No. 20-1408

IN THE UNITED STATES COURT OF APPEALS
FOR THE FOURTH CIRCUIT

MICHAEL ZITO; CATHERINE ZITO

Plaintiffs – Appellants,

v.

NORTH CAROLINA COASTAL RESOURCES COMMISSION

Defendant – Appellee.

On Appeal from the United States District Court
for the Eastern District of North Carolina
The Honorable James C. Dever, III, U.S. District Court Judge

CORRECTED BRIEF OF AMICUS CURIAE NORTH CAROLINA COASTAL FEDERATION IN SUPPORT OF NORTH CAROLINA COASTAL RESOURCES COMMISSION

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July 31, 2020

UNITED STATES COURT OF APPEALS FOR THE FOURTH CIRCUIT

DISCLOSURE STATEMENT

- In civil, agency, bankruptcy, and mandamus cases, a disclosure statement must be filed by **all** parties, with the following exceptions: (1) the United States is not required to file a disclosure statement; (2) an indigent party is not required to file a disclosure statement; and (3) a state or local government is not required to file a disclosure statement in pro se cases. (All parties to the action in the district court are considered parties to a mandamus case.)
- In criminal and post-conviction cases, a corporate defendant must file a disclosure statement.
- In criminal cases, the United States must file a disclosure statement if there was an organizational victim of the alleged criminal activity. (See question 7.)
- Any corporate amicus curiae must file a disclosure statement.
- Counsel has a continuing duty to update the disclosure statement.

No. 20-1408 Caption: Michael Zito; Catherine Zito v. North Carolina Coastal Resources Com

Pursuant to FRAP 26.1 and Local Rule 26.1,

North Carolina Coastal Federation
(name of party/amicus)

who is amicus, makes the following disclosure:
(appellant/appellee/petitioner/respondent/amicus/intervenor)

1. Is party/amicus a publicly held corporation or other publicly held entity? ☐YES ☑NO

2. Does party/amicus have any parent corporations? ☐YES ☑NO
If yes, identify all parent corporations, including all generations of parent corporations:

3. Is 10% or more of the stock of a party/amicus owned by a publicly held corporation or other publicly held entity? ☐YES ☑NO
If yes, identify all such owners:

4. Is there any other publicly held corporation or other publicly held entity that has a direct financial interest in the outcome of the litigation? ☐YES ☑NO
If yes, identify entity and nature of interest:

5. Is party a trade association? (amici curiae do not complete this question) ☐YES ☐NO
If yes, identify any publicly held member whose stock or equity value could be affected substantially by the outcome of the proceeding or whose claims the trade association is pursuing in a representative capacity, or state that there is no such member:

6. Does this case arise out of a bankruptcy proceeding? ☐YES ☑NO
If yes, the debtor, the trustee, or the appellant (if neither the debtor nor the trustee is a party) must list (1) the members of any creditors' committee, (2) each debtor (if not in the caption), and (3) if a debtor is a corporation, the parent corporation and any publicly held corporation that owns 10% or more of the stock of the debtor.

7. Is this a criminal case in which there was an organizational victim? ☐YES ☑NO
If yes, the United States, absent good cause shown, must list (1) each organizational victim of the criminal activity and (2) if an organizational victim is a corporation, the parent corporation and any publicly held corporation that owns 10% or more of the stock of victim, to the extent that information can be obtained through due diligence.

Signature: /s/ Ramona H. McGee Date: July 31, 2020

Counsel for: North Carolina Coastal Federation

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INTEREST OF AMICUS CURIAE

Amicus curiae the North Carolina Coastal Federation ("Coastal Federation"), a not-for-profit membership organization established in 1982, has spent decades educating the public and advising policy-makers about the natural processes of North Carolina's barrier islands, including the impacts of erosion, sea level rise, and climate change. In furtherance of its mission to protect North Carolina's beaches and ensure public access to the North Carolina coast, the Coastal Federation has, since its founding, advocated for more protective regulations and policies under North Carolina law, including advocacy before the North Carolina Coastal Resources Commission, the North Carolina General Assembly, and federal agencies.

The Coastal Federation has previously joined litigation involving takings claims and public trust rights on the North Carolina coast. For example, the Coastal Federation intervened in a takings lawsuit to successfully defend North Carolina's ban on ocean seawalls. *Shell Island Homeowners Ass'n, Inc. v. Tomlinson*, 517 S.E.2d 406, 415 (N.C. Ct. App. 1999). The Coastal Federation also filed an amicus brief with the North Carolina Supreme Court in a case that affirmed the public's right to access, use, and enjoy North Carolina's dry sand beach. *See Nies v. Town of Emerald Isle*, 780 S.E.2d 187 (N.C. Ct. App. 2015), *aff'd*, 369 N.C. 484 (2016).

The Coastal Federation sought to intervene in the case below, but its motion for intervention was declared moot when the case was dismissed. The Coastal Federation's longstanding interests in preserving and enhancing the quality of North Carolina's valuable and dynamic coastline are threatened by the Zitos' takings claim.

This brief is properly before the Court pursuant to Federal Rule of Appellate Procedure 29(a) because all parties have consented to its filing. No party's counsel authored this brief in whole or in part. Neither any party nor any party's counsel contributed money that was intended to fund preparing or submitting this brief. No person other than amicus, its members, or its counsel contributed money that was intended to fund preparing or submitting this brief.

