

BLUE RIBBON COMMITTEE ON
Shoreline Management
FINAL REPORT

Recommendations for improved beachfront management in South Carolina

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February 5, 2013

Mr. Allen Amsler
Chairman of the Board
S.C. Department of Health and Environmental Control
2600 Bull Street
Columbia, SC 29201

Dear Chairman Amsler:

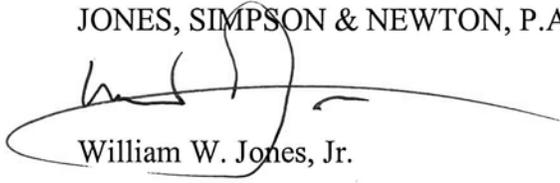
On behalf of the members of the Blue Ribbon Committee, I am pleased to submit the attached final report for your review and consideration. Entitled *Blue Ribbon Committee on Shoreline Management Final Report, Recommendations for Improved Beachfront Management in South Carolina*, the report outlines sixteen regulatory and policy recommendations that the members of the committee believe to be thoughtful, reasonable and necessary to ensure the long-term health and sustainability of our coastal resources and the communities that are dependent on them.

As you are aware, the Blue Ribbon Committee appointed by the DHEC Board in October 2010 was purposefully comprised of representative stakeholders from key constituencies of our diverse coastal community. Despite varying perspectives, the members committed to thoughtfully deliberate state laws, regulations and policies, consider scientific and technical information and share their own personal and professional experiences. As the Chairman of the committee, I am pleased that the result of our process is a set of recommendations that garnered the support of strong voting majorities, and in many cases, unanimous support of voting members.

Given the significance of episodic and persistent challenges that threaten our beaches and beachfront communities, the Blue Ribbon Committee strongly encourages the DHEC Board to adopt, promulgate and implement these recommendations as swiftly as possible.

Thank you for the opportunity to serve this critically important charge.

JONES, SIMPSON & NEWTON, P.A.



William W. Jones, Jr.

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Acknowledgements

The Blue Ribbon Committee process would not have been possible without the dedication of time and energy from the committee members, guest presenters and DHEC staff. DHEC recognizes and sincerely appreciates the effort required to organize, attend and document all of the meetings held in two cities over the course of almost two years.

DHEC would also like to thank the members of the Shoreline Change Advisory Committee, whose work served as a valuable foundation on which the Blue Ribbon Committee was able to construct specific recommendations for the improved management of our shared coastal resources.

Guest Presenters: Leslie Jones, South Carolina Department of Insurance
 Berry Williams, National Flood Insurance Program and Community Rating System

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**As of the publication of this report, Braxton Davis serves as the Director of the North Carolina Division of Coastal Management Program and Matt Slagel serves as a Shoreline Management Specialist with the North Carolina Division of Coastal Management.*

Introduction

Over twenty years ago, the former South Carolina Coastal Council (now the Department of Health and Environmental Control (DHEC), Ocean and Coastal Resource Management) recognized an emerging crisis situation involving our state's beaches and convened a Blue Ribbon Panel to address a myriad of interrelated natural and human-induced challenges. Citing chronic erosion, gradual sea level rise, increased shoreline development and population growth, and a lack of comprehensive beachfront planning and management, the panel developed recommendations that provided guidance to state regulators and legislators in developing improved state beach management policies. Most of their recommendations were adopted into the landmark law commonly referred to as the Beachfront Management Act of 1988 (S.C. Code Ann. § 48-39-250 et seq.)

Since that time, the planning and regulatory efforts outlined in the Beachfront Management Act have attempted to balance economic development and private property rights with public access and conservation of fragile public trust resources. In many respects, South Carolina's coastal management program has made great strides towards this effort and our shared coastal heritage has proved to be resilient. However, the challenges addressed by the original panel are persistent and new challenges have begun to emerge along the beachfront in addition to the complex coastal estuarine system.

In 2007, DHEC initiated a Shoreline Change Initiative to organize existing data collection and research efforts, identify additional research needs, and formulate policy options to guide the management of South Carolina's beachfront and estuarine shorelines. DHEC established an external Shoreline Change Advisory Committee (SCAC), comprised of representatives from various stakeholder groups, to discuss the past two decades of experiences under the S.C. Beachfront Management Act and to identify potential research and policy needs related to beachfront and estuarine shoreline management for the coming decades. The SCAC released a final report, *Adapting to Shoreline Change: A Foundation for Improved Management and Planning in South Carolina*, in April 2010.

Based on the findings and recommendations of the SCAC, the DHEC Board appointed a new Blue Ribbon Committee on Shoreline Management in October 2010 and charged the committee with developing specific statutory and regulatory recommendations to help guide the stewardship of South Carolina's beachfront and estuarine shorelines. Comprised of representative stakeholders, elected officials and leading legal and academic experts, the Blue Ribbon Committee has worked over the past two years to evaluate current conditions, discuss various experiences and attempt to resolve divergent perspectives in order to provide the DHEC Board with the following recommendations for its consideration.

In January 2013, the Blue Ribbon Committee voted unanimously to present its recommendations for enhanced beachfront management to the DHEC Board, acknowledging that it has not addressed matters related to estuarine shoreline management, as originally charged. Despite their similarities in management issues and challenges, the Blue Ribbon Committee believes that beachfront management and estuarine shoreline management are topics each deserving of its own deliberative process. Therefore, the Blue Ribbon Committee strongly encourages the DHEC Board to appoint and charge a committee of representative stakeholders to thoroughly examine challenges associated with estuarine shoreline management and develop specific recommendations to improve and enhance the implementation of pertinent laws, regulations and policies.

The recommendations contained in this report represent the majority opinion as expressed by committee votes. In many cases, the recommendations are supported unanimously or with a strong voting majority. Other recommendations remain more controversial, but are nevertheless supported by the majority of committee members. Recognizing the critical economic importance, natural beauty and fragility of our beaches and coastal areas, the members of the Blue Ribbon Committee strongly encourage the swift adoption and implementation of these recommendations to ensure that South Carolina's coast remains a vibrant place to live, work and enjoy for the citizens and visitors of our state, now and as a legacy for future generations.

Blue Ribbon Committee Members

Mr. William W. Jones, Jr., Chairman

Jones, Simpson and Newton, P.A.

William L. Otis, Jr., Vice-Chairman

Mayor, Town of Pawleys Island

Mr. R. Mac Burdette

Patriots Point Naval and Maritime Museum

Senator Paul G. Campbell, Jr.

