

# The Rising Tension over Sea Level Rise: Applying Common Law Doctrines to Unprecedented Environmental Changes in North Carolina

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## *Introduction*

In a segment titled “Sink or Swim,” comedian Stephen Colbert recently quipped that North Carolina had come up with the perfect response to sea level rise: “if your science gives you a result that you don’t like, pass a law saying that the result is illegal.”<sup>1</sup> His comment was in response to the passage of North Carolina’s controversial bill, House Bill 819, which aims to mitigate the projected effects of sea level rise in North Carolina.<sup>2</sup> Though Colbert’s remarks made light of the fact that lawmakers are trying to hide from the effects of sea level rise by dictating how this is predicted, the fact remains that unprecedented changes will bring very real challenges to the legal system due to the clash between the public trust doctrine and takings jurisprudence.<sup>3</sup> Tension between private and public interests will certainly become a contentious issue, as the government tries to maintain public access to coastal lands and waters, while simultaneously protecting the rights of littoral property owners. Although some scholars anticipate that littoral property owners will contend that subjecting land to the public trust as the mean high tide line rises will constitute a government taking, scholars also anticipate that if North Carolina looks to the natural expansions of the doctrines which have always governed the line between public and private land, compensation will be neither practical nor necessary.<sup>4</sup> Part I of this paper aims to introduce the effects of sea level rise in North Carolina as well as the

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<sup>1</sup> *The Colbert Report: The Word – Sink or Swim* (Comedy Central television broadcast June 4, 2012).

<sup>2</sup> Coastal Management Policies, Session Law 2012-202, 2012 N.C. Sess. Laws 984 (2012); John Murawski, *Senate Approves Law that Challenges Sea-Level Science*, NEWS & OBSERVER, June 13, 2012, available at <http://www.newsobserver.com/2012/06/12/2132216/senate-approves-law-that-challenges.html>.

<sup>3</sup> Michael A. Hiatt, *Come Hell or Highwater: Reexamining the Takings Clause in a Climate Changed Future*, 18 DUKE ENVTL. L. & POL’Y F. 371, 371 (Spring 2008).

<sup>4</sup> See Margaret E. Peloso & Margaret R. Caldwell, *Dynamic Property Rights: The Public Trust Doctrine and Takings in a Changing Climate*, 30 STAN. ENVTL. L.J. 51, 58 (2011).

common law doctrines which currently govern littoral property rights. Part II of this paper analyzes the rising tensions between public and private interests as the mean high tide line rises and new land is taken under the public trust doctrine.

## Part I: North Carolina's Current Environmental and Legal Landscape

### A. Sea Level Rise

According to the EPA's website, tidal gauge stations along North Carolina's coast measured a rise in sea levels of four to six inches between 1958 and 2008.<sup>5</sup> Sea levels are therefore rising in North Carolina at a rate of 2.22 millimeters a year, which is even faster than the global average of 1.7 millimeters a year.<sup>6</sup> Though these numbers do not seem all that daunting, North Carolina's coast slopes so little that even a minimal rise in sea level may inundate a very large expanse of land.<sup>7</sup> For example, a foot in sea level rise means that the shoreline could move inland by 2,000 to 10,000 feet, depending on the location in North Carolina.<sup>8</sup> Statistics regarding the implications of this differ greatly, but one study by researchers from four North Carolina universities estimated that in four of the twenty coastal counties alone, the loss on residential properties could be as much as \$3.2 billion and as much as \$3.7 billion for nonresidential properties by 2080.<sup>9</sup> Thousands of square miles may become inundated, so "mitigation measures will be costly and limited by the vast scope of coastline

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<sup>5</sup> *Climate Change Indicators in the United States, Figure 2*, U.S.EPA, <http://www.epa.gov/climatechange/science/indicators/oceans/sea-level.html> (last updated Dec. 10, 2012).

<sup>6</sup> Alex R. Williams, *North Carolina Coastal Conservation: Intrusion on Littoral Property Owners' Rights or Protection of Public Enjoyment?*, 4 APPALACHIAN NAT. RESOURCES L.J. 87, 88 (2010).

