necessarily or fairly implied therefrom, and those that are essential and indispensable.” *Bd. of Supervisors v. Horne*, 216 Va. 113, 117 (1975) (citing *City of Richmond v. Cty. Bd.*, 199 Va. 679, 684-85 (1985)). *See also The Dillon Rule*, CITY OF WILLIAMSBURG, <http://www.williamsburgva.gov/government/departments-a-h/city-manager-s-office/newsroom/the-dillon-rule> (last visited Nov. 2, 2017).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² Va. Att’y Gen. Op. (Dec. 3, 2010) <https://www.oag.state.va.us/files/Opinions/2010/10-091-Paylor.pdf>.

⁴³ VA. CODE ANN. § 28.2-1203(A) (2007) (“It shall be unlawful for any person to build, dump, trespass or encroach upon or over, or take or use any materials from the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth, unless such act is performed pursuant to a permit issued by the Commonwealth . . .”).

⁴⁴ Va. Att’y Gen. Op., *supra* note 42. *But see*, *Jennings v. Board of Supervisors of Northumberland Co.*, 281 Va. 511 (2011), finding that the locality and VMRC had concurrent jurisdiction for the proposed marina construction beyond mean low water because VA. CODE ANN. § 15.2-2280 authorizes localities to zone territory under their jurisdiction, and VA. CODE ANN. § 15.2-3105 includes within localities’ boundaries “all wharves, piers, docks and other structures, except bridges and tunnels” erected along the waterfront.

III. TAKING OF PROPERTY

Under the Fifth and Fourteenth Amendments to the U.S. Constitution, the federal government is entitled to take private property so long as the property owner is compensated.⁴⁵ These Amendments impose two conditions on the government before it can take a private landowner's property. First, the taking must be "for public use,"⁴⁶ and second, the landowner must receive fair compensation.⁴⁷ Takings may be physical or regulatory.⁴⁸ A physical taking occurs when the government physically occupies privately owned land such that the landowners' right to control their property has been destroyed.⁴⁹ A substantial amount of litigation surrounds the second type of taking—when the government so heavily regulates a landowner that the property is rendered valueless economically. In order to address this takings gray area, the Supreme Court in *Penn. Cent. Transp. Co. v. New York City* laid out factors to consider in deciding whether or not the diminution in the value of the property has reached a certain magnitude such that it has become a taking.⁵⁰ To determine whether there has been an implied, or regulatory, taking, a court should examine: (1) the character of the invasion, (2) the economic impact of the regulation as applied to the particular property, and (3) the property owner's distinct investment-backed expectations with respect to that property.⁵¹

While the power to take property was initially limited to the federal government, it is now also a power that state governments can exercise.⁵² Specifically, in Virginia, the takings power is found in both the Virginia Constitution as well as the Code of Virginia.⁵³ The Virginia Code further enumerates the condemnation authority for local governments in § 15.2-1901.⁵⁴ Further, the U.S. Supreme Court upheld a city's authority to take private property to sell for private development in *Kelo v. City of New London*.⁵⁵ In that case, a city in Connecticut seized private property and sold it to private developers, justifying the action by saying it would create jobs and tax revenue.⁵⁶ The

⁴⁵ U.S. CONST. AMEND. V ("nor shall private property be taking for public use, without just compensation."). U.S. CONST. AMEND. XIV, § 1 ("nor shall any state deprive any person of life, liberty, or property, without due process of law.").

⁴⁶ See *Richmond v. Carneal*, 129 Va. 388 (Va. 1921) (holding that a public use requires a fixed and definite use and implies enjoyment by the public at large; public use and public benefit are not synonymous terms).

⁴⁷ There is no formula for what constitutes "just compensation," so it is the subject of frequent litigation.

⁴⁸ *A Primer in Eminent Domain and Takings Law under the U.S. Constitution*, AMERICAN BAR ASSOCIATION, https://www.americanbar.org/groups/young_lawyers/publications/the_101_201_practice_series/primer_important_takings_law_under_us_constitution.html (last visited Jan. 20, 2018).