S.C. Senate District 44

Senator Raymond E. Cleary, III

S.C. Senate District 34

Mr. Josh Eagle

University of South Carolina School of Law

Representative Tracy R. Edge

S.C. House of Representatives District 104

Ms. Elizabeth M. Hagood

Lowcountry Open Land Trust

Representative William G. Herbkersman

S.C. House of Representatives District 118

Mr. Nick Kremydas

S.C. Association of Realtors

Mr. Thomas D. Peebles

Fmr. Mayor, Town of Hilton Head Island

Mr. Robert Perry

S.C. Department of Natural Resources

Senator Clementa C. Pinckney

S.C. Senate District 45

Mr. Terry E. Richardson, Jr.

Richardson, Patrick, Westbrook & Brickman

Joseph P. Riley, Jr.

Mayor, City of Charleston

Robert S. Young, Ph.D.

Western Carolina University

Topic: Policy of Beachfront Retreat

Background and Issues:

The S.C. Code of Laws §48-39-250 et seq. states: “Erosion is a natural process which becomes a significant problem for man only when structures are erected in close proximity to the beach/dune system. It is in both the public and private interests to afford the beach/dune system space to accrete and erode in its natural cycle. This space can be provided only by discouraging new construction in close proximity to the beach/dune system and encouraging those who have erected structures too close to the system to retreat from it...A forty-year policy of retreat from the shoreline is established.”

Despite this finding, there has not been a broad-scale active retreat from the beach/dune system since the enactment of the Beachfront Management Act in 1988. According to findings of the Shoreline Change Advisory Committee (SCAC) there are numerous reasons for the limited implementation of the retreat policy, including:

- Many beachfront lots are too small to relocate structures farther landward within the same lot, as required if structural damage occurs that is greater than 66% of appraised value;
- Relocation to a nearby lot might not be possible because much of the coast is now heavily urbanized and available land for relocation near the ocean is scarce or prohibitively expensive;
- There are few financial assistance programs or incentives to relocate from beachfront lots;
- Existing federal, state, and local policies to implement retreat are limited – building is not only possible in the state’s setback area, but also seaward of the DHEC-OCRM baseline;
- There have been relatively few coastal storms or large-scale erosion events that have required emergency action on a broad scale since Hurricane Hugo (1989); and
- Renourishment has kept pace with erosion in most areas.

Since the promulgation of the Beachfront Management Act, South Carolina’s coast has experienced a rapid increase in population and development. Although some of South Carolina’s beaches experience periods of accretion, it has been documented that most beaches are erosional over the long-term. Despite a stated policy of retreat, the goal of the policy is not clearly defined and remains controversial. The existing policy does not establish clear mechanisms to encourage or require active relocation or removal of structures, nor does it establish policies that prevent new development or redevelopment in any areas within the beach/dune system or seaward of the baseline.

Discussion: A significant portion of developed oceanfront property lays within close proximity to the Atlantic Ocean. It was asserted to the committee that development represents significant financial investment and landward movement of existing structures is often not economically feasible for private property owners. Similarly, some municipal officials and committee members cited logistical concerns with retreat due to property boundaries or physical features, such as public infrastructure or protected resources. Alternative terms, such as a policy of beachfront stabilization, were also considered, though

ultimately rejected by the committee. However, a majority of committee members agree that the importance of protecting the beach and sand dune system for natural habitat, storm buffer, recreation and tourism remains paramount and that state policy should not implicitly endorse hard erosion control structures or suggest that renourishment will continue indefinitely.

The committee considered options to best address the ambiguity of the retreat policy, including a debate regarding the definition and interpretation of the word “retreat” itself. Many committee members believe that the concern over retreat was in the implementation of the policy, not in the definition of the word. Ultimately, the committee recommends that the policy of the state should emphasize the preservation of the beach and beach/dune system rather than promote a policy of retreat that is vague and often impracticable or unattainable. For the purpose of this recommendation, the term “preservation” includes the implementation of coastal management techniques such as beach nourishment, the landward movement and/or removal of habitable structures whenever necessary and feasible, the conservation of undeveloped shorelines and sand dune creation and stabilization using sand fencing and native vegetation.

A minority of dissenting committee members raised concerns with the language of the proposed recommendation. Specifically, the minority cited the frequent occurrence of the term “retreat” throughout statute and regulation and cautioned that a wholesale replacement or removal of the term would create confusion and unintended management outcomes. Alternatively, the minority suggests that the policy of preservation serve as the primary overarching policy statement of S.C. Code of Laws §48-39-260 and that the term “retreat” should remain elsewhere in statute and regulation as a management policy option to achieve the goals of the Beachfront Management Act.

The minority also expressed concern about the inclusion of the undefined term “beachfront” in addition to the statutorily-defined definition of beach/dune system. The minority cautions that the term “beachfront” may be arbitrarily defined to include infrastructure and habitable development, and that applying a broad policy of preservation to include these features would undermine efforts to relocate and guide development away from unstable beaches and preserve naturally occurring features, such as primary and secondary dune fields and native vegetation. Should the term “beachfront” be retained in the formal adoption of this recommendation, the minority strongly suggests that the term be defined to include only those naturally-occurring features found outside of the defined beach/dune system, such as secondary dune fields.

Recommendation 1: Replace language regarding the policy of retreat with the following: The policy of the state of South Carolina is the preservation of its coastal beachfront and beach/dune system.

Affected Statute: S.C. Code of Laws §48-39-250(6), 48-39-260(2), 48-39-280(A), 48-39-280(A)(2), 48-39-280(B);48-39-350(A)(9)

Affected Regulation: S.C. Code of Regulations 30-1.C(4), 30-1.C(5)(c), 30-1.C(6), 30-1.D(4)(b), 30-11.D(1)-(2), 30-21(1), 30-21(3)



Topic: State Beachfront Jurisdiction

Background and Issues:

Jurisdictional baselines and setback lines were established through the Beachfront Management Act in 1988 to regulate the new construction, repair, or reconstruction of buildings and erosion control structures along the state's ocean shorelines. Building within the jurisdictional "setback area" is allowed, but is subject to specific regulations contained in S.C. Code of Regulations 30-13 and 30-21. Pursuant to S.C. Code Ann. §48-39-280(C), DHEC is required to perform a periodic review of the location of the baseline every 8-10 years. This process allows for the movement of the baseline either landward or seaward under certain physical circumstances.