<sup>7</sup> Okmyung Bin, Chris Dumas, Ben Poulter & John Whitehead, *Impacts of Global Warming on North Carolina's Coastal Economy*, APPALACHIAN STATE UNIV., <http://econ.appstate.edu/climate/NCSummary.pdf> (last visited Jan. 2, 2013).

<sup>8</sup> *Id.*

<sup>9</sup> *Id.*

threatened.”<sup>10</sup> The entire country will feel the effects of sea level rise, especially as ever increasing numbers of people flock to the coasts where property values and investment opportunities continue to grow.<sup>11</sup>

## B. Current Common Law Doctrines as Guiding Principles

The public trust doctrine is a common law doctrine which provides that the government will hold title of submerged lands in trust for the people.<sup>12</sup> States hold the right to apply the public trust doctrine over waters not required by federal law, and the eastern states alone fall into six categories with regard to the tests used to establish where title can be asserted over submerged lands.<sup>13</sup> North Carolina and Florida are unique in that they follow the “navigable-in-fact” test, which is generally applied by non-coastal states.<sup>14</sup> States also hold the right to determine where the boundary lies between private and public land.<sup>15</sup> North Carolina General Statutes Section 77-20 states that the “seaward boundary of all property within the State of North Carolina, not owned by the State, which adjoins the ocean, is the mean high water mark.”<sup>16</sup> North Carolina therefore holds title to the land below this line under the public trust doctrine.<sup>17</sup> Historically, under the public trust doctrine, land was held in trust so the public had access to tidal waters for navigation, commercial activity, and fishing.<sup>18</sup> States have maintained the right to expand the doctrine to include other recreational and conservational rights.<sup>19</sup>

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<sup>10</sup> Hiatt, *supra* note 3, at 376.

<sup>11</sup> *Id.* at 376.

<sup>12</sup> See Peloso & Caldwell, *supra* note 4, at 57.

<sup>13</sup> Robin Kundis Craig, *A Comparative Guide to the Eastern Public Trust Doctrines: Classifications of States, Property Rights, and State Summaries*, 16 PENN. ST. ENVTL. L. REV. 1, 11 (Fall 2007).

<sup>14</sup> *Id.* at 13.

<sup>15</sup> *Id.* at 4.

<sup>16</sup> N.C. Gen. Stat. § 77-20 (2012).

<sup>17</sup> See Hiatt, *supra* note 3, at 377.

<sup>18</sup> *Id.* at 378.

<sup>19</sup> *Id.*

Though the public trust doctrine in the United States has its roots in English common law this doctrine was not explicitly articulated by the Supreme Court until the *Illinois Central Railroad Co. v. Illinois*<sup>20</sup> case in 1892, which held that a state could not renounce control over property held in the public interest.<sup>21</sup> North Carolina's Supreme Court first addressed the public trust in *Shepard's Point Land Co. v. Atlantic Hotel*<sup>22</sup> in 1903, holding that the state could not "dispose of . . . public trust property."<sup>23</sup> This was overturned in 1995 when the Supreme Court of North Carolina held that while there is the presumption submerged lands will be held in trust for the public, the General Assembly has the power to convey such lands in fee simple without reservation of public trust rights.<sup>24</sup>

Like most states, North Carolina does not specifically provide for a public trust doctrine in its constitution, though the constitutional provision for conservation of natural resources has been cited as evidence of support for this doctrine.<sup>25</sup> Case law and statutes govern what lands are to be held in trust and the rights the public have on this land. In North Carolina, "the public has the right to navigate, swim, hunt, fish, and enjoy all recreational activities in the watercourses of the State and the right to freely use and enjoy the State's ocean and estuarine beaches and public access to the beaches."<sup>26</sup>

Under the doctrines of erosion and accretion, the line between public and private land corresponds to the natural fluctuation of the high mean water mark as it moves landward or

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<sup>20</sup> 146 U.S. 387 (1892).

<sup>21</sup> Alice Gibbon Carmichael, *Sunbathers Versus Property Owners: Public Access to North Carolina Beaches*, 64 N.C.L. Rev. 159, 176 (1985).

<sup>22</sup> 132 N.C. 517, 44 S.E. 39 (N.C. 1903).