INTRODUCTION

This is not a simple takings case. Contrary to the Zitos' representations, it is the Atlantic Ocean—not the state of North Carolina—that has limited the Zitos' ability to use their property as they wish. The people of North Carolina have been guaranteed a right to access and enjoy the ocean beach since time immemorial, and the State's setback regulations serve to protect the beaches from incompatible uses that would endanger the public welfare. The Zitos take issue not just with this single, ordinary instance of enforcement of North Carolina's setback regulations, but rather with this entire regulatory scheme. As such, this case goes to the heart of North Carolina's ability to protect the natural resources of its dynamic coastline.

The importance of North Carolina's setback regulations, and the State's ability to enforce them, is growing as North Carolina's coast is increasingly threatened by sea level rise and erosion due to climate change. The State must be able to respond to these existential threats to its coastal resources through appropriate regulatory mechanisms, as it has historically done in addressing the forces of erosion in the face of development pressures. A ruling in favor of the Zitos would effectively dismantle this system and prioritize safeguarding the financial interests of private property owners who knowingly invest in a swiftly eroding shoreline, over the public interest in North Carolina's ability to protect its coastal public trust resources.

ARGUMENT

I. THE ZITOS' LAWSUIT WOULD UNDERMINE PROTECTION OF NORTH CAROLINA'S DYNAMIC COASTLINE.

In framing their grievances as a straightforward Fifth Amendment takings case, the Zitos ask the Court to put on blinders to the true meaning and repercussions of their legal challenge. While the Zitos allege that their property has been "taken" by the North Carolina Coastal Resources Commission ("the Commission"), the only encroachment that has occurred on the Zitos' property, and now hinders their ability to build there, is the natural encroachment of the ocean that has been eroding the shoreline of Nags Head since long before the Zitos purchased their lot on East Seagull Drive. Though their lot is 140 feet deep, the Zitos propose to build a house that is entirely seaward of the 60-foot grandfathered setback limit. *See* Joint Appendix ("JA") at 13 ¶ 31; JA at 33 ¶ 3. In denying the Zitos' request, the Commission merely enforced its regulations that have been in place since 1977, more than 30 years before the Zitos acquired their property.

A finding in favor of the Zitos would have the effect of undermining North Carolina's long-standing setback regulations. If the Commission cannot apply its setback regulations here without committing an uncompensated taking under the Fifth Amendment, then it cannot apply them *anywhere, under any set of facts,* without the same effect. If the Zitos and other beachfront property owners are

able to bring these claims against the Commission, then the Commission could be forced to pay for all buildings that are knowingly constructed on a dynamic shoreline and compromised by shoreline erosion and sea level rise. This economic threat would in turn incentivize the Commission to cease or significantly attenuate enforcement of its setback regulations.

To suggest that this case only seeks to challenge a single permit denial, rather than the validity of the coastal management program itself, is disingenuous at best. The Zitos' counsel, the Pacific Legal Foundation, an organization headquartered in Sacramento, California, has brought multiple takings claims for properties on the same block of the same street in Nags Head, North Carolina. *See, e.g.*, *Sansotta v. Town of Nags Head*, 97 F. Supp. 3d 713 (E.D.N.C. 2014); *Town of Nags Head v. Toloczko*, No. 2:11-CV-1, 2014 WL 4219516 (E.D.N.C. Aug. 18, 2014). The Pacific Legal Foundation also unsuccessfully brought a high-profile takings claim in North Carolina state court challenging public rights of use and access to ocean beaches. *See Nies v. Town of Emerald Isle*, 780 S.E.2d 187 (N.C. Ct. App. 2015).

While the loss of their beach house is unfortunate, the Zitos inherently made a gamble when they purchased their vacation home in 2008 (*see* JA at 11 ¶ 12) on a strip of shoreline that had already experienced, and continues to experience, significant levels of coastal erosion. Some beaches, particularly on the southern

half of North Carolina's coast, experience lower erosion rates and long-term accretion. N.C. Div. Coastal Mgmt., *Coastal Erosion Study* (2016), Attachment 1, at 10. At Sunset Beach, for example, the shoreline has been accreting by approximately 8 feet per year since the mid-1940s. *Id.* The beachfront around Nags Head, by contrast, is eroding by up to 11.4 feet per year depending on the location, according to measurements from the North Carolina Division of Coastal Management. *See* Online GIS Layer, *Erosion Rates (2020) – Oceanfront*, N.C. Div. Coastal Mgmt., https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=f5e463a929ed430095e0a17ff803e156 (last visited July 29, 2020), Attachment 2. The current annual average erosion rate for the Zitos' property in 2020 is 7.0 feet per year. *Id.*; *see also* JA at 13 ¶ 29 (official erosion rate in 2018 is 6 feet per year).

