

**BOARD OF HEALTH AND ENVIRONMENTAL CONTROL
SUMMARY SHEET**

December 8, 2016

- (X) ACTION/DECISION
() INFORMATION

I. TITLE: Staff Recommendation and Request for Public Hearing to Inform the Final Agency Decision - Wave Dissipation System

II. SUBJECT: Request Approval to Publish the Staff Recommendation to Provide Opportunity for Public Comment and Conduct a Public Hearing before the Board

III. FACTS:

1. In accordance with the S.C. Code Ann. § 48-39-130(D)(2) exception, Budget Proviso 34.51 of the 2014-2015 General Appropriations Act (amended in 2015-2016 as Budget Proviso 34.48) authorized “[t]he deployment of a qualified wave dissipation device seaward of the setback line or baseline pursuant to a study conducted by the Citadel or a research university.”
2. From March through September 2015, researchers from The Citadel submitted formal requests to the Department to perform a study of the Wave Dissipation System (WDS) at the following locations: Ocean Club Villas, Beachwood East and Seascape Villas in the Wild Dunes community, Isle of Palms, SC; and Harbor Island, St. Helena, SC pursuant to S.C. Code Ann. Regulation §30-5(A)(2).
3. The Department acknowledged that the proposed research projects at the above referenced locations met the "research activities of a State educational institution" exception pursuant to S.C. Code Ann. Regulation §30-5(A)(2) and did not require a direct critical area permit provided conditions were met.
4. The Citadel’s WDS research projects ended on July 28, 2016. Data collected from the study was provided to the Department in a final report from The Citadel on August 28, 2016.
5. The Department contracted with GEL Engineering to collect data and information on the design and functionality of the WDS research projects, and provide a third party evaluation of the findings in a final report. GEL collected information between March and July 2016, and the final report