<sup>23</sup> Charmichael, *supra* note 21, at 177.

<sup>24</sup> Joseph J. Kalo, *North Carolina Oceanfront Property and Public Waters and Beaches: The Rights of Littoral Owners in the Twenty-first Century*, 83 N.C.L. REV. 1427, 1443 n.46 (2005).

<sup>25</sup> Craig, *supra* note 13, at 87.

<sup>26</sup> N.C. GEN. STAT. § 1-45.1 (2007).

seaward.<sup>27</sup> As the coastline naturally erodes<sup>28</sup> and the high mean water line moves inward, the state acquires title to this land.<sup>29</sup> Conversely, if the land naturally accretes<sup>30</sup> along the shoreline, the littoral property owner takes title to the additional land.<sup>31</sup> Generally, these doctrines have an element of symmetry, as it serves to balance the gains and losses due to naturally occurring erosion and accretion.<sup>32</sup> These rules are in place to provide that littoral property owners maintain contact with the ocean, the defining feature of their property.<sup>33</sup>

North Carolina's preference to protect the littoral owner's status is reflected in the rejection of traditional common law regarding avulsive<sup>34</sup> events in favor of statutory regulation.<sup>35</sup> Traditionally under common law, the littoral boundary would not shift if the shoreline was dramatically and perceptibly altered due to an event such as a hurricane or storm.<sup>36</sup> North Carolina's General Statute Section 1446-6 has altered this common law rule to say that when land is added above the high mean tide line naturally, the littoral property owner takes title to that land.<sup>37</sup> When this is taken together with Section 77-20(a), which defines the high mean tide line as the line separating private land and land held in the public trust, the result is that the

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<sup>27</sup> See E. Britt Bailey, *From Sea to Rising Sea: How Climate Change Challenges Coastal Land Use Laws*, 33 U. Haw. L. Rev. 289, 304 (Winter 2010).

<sup>28</sup> Erosion is here defined as the "gradual washing away of land bordering on a stream or body of water by the action of the water." *Id.* at 292-293.

<sup>29</sup> *Id.* at 306.

<sup>30</sup> Accretion is here defined as "a gradual and imperceptible process in which additions of sand, soil, or sediment creates new land that was previously submerged in water." *Id.* at 293.

<sup>31</sup> *Id.* at 305.

<sup>32</sup> *Id.* at 306.

<sup>33</sup> Kalo, *supra* note 24, at 1437.

<sup>34</sup> Avulsion is defined as "a sudden, frequently dramatic, shoreline change occasioned by the hammering of the shoreline by an event such as a hurricane or the winds and waves of a northeaster or similar violent storm." *Id.* at 1438.

<sup>35</sup> *Id.* at 1444.

<sup>36</sup> *Id.* at 1438.

<sup>37</sup> N.C. Gen. Stat. §146-6(b) (2003); Kalo, *supra* note 24, at 1441.

statutes “[treat] all natural changes to the shoreline the same and [are] grounded in the preservation of an oceanfront property owner’s littoral status.”<sup>38</sup>

## Part II: Rising Tension Between Private and Public Interests as Sea Levels Rise

### A. The Doctrines of Erosion and Accretion May Not Apply as Sea Levels Rise

Though sea levels are rising mere millimeters a year, it is not unreasonable to think that over the course of many years, the mean high tide line could shift so far inward that littoral property owners’ land would become completely inundated, leaving their landward neighbors facing the sea. As stated earlier, even a foot of sea level rise will have enormous impacts, bringing new challenges when applying well-established doctrines.<sup>39</sup> First, the doctrines of erosion and accretion may no longer be adequate as scholars anticipate that sea level rise will go beyond the scope of these doctrines.<sup>40</sup> Moreover, legal scholars anticipate that there might be increased litigation from littoral property owners demanding compensation for the loss of land to the public trust as the mean high tide continues to rise.<sup>41</sup>

Since the doctrines of erosion and accretion provide for the natural fluctuation of the shoreline, scholars anticipate that these doctrines may not apply to sea level rise.<sup>42</sup> Scholars see the term “natural” as problematic, because sea level rise is generally agreed to result from