The baseline is established at the crest of the primary oceanfront sand dune in standard zones of the beachfront and at the most landward point of erosion over the last 40 years in unstabilized inlet zones. The primary dune is defined as at least 3 feet in height and 500 feet in length (S.C. Code Ann. Regs. 30-1.D (43)). Movement of the baseline can occur based on long-term erosion or accretion rates, survey data and historical shoreline positions (S.C. Code Ann. §48-39-280(C)). Landward movement of the baseline may occur due to chronic erosion, while seaward movement may occur due to long-term accretion. The baseline can also move seaward as the result of a successful petition from an individual property owner following a renourishment project. All petitions for baseline relocation must be endorsed by the local government and may be filed at any time.

The jurisdictional setback line is established landward of the baseline at a distance of forty times the average annual long-term erosion rate and not less than twenty feet from the baseline. New construction within the setback area is limited to a maximum of 5,000 square feet of heated space while existing structures located wholly or partially within the setback area are allowed to be rebuilt to their current dimensions if destroyed. The construction of new erosion control devices, defined as seawalls, revetments and bulkheads, is prohibited within the setback area. Maintenance of existing erosion control devices is allowed, however the repair and reconstruction of existing erosion control devices is restricted (S.C. Code Ann. §48-39-290 (B)). Research and field verification substantiate the observation that oceanfront erosion control devices exacerbate erosion rates and often result in the loss of dry sand beach for recreational use and natural habitat.

Seaward movement of the baseline has resulted in the encroachment of development into sensitive, unstable and hazard-prone areas. In addition, the minimum setback distance of twenty feet results in a narrow jurisdictional area, allowing new seawalls and new buildings much larger than 5,000 square feet to be constructed just outside of the state's beachfront jurisdiction. Therefore, any new seawalls that are constructed beyond the setback line are consequently "grandfathered in" to the state's jurisdiction as the shoreline migrates landward and the setback line is subsequently altered in future revision cycles. Currently, almost 60% of the state's developed shoreline has the minimum setback distance of twenty feet.

Ecologically valuable beach and dune features are often located outside of the state’s jurisdiction of the beach/dune system. While mitigation for dune damage is required under S.C. Code of Regulations 30-11.D(6), there is no state prohibition on dune destruction other than for the primary dune. Large secondary dunes are particularly vulnerable to development when a new, sometimes temporary primary dune forms at a seaward location.

Discussion: DHEC staff provided information regarding current law and regulation and explained that state beachfront jurisdictional lines may move either seaward or landward, depending on long-term erosion rates and changes to the shoreline. Periods of accretion in some areas over recent decades have resulted in the seaward movement of jurisdictional lines, bringing development closer to dynamic shorelines. Although several municipalities, including the Town of Pawleys Island and the Town of Hilton Head Island, impose oceanfront development restrictions that surpass those of the state, the majority of committee members agree that there is a need for a consistent and more conservative statewide policy that effectively “holds the line” on development along the oceanfront.

In an effort to provide increased statewide protection, the committee recommends that the state prohibit any future seaward movement of the baseline. The public benefit and rights of all state citizens, along with the economic interest of individual property owners, were carefully considered when establishing this recommendation. However, some committee members were concerned that restricting the movement of jurisdictional lines seaward would deprive private property owners of certain rights and would amount to a regulatory taking. Based on legal guidance provided by committee members, the majority of committee members agree that there can be no “investment-backed expectation” of a property owner that their purchased beachfront property will accrete and provide additional land for construction or private use. It was also noted that most shorelines that have natural accretion are dynamic and are more likely to be at risk for future erosion, making building in these areas risky. The majority of committee members agree that beach accretion, whether natural or man-made, should provide a buffer to erosion and coastal hazards, rather than stimulate further development. The committee concluded that current regulatory provisions allowing reconstruction of existing habitable structures, coupled with the preservation of special permit allowances for building seaward of the baseline would provide regulatory remedy for affected property owners.

Recommendation 2: Subject to S.C. Code of Law 48-39-290(D), the baseline established under the S.C. Beachfront Management Act should not move seaward from its position on June 14, 2011.

Affected Statute: S.C. Code of Laws Ann. §48-39-280(A)-(D)

Affected Regulation: S.C. Code of Regulations 30-14.G, 30-14.E, 30-1.D (4)



Discussion: DHEC explained to the committee that the minimum setback distance is calculated based on the average historical shoreline position and erosion rates, and does not reflect episodic shoreline change due to storm events or cyclical patterns of intense accretion followed by correspondingly intense erosion. The committee considered the potential benefits and consequences of increasing the setback distance from the current minimum of 20 feet to either 50 feet or 100 feet. The committee also considered setback restrictions imposed in other coastal states, many of which enforce a “no-build zone” much farther landward than 20 feet. The committee recognized that even with an expanded minimum setback area, South Carolina’s setback area would continue to be less restrictive than in other coastal states. DHEC informed the committee that increasing the minimum setback distance from 20 feet to 50 feet would affect approximately 264 additional habitable structures.

Field assessments by DHEC suggest an increasing trend of property owners constructing erosion control devices immediately outside of current state jurisdiction in anticipation of eroding shorelines. Through its discussion, the committee determined that an increased setback distance would limit the size of new construction on vacant lots in close proximity to the ocean and would also prohibit the construction of new seawalls within a greater area of state jurisdiction.

The committee also considered what effect an increased state jurisdictional setback area would have on private insurance premiums and discount credits available through the National Flood Insurance’s Community Ratings System (CRS) program. According to the National Flood Insurance Program (NFIP):

Community Rating System (CRS) is a voluntary incentive program that recognizes and encourages community floodplain management activities that exceed the minimum NFIP requirements. As a result, flood insurance premium rates are discounted to reflect the reduced flood risk resulting from the community actions meeting the three goals of the CRS: reducing flood damage to insurable property; strengthening and supporting the insurance aspects of the NFIP, and encouraging a comprehensive approach to floodplain management.

Information provided by the Federal Emergency Management Agency (FEMA) and the S.C. Department of Insurance indicates that insurance rates are influenced by a structure’s proximity to water, not state jurisdictional lines, and that an expanded minimum setback area may provide community discounts under the CRS program. Regardless of insurance discount incentives, there is general consensus among the majority of committee members that living on the beachfront has associated risks, and even a potential rise in private insurance rates should not outweigh the need to increase the setback area if it significantly benefits the public interest. Increasing the statewide minimum setback from 20 feet to 50 feet is supported by a majority of committee members. However the motion considered did not garner a two-thirds majority vote and is therefore not a recommendation of this committee.

Motion Considered: The minimum setback distance should be increased to 50 feet from the baseline for all beach and inlet zones.