Indeed, the math is quite simple. According to an October 2017 survey, the Zitos' beach house was set back approximately 12 feet landward of the erosion setback line, JA at 28, which is "generally located at or immediately oceanward of the seaward toe of the frontal dune or erosion escarpment." 15A N.C. Admin. Code 07H .0305(a)(5). The Zitos seek to build a house that is approximately 30 feet from front-to-back. JA at 27; 33 ¶ 7. The annual erosion rate on East Seagull Drive, conservatively estimated, is about 6 feet per year. JA at 13 ¶ 29. Under natural processes, this means that within seven years, the shoreline in front of the

Zitos' lot would have eroded an additional 42 feet, putting the Zitos' proposed house entirely seaward of the erosion setback line. By as soon as 2024, the house would effectively be in the ocean.

Under the Zitos' takings theory presented in this case, any time natural processes, such as erosion, diminish the value of private property and the Commission does not grant a variance from the Coastal Area Management Act regulations, the Commission would be committing a taking of private property that requires compensation under the Fifth Amendment. The Takings Clause of the Fifth Amendment "does not, however, create an affirmative obligation on local governments to enhance the value of real property, or require compensation for all land-use regulations that destroyed or adversely affected recognized real property interests." *Quinn v. Bd. of Cty. Commissioners for Queen Anne's Cty., Maryland*, 862 F.3d 433, 438–39 (4th Cir. 2017) (internal citations omitted).

The Zitos' desired outcome would paralyze local and state governments from exercising their authority to protect the public health and welfare, and the public trust, undermining both the Commission's and the Coastal Federation's interests in coastal protection. Moreover, "the Takings Clause only protects property rights as they are established under state law," *Stop the Beach Renourishment, Inc. v. Fla. Dep't of Envtl. Prot.*, 560 U.S. 702, 732 (2010), and North Carolina law is clear that neither the Zitos, nor any other private property

owners, are entitled to be personally enriched by the natural processes occurring beyond the State's control. *See, e.g.*, *Carolina Beach Fishing Pier, Inc. v. Town of Carolina Beach*, 177 S.E.2d 513, 517 (N.C. 1970) (finding that plaintiffs' "premise that the protection of property from erosion is an essential right of property owners" had "no support in the law").

II. THE ZITOS SEEK TO AVOID STATE COURT BECAUSE THE ISSUES THIS CASE RAISES ARE WELL SETTLED UNDER NORTH CAROLINA LAW.

The Zitos are seeking to bring their claim in federal court in order to escape North Carolina's clear legal precedent that would bar their efforts. The real problem is not, as the Zitos argue, that North Carolina's state courts are incapable of providing an adequate remedy for their alleged harm. Rather, the courts would be bound to reject the Zitos' takings claim because well-settled precedent of North Carolina's highest courts has rejected similar takings claims, upholding the State's longstanding regulatory protection of ocean beach resources.

A. The Zitos' Lawsuit Would Prevent the State from Implementing Its Longstanding Coastal Regulatory Scheme.

When the North Carolina General Assembly passed the North Carolina Coastal Area Management Act ("CAMA") in 1974, it was one of the first such laws in the country. *See* Thomas J. Schoenbaum, *The Management of Land and Water Use in the Coastal Zone: A New Law Is Enacted in North Carolina*, 53 N.C.

L. Rev. 275, 275 n.3 (1974), Attachment 3. A primary objective of CAMA is "to insure that the development or preservation of the land and water resources of the coastal area proceeds in a manner consistent with the capability of the land and water for development, use, or preservation *based on ecological considerations*." N.C. Gen. Stat. § 113A-102(b)(2) (emphasis added); *see also* Milton S. Heath, Jr., *Legislative History of the Coastal Area Management Act*, 53 N.C. L. Rev. 345, 349 (1974), Attachment 4.

In order to achieve this objective, CAMA requires a permit for any "development" within the 20 coastal counties covered by the Act's protections, if any part of the proposed development is in an Area of Environmental Concern established by the Commission. N.C. Gen. Stat. §113A-118. Areas of Environmental Concern are the foundation of the Commission's permitting program for coastal development. An Area of Environmental Concern is an area of natural importance: it may be easily destroyed by erosion or flooding; or it may have environmental, social, economic or aesthetic values that make it valuable to the State. *See* N.C. Div. Coastal Mgmt., CAMA Handbook for Dev. in Coastal N.C. (Apr. 2014) [hereinafter "CAMA Handbook"], Attachment 5, at 2. The Commission designates Areas of Environmental Concern to protect them from uncontrolled development, which may cause irreversible damage to property, public health or the environment, thereby diminishing their value to the entire

state. *See id.*; N.C. Gen. Stat. § 113A-113. Areas of Environmental Concern cover almost all coastal waters and less than three percent of the land in the 20 coastal counties. CAMA Handbook, Attachment 5, at 2.

The Ocean Hazard category of Areas of Environmental Concern is intended to protect the narrow barrier islands of the Outer Banks, which are constantly changing under the forces of wind and water. CAMA Handbook, Attachment 5, at 8; 15A N.C. Admin. Code 07H .0302 ("Ocean hazard areas are critical . . . because of both the severity of the hazards and the intensity of interest in the areas."). Barrier island ecosystems, such as North Carolina's Outer Banks, which extend nearly 200 miles long but are only three miles wide at their largest point, are particularly dynamic. These islands, which have been called "restless ribbons of sand," provide a natural buffer between the mainland and the ocean by bearing the brunt of high-energy storm events. *See* Orrin H. Pilkey et al., *The North Carolina Shore and its Barrier Islands: Restless Ribbons of Sand* 4 (1998), Attachment 6. These islands can be thought of like giant sand bars, where wind and waves move sand over from the seaward side of the island and build it up on the other. *See, e.g.*, Sarah Kaplan, *"Basically Just a Sand Bar": Outer Banks Might Narrowly Escape Hurricane Florence, But What About the Next Hurricane?*, Wash. Post (Sept. 13, 2018), https://www.washingtonpost.com/national/basically-just-a-sand-bar-outer-banks-might-narrowly-escape-florence-but-what-about-the-next-

hurricane/2018/09/13/7efabf32-b784-11e8-a2c5-3187f427e253_story.html, Attachment 7.