⁴⁹ See *Loretto v. Teleprompter Manhattan Catv Corp.*, 458 U.S. 419 (1982).

⁵⁰ *Penn. Cent. Transp. Co. v. New York City*, 483 U.S. 104 (1978).

⁵¹ *Id.* at 124.

⁵² See Bill Funk, *CPR Perspective: The Takings Clause of the Fifth Amendment*, CTR. FOR PROGRESSIVE REFORM, <http://www.progressivereform.org/perspTakings.cfm> (last visited Jan. 3, 2018).

⁵³ VA. CONST. ART. I, § 11 ("That the General Assembly shall pass no law whereby private property, the right to which is fundamental, shall be damaged or taken except for public use. No private property shall be damaged or taken for public use without just compensation to the owner thereof. No more private property may be taken than necessary to achieve the stated public use. Just compensation shall be no less than the value of the property taken, lost profits and lost access, and damages to the residue caused by the taking."); VA. CODE ANN. § 1-219.1 (2012).

⁵⁴ VA. CODE ANN. § 15.2-1901 (2013). Localities are authorized to acquire private property for public use through the power of eminent domain.

⁵⁵ *Kelo v. City of New London*, 545 U.S. 469 (2005).

⁵⁶ *Id.* at 474.

Court held that this action did not violate the Fifth Amendment because, while the property was not going directly to the public, the taking still qualified as a public use.⁵⁷

Finally, protections against takings are not reserved solely for private landowners. Rather, the federal government is also required to fairly compensate state agencies, should state land be taken.⁵⁸ In *Arkansas Game & Fish Commission v. United States*, the Supreme Court held that “government-induced flooding temporary in duration gains no automatic exemption from Takings Clause inspection.”⁵⁹ In that case, the U.S. Army Corps of Engineers, which owned and operated a dam in Arkansas, deviated from their Water Control Manual and extended flooding into a Management Area owned by Arkansas’s Game and Fish Commission.⁶⁰ These temporary deviations caused sustained flooding in the Management Area and substantially changed the nature of the environment.⁶¹ The Court held that “government-induced flooding can constitute a taking of property, and [that] a taking need not be permanent to be compensable.”⁶² This case indicates that state and local governments can bring claims for improper takings should a government entity exerting a power that impacts their property fail to provide just compensation. Governmental entities tend to use their eminent domain authority to take private property to build projects for public use. As mentioned above, should the entity use this power, the project must be for public use and the landowner must be given just compensation. Otherwise, the landowner would likely be successful with a takings claim.

IV. PROJECTS & IMPLICATIONS

As the Hampton Roads area of Virginia continues to see rising sea levels and recurrent flooding, the mean low water line will begin to shift and encroach on property currently held by private landowners. Further, localities are affected by any state- or federally-owned projects in the waters and on the bottomlands past the mean low water line. It is important when moving forward with projects to look at the individual deeds, easements, and other property documents. For instance, the court in *Marble Techs., Inc. v. Mallon*⁶³ considered whether an easement in Hampton created by a 1936 deed was stationary or moved with the changing mean high water line. In that case, an easement between private parties originally written in 1936 that ran parallel to the Chesapeake Bay, explicitly said, “Along Present Mean *High Water*.”⁶⁴ In 2015, at the time of the case, the easement was underwater.⁶⁵ The Virginia Supreme Court looked at the plain language of the easement, rather than the intent of the deed drafters, in holding that the easement never moved from the mean high water line as it existed in 1936,⁶⁶ even though that meant the easement was now underwater and those property rights were gone. This case is important because it shows that there is likely no bright-line rule regarding property rights and rising sea levels; localities must

⁵⁷ *Id.* at 489–90.

⁵⁸ *See* *Ark. Game & Fish Comm’n v. United States*, 568 U.S. 23 (2012).