Affected Statute: S.C. Code of Laws Ann. §48-39-280(B)

Affected Regulation: S.C. Code of Regulations 30-1.D (46)



Discussion: DHEC explained to the committee that habitable structures constructed within the setback area are limited in size to 5000 square feet of heated space. However, there is a discrepancy between statute and regulation regarding this size limitation. The statute (S.C. Code Ann. §48-39-290(B)(1)(a)(i)) states, in part:

“If part of a new habitable structure is constructed seaward of the setback line, the owner must certify in writing to the department that the construction meets the following requirements... The habitable structure is no larger than five thousand square feet of heated space.”

By contrast, regulation (S.C. Code Ann. Regs. 30-13.B(2)) states:

“That portion(s) of the habitable structure seaward of the setback line is no larger than five thousand square feet of heated space.”

DHEC advised the committee that potential jurisdictional issues have been identified regarding the exertion of state authority over private development outside of the state’s jurisdictional setback area. Further, DHEC informed the committee that staff has applied the regulation in permitting decisions, thus limiting DHEC’s regulatory review to only the portion of a habitable structure that lies within the setback area, rather than the structure in its entirety. The Blue Ribbon Committee discussed the original intent of the Beachfront Management Act and state jurisdictional setback area to limit large structures in close proximity to unstable beaches. Ultimately, the majority of the committee members agree that the regulation should be amended to conform to the intent of the statute. This change would require DHEC to review permit applications for structures partially or entirely within the state jurisdictional setback area and limit the entire structure size to no more than 5,000 square feet of heated space.

Recommendation 3: Amend the regulation to conform with the intention of the statute to state: “If part of a new habitable structure is constructed seaward of the setback line, the owner must certify in writing to the department that the construction meets the following requirements... The habitable structure is no larger than five thousand square feet of heated space.”

Affected Regulation: S.C. Code Ann. Regs. 30-13.B(2)



Topic: Special Permits and Activities Seaward of the Baseline

Background and Issues:

The special permit provision of the Beachfront Management Act allows beachfront property owners to seek authorization for the construction of habitable structures seaward of the baseline (S.C. Code Ann. §48-39-290 (D)). Special permits for house construction seaward of the baseline may be issued in situations where without such a permit, the property owner would have no reasonable use of the property. However, a house built under a special permit cannot be constructed on a primary dune or on the active beach. Further, if the beach erodes to the extent that a house authorized by special permit becomes situated on the active beach, it must be removed at the owner's expense.

The majority of special permit requests have been granted by DHEC. Of the 58 special permits granted, 42 structures have been erected to date. Although special permits contain conditions that pertain to the structure, there is insufficient statutory or regulatory language to restrict development of property in highly unstable and hazardous areas. To date, DHEC has not required the removal of a habitable structure authorized under special permit from the active beach.

The Beachfront Management Act also currently provides for certain state permitting exemptions for activities seaward of the baseline (S.C. Code Ann. §48-39-290 (A)). Activities covered under this exemption include the construction of wooden walkways no larger in width than six feet, public fishing piers, golf courses, normal landscaping, structures permitted by special permit, the reconstruction of pools landward of an existing, functional erosion control structure and groins.

Discussion: According to DHEC, the instability of many developed beach areas has required human intervention to protect habitable structures and infrastructure, primarily through minor and major renourishment projects and the implementation of Emergency Orders. Although beach renourishment may provide a viable temporary option for restoring the beach, it is not a long-term or permanent solution. Ongoing maintenance requires significant financial commitment and access to suitable sand sources. The committee concluded that DHEC should consider historical beach nourishment in determining the vulnerability of a property during the evaluation of a special permit request. However, the committee agreed that this recommendation is not intended as an absolute prohibition on all new construction seaward of the baseline on beaches that have been renourished. The majority of the committee believes that the continued availability of the special permit provision provides adequate remedy to counter assertions of total regulatory taking.

Recommendation 4: The Department shall consider whether a proposed structure would be constructed on renourished beach when evaluating a request for a special permit to construct a habitable structure seaward of the baseline.

Affected Regulation: S.C. Code of Regulations 30-15.F(6)(a)



Discussion: DHEC explained to the committee that under current law, all special permits issued for habitable structures contain a condition that requires the structure to be removed if it becomes situated on the active beach due to erosion. Additional special conditions may also be applied and enforced by DHEC on a case by case basis. Although certain real estate disclosures, including the location of state jurisdictional lines on the property and annual erosion rates are currently required under the Beachfront Management Act, the majority of committee members agree that long-term conditions placed on structures allowed under special permit should be required to be documented permanently on the deed to the property. This requirement will adequately inform potential and subsequent owners of regulatory restrictions placed on the property in addition to the physical characteristics of the adjacent beach.

Recommendation 5: The Department shall require special permit conditions be documented on the deed of conveyance.

Affected Statute: S.C. Code of Laws §48-39-290(D) and §48-39-330

Affected Regulation: S.C. Code of Regulations 30-15.F



Discussion: According to current regulation (S.C. Code Ann. Regs. 30-13.Q), “Golf Courses are allowed seaward of the baseline because they can adjust to a changing shoreline more readily than other types of land uses. Sandscraping or sandbagging is not allowed as protection for golf courses.” DHEC informed the committee that events in recent years have exposed vulnerabilities in this regulation, including the risk that episodic and chronic erosion presents to irrigation lines, cart paths and associated golf course infrastructure. The presence of infrastructure and landscaped course features in unstable areas has resulted in a number of challenging regulatory situations in which golf course managers have sought regulatory relief outside of the provisions allowed by regulation.

As stated elsewhere in this report, the committee recognizes the financial investment and economic value of South Carolina’s coastal golf courses, particularly those within proximity to the Atlantic Ocean. However, the committee is unanimous in its recommendation to restrict the construction and expansion of oceanfront golf courses seaward of the baseline. This recommendation is intended to prohibit the installation of infrastructure and landscaped course features in unstable areas and to prevent the seaward expansion of golf courses in the event of natural or manmade shoreline accretion. As stated in the recommendation, existing golf courses may be maintained in their existing configurations and may be repaired and/or replaced to their preexisting configurations in the event of a major storm.

Recommendation 6: Prohibit the construction of new golf courses and the modification or expansion of existing golf courses seaward of the baseline. Normal repair, maintenance and replacement to existing conditions will be allowed.