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<sup>38</sup> Kalo, *supra* note 24, at 1444. This paper will not specifically address man-made additions to the shoreline such as from state beach nourishment projects, but as exemplified by the Supreme Court’s decision in *Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection*, 130 S.Ct. 2592 (2010), littoral owners are likely to claim they should be compensated if the state takes title to artificially accreted beaches. See JOSH EAGLE, COASTAL LAW 352 (Wolters Kluwer Law & Business, 2011). In the case, *Stop the Beach Renourishment, Inc.*, the Supreme Court considered whether a Florida beach renourishment project constituted a governmental taking which required compensation. *Stop the Beach Renourishment, Inc.*, 130 S.Ct. at 2592. The court held that “[t]here is no taking unless petitioner can show that, before the Florida Supreme Court’s decision, littoral-property owners had rights to future accretions and contact with the water superior to the State’s right to fill in its submerged land.” *Id.*

<sup>39</sup> See Bin, *supra* note 7.

<sup>40</sup> See Bailey, *supra* note 27, at 307.

<sup>41</sup> Hiatt, *supra* note 3, at 382.

<sup>42</sup> *Id.* at 383.

anthropogenic causes.<sup>43</sup> The development of these doctrines was not intended for such a large loss, and moreover the localized forces that generally cause erosion are not comparable to the global forces which are leading to sea level rise.<sup>44</sup> Yet another reason why these doctrines should not apply is because sea level rise is not of such a nature that the balance inherent in the doctrines will remain. Where there currently is thought to be some symmetry and fairness between inward and outward movement, sea level rise will merely constitute a one way loss for property owners as the mean high tide continues to move mainly inward.<sup>45</sup> The doctrines of erosion and accretion are meant to consider the dynamic boundaries of the coastline, but given the unprecedented nature of sea level rise, these doctrines may no longer be applicable.<sup>46</sup>

#### B. Reasons in Favor of Compensation to Littoral Property Owners

Although scholars give many reasons for why the takings clause will likely not apply as the public trust doctrine is asserted in the face of sea level changes, it is worth considering the reasons littoral property owners may give in favor of compensation. The current doctrine of erosion does not require compensation for loss of property due to erosion, but if courts determine that sea level rise exceeds the reaches of this doctrine, then turning private land to public land might be construed as a government taking.<sup>47</sup> Even where land becomes a part of the public trust the property owner loses his property right to exclude.<sup>48</sup> Moreover, North Carolina's

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<sup>43</sup>*Id.* at 384.

<sup>44</sup>*Id.*

<sup>45</sup>*Id.*

<sup>46</sup>*Id.* at 383.

<sup>47</sup> Hiatt, *supra* note 3, at 384. The takings clause is generally applied when the government physically takes private property for its own use, but also applies when regulations go so far that it is as if the government was physically taking the land. *Id.* at 380. When a regulation is not instituted to prevent a nuisance, courts will do a balancing test to see whether the regulation is "taking" private property in such a way that requires compensation. *Id.* at 381. The factors which are taken into consideration include: "the character of the government action, the economic impact of the regulation on the property owner, and the property owner's investment-backed expectations." *Id.*

<sup>48</sup> *Id.* at 385.

constitution does not explicitly create a public trust doctrine, but rather contains language that scholars cite to support the doctrine. Some scholars therefore worry that application under such an expanded scope as sea level rise could be a regulatory taking.<sup>49</sup>

### C. Arguments that Placing Land Under the Public Trust Should Not Be Considered a Taking

Though arguments may be made that assertion of the public trust doctrine as sea levels rise could be considered a taking, there are many more reasons for why this likely will not be the case. Perhaps the strongest argument against finding a taking was established in the *Illinois Central Railroad* case, when the Supreme Court held that public trust lands hold “a special kind of title which may not freely be given away.”<sup>50</sup> States have the duty of acting as trustees for public land, and if North Carolina were to allow people to ignore the ambulatory nature of this line as sea levels rise, it would unlawfully renounce its duty.<sup>51</sup> Littoral owners may claim that it would be a regulatory taking if, for example, the government prohibits building seawalls to protect property against sea level rise, but since the scope of sea level rise will be so expansive, permitting such fortification for all landowners would in fact “amount to an abdication of the state’s public trust responsibilities,” as this would allow property owners to prevent “the advance of the dynamic property line.”<sup>52</sup> Scholars furthermore believe that the State would also be abdicating its duty if it does not act to place land in public trust as vast amounts of land become inundated.<sup>53</sup> Though the application of the doctrine may be unprecedented in scope, failing to uphold the public trust doctrine would be a violation of the State’s duty.