The Ocean Hazard System is made up of oceanfront lands and the inlets that connect the ocean to the sounds. CAMA Handbook, Attachment 5, at 8. These areas are prone to hazards from storms, flooding, and dune erosion that can quickly change the shape of a shoreline and threaten buildings and structures built there. *Id.*; 15A N.C. Admin. Code 07H .0301–.0302. Coastal storms have the power to move massive amounts of sand offshore, and in a natural process, this sand subsequently returns to the beach. *See* N.C. Div. Coastal Mgmt., *Coastal Erosion Study* (2016), Attachment 1, at 5. When this process is interrupted by coastal development, however, as is the case on Nags Head and much of the Outer Banks, sand that would otherwise be deposited onto higher ground is instead left submerged, exposed to continued erosional forces. *Id*. at 1.

Accordingly, the Commission has long recognized that any oceanfront development that occurs in these areas must be carefully planned and managed. *See* 15A N.C. Admin. Code 07H .0302–.0303. The Commission's express purpose in enacting the Ocean Hazard rules was,

> to further the goals set out in G.S. 113A-102(b), with particular attention to minimizing losses to life and property resulting from storms and long-term erosion, preventing encroachment of permanent structures on public beach areas, preserving the natural ecological

> conditions of the barrier dune and beach systems, and reducing the public costs of inappropriately sited development.

15A N.C. Admin. Code 07H .0303(b) (effective 1977, amended 1992). Preserving oceanfront beaches and dunes helps protect buildings and environments behind them by absorbing the force of wind and waves, while the dense root networks of dune plants trap and anchor sand. *See* CAMA Handbook, Attachment 5, at 9. Left uncontrolled, development can destroy these dunes and their vegetation, increasing the risk of damage to structures from erosion, flooding and waves. *Id.*; 15A N.C. Admin. Code 07H .0301 ("uncontrolled or incompatible development could unreasonably endanger life or property").

The enforcement of the Ocean Hazard rules is consistent with the underlying policy considerations of CAMA, which favor consideration of the ecological capability of the land to support development over the economic desires of those who may wish to build on it. *See* N.C. Gen. Stat. § 113A-102(b). The drafters of CAMA were fully aware that "coastal area beaches, dunes, marshes and estuaries are essential to the total ecology of the coastal area in preventing flooding and erosion," and thus sought to protect them for the greater good. *See* Peter G. Glenn, *The Coastal Area Management Act in the Courts: A Preliminary Analysis*, 53 N.C. L. Rev. 303, 333 n.140 (1974), Attachment 8.

A series of law review articles authored by University of North Carolina School of Law professors immediately after the promulgation of CAMA offer a contemporaneous view into CAMA's policy goals. *See* Thomas J. Schoenbaum, *Management of Land and Water Use in the Coastal Zone: A New Law Is Enacted in North Carolina*, 53 N.C. L. Rev. 275 (1974), Attachment 3; *see also* Milton S. Heath, Jr., *Legislative History of the Coastal Area Management Act*, 53 N.C. L. Rev. 345 (1974), Attachment 4. Professor Thomas Schoenbaum, who authored the first complete draft of CAMA, considered coastal zone management laws to inherently "differ from the traditional land use controls in that their purpose is not just to prevent and referee between conflicting uses of land and to provide for physical development, but to protect the environmental integrity and productivity of land as a limited resource as well." Schoenbaum, Attachment 3, at 275, 276–77. Under the view of CAMA's drafters, the "more fragile and the more critical the area is from an environmental viewpoint, the greater should be the burden of proof as to the benefit of the particular form of development." *Id.* at 279.

B. The State Is Not to Blame When *the Ocean and Natural Processes of Erosion* Encroach Upon Beach-Front Property.

The policies and standards created by CAMA operate to protect and preserve North Carolina's ocean beaches and the public from a number of threats, including the hazards created by ecologically incompatible beachfront development. 15A N.C. Admin. Code 07H .0301. Because the beaches of the Outer Banks are so

dynamic, however, an area of development that was ecologically compatible at the time of its construction may become increasingly less compatible as the years pass and the shoreline changes. Such is the case with the Zitos' vacation home. Against this backdrop, North Carolina state courts have long recognized the important role of natural processes, like erosion and accretion, in understanding the uniquely dynamic nature of coastal property rights.

In considering circumstances similar to those presented in the case at bar, North Carolina courts have made clear that the State's consistent enforcement of its regulations is not to blame when *the ocean and natural processes of erosion* encroach on beach-front property. North Carolina courts have considered natural occurrences such as erosion and migration of waters to be a consequence of being a riparian or littoral landowner, which at times operates to divest landowners of their property. *See Carolina Beach Fishing Pier*, 177 S.E.2d at 517; *Shell Island Homeowners Ass'n, Inc. v. Tomlinson*, 517 S.E.2d 406, 414 (N.C. Ct. App. 1999).