Affected Statute: S.C. Code of Laws §48-39-290(A)

Affected Regulation: S.C. Code of Regulations 30-15.Q



Topic: Emergency Orders and Sandbags

Background and Issues:

The term “emergency” is defined in the S.C. Coastal Tidelands and Wetlands Act as “any unusual incident resulting from natural or unnatural causes which endanger the health, safety, or resources of the residents of the state, including damages or erosion to any beach or shore resulting from a hurricane, storm, or other such violent disturbance” (S.C. Code Ann. §48-39-10(U)).

Emergency situations, either prior to or after a storm event often prompt local governments to issue Emergency Orders, which allow property owners to construct temporary barriers against wave uprush through sandbagging, sand scraping, or minor renourishment (S.C. Code Ann. Regs. 30-15.H). Although Emergency Orders may be issued by local governments, DHEC must be notified within 72 hours of any issuance that would normally require a permit. State regulations require that the notification indicates the nature of the emergency, the substance of the order, the time the order will be issued, the name of the local official executing the order and the authority under which that person is acting, the location of the activity, and an estimate of when the order will be withdrawn (S.C. Code Ann. Regs. 30-5.B). Current regulations specify that sandbags must be biodegradable, a maximum size of five gallons (0.66 cubic feet) each, filled with beach compatible sand, and stacked at an angle not steeper than 45 degrees (S.C. Code Ann. Regs. 30-15.H(1)). The owners of property or properties being protected by sandbags are responsible for the maintenance of the bags to ensure that they remain in place and in good repair, and they are also responsible for the complete removal of the bags when so ordered by DHEC (S.C. Code Ann. Regs. 30-15.H(1)(f)).

Since 1985, 116 Emergency Orders have been issued by local governments or by the state along the beachfront of South Carolina. The Emergency Orders specified one or a combination of the following temporary erosion mitigation techniques: sandbags, sand scraping, or minor renourishment from an upland source. Edisto Beach has had 31 Emergency Orders, but many of these were issued for individual parcels, whereas Emergency Orders for other beaches were issued for the entire barrier island or municipality. Coast wide, nine Emergency Orders were issued in the 1980s, 43 were issued in the 1990s, and 64 have been issued since 2000. According to this data, the number of issued Emergency Orders has steadily increased and may continue to do so if storms become more frequent and funding for renourishment is reduced or becomes more intermittent.

In evaluating the existing statute and regulation, the SCAC noted that serious deficiencies exist, specifically pertaining to when it is appropriate to issue an Emergency Order, what design criteria should be applied to temporary structures and what administrative enforcement procedures should be used when the criteria of an issued Emergency Order are not met. Moreover, the SCAC asserted that there are several reasons to restrict the use of sandbags for emergency erosion control, including:

- Increased loss of access, recreational beach, and habitat over time. Even a well designed sandbag revetment has the same potential to cause increased erosion at the site and along adjacent beach property as would a rock revetment or wooden bulkhead, the new construction of which are prohibited under current regulation;
- Debris at the site and along both adjacent and far-off shorelines from structural failure;
- A lack of incentives to fully consider and devise a long-term erosion control plan due to practically unlimited sandbag use.

The SCAC provided the general recommendation that the use of sandbags and other means of erosion control should be subject to state regulations that offer specific, reasonable and temporary solutions for emergency situations while minimizing the negative impacts on public safety, beach access and the health of the beach dune system. More specifically, the SCAC outlined a recommended administrative process for the issuance of Emergency Orders for sandbags:

Emergency sandbag provisions should be subject to the following process:

- A. Following an emergency declaration by the Governor or Legislature, DHEC-OCRM may issue Emergency Orders for those communities or petitioners within the area specifically included under the declaration. The Emergency Order should establish allowable emergency measures, including the use of temporary sandbags.
- B. Property owners acting under a DHEC-OCRM Emergency Order should be required to post a bond for the eventual removal of all sandbags.
- C. Within 90 days of the issuance of a DHEC-OCRM Emergency Order, the petitioner must also provide DHEC-OCRM with an acceptable plan (1-2 pages may suffice), in writing, for:
 - a. the removal or relocation of the threatened structure; and/or
 - b. evidence that their community has a feasible and financially viable renourishment plan for the affected area that is consistent with their approved Local Comprehensive Beachfront Management Plan.
- D. If the petitioner has not provided DHEC-OCRM with an acceptable plan for removal, relocation, or renourishment within 90 days of the issuance of an Emergency Order, then the Emergency Order should be deemed to have expired at the end of the 90th day, and the sandbags should be removed at the property owners' expense.
- E. If the petitioner's plan is approved and calls for renourishment, then a renourishment permit application should be submitted to DHEC-OCRM within 18 months of the issuance of the original Emergency Order.
 - a. If DHEC-OCRM approves the renourishment permit, then sandbags should be allowed to remain in place for up to 12 months after the permit is issued to allow sufficient time for the project to be completed, but must be removed at the time of renourishment or at the end of the 12 month period.

- b. If DHEC-OCRM denies the renourishment permit application, the sandbags should be removed within 90 days of the final agency decision (including all appeals), at the property owners' expense.
- F. If the petitioner's plan is approved and calls for removal or relocation of a threatened structure, this should occur within 18 months of the original Emergency Order issuance and all sandbags should be removed at that time at the property owners' expense.

Discussion: The process proposed by the SCAC was discussed and is unanimously supported by this committee because it provides procedural consistency and unambiguous guidance for the issuance, maintenance and removal of sandbags while also providing property owners with reasonable options for the protection of private property. As outlined by the proposed process, sandbags would be allowed to remain on the beach for a period of up to three years, provided that the property owner submits an acceptable plan for renourishment, and that the renourishment permit is approved by DHEC. An acceptable plan may include, but is not limited to, a signed proposal or outlined plan. Sandbags would remain for a shorter timeframe for plans that include the removal or relocation of the threatened structure. If plans are not developed for renourishment or removal or relocation of the threatened structure, the sandbags would remain on the beach for up to 90 days.

The committee discussed the potentially broad impacts to public trust resources and agreed that the authority to issue Emergency Orders for sandbags should be vested solely in the state. Compared to "soft" erosion intervention strategies, such as minor beach nourishment and sand scraping, sandbags have the potential to cause significant environmental harm and should only be used in the most serious shoreline emergencies. Sandbags act as a hard erosion control device that reinforces upland property while exacerbating erosion, degrading the accessibility of the public beach and impacting the nesting and foraging of threatened and endangered species. Sandbags are also often displaced and may wash out into the ocean and drift to neighboring beaches. The committee also agrees that the size and material of sandbags should be determined by DHEC to ensure effective temporary shoreline stabilization, mitigate adverse environmental impacts and allow the flexibility needed to address localized situations and employ new technologies.