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *Id.*

⁶² *Id.* at 34.

⁶³ *Marble Techs., Inc. v. Mallon*, 290 Va. 27 (Va. 2015).

⁶⁴ *Id.* at 30 (emphasis added). Recall that, in Virginia, the rights of property owners extend to the mean *low* water line. VA. CODE ANN. § 28.2-1208.

⁶⁵ *Marble Techs., Inc.*, 290 Va. at 30.

⁶⁶ *Id.* at 34.

look to individual parcels of land and the language in specific deeds to determine the proper course forward.

Below, this paper will explore various government projects that may have an impact on the lands owned by other governmental entities or private landowners.

A. Breakwaters

A breakwater is an erosion control project designed to block waves from eroding the land, essentially “a large pile of rocks built parallel to the shore.”⁶⁷ When a breakwater is completely submerged under the water, it can resemble a reef.⁶⁸ One downside to the use of a breakwater as a means of diminishing the harms to shorelines from waves and tides is that they can lead to a drastic and dramatic change of the contour of the beach.⁶⁹ Further, a breakwater may cause a different beach, one not protected by the breakwater, to erode more so than it might have naturally.⁷⁰ This downstream shoreline erosion might lead to legal claims; if a government constructs a breakwater that causes the deterioration of a privately owned beach, that landowner might seek remedy through a takings claim. While there are no cases as of yet that specifically address the effects of breakwaters on waterfront property, there are some similar cases to which one could look to extrapolate the likely outcome of such breakwater cases. Some Virginia courts have held that government actions that cause private lands to erode constituted a compensable taking,⁷¹ which bodes well for landowners suffering damages caused by a breakwater – if they can prove the elements of a takings claim, as laid out above.

B. Living Shorelines

In contrast to the hardening of a shoreline through a sea wall,⁷² living shorelines provide a soft armoring option to respond to the issues of erosion and sea level rise. Living shorelines “use[] plants, sand, and limited use of rock to provide shoreline protection and maintain valuable habitat.”⁷³ Some benefits of using a living shoreline include: “stabilization of the shoreline”; “protection of surrounding riparian and intertidal environment”; “improvement of water quality via filtration of upland run-off”; and “creation of habitat for aquatic and terrestrial species.”⁷⁴ While a living shoreline serves as a means of erosion control for the property on which it is constructed, these projects may contribute to erosion on adjacent properties if not correctly

⁶⁷ *Shoreline Structures*, BEACHAPEDIA, http://www.beachapedia.org/Shoreline_Structures (last visited Nov. 17, 2017).

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *See Ark. Game & Fish Comm’n*, 568 U.S. 23 (holding that recurrent flooding caused by the Army Corps of Engineers’ dam was not exempt from suit brought under the Takings Clause); *Jennings v. Commonwealth Transp. Comm’r of Va.*, 83 Va. Cir. 184 (2011) (holding that landowners were entitled to damages when a bridge expansion caused portions of their property to erode); *Waltman v. King William County Sch. Bd.*, 81 Va. Cir. 381 (2010) (finding that flooding on private property from a neighboring retention basin amounted to a taking and landowners could be compensated for the substantial damage to their property).

⁷² *See infra* Section IV.H.

⁷³ *Living Shorelines*, NAT’L OCEANIC & ATMOSPHERIC ADMIN., <http://www.habitat.noaa.gov/restoration/techniques/livingshorelines.html> (last visited Oct. 26, 2017).

⁷⁴ *Id.*

designed or constructed.⁷⁵ Therefore, if a governmental entity chooses to construct a living shoreline on its own property, consideration should be given to potential adverse effects on adjacent private property. Additionally, when a governmental entity chooses to use its eminent domain authority to construct a living shoreline on private property, the government must ensure the project is for a public use and that the private landowner is given just compensation.

