

## **Delaying a Decision on the Future of North Carolina's Coast: The Sandbag Removal Moratorium and Terminal Groin Study**

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On August 26, 2009, Governor Beverly Perdue signed North Carolina Session Law 2009-479.<sup>1</sup> The bill contains two distinct portions: a moratorium on the removal of temporary erosion control structures<sup>2</sup> and a study of the use of terminal groins as erosion control devices.<sup>3</sup> The N.C. Coastal Resources Commission (“Commission”) is to observe a moratorium until September 1, 2010, on the removal of sandbag seawalls currently in place along the N.C. coast.<sup>4</sup> Session Law 2009-479 also directs the Commission, in consultation with the N.C. Division of Coastal Management, the N.C. Division of Land Resources, and the N.C. Coastal Resources Advisory Council to conduct a study of terminal groin use as a feasible and advisable means of controlling coastal erosion for submission to the Environmental Review Commission and N.C. General Assembly by April 1, 2010.<sup>5</sup>

### I. Sandbag Removal Moratorium

The moratorium on sandbag structure removal was incorporated in Session Law 2009-479 after Senate Bill 998 unanimously passed the Senate in May 2009. Senate Bill 998 called for a moratorium on the removal of temporary erosion control devices and ordered a study of best practices in the use of temporary erosion control structures as a means of protecting eroding shorelines.<sup>6</sup> Temporary sandbags and beach nourishment have been the only measures, short of structure relocation, available to property owners to hold back coastal erosion since the Commission banned the use of coastal hard structures in 1985; the ban was written into law in

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<sup>1</sup> Address Erosion Control Issues, 2009 N.C. Sess. Laws 479

<sup>2</sup> *Id.* at §1(b).

<sup>3</sup> *Id.* at § 2(a).

<sup>4</sup> *Id.* at §§1(a), 3.

<sup>5</sup> *Id.* at §2(a), (d).

<sup>6</sup> S.B. 998, 2009 Gen. Assem., 148<sup>th</sup> Sess. (N.C. 2009).

2003 by a unanimous vote from both chambers.<sup>7</sup> The law prohibits any person from constructing a “permanent erosion control structure,” which is defined as breakwaters, bulkheads, groins, jetties, seawalls and other similar structures, along North Carolina shorelines and inlets; it further limits temporary erosion devices to sandbags.<sup>8</sup>

Prior to becoming law in 2003, the rule against coastal hard structures was unsuccessfully challenged in *Shell Island Homeowners Ass’n, Inc. v. Tomlinson*.<sup>9</sup> In this case homeowners sued the state alleging the hardened structure rule violated their property right to build an erosion control structure to protect their condominium complex from the southward migration of Mason’s Inlet.<sup>10</sup> The opinion in *Shell* upheld the hardened structure ban stating that:

[P]laintiffs have failed to cite to this Court any persuasive authority for the proposition that a littoral or riparian landowner has a right to erect hardened structures in statutorily designated areas of environmental concern to protect their property from erosion and migration. The courts of this State have considered natural occurrences such as erosion and migration of waters to be, in fact, natural occurrences, a consequence of being a riparian or littoral landowner, which consequence at times operates to divest landowners of their property.<sup>11</sup>

Under administrative rules adopted by the Commission under authority granted in the Coastal Area Management Act (CAMA), sandbags are allowed as temporary erosion measures for up to five years in a community actively pursuing a beach nourishment project or up to eight years if located in an Inlet Hazard Area adjacent to a community actively pursuing an inlet relocation project.<sup>12</sup> Despite these rules, various extensions granted following storms have

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<sup>7</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, 1488-89 (2005).

<sup>8</sup> Erosion Control Structures, 2003 N.C. Sess. Laws 427, §3 (to be codified as amended at N.C. Gen. Stat. §113A-115.1(b)).

<sup>9</sup> 134 N.C. App. 217, 517 S.E.2d 406 (1999).

<sup>10</sup> *Id.* at 219-220, 517 S.E.2d at 409-410.