The committee discussed that the removal of sandbags may either be done voluntarily by the property owner once a long-term solution has been implemented or through the exercise of administrative authority if compliance with the emergency order requirements is violated. The requirement of a sufficient financial bond to allow DHEC to remove sandbags in the event of non-compliance creates a strong incentive for long-term shoreline change planning, timely execution of the plan and an implicit preference for "soft" intervention strategies, if feasible. The committee also discussed and generally agreed that the bond requirement adequately negates the need for additional regulatory restrictions on the use of sandbags, such as limiting the number of times an emergency order for sandbags could be issued for an individual property.

Recommendation 7: Adopt the Shoreline Change Advisory Committee’s process for issuing Emergency Orders for sandbags to include sole issuance authority by the Department, bonds for sandbag removal, and discretion by the Department for determining size and material of sandbags.

Affected Statute: S.C. Code of Laws §48-39-130(D)(1)

Affected Regulation: S.C. Code of Regulations 30-5.A(1), 30-5.B, 30-9.B, 30-15.H



Discussion: The committee received information from DHEC that indicated that the current definition of “imminent danger” may potentially limit the time in which property owners, municipal governments and state coastal resource managers have to coordinate, issue Emergency Orders and effectively intervene to protect a habitable structure. Revising the definition of “imminent danger” would allow Emergency Orders to be issued when erosion is within 20 feet of a structure. According to DHEC, this would provide consistency with FEMA’s Community Ratings System and the State Insurance Program definition of “imminent danger”.

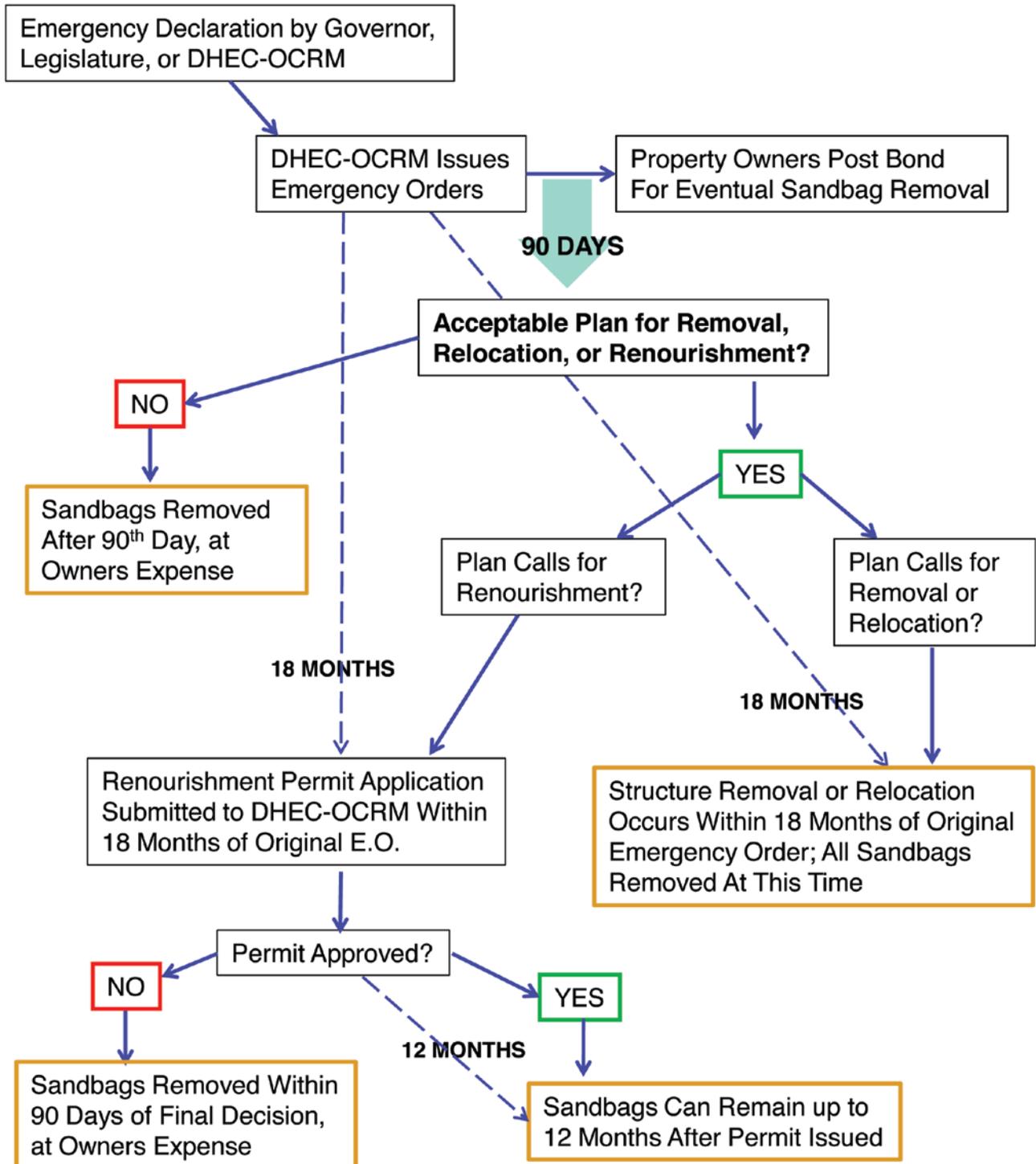
The committee discussed whether the physical measurement was a “trigger” for issuing an emergency order and reexamined the concern over long-term use of sandbags and of providing emergency order options to areas of chronic erosion. It was reiterated that unstable and chronically erosional areas, particularly along inlets, are more vulnerable to storm events and that it can be difficult to distinguish between an emergency and a predictable situation. The committee discussed whether relaxing the definition of “imminent danger” would encourage the use of “soft” solutions instead of sandbags. DHEC confirmed that regardless of the definition of “imminent danger”, sand bags authorized under an emergency order will continue to be required to be placed as close to the structure as possible, pursuant to existing regulation.

Recommendation 8: Modify the definition of “imminent danger” relating to the issuance of Emergency Orders from “ten feet” to “twenty feet”.