C. Elevated Boardwalks

Elevated boardwalks are often used to allow for passage across wetlands, which otherwise would be difficult to walk across.⁷⁶ “Across the Nation, hundreds of federal and state government natural resource agencies, land trusts, and local governments have constructed boardwalks in wetlands and trails adjacent to and paralleling wetland boundaries in adjacent uplands.”⁷⁷ Property rights issues may arise with elevated boardwalks when they are connected to state-owned bottomlands, or when the government takes private property to construct an elevated boardwalk. Further, because boardwalks can be invasive on potentially “dense vegetation, standing water and deep organic soils,”⁷⁸ environmental groups might find issue with their erection. For instance, in *Assateague Coastal Trust*,⁷⁹ the Assateague Coastal Trust, a non-profit environmental advocacy organization, brought suit against a Maryland landowner who wanted to construct an elevated boardwalk across wetlands on his private property.⁸⁰ The group challenged his construction plans, which called for a 180-foot boardwalk, citing a Maryland statute that allows for only 100-feet of boardwalk across a wetland.⁸¹ Even though the landowner’s plan exceeded the statutory limit, the Board of Zoning Appeals granted his application.⁸² The Board considered that the construction plan “represented the least possible intrusion to allow [the landowner] to enjoy access to the water” in deciding to grant his application. In reviewing the Assateague Coastal Trust’s appeal, the court upheld the grant of the application.⁸³ The court considered that under Maryland law, a “riparian proprietor, whose land is bound by a navigable river, . . . has the right of access to the navigable part of the river from the front of his lot, and the right to make a landing, wharf, or pier for his own use[.]”⁸⁴ The court in this case considered private landowners’ riparian rights and placed them above even the state statute, demonstrating that courts might be willing to protect landowners’ property rights. Should state or federal governmental entities try to condemn either private- or locality-owned property to build elevated boardwalks, they must consider the property rights of the landowners, even if those rights might extend further than typically enumerated by statute.

⁷⁵ VA. INST. OF MARINE SCIENCE, LIVING SHORELINE DESIGN GUIDELINES FOR SHORE PROTECTION IN VIRGINIA’S ESTUARINE ENVIRONMENTS, 36 (2017), <http://deq.state.va.us/Portals/0/DEQ/CoastalZoneManagement/FundsInitiativesProjects/task92-02-16b.pdf?ver=2017-12-21-154205-260>.

⁷⁶ Jon Kusler, COMMON QUESTIONS: CONSTRUCTING WETLAND BOARDWALKS AND TRAILS 1, <https://www.railstotrails.org/resourcehandler.ashx?id=4231> (last visited Nov. 29, 2017).

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ *Assateague Coastal Tr., Inc. v. Schwalbach*, 223 Md. App. 631 (Md. 2015).

⁸⁰ *Id.* at 634.

⁸¹ *Id.* at 635 (quoting MD. CODE ANN., NAT. RES. § 3-125(b)(1) (LexisNexis 2017)).

⁸² *Assateague Coastal Tr.*, 223 Md. App. at 639.

⁸³ *Id.* at 658.

⁸⁴ *Id.* at 646–47 (quoting *White v. Pines Cmty. Improvement Ass’n, Inc.*, 403 Md. 13, 16–17 (Md. 2008)).

D. Recreational Amenities

Piers and other types of recreational amenities can bring about various legal claims, especially those that might implicate a takings suit. A pier is “[a] platform on pillars projecting from the shore into the sea, typically incorporating entertainment arcades and places to eat.”⁸⁵ Should a state or federal government seek to build a pier in the water, they would need to find some place to connect it to the land, whether it be locality- or privately-owned, so that the public can access the pier. However, a landowner could then raise a takings claim if the government entity tried to condemn the access property. In such a case (as with all takings suits), the government would need to prove that the pier would be used by the public, and would need to determine just compensation for the landowner.⁸⁶