The North Carolina Supreme Court has held that property rights do not remain static in the face of these dynamic natural processes. *See Carolina Beach Fishing Pier*, 177 S.E.2d at 517. When the boundary of a tract of land is determined by a body of water, as is the case with the boundary at which the Zitos' lot is encumbered by public trust rights in the ocean beach, *see Nies*, 780 S.E.2d at 190, then the boundaries of that property and its attendant rights shift with the

shifting of the water body. When the location of that water body "is gradually and imperceptibly changed or shifted by accretion, reliction, or erosion, the margin . . . of the . . . body, as so changed, remains the boundary line of the tract, which is extended or restricted accordingly." *Carolina Beach Fishing Pier*, 177 S.E.2d at 517. Thus, the North Carolina Supreme Court has concluded that when beach-front property owners' lots are gradually worn away by shoreline erosion, their titles are "divested by the sledge-hammering seas[,] the inscrutable tides of God." *Id.* (citations omitted).

When these natural occurrences operate to divest landowners of their property interests, the Commission cannot be held at fault. In a takings case before the North Carolina Court of Appeals in the late 1990s, the Shell Island Homeowners Association unsuccessfully challenged the Commission's enforcement of its hardened structure rule banning ocean seawalls. *Shell Island*, 517 S.E.2d at 414. As here, the Commission's rules prohibited types of construction that were deemed harmful to the ocean beach public trust resource. The *Shell Island* court held that the Commission's denial of a construction permit did not effect a regulatory taking—that it was erosion rather than the State that took the plaintiffs' property:

> [P]laintiffs' complaint does not allege that the migration of Mason's Inlet and the resulting erosion of plaintiffs' property have been caused by any regulatory action taken by defendants, and *these naturally*

> *occurring phenomena are the primary causes of any loss sustained by plaintiffs*. Defendants' consistent enforcement of the hardened structure rules, consistent with its statutory powers, is merely incidental to these natural occurring events.

Id. at 415 (emphasis added).

Under North Carolina law, the Commission's decision on the Zitos' variance application neither operated to divest the Zitos of their privately held property rights, nor conferred a benefit to the public. While the Zitos' lot may have been entirely landward of the ocean beach area thirty years ago, the natural processes of shoreline erosion (which are exacerbated by coastal development) have worked to change that. If anything has encroached upon the Zitos' property in this case, it is only the ocean, not the Commission.

C. North Carolina's Ocean Beaches Are a Public Trust Resource.

Just as the Zitos' property rights are inherently subject to the natural flux of the shoreline, they are also impacted by the attendant public trust rights in the dynamic ocean beach. CAMA seeks to "establish policies, guidelines and standards for: . . . [p]rotection of present common-law and statutory public rights in the lands and waters of the coastal area." N.C. Gen. Stat. § 113A-102(b)(4). The public trust rights in the lands and waters of the coastal area, which are protected by the Commission's regulations, are well-established under state law and have repeatedly been upheld by North Carolina's courts. North Carolina law makes clear that the ocean beaches of North Carolina, including privately owned

property in dry-sand beach areas, are a public trust resource—meaning that they are encumbered by public trust rights and subject to the public trust doctrine. *Nies*, 780 S.E.2d at 195–96.

The public trust doctrine is a common law principle providing that certain land associated with bodies of water is held in trust by the State for the benefit of the public. *See Fabrikant v. Currituck Cty.*, 621 S.E.2d 19, 27 (N.C. Ct. App. 2005). Under the public trust doctrine, North Carolina law explicitly recognizes both public trust lands, which are owned by the State, and public trust *rights*, which apply more broadly to public trust *resources*. *See Nies*, 780 S.E.2d at 194. Public trust resources are defined under state law as "land and water areas, *both public and private*, subject to public trust rights." N.C. Gen. Stat. § 113–131(e) (emphasis added); *see also Nies*, 780 S.E.2d at 194.

Public trust rights are "those rights held in trust by the State for the use and benefit of the people of the State in common." N.C. Gen. Stat. § 1–45.1; *see also Friends of Hatteras Island Nat'l Historic Maritime Forest Land Trust for Pres., Inc. v. Coastal Res. Comm'n*, 452 S.E.2d 337, 348 (N.C. Ct. App. 1995). North Carolina state law defines public trust rights guaranteed to its residents as including the "right to freely use and enjoy the State's ocean and estuarine beaches and public access to the beaches." N.C. Gen. Stat. § 1–45.1; *see also Fabrikant*, 621 S.E.2d at 27; *Nies*, 780 S.E.2d at 194.