Affected Regulation: S.C. Code of Regulations 30-15.H



*Recommended Administrative Process for
Issuance of Emergency Orders for Sandbags
(Recommendation 7)*



Discussion: The majority of committee members believe that the existing definition of “emergency” is sufficient to provide DHEC and coastal municipalities with appropriate discretion to issue Emergency Orders that allow property owners to protect habitable structures. According to DHEC, the agency only issues Emergency Orders in the event of a named storm directly or indirectly impacting the coast. However, vulnerable areas, including highly erosional areas and along inlets, challenge the distinction between chronic conditions and episodic emergencies. “Soft” interventions, including minor beach nourishment and sand scraping, provide temporary regulatory relief to property owners of structures that become threatened during emergency and non-emergency events. The committee discussed the roles and responsibilities of coastal municipalities and agrees that it is appropriate to continue to vest coastal municipalities with the authority to issue Emergency Orders for minor beach nourishment and sand scraping when a structure is determined to be in imminent danger. To that end, the financial obligation for minor nourishment and sand scraping performed under Emergency Orders should be the responsibility of the individual property owner(s) who request the Emergency Orders and/or the coastal municipalities that issue them. However, in the event of a major emergency, the committee supports the state issuance of Emergency Orders for minor beach nourishment and sand scraping over broad areas in addition to the state providing funding assistance to protect threatened structures as necessary.

Recommendation 9: Retain existing provisions for Emergency Orders relating to minor renourishment and sand scraping (excluding sandbags), provided they meet the existing definition of “emergency” and activities are accomplished through private or local funding. In the event of an executive or state issued emergency order, state funding would not be precluded.

Affected Statute: S.C. Code of Laws §48-39-120(E)

Affected Regulation: S.C. Code of Regulations 30-15.H(2) and (3)



Discussion: In order to provide procedural consistency and limit the occurrence of Emergency Orders for sand bags, the committee discussed and agreed that the authority to issue Emergency Orders for sandbags should be solely vested in the state and that upland structures eligible for protection with sandbags must be more clearly defined. The committee agrees that regulations should preclude the protection of undeveloped property and non-habitable property improvements (i.e. gazebos, irrigation lines, decks, etc.) with sandbags while allowing for the use of sandbags to protect critical public infrastructure, including roads, water and sewer lines. The committee debated the term “critical public infrastructure”, and some committee members thought the specificity was unnecessary or unfair to private property owners. However, the majority of committee members agree that the language is necessary to reduce the frequency of sandbag use and cited the availability of alternative “soft” solutions for private property protection.

Recommendation 10: Clarify regulations so that Emergency Orders for sandbags shall be issued only by the Department and shall be limited to the protection of existing habitable structures and critical public infrastructure.

Affected Statute: S.C. Code of Laws §48-39-130 (D)(1)

Affected Regulation: S.C. Code of Regulations 30-15.H



Discussion: DHEC informed the committee that the S.C. Code of Regulations 30-13.Q states that, “Golf Courses are allowed seaward of the baseline because they can adjust to a changing shoreline more readily than other types of land uses. Sandscraping or sandbagging is not allowed as protection for golf courses.” Recognizing the major financial investment and economic importance of the state’s oceanfront golf courses, the committee agrees that regulatory remedies should be broadened to allow for adequate emergency protection using “soft” solutions, including minor renourishment and sandscraping from the inter-tidal zone as necessary to protect golf course infrastructure. This recommendation does not relieve golf course owners and operators of their responsibility to plan for chronic erosion by relocating infrastructure and/or applying for state and federal permits for beach renourishment.

Recommendation 11: Maintain the current prohibition of the use of sandbags to protect golf courses. Clarify that minor renourishment and sand scraping are allowed.

Affected Regulation: S.C. Code of Regulations 30-13.Q(1), 30-15.H(1),(2), and (3)



Topic: Beach Renourishment

Background and Issues:

One of South Carolina's coastal policies is to "promote carefully planned nourishment as a means of beach preservation and restoration where economically feasible" (S.C. Code Ann. §48-39-260(5)).

Current regulations require:

- Careful study given to the type (grain size and quality) of material most suitable for nourishment of a particular beach;
- Borrow areas and sand for nourishment carefully selected to minimize adverse effects;
- Where possible, nourishment shall be performed in concert with inlet stabilization or navigation projects (beneficial reuse of dredged material)

The S.C. Beach Renourishment and Improvement Trust Act (S.C. Code Ann. §48-40-10 et seq.) established the S.C. Beach Restoration and Improvement Trust Fund for the purposes of:

- Providing matching funds to qualifying municipal and county governments for the restoration of eroded public beaches and improvement and enhancement of public beach access;
- Restoring beaches and protective sand dunes on an emergency basis after significant storm damage; and
- Evaluating erosion rates and hazard areas annually for all state beaches.

Although the trust fund has been established, state renourishment funds have been distributed through supplemental appropriations rather than routed through the trust fund. For municipal and county governments to qualify for state renourishment funds, they must adopt and enforce a Local Comprehensive Beach Management Plan and provide "full and complete" public access to the portions of the beach that are being renourished with state funds.

Based on DHEC data, at least 25 renourishment projects have occurred in South Carolina since 1985, with a total of over 28.8 million cubic yards of sand added at a price of \$233 million (not adjusted for inflation). Hilton Head Island, the Grand Strand, and Folly Beach have had the most sand applied, combining for 22,173,000 cubic yards, or 77% of the state's total. The projects in these areas have cost a combined \$184.1 million, which is 79% of the entire amount that has been spent in the state for renourishment. While all three areas received some state funding, the Grand Strand and Folly Beach projects were supported primarily through federal funding, and the Hilton Head Island projects were supported primarily through local funding. Of the \$233 million spent on renourishment projects, \$22.7 million came from private funds (10%), \$66.9 million from local funds (29%), \$46.1 million from state funds (20%), and \$97.3 million from federal funds (41%).

Discussion: The committee discussed and unanimously supports the Beach Renourishment Trust Fund as the appropriate mechanism for funding renourishment projects throughout the state. In order to provide adequate funding for current and future needs, the Trust Fund should be funded reliably and incrementally. Additionally, the Trust Fund should be expanded to allow DHEC to distribute funding to municipalities for other erosion mitigation activities, including but not limited to the relocation of public utilities and infrastructure, the voluntary purchase of and/or placement of conservation easements on high risk property and technical planning assistance.

Recommendation 12: Establish a dedicated funding source to adequately and reliably fund the Beach Restoration and Improvement Trust Fund and expand the purpose, appropriations, and designation of funds to include additional beach management options.