Lawsuits might also be brought when a pier crosses property lines, as was addressed in *Langley v. Meredith*.⁸⁷ In that case, a waterfront landowner in Virginia Beach brought suit against his neighbor, claiming that the neighbor’s pier extended over the property line dividing them and encroached on his riparian rights.⁸⁸ Because Virginia law expressly prohibits the building of any private pier or landing that interferes with navigation or the private rights of another,⁸⁹ the Supreme Court of Virginia upheld the trial court’s judgment that the neighbor remove the parts of the pier that extended over the property line. However, this Code section deals with disputes between two private property owners, rather than between a government entity and a private landowner. Were this a dispute between a government entity and a private landowner, the government would not be prohibited from diminishing the landowner’s private rights.⁹⁰ As with any takings claim, however, the government must ensure the project is for a public use and that the private landowner is given just compensation if the property value is diminished.

E. Beach Nourishment

Beach nourishment is a process by which sand is brought in from either an onshore or offshore source to replace the sand on a beach suffering from erosion.⁹¹ Nourishment can be used as a “mitigation strategy for adapting to climate change impacts, especially coastal erosion exacerbated by sea level rise and increased storm surge activity and intensity.”⁹² Beach nourishment has been a topic of contention in coastal communities, and there have been important court cases on that topic both in Virginia state courts, as well as the Supreme Court of the United States. The cases below show that courts seem to be inclined to allow government beach renourishment projects even if that means diminishing private landowners’ access to the water.

⁸⁵ *Pier*, OXFORD DICTIONARY, <https://en.oxforddictionaries.com/definition/pier> (last visited Oct. 29, 2017).

⁸⁶ *See supra* Part III.

⁸⁷ *Langley v. Meredith*, 237 Va. 55 (Va. 1989).

⁸⁸ *Id.* at 57.

⁸⁹ VA. CODE ANN. § 62.1-164 (1972).

⁹⁰ *See Borough of Harvey Cedars v. Karan*, 214 N.J. 384 (N. J. 2013) (holding that the government’s interest in protecting the shorelines trumped the private landowners’ property rights so long as the landowners were fairly compensated for their loss).

⁹¹ *Beach Nourishment Issues*, SIERRA CLUB, <https://content.sierraclub.org/grassrootsnetwork/teams/beach-nourishment-issues> (last visited Nov. 20, 2017).

⁹² *Id.*

In *Stop the Beach Renourishment*,⁹³ the Supreme Court had to decide whether or not beachfront landowners had constitutionally protected rights to sand that was used to restore a beach. In 2003, the Florida Department of Environmental Protection applied for a permit that would allow the agency to dredge sand from a shoal to rebuild a beach.⁹⁴ Local homeowners, however, argued that this permit would have resulted in an unconstitutional taking of their lands.⁹⁵ The United States Supreme Court held that the issuance of such a permit would not constitute a taking in violation of the Fifth and Fourteenth Amendments, concluding that there could be no taking unless the property owners had rights to *future* exposed land.⁹⁶ The court came to this conclusion by reasoning that (1) the state owns the submerged lands adjacent to beachfront property and thus has the right to fill that land; and (2) if land that has been previously submerged is exposed, it belongs to the state even if that means the beachfront property owners no longer have contact with the water.⁹⁷ Thus, with this holding, the Court decided that beach renourishment does not trigger an unconstitutional taking even if the result is that waterfront property owners no longer have *waterfront* property.

The issue of beach renourishment has also been taken up by the Supreme Court of Virginia. In *3232 Page Ave. Condo.*,⁹⁸ the court looked at whether or not the City of Virginia Beach could replace the sand along Cape Henry Beach, which included the beach in front of the 3232 Page Avenue Condominium Unit.⁹⁹ Of particular importance in this case was the question of the ownership of easements that led to the beach.¹⁰⁰ The court concluded that the City could condemn the easements and the beach in order to perform renourishment because there had been a long-term public use of the Cape Henry Beach, and because the City had been maintaining and patrolling the property for over thirty years.¹⁰¹ Thus, the City had ownership over the easements in question.¹⁰²

F. Dune Construction

Dunes are naturally occurring on sandy coastlines and serve as a barrier between the sea and land by protecting the land from wind, erosion, and sea level rise.¹⁰³ Naturally-occurring dunes have been depleted with the rise of seaside development.¹⁰⁴ As a response, state, local, and/or federal governments might seek to rebuild dunes to protect the shorelines. Legal issues may arise, however, as to whether or not the addition of dunes impedes on waterfront landowners' property rights.