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<sup>49</sup> *Id.* at 383.

<sup>50</sup> 146 U.S. 387, 452 (1892).

<sup>51</sup> See Peloso & Caldwell, *supra* note 4, at 58.

<sup>52</sup> *Id.* at 59.

<sup>53</sup> *Id.*

The takings clause is intended to protect individuals from being singled out and forced to bear public burdens.<sup>54</sup> Government takings under the public trust doctrine can be distinguished from the kind of taking from which the Fifth Amendment was designed to protect people for several reasons, bolstering scholars' belief that compensation in this scenario will not be required. Firstly, sea level rise will not merely affect a few individual property owners, but rather thousands of coastal property owners. The government will not have discretion over which areas will be most affected by rising sea levels, and coastal owners will be sharing both the risks and losses.<sup>55</sup> Moreover, asserting the public trust as sea levels rise will be different from the typical government taking because the action will actually be passive.<sup>56</sup> The government is not directly responsible for the effects of climate change, but will rather be forced to deal with the encroaching water. The only action the State will take is to uphold its duty in subjecting property over which the mean high tide line has moved under the public trust.<sup>57</sup>

Yet another reason why the state will likely not compensate littoral owners as they lose land to the public trust is that land loss should be the "reasonable expectation" of littoral property owners. Such property owners are already aware of the higher risk of living next to an ambulatory property line, should be regarded as having constructive notice of such property loss.<sup>58</sup> Sea level rise is currently happening at a rate of millimeters per year, which may make loss in property imperceptible today, but will become evident over the course of many years. This is not a phenomenon that will occur overnight, and if sea level rise is seen as a reasonable expectation of the property owner, that reasonable owner would reasonably expect that his

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<sup>54</sup>See. Niki L. Pace, *Wetlands or Seawalls? Adapting Shoreline Regulation to Address Sea Level Rise and Wetland Preservation in the Gulf of Mexico*, 26 J. LAND USE & ENVTL. L. 327, 352 (Spring 2011).

<sup>55</sup> Hiatt, *supra* note 3, at 388.

<sup>56</sup> *Id.*

<sup>57</sup> *Id.* at 389.

<sup>58</sup> *Id.* at 395.

property will become part of the public trust.<sup>59</sup> In fact, some scholars say that the State has a vested future interest in the property, and as protector of the public trust, the State has the obligation to subject land to the public trust. Furthermore, these scholars argue that the State could even “maintain an action in waste against anyone who takes actions today that would impair the public’s future interest.”<sup>60</sup> While these reasons all support the claim that the State will not be required to compensate littoral owners as their property slowly becomes subject to the public trust, there is not nearly as much certainty with regard to the State’s right to prohibit littoral owners from preventing such encroachment themselves. For example, regulations which stop owners from building seawalls is the source of much debate, as some scholars anticipate this is a stronger cause for demanding compensation as a regulatory taking by the government.<sup>61</sup>

A final reason for why it is not likely that the government will have to compensate littoral owners as the mean high tide rises, is that just compensation would be inefficient and impractical.<sup>62</sup> Land loss will affect too many people over an expansive area.<sup>63</sup> Moreover, sea level rise will occur so slowly, that the amount of just compensation would be too difficult to measure.<sup>64</sup> Because the mean high tide line shifts mere millimeters a year, the amount of land taken under the public trust would be so small and of such little value that it would not make sense to make such incremental payments to so many people every year.<sup>65</sup>

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<sup>59</sup> *Id.*

<sup>60</sup> Peloso & Caldwell, *supra* note 4, at 84.

<sup>61</sup> *See* Pace, *supra* note 54, at 329.

<sup>62</sup> Hiat, *supra* note 3, at 396-397.

<sup>63</sup> *Id.* at 395.