Affected Statute: S.C. Code of Laws §48-40-10 *et.seq.*

Affected Regulation: S.C. Code of Regulations 30-18



Discussion: DHEC presented the committee with information regarding emerging challenges associated with nearshore alteration projects, including the availability and potential competition for beach compatible sand for renourishment, the ability to evaluate potential downdrift impacts, ecological and economic sustainability, and the implementation of effective regulatory and project monitoring standards. The committee discussed and agreed that effective planning and management of complex nearshore alteration projects requires careful analysis based on the best available scientific data and information. Specifically, the committee discussed the benefits of enhanced information sharing among academic and professional coastal engineers, scientists and managers. Based on this discussion, the committee unanimously recommends that DHEC establish an ad hoc technical committee to explore management issues and formulate policy recommendations that will guide improvements to resource planning, project review, permitting and monitoring processes. It is not the intention of this committee to add a layer of regulatory or administrative review to individual projects. As an ad hoc committee, this group would not possess the authority to review or comment on specific regulatory permit applications. Rather, the committee would provide general analysis and guidance for the efficient and effective management of the state's nearshore coastal resources.

Recommendation 13: DHEC should establish an ad hoc Technical Committee to formulate policy recommendations for nearshore alteration project reviews and clarify that the committee would be involved in coast-wide planning efforts with no authority to comment on specific permits.

Affected Regulation: S.C. Code of Regulations 30-13.N (2)



Topic: Groins

Background and Issues:

Groins are shore-perpendicular structures that are designed to stabilize an eroding beach or extend the life of some renourishment projects by trapping sand that is being transported as littoral drift. Groins are not defined as erosion control structures by the S.C. Beachfront Management Act, as amended, so they are allowed under certain conditions. Terminal groins are shoreline-perpendicular stabilization features situated adjacent to an inlet at the end of a barrier island or coastal land mass. The intended purpose of a terminal groin is to interrupt the littoral drift by trapping a portion of the sediment along an otherwise erosional beach before it enters the inlet system. New groins may only be allowed on beaches that have high erosion rates with erosion threatening existing development or public parks and only in conjunction with an ongoing beach renourishment effort. The applicant for a groin project must also provide a financially binding commitment to cover the estimated cost of reconstructing or removing the groin if monitoring indicates adverse downdrift impacts attributable to the project (S.C. Code Ann. §48-39-290(A)(8)).

The construction and maintenance of groins has become increasingly controversial due to inconclusive evidence of their long-term effectiveness, the potential for increased localized erosion, downdrift “sand starvation” and reduced lateral beach access at high tide. Groins may also pose a public safety hazard, particularly when not adequately maintained. Despite the monitoring program that is required for the construction of a new groin, it is difficult to prove or disprove downdrift impacts. Impacts are more apparent on beaches immediately adjacent to a groin, but quantifying impacts on beaches farther away is more challenging. To date, DHEC has not required a groin to be reconfigured or removed, or required renourishment of an adjacent beach due to downdrift impacts.

Based on analysis of 2006 aerial imagery and information from some local communities, there are presently 166 groins along the oceanfront of South Carolina. Of these, seven are terminal groins constructed at one end of a barrier island and designed to stabilize the dynamic inlet shoreline in that area. Pawleys Island, Folly Beach, Edisto Beach, and Hilton Head Island have the most groins, combining for 126 (76%) of the state’s total. Many of the existing groins in the state have not been maintained and no longer function properly. Ownership of these dilapidated groins is often unclear, so proceeding with enforcement or removal is difficult. The number of groins could potentially increase in the future because they are allowed in conjunction with renourishment projects under certain conditions.

Discussion: DHEC informed the committee that groins are not defined in statute or regulation as erosion control structures, despite their intended function of trapping sand. The committee discussed the controversial issues related to groins, but acknowledged that the construction of many

existing groins predated the promulgation of the state's Beachfront Management Act. Further, the committee recognizes that groins have historically been an integral shoreline management practice used to stabilize long reaches of beach and to counteract the effects of localized chronic and episodic erosion. For this reason, the committee debated and reached a compromise that allows municipalities to maintain existing and permitted groins for shoreline stabilization, while curtailing their use in areas that currently do not employ them as a coastal management strategy. This recommendation does not affect other regulatory requirements associated with the construction of previously permitted groins or the maintenance or repair of existing groins.

Recommendation 14: No new groins should be permitted by the Department, with the exception of terminal groins. Existing groins, permitted groins, and groin permits under review by the Department as of May 1, 2012, in whatever state they exist, are excluded from this prohibition and are allowed to be repaired or rebuilt.

Affected Statute: S.C. Code of Laws §48-39-290(A)(8)

Affected Regulation: S.C. Code of Regulations 30-15.G



Discussion: In an attempt to balance sediment management needs among coastal municipalities, the committee unanimously recommends that terminal groins continue to be an available shoreline management practice, provided that proposals for their construction undergo rigorous technical scrutiny to minimize downdrift impacts through proper siting and employment of new technologies and construction techniques. The Technical Committee referred to in this recommendation should be comprised of experts in coastal engineering, geomorphology, geology, biology and related fields. Although the Technical Committee would not review specific permit applications, their advice and guidance should be applied by DHEC in regulatory decisions and long-term planning efforts. Further, the committee recommends that the existing regulatory requirement that terminal groins only be constructed in conjunction with a large-scale beach renourishment project be retained.

Recommendation 15: Establish an ad hoc Technical Committee under the Department's Office of Ocean and Coastal Resources to recommend specific design and siting standards, and review considerations for terminal groins. The recommendations of the Technical Committee would be applied coast-wide and would not be project specific.



Discussion: The committee strongly recommends that DHEC explore the regulatory, legal and financial aspects of groin ownership, maintenance and removal and to work with coastal municipalities and other state agencies to determine clear lines of responsibility. The committee discussed and recognizes that many coastal municipalities rely on groins to stabilize their beaches and this recommendation is not intended to disallow the maintenance of existing functional groins, should ownership be claimed by the municipality. However, unclaimed dilapidated and dysfunctional groins should be removed to allow for increased littoral sand transport and enhanced public beach access. Building on its previous discussion, the committee recommends that the purpose of the Beach Renourishment and Improvement Trust Fund be expanded to allow for direct state expenditure and municipal matching funds for groin removal.

Recommendation 16: Require all coastal municipalities to claim ownership of existing groins if they desire to retain them. Dilapidated or dysfunctional groins would be required to be repaired and maintained by the local entity. The state should establish a process for the removal of “unclaimed” dilapidated or dysfunctional groins via funds from the Trust Fund.

Affected Statute: S.C. Code of Laws §48-39-290

Affected Regulation: S.C. Code of Regulations 30-15.G





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