⁹³ *Stop the Beach Renourishment, Inc. v. Fla. Dep't of Env'tl. Prot.*, 560 U.S. 702 (2010).

⁹⁴ *Id.* at 711.

⁹⁵ *Id.*

⁹⁶ *Id.* at 733.

⁹⁷ *Id.* at 730.

⁹⁸ *Page Ave. Condo. Unit Owners Ass'n v. City of Va. Beach*, 284 Va. 639 (Va. 2012).

⁹⁹ *Id.* at 642–43.

¹⁰⁰ *Id.* at 644–45.

¹⁰¹ *Id.* at 649.

¹⁰² *Id.* at 650.

¹⁰³ Mathew M. Linham & Robert J. Nicholls, *Dune construction and stabilisation*, CLIMATE TECH. CTR. & NETWORK, <https://www.ctc-n.org/technology-library/coastal-zones/protection-hard-engineering/dune-construction-and-stabilisation>.

¹⁰⁴ *Id.*

While Virginia courts have yet to address the issue of takings in relation to dune construction, it was the focus of *Borough of Harvey Cedars*,¹⁰⁵ which came before the New Jersey Supreme Court. In that case, the Borough of Harvey Cedars took a portion of the Karans' beachfront property in order to build a dune that would protect homes in the area from "the destructive fury of the ocean."¹⁰⁶ Because the Borough used its power of eminent domain, the Karans were entitled to just compensation, but the question in this case was "how to calculate 'just compensation' when the taking of a portion of the property for a public project may lessen in part and enhance in part the value of the remaining property."¹⁰⁷ In this case, the court was concerned with an increase in the value of the Karans' home that arose from the construction of the dune, as the Karans' would be protected from ocean surges because of the dune.¹⁰⁸ The court concluded that just compensation should be based on the fair market value of the Karans' property, as well as benefits that can be reasonably calculated at the time of the taking.¹⁰⁹ Although this is not a Virginia case, it reiterates the importance of protecting property rights of private landowners in that it requires compensation for government projects regardless of where a project is built if it diminishes the economic value of the private landowner's property.

G. Dams

Dams are often used as a means to control flooding in order to protect economic, environmental, and social interests.¹¹⁰ Some of these social interests could include recreation, water supply, hydroelectric power, waste management, and wildlife habitat.¹¹¹ As mentioned earlier, dams can change the flow of water and can lead to legal claims.¹¹² In *Arkansas Game & Fish Commission v. United States*, the Supreme Court held "that recurrent floodings, even if of finite duration, are not categorically exempt from Takings Clause liability."¹¹³

Dams as flood control structures can also bring about tort claims, as was addressed in *Bowling v. Oxford*.¹¹⁴ In that case, two plaintiffs brought a negligence claim against the City of Oxford, North Carolina, arising from the breaking of a dam.¹¹⁵ When the dam broke, it flooded the plaintiffs' farm, causing damage to both crops and buildings.¹¹⁶ Prior to the break, the city knew of a leak in the dam but took no remedial action.¹¹⁷ When plaintiffs filed claims with the city, city officials denied any tort liability, claiming they were immune because they constructed and maintained the dam, the statute of limitations had passed, and the city did not know of any defect

¹⁰⁵ *Borough of Harvey Cedars v. Karan*, 214 N.J. 384 (N.J. 2013).

¹⁰⁶ *Id.* at 388.

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* at 414.

¹⁰⁹ *Id.* at 412.