State law and precedent define the ocean beach public trust resource to include both the "wet sand" beach area, which extends to the mean high water mark and belongs to the State, and the "dry sand" beach area, which extends inland from the mean high water mark and can be both public and private. *See* N.C. Gen Stat. § 77-20(e); *Nies*, 780 S.E.2d at 194; N.C. Const. art. XIV, §5; *see also* N.C. Gen. Stat. § 77–20(d) (the right of the people to the "customary free use and enjoyment" of "the full width and breadth of the ocean beaches of this State from time immemorial" is "a part of the common heritage of the State recognized by Article XIV, Section 5 of the Constitution of North Carolina"). The landward boundary of the dry sand beach will generally be the foot of the most seaward dunes, if dunes are present; the regular natural vegetation line, if natural vegetation is present; or the storm debris line, which indicates the highest regular point on the beach where debris from the ocean is deposited at storm tide. *Nies*, 780 S.E.2d at 190. These lines of demarcation are in constant flux due to erosion or accretion of sand from wind, waves, tides, and storms. *See* N.C. Gen. Stat. § 77-20(e); *Nies*, 780 S.E.2d at 191.

In *Nies v. Town of Emerald Isle*, another beachfront takings case brought by the Pacific Legal Foundation, the plaintiffs claimed that a town ordinance allowing the public to drive on the "dry sand" beach areas of the plaintiffs' property every year effected a *per se* taking of their property without just compensation. 780

S.E.2d 187 (2015). The North Carolina Court of Appeals disagreed, finding that the dry sand beach portion of the plaintiffs' property was encumbered by public trust rights. *Id.* at 198. The *Nies* court reasoned that the "General Assembly has made clear its understanding that at least some portion of privately-owned dry sand beaches are subject to public trust rights." *Id.* at 197. Thus, the plaintiffs never had the right to exclude the public from the dry sand beach portion of their property. *Id.* ("The ocean beaches of North Carolina, as defined in N.C. Gen.Stat. § 77–20(e) . . . are subject to public trust rights unless those rights have been expressly abandoned by the State.").

Thus, the public trust resource of North Carolina's ocean beach covers privately owned dry sand beach areas as well as wet-sand beach. North Carolina's system of coastal regulation aims to protect those public trust resources, to which the public has an inherent right of use and enjoyment, from the deleterious effects of ecologically incompatible development. *See* 15A N.C. Admin. Code 07H .0303 ("[I]t is the objective of the Coastal Resources Commission to protect present common-law and statutory public rights of access to and use of the lands and waters of the coastal area."). Ocean-front development, such as the Zitos' proposed construction, implicates these public trust rights, which automatically attach to the ocean beach areas.

III. NORTH CAROLINA'S COASTAL REGULATIONS ARE MORE IMPORTANT THAN EVER IN THE FACE OF CLIMATE CHANGE.

The Zitos' attempt to undermine North Carolina's coastal protections is happening against the backdrop of the intensifying effects of climate change. As the United States Supreme Court has acknowledged, "[t]he harms associated with climate change are serious and well recognized." *Mass. v. E.P.A.*, 549 U.S. 497, 499 (2007) (noting that sea level rise resulting from global warming had "already begun to swallow Massachusetts' coastal land"). Moreover, it is North Carolina's sovereign prerogative to safeguard the interests of the State and its citizens against these harms. *See id.* at 518–20 (discussing a State's interest to protect "all the air and earth within its domain"). If the Zitos were to succeed in this case, North Carolina's ability to protect its coastal resources in the face of an even more rapidly and dramatically changing coast would be significantly undermined.

The science clearly shows that the shoreline erosion plaguing Nags Head is only getting progressively worse as a result of climate change. Even if the Commission were to allow the Zitos to rebuild their house on the same footprint now, it would predictably be washed into the ocean in the near future—like the entire row of homes that formerly existed seaward of the Zitos' property on East Seagull Drive and were irreparably destroyed by a November 2009 nor'easter. *See, e.g.*, *Town of Nags Head v. Toloczko*, 728 F.3d 391 (4th Cir. 2013); *Sansotta v. Town of Nags Head*, 724 F.3d 533 (4th Cir. 2013). Oceanfront homes that are

being overtaken by rising seas in the Outer Banks pose a public hazard—a home that collapsed on the opposite side of the Oregon Inlet in Rodanthe this May created a half-mile-long debris field of boards and nails, and the area has multiple compromised septic tanks in the water. *See House Collapse in Rodanthe Leads to Large Debris Field Along the Beach*, Island Free Press (May 29, 2020), https://islandfreepress.org/outer-banks-news/oceanfront-house-collapse-in-rodanthe-leads-to-large-debris-field-along-the-beach/, Attachment 9. This means that the consequences of the Commission being unable to enforce its setback regulations extend far beyond economic costs and threaten the future ability of North Carolina to protect the integrity and safety of its beaches for the use and enjoyment of its citizens.

As discussed above, CAMA is designed to protect sensitive coastal areas, which may easily be destroyed by erosion or flooding, from the deleterious impacts of uncontrolled or incompatible development. *See* 15A N.C. Admin. Code 07H .0301. While climate change may not have been at the forefront of the North Carolina legislature's mind when CAMA was first drafted in the early 1970s, it now presents an existential threat to many of these coastal areas, such as Nags Head. This makes the Commission's ability to regulate development to protect this invaluable public resource more important now than ever before.