<sup>11</sup> *Id.* at 228, 517 S.E.2d at 414.

<sup>12</sup> 15A N.C. ADMIN. CODE 07H.0308 (a)(2)(G) (2009).

resulted in some unsightly sandbag piles staying in place for as long as two decades.<sup>13</sup> The N.C. Division of Coastal Management was slated to begin removal of the offending bags on May 1, 2008. There are currently 370 structures in the state permitted to have sandbags.<sup>14</sup> Of those, 149 are subject to removal under the CAMA rules.<sup>15</sup> In 2008 property owners were sent appropriate notice to remove their bags within 30 days; not a single one complied with the notice and the division staff has not been willing to take additional steps to enforce the rule.<sup>16</sup>

The moratorium in Session Law 2009-479 responds to the concerns of coastal property owners worried that strict enforcement of the sandbag removal would doom their homes and businesses to a watery demise. It allows state lawmakers, local officials, and government division staff time to look at challenging issues such as how to fund expensive beach nourishment projects on a recurring basis or proposals to allow limited construction of permanent erosion control measures such as groins along the North Carolina coast. Reviewing the public comments from just a single meeting of the study mandated by Session Law 2009-479 provides a brief view of how divided the opinions are on this topic.<sup>17</sup> On one side of the issue are academics and environmentalists concerned with the impact proposed changes will have on the coast's natural beauty and wildlife population, on the other side are property owners and local officials desperate to maintain the beaches for personal use and as an attraction for tourists. After heated public comments at the October 29, 2009, study meeting Ocean Isle Beach Mayor Debbie Smith ended by urging everyone to "keep an open mind."<sup>18</sup> Given the complicated

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<sup>13</sup> Catherine Kozak, *Targeted Sandbags in N.C. Can Stay Until 2010*, THE VIRGINIAN-PILOT ONLINE, Aug. 30, 2009, available at <http://hamptonroads.com/2009/08/targeted-sandbags-nc-can-stay-until-2010>.

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

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

<sup>16</sup> *Id.*

<sup>17</sup> CRC Terminal Groin Study Public Comments Received, <http://dcm2.enr.state.nc.us/CRC/tgs/public%20comments.pdf> (last visited Dec. 30, 2009).

<sup>18</sup> Gareth McGrath, *Rushed Terminal Groin Study Already Questioned*, STAR NEWS ONLINE, Oct., 30, 2009, available at

issues at odds between coastal property preservation and environmental stewardship, the moratorium stalling tactic was likely the best short-term option until a more stable solution can be found.

## II. Terminal Groin Study

The second portion of Session Law 2009-479 directs the Commission to look at a permanent erosion control measure that might be implemented as an alternative to sandbags strewn up and down the coast. The terminal groin study section comes in response to efforts by a group of coastal North Carolina legislators to pass Senate Bill 832, backed by local community leaders and a coalition of beach property owners, allowing limited terminal groin construction as an exception to the long-standing ban on coastal hard structures.<sup>19</sup> What some call the “New Jerseyization”<sup>20</sup> of the North Carolina coastline has been stalled for at least one more year with the passage of Session Law 2009-479, evincing a small victory for opponents of coastal hard structures.<sup>21</sup> Ultimately, though, the results of the study committee will weigh heavily on whether Senate Bill 832 gets taken up by the House during the upcoming 2010 short session.

For the purposes of the study, the steering committee has chosen to define a terminal groin as a “groin, often at the end of a littoral cell or at the up-drift side of an inlet, intended to

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<http://www.starnewsonline.com/article/20091030/ARTICLES/910309952/1015/NEWS01?Title=Rushed-terminal-groin-study-already-questioned>.

<sup>19</sup> S.B. 832, 2009 Gen. Assem., 148<sup>th</sup> Sess. (N.C. 2009).