¹¹⁰ FEDERAL EMERGENCY MANAGEMENT ASSOCIATION, <https://www.fema.gov/benefits-dams> (last visited Jan. 20, 2018).

¹¹¹ *Id.*

¹¹² *See generally Ark. Game & Fish Comm'n*, 568 U.S. 23.

¹¹³ *Id.* at 27.

¹¹⁴ *Bowling v. Oxford*, 267 N.C. 552 (N.C. 1966).

¹¹⁵ *Id.* at 554.

¹¹⁶ *Id.*

¹¹⁷ *Id.*

in the dam.¹¹⁸ Before reaching its conclusion, the court stated, “Though the water from the broken dam flooded over and damaged the properties of the plaintiffs, the city cannot be held liable for the resulting damage unless in the construction or maintenance of the dam the city was negligent.”¹¹⁹ Bearing this in mind, the court found that there was ample evidence, including the city’s knowledge of the leak without any remedial action, to allow a jury to determine the city acted negligently in its maintenance of the dam, and that plaintiffs could bring a suit against the city.¹²⁰ While governments might seek to build a dam in order to protect the lands within its borders, it is important to understand that certain legal claims might be brought should any damage to private property arise. These claims could range from nuisance actions to unconstitutional takings. Governments may need to balance the protection such projects may bring with the costs of any claims should the projects impede on private property rights.

H. Sea Walls

Seawalls are a common response to shoreline erosion along coastlines. “Seawalls are structures built of concrete, wood, steel or boulders that run parallel to the beach at the land/water interface.”¹²¹ By preventing the movement of sand caused by waves and holding back the ocean, seawalls help to harden shorelines and protect them from erosion.¹²² One problem with seawalls, however, is that they can cause “increased erosion in adjacent areas of the beach that do not have seawalls.”¹²³ This may have legal implications for those whose properties are disadvantaged by the sea wall. In *Bailey v. Marine Resources Commission*,¹²⁴ the Circuit Court of the City of Virginia Beach addressed some of the legal issues arising from the construction of seawalls. In that case, the plaintiff was a beachfront property owner who applied for a permit to build a bulkhead (i.e., seawall) on his property.¹²⁵ The Virginia Marine Resources Commission denied this request because the construction would impair the natural functions of a dune.¹²⁶ The circuit court upheld the VMRC decision to deny the permit. Based on the drawing the plaintiff submitted with his permit application, it was clear that his proposed bulkhead would alter the functions of a coastal sand dune.¹²⁷ Further, the court found that there was no taking of the plaintiff’s property by the VMRC’s denial. “A regulatory measure restricting the permissible uses of lands zoned as wetlands, flood plains or the like, constitutes a valid exercise of police power even though it may have some degree of restrictive effect upon an owner’s use of his land.”¹²⁸ Local governments can protect the property rights of private landowners by ensuring that a sea wall project does not impose on the property rights. While neither the landowners nor the locality would be able to stop a federal or state sea wall construction project, the landowner could potentially bring a variety of

¹¹⁸ *Id.* at 555.

¹¹⁹ *Id.* at 558.

¹²⁰ *Bowling*, 267 N.C. at 559.

¹²¹ *Shoreline Structures*, *supra* note 67.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Bailey v. Va. Marine Res. Comm’n*, 3 Va. Cir. 254 (Va. Cir. Ct. 1984).

¹²⁵ *Id.* at 254.

¹²⁶ *Id.* at 254–55.

¹²⁷ *Id.* (“[T]he proposed bulkhead would actually cause severe erosion and diminish the natural sand replenishment the dunes provide to the beaches . . .”). See *supra* Section IV.F for an explanation of the benefits of a coastal sand dune.