<sup>64</sup> *Id.*

<sup>65</sup> *Id.* at 396.

D. *Town of Nags Head v. Cherry Inc.*

An example of the kind of litigation that scholars anticipate is exemplified by a very recent case, *Town of Nags Head v. Cherry Inc.*<sup>66</sup> The Town of Nags Head sought to demolish the defendant's dwelling as the mean high tide line had shifted inward, and the house now stood in public trust area.<sup>67</sup> The defendant moved to dismiss the claim, arguing that only the State has the power to enforce such public trust rights.<sup>68</sup> The appellate court reasoned that since the dwelling had not previously stood on land held in public trust, the municipality could not enforce the violation of the public trust doctrine since that is a sovereign right reserved for the State.<sup>69</sup> The State, through the Attorney General, is the only party which can enforce the public trust, and therefore the trial court had erred in denying dismissal.<sup>70</sup> The court furthermore noted that where the state condemns land, the state must compensate the owner.<sup>71</sup>

This case not only reflects the growing tension between littoral property owners and municipalities as the mean high tide shifts but also illustrates the complexity surrounding the issue with regard to enforcement. Since the State, not individual municipalities, holds the power to subject lands to the public trust, the only instance in which the municipality can condemn this property, is if it is declared a nuisance for creating risk of injury.<sup>72</sup> Scholars anticipate that similar cases will become more prevalent with sea level rise, and worry that it would be impractical for the Attorney General's office to handle every individual case.<sup>73</sup> While variation in the laws of individual municipalities should not affect public trust rights, it may be more

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<sup>66</sup> 723 S.E.2d 156 (N.C. Ct. App. 2012) *cert. denied*, 732 S.E.2d 580 (N.C. Oct 4, 2012).

<sup>67</sup> *Id.* at 157.

<sup>68</sup> *Id.* at 158.

<sup>69</sup> *Id.* at 161.

<sup>70</sup> *Town of Nags Head*, 723 S.E.2d 156 (N.C. Ct. App. 2012).

<sup>71</sup> *Id.*

<sup>72</sup> *Id.* at 164.

<sup>73</sup> Joseph J. Kalo, *Recent and Ongoing State Coastal Law Litigation: Balancing Public Trust and Private Property Rights*, LEGAL TIDES (N.C. COASTAL RESOURCES L., PLAN. & POL'Y CTR.), Spring/Summer 2012, at 1.

practical for the coastal municipalities to enforce such public trust rights, except for cases where the state objects or engages in litigation itself.<sup>74</sup> This case also shows that the appellate court believes that condemnation of properties due to the public trust doctrine requires compensation.<sup>75</sup> Scholars maintain, however, that littoral owners are aware of the risks they choose to take by living along a dynamic boundary, and therefore should assume the responsibility when houses end up in public trust areas.<sup>76</sup> While scholars generally agree that the scope of sea level rise will be such that compensation in the long run will not be required, this case demonstrates that property owners currently have strong arguments for why they should be compensated.

### Conclusion

The legal challenge discussed in this paper represents just one issue which will come to play as sea levels rise. Litigation from littoral owners alleging government takings is also likely to arise from a variety of adaptation techniques to sea level rise such as restriction on development, beach nourishment projects, and shoreline armoring.<sup>77</sup> Scholars maintain that common law doctrines will have to “flex” in order for states to effectively deal with these unprecedented changes.<sup>78</sup> Though the government may initially face a number of takings claims, placing land in public trust will be necessary to protect these coastal populations.<sup>79</sup> In conclusion, resolving the tensions between private and public interests will require an exception to the takings rule so that no taking occurs when the government applies the public trust doctrine to land that has become inundated through the uncontrollable forces of nature.<sup>80</sup>

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<sup>74</sup> *Id.*

<sup>75</sup> *Town of Nags Head*, 723 S.E.2d at 161.

<sup>76</sup> Kalo, *supra* note 73, at 1.

<sup>77</sup> See Pace, *supra* note 54, at 327.

<sup>78</sup> See Bailey, *supra* note 27, at 319.

<sup>79</sup> See Peloso & Caldwell, *supra* note 4, at 106.

<sup>80</sup> Hiatt, *supra* note 3, at 397.