A. Climate Change Is Already Impacting the World's Coasts.

The Intergovernmental Panel on Climate Change reports that human activities are estimated to have caused approximately 1.0°C (1.8°F) of global warming above pre-industrial levels, and global warming is *likely* to reach 1.5°C (2.7°F) between 2030 and 2052 if it continues to increase at the current rate. IPCC, *2018: Summary for Policymakers. In: Global Warming of 1.5°C.* 4 (Masson-Delmotte et al. eds., 2018), https://www.ipcc.ch/sr15/chapter/spm/, Attachment 10. Impacts of climate change in the intensity and frequency of severe weather events have already been detected and are also predicted to continue to increase. *Id.* at 4, 7.

Sea level rise is already accelerating along the Atlantic coast and will continue to increase coastal erosion rates. *See* Stephen P. Leatherman et al., *Sea Level Rise Shown to Drive Coastal Erosion*, 81 EOS 55, 56 (2000), Attachment 11; Roshanka Ranasinghe et al., *Climate Change Impact Assessment for Inlet-Interrupted Coastlines*, 3 Nature Climate Change 83 (2013), Attachment 12. Increases in global temperatures have already caused a 7 to 8 inch increase in global average sea level rise since 1900, with almost half of this rise (3 inches) occurring since 1993. William V. Sweet et al., *Sea Level Rise*, *in* Climate Science Special Report: Fourth National Climate Assessment, Volume I, 333 (Donald J. Wuebbles et al. eds., 2017), Attachment 13. The best available science predicts

that global average sea levels will continue to rise, by *at least* several inches in the next fifteen years and 1 to 4 feet by 2100—with a possibility of as much as an 8 foot rise by 2100. *Id.* at 333.

These rising sea levels exacerbate erosion rates, with severe consequences. A new study published in March 2020 predicts that, under the worst case climate scenario, the United States could lose 3,436 miles of sandy beach to climate change-related factors, ranking it 6th in the world in percentage of lost beach. Michalis I. Vousdoukas et al., *Sandy Coastlines Under Threat of Erosion*, 10 Nature Climate Change 260, 263 (Mar. 2, 2020), Attachment 14.[1]

Coastal erosion will also be exacerbated by other climate-induced changes such as increased storm intensity and frequency, and changes in prevailing currents, both of which are projected to lead to increased erosion and beach loss. Changes in wave action along the coast, connected to intensifying storms fueled by climate change, have already led to dramatic shifts in longshore sediment transport gradients. *See* Jennifer M. Johnson et al., *Recent Shifts in Coastline Change and Shoreline Stabilization Linked to Storm Climate Change*, 40 Earth Surface Processes and Landforms 569 (2014), Attachment 15.

[1] This translates to 2,451 miles of sandy beach loss under the most conservative climate scenario. *Id.*

The impact of rising seas becomes even more powerful when storm surge or rainfall is added on top of a higher tide, therefore storm surge and rainfall vulnerabilities must be considered in addition to sea level rise. Through a major storm, communities acutely feel the effects of what are, until then, chronic incremental increases in sea level. And even a single hurricane or major storm can remove considerable amounts of sand from a beach, particularly if that beach has been artificially filled. *See, e.g.*, Vousdoukas et al., Attachment 14; Johnson et al., Attachment 15.

B. North Carolina's Outer Banks Are Severely Impacted by Climate Change.

The impacts of climate change are now being felt so strongly that they are impossible to ignore, not only as a global phenomenon but also on a more local scale. One of the most important impacts of global climate change is sea level rise, which will result in increased erosion rates and inundation along North Carolina's beaches. *See generally* North Carolina Climate Risk Assessment and Resilience Plan (2020), Attachment 16, at Ch. 5.C. In North Carolina, 2019 was the single warmest year on record, and the State is still recovering from two "500-year storms"—Hurricane Florence and Hurricane Matthew—that hit the coast within 23 months of each other. *See Message from Governor Cooper, in id.*

North Carolina's Outer Banks are severely impacted by increases in sea level rise, hurricanes, and erosion. The disproportionate impacts result from the barrier islands' unique geological structure and processes. When barrier island coastlines are developed, they become even more susceptible to sea level rise and resultant coastal erosion than they otherwise would have been. Vousdoukas et al., Attachment 14, at 262. Thus, rather than the barrier islands migrating westward as a result of wind and waves carrying sand over the dunes onto the back side, as would happen in a natural response to sea level rise, they are instead simply becoming narrower and narrower as the shoreline erodes away. *See, e.g.*, N.C. Div. Coastal Mgmt., *Coastal Erosion Study* (2016), Attachment 1, at 1, 21, 27, 34.

The impacts of climate change and increased erosion rates are especially concerning for North Carolina's beaches and the Nags Head area in particular, where the beachfront is eroding by up to 11.4 feet per year depending on the location. Online GIS Layer, *Erosion Rates (2020) – Oceanfront*, N.C. Div. Coastal Mgmt., https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=f5e463a929ed430095e0a17ff803e156 (last visited July 29, 2020), Attachment 2. Some areas of the Outer Banks are even worse off—erosion rates on Hatteras Island reach up to a whopping 22.1 feet per year. *Id.* The National Oceanic and Atmospheric Administration ("NOAA") 2017 sea level rise scenarios released as part of the Fourth National Climate Assessment estimate that in the extreme

scenario, Duck (the nearest NOAA tide gauge to Nags Head) will see 3.5 feet of sea level rise by 2050 and 11.4 feet by 2100. Sea Level Rise Viewer for Duck Pier, NC, https://coast.noaa.gov/slr/#/layer/slr (select "local scenarios; then search "Duck, NC") (last visited July 29, 2020), Attachment 17. Even under the Intermediate and Intermediate-High scenarios—which current observed rates of sea level rise are following—Duck will experience between 1.7-2.4 feet of sea level rise by 2050 and 4.4-6.8 feet by 2100. *Id.*; NOAA, *Global and Regional Sea Level Rise Scenarios for the United States* (2017), https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf, Attachment 18.