¹²⁸ *Bailey*, 3 Va. Cir. at 257.

legal claims were the project to impact their property. For instance, the landowner could possibly be able to bring a negligence or trespass claim if the government was negligent in its construction of the sea wall,¹²⁹ or a takings claim if the project is not intended for public use or if the landowner was not fairly compensated.¹³⁰

I. Other Potential Projects

There is likely a long list of other potential coastal projects that could bring about legal issues between landowners and the project-implementing entity. One example argued before the Virginia Supreme Court regarded a floating platform next to a restaurant at the Chincoteague Inn.¹³¹ In *VMRC v. Chincoteague Inn*, the court grappled with the question of whether or not the VMRC could require the Chincoteague Inn to get a permit for using the platform, which was tethered and floating over state-owned bottomlands next to the building, as an extension of its restaurant.¹³² While the platform did not touch the bottomlands, the court held that it did *encroach* on state-owned bottomlands in violation of Virginia Code § 28.2-1203(A).¹³³ Further, the court explained the doctrine of *jus publicum* and the constitutional protection of public rights. While activities such as fishing, hunting, and navigation are rights guaranteed to the public, the Inn was not engaging in an activity that is a public right.¹³⁴ In conclusion, the court found that the VMRC had the authority to require a permit for the use of the floating platform tethered at the Chincoteague Inn.¹³⁵

It is also important to analyze levee systems, as used in New Orleans, when looking at channelward projects and the potential impacts on privately-owned lands. While this is not currently an issue in Virginia, it could be in the future, and there have been numerous court cases in other states, such as Louisiana, regarding levees. For instance, in *Avenal*,¹³⁶ oyster fishermen brought a takings claim against the State of Louisiana. The fishermen argued that by building a levee system in the Breton Sound, where the fishermen held oyster leases, the salinity of the water was altered and the fishermen could no longer harvest as many oysters.¹³⁷ The fishermen argued this action was a taking in that it lessened their use and enjoyment of the sound's bottomland by diminishing its value.¹³⁸ The court, however, did not agree, and held that there was no compensable taking,¹³⁹ because this was state-owned bottomland, and thus state-owned oysters, the state could not "take" from itself.¹⁴⁰ Ultimately, there is an endless list of projects that state or federal government entities might seek to build within a locality. While the above cases demonstrate that local governments cannot stop outright the construction of such projects, there are certain measures

¹²⁹ See *supra* Section IV.G (discussing *Bowling*).

¹³⁰ See *supra* Part III (discussing takings claims).

¹³¹ Va. Marine Res. Comm'n v. Chincoteague Inn, 287 Va. 371 (Va. 2014).

¹³² *Id.* at 376–77.

¹³³ *Id.* at 384–85.

¹³⁴ *Id.* at 386–88.

¹³⁵ *Id.* at 390.

¹³⁶ *Avenal v. State*, 886 So. 2d 1085 (La. 2004).

¹³⁷ *Id.* at 1091–92.

¹³⁸ *Id.*

¹³⁹ *Id.* at 1104.

¹⁴⁰ *Id.*

that can be taken to protect the property rights of citizens, such as takings claims or various tort claims.

CONCLUSION

It is important to understand the boundaries of state-owned lands—in Virginia, the state owns up to the mean low water line. The properties landward of the water can be owned privately or by the government, but in either case, the state’s property rights end at the mean low water line. Because the State of Virginia, and the Hampton Roads area in particular, is experiencing significant relative sea level rise, issues have begun to arise with where the mean low water line actually is (as compared to where it has historically been). All levels of government have an interest in protecting the coastline through mitigation and adaptation projects. Many of these projects, however, must straddle both state-owned bottomlands and privately-owned waterfront property, leading to many property rights issues that often end up in court. Further, courts will generally consider a project to be legally justified under government takings powers so long as the government entity justly compensates the owner of the property, and the project is for public use. However, the aforementioned cases do present localities with a few legal issues that may arise with these types of projects, namely takings claims. What the laws and cases discussed above show is that localities have no power to stop federal or state projects above state-owned bottomlands unless such projects cause damage to adjacent properties and trigger takings claims. If localities and private landowners are aware of the legal issues surrounding these types of projects, there can potentially be more cooperative efforts and less time spent in court.