<sup>20</sup> New Jerseyization is a popular expression used to describe the negative effects that may follow the use of coastal hard structures. The term encompasses both a loss of natural beauty and the non-aesthetic side effects that can occur with the misuse of coastal hard structures. New Jersey has extensively used coastal hard structures causing a saw tooth pattern along parts of the coast as sand builds up on one side of a structure and is washed away from the opposite side. Critics have decried New Jersey’s coastal policies as stemming coastal erosion at the price of loosing the natural beach. Orrin H. Pilkey, James B. Duke Professor Emeritus of Geology at the Nicholas School of the Environment at Duke University, is credited with first using the term during the 1970s.

<sup>21</sup> Gareth McGrath, *Coastal Regulators to Study Terminal Groins*, STAR NEWS ONLINE, Aug., 11, 2009, available at <http://www.starnewsonline.com/article/20090811/articles/908119959?Title=Coastal-regulators-to-study-terminal-groins>.

prevent sediment passage into the channel beyond.”<sup>22</sup> This definition for a terminal groin has some critics frustrated; in fact, the use of the term terminal groin raises some protestation. Dr. Orrin H. Pilkey of Duke University’s Nicholas School of the Environment contends that terminal groin is a misleading name for what is actually a jetty.<sup>23</sup>

At the project kickoff meeting held Sept. 15, 2009, in New Bern, North Carolina, a representative of Moffatt & Nichol, the marine engineering firm hired to conduct the technical aspects of the study, outlined the firm’s working view of the differences between jetties, groins, and terminal groins. Jetties on open seacoasts or at the mouths of tidal inlets help deepen and stabilize a channel by preventing shoaling of a channel by littoral materials; the most common function of a jetty is as a protection for navigation channels.<sup>24</sup> A groin is a narrow hardened structure extending perpendicular from the shoreline built to reduce longshore currents; the undesired side effect of a groin is often erosion further down the beach that creates a saw tooth coastline.<sup>25</sup> In contrast to a regular groin, a terminal groin is placed at the end of a beach or mouth of an inlet to retain sand on the coast and prevent it passing into the channel beyond.<sup>26</sup>

Session Law 2009-479 explicitly directs the Commission to report on several considerations that can be summarized as follows:

- 1) Conduct a scientific review using data from North Carolina and other states of the physical and environmental impact of terminal groins.<sup>27</sup>

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<sup>22</sup> John Martin, Coastal/Hydraulic Engineer, Moffatt & Nichol, Slideshow Presentation at the Terminal Groin Study Project Kickoff Meeting (Sept. 15, 2009), *available at* <http://dcm2.enr.state.nc.us/CRC/tgs/Terminal%20Groin%20Kickoff%20Meeting%20presentation.pdf>.

<sup>23</sup> Orrin H. Pilkey, Op-Ed., *Caving In Our Coast*, NEWS & OBSERVER ONLINE, Sept. 22, 2009, *available at* [http://www.newsobserver.com/opinion/columnists\\_blogs/story/91532.html](http://www.newsobserver.com/opinion/columnists_blogs/story/91532.html).

<sup>24</sup> Martin, *supra* note 22.

<sup>25</sup> *Id.*

<sup>26</sup> *Id.*

<sup>27</sup> Address Erosion Control Issues, 2009 N.C. Sess. Laws 479, §2(b)(1), (2).

- 2) Determine best practices in engineering and construction of terminal groins that will minimize impacts on adjacent shorelines.<sup>28</sup>
- 3) Characterize the current and future economic impact of erosion along the North Carolina coast under current practices and project the construction and maintenance costs of terminal groins.<sup>29</sup> And,
- 4) Determine what types of areas would be best served by terminal groin construction.<sup>30</sup>

The lead contractor on the project, Moffatt & Nichols, has divided the study into eight specific tasks in order to meet the mandated objectives and draft the final report by the stated deadline.<sup>31</sup> Public input will be solicited through three open hearings where interested individuals are welcome to present their viewpoints and share written material with the committee members.<sup>32</sup> These meetings are scheduled for Oct. 29, 2009; Jan. 13, 2010; and March 24, 2010.<sup>33</sup> The public is also welcome at other committee meetings though the time for public comment will be limited by necessity.<sup>34</sup> At the project kickoff the committee heard input from several local officials and concerned citizens both for and against terminal groins.<sup>35</sup>

Proponents of terminal groins make much of the differences between those structures and usual groins, which are not being considered by legislators as an environmentally conscious method of erosion control. Supporters contend that unlike usual groins, the proposed terminal

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<sup>28</sup> *Id.* at §2(b)(3).