The erosion impacts of hurricanes and tropical storms on the Outer Banks are particularly severe. The storm surge from Hurricane Isabel in 2003, for example, created an entirely new permanent inlet severing the southern part of Hatteras Island, as well as widespread dune erosion in Nags Head. *See* U.S. Geological Service, Dune Erosion in Nags Head, North Carolina, https://www.usgs.gov/media/images/dune-erosion-nags-head-north-carolina (last visited July 29, 2020), Attachment 19; Kaplan, Attachment 7. During Hurricane Matthew in 2016, the Oregon Inlet Marina gauge near Nags Head measured a storm surge more than two feet higher than high tide. NOAA, *Tides & Currents: Oregon Inlet Marina*, https://tidesandcurrents.noaa.gov/waterlevels.html?id=8652587&uni

ts=standard&bdate=20161001&edate=20161010&timezone=LST&datum=MHHW&interval=6&action= (last visited July 29, 2020), Attachment 20. Storm surge came close to this level of flooding during Hurricane Florence in 2018, when the Oregon Inlet Marina gauge measured a storm surge of 1.7 feet above high tide. *Id.* (changing dates to September 14-16, 2018), Attachment 21. A month later, as the remains of Hurricane Michael passed, the area saw a storm surge of 4 feet over normal high tide. *Id.* (changing dates to October 11-12, 2018), Attachment 22. In 2019, Hurricane Dorian produced a storm surge of over 3 feet above typical high tide at Nags Head, *id.* (changing dates to September 6-7, 2019), Attachment 23, and resultant erosion carved out a 6-foot embankment from the beach of Cape Hatteras National Seashore. Simone Jasper, *Hurricane Dorian Turned an Outer Banks Beach Into a Cliff. Here's What It Exposed*, News & Observer (Sept. 19, 2019), https://www.newsobserver.com/news/state/north-carolina/article235250157.html, Attachment 24.

The Atlantic coast already sees more Category 4 and Category 5 hurricanes compared to the 1980s, and North Carolina ranks second among U.S. states for the number of tropical storms and hurricanes that have affected its shores. Brian Donegan, *North Carolina Second Only to Florida for U.S. Tropical Storms and Hurricanes*, The Weather Channel (Sept. 11, 2018), https://weather.com/storms/hurricane/news/2018-06-05-map-shows-how-many-tropical-storms-hurricanes-

struck-each-state, Attachment 25. Atlantic coast geography and currents make Eastern North Carolina especially exposed and prone to tropical storm and hurricane strikes. *Cf.* Barry D. Keim et al., *Spatial and Temporal Variability of Coastal Storms in the North Atlantic Basin*, 210 Marine Geology 7, 8 (2004), Attachment 26. On average, hurricanes impact the North Carolina shore every 5-7 years, but climate change conditions will increase the number of tropical storms that turn into major hurricanes. *See* Peter J. Webster et al., *Changes in Tropical Cyclone Number, Duration, and Intensity in a Warming Environment*, 309 Sci. 1844, 1845 (2005), Attachment 27; NOAA, *Tropical Cyclone Climatology*, https://www.nhc.noaa.gov/climo/ (last visited July 29, 2020), Attachment 28.

North Carolina's ocean beaches, a unique and invaluable public trust resource, are thus confronting an existential threat in the face of climate change. The synergistic impacts of increasing sea level rise, erosion rates, and catastrophic storms make the protection of ocean beaches all the more urgent.

CONCLUSION

The issues of sea level rise and erosion that plague North Carolina beaches, such as Nags Head, are only getting worse due to climate change. The Zitos ask the Court to put blinders on and ignore this simple fact—that these natural phenomena are encroaching on the Zitos' property, not the Commission. Allowing the Zitos' case to move forward would have the effect of dramatically undermining

North Carolina's ability to protect its ocean beaches, a public trust resource, from these threats.

For the foregoing reasons, amicus curiae the North Carolina Coastal Federation urges this Court to uphold the judgment of the district court.

Respectfully submitted, this the 31st day of July, 2020.

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitations of Fed. R. App. P. 29(a)(5) and Fed. R. App. P. 32(a)(7)(B) because this brief contains 6,475 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word 2010 in 14-point Times New Roman font.

DATED: July 31, 2020

/s/ Ramona H. McGee

Attorney for Amicus Curiae

CERTIFICATE OF SERVICE

I hereby certify that on July 31st, 2020, I electronically filed the foregoing **Corrected Brief of Amicus Curiae North Carolina Coastal Federation in Support of North Carolina Coastal Resources Commission** with the Clerk of the Court using the CM/ECF system, which will automatically send notification of such filing to all counsel of record.

This the 31st day of July, 2020.

/s/ Ramona H. McGee
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