<sup>29</sup> *Id.* at §2(b)(4), (5).

<sup>30</sup> *Id.* at §2(b)(6).

<sup>31</sup> Mike Shutak, *Terminal Groin Study Begins*, CAROLINA COAST ONLINE, Sept. 17, 2009, available at <http://www.topsailvoice.com/articles/2009/09/17/news-times/news/doc4ab10c16a036e721613673.txt>.

<sup>32</sup> CRC Terminal Groin Study Public Hearings, <http://dcm2.enr.state.nc.us/CRC/tgs/public%20hearings.html> (last visited December 30, 2009).

<sup>33</sup> *Id.*

<sup>34</sup> *Id.*

<sup>35</sup> CRC Terminal Groin Study, <http://dcm2.enr.state.nc.us/CRC/tgs/terminal%20groin%20study.html> (last visited Dec. 30, 2009).

groins will be low-slung structures that will allow sand to pass over them once they have retained a desired amount of sand at the end of North Carolina coastal islands and at the mouths of inlets.<sup>36</sup> Some opponents to terminal groins concede that they are by no means as harmful to the appearance of the coast as general groins, but contend that making an exception for one type of structure will open the floodgates for future exceptions in the face of more pressure from coastal property owners.<sup>37</sup>

Ironically, some of the key legislators behind the 2003 ban of all coastal hard structures are supporters of Senate Bill 832 allowing the installation of terminal groins along the coast.<sup>38</sup> A heated public debate erupted when Senate Bill 832 passed the Senate by a large margin well before the required crossover deadline, eventually resulting in the legislation that became Session Law 2009-479.<sup>39</sup> Opponents of hard structures on the North Carolina coast see the legislation as an indication that private property owners and commercial interests have triumphed over North Carolina's history of beach preservation.<sup>40</sup> The bill is more aptly described as a short-term compromise between advocates for no change to the existing ban and legislators who feel significant pressure from their constituents with valuable oceanfront property.<sup>41</sup>

### III. Conclusion

The state-sanctioned study will be completed and on the desk of legislators just in time for their review prior to the May 2010 short session. The study committee has set February 1, 2010, as a target date to produce their first draft report and a second draft is expected by March

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<sup>36</sup> Garreth McGrath, *Sand-trapping Groin Bill Stalled in N.C. House*, STAR NEWS ONLINE, July 21, 2009, available at <http://www.starnewsonline.com/article/20090721/articles/907219975?Title=Sand-trapping-groin-bill-stalled-in-N-C-House>.

<sup>37</sup> *Id.*

<sup>38</sup> Pilkey, *supra* note 23.

<sup>39</sup> Jim Leutze, *Future of NC Coast*, RALEIGH METRO MAGAZINE, May 2009, available at <http://www.metronc.com/article/?id=1891>.

<sup>40</sup> *Id.*

<sup>41</sup> McGrath, *supra* note 18.

1, 2010; public input is welcome on these draft documents through the final public hearing scheduled for March 25, 2010.<sup>42</sup> It is too early to judge which direction the committee will lean, but over the next four months a better picture of the future of terminal groins and, indeed, the future of coastal erosion control in North Carolina will emerge. While Session Law 2009-479 makes no lasting changes to environmental policy in the state, the results of the terminal groin study and the sunset on the sandbag removal moratorium will force legislators to make important choices between environmental concerns and coastal property preservation. Now is the time for interested parties on both sides of the debate to voice their concerns while the tides of policy are still changing.

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<sup>42</sup> CRC Terminal Groin Study Meetings, <http://dcm2.enr.state.nc.us/CRC/tgs/TG%20study%20meetings.html> (last visited Jan. 3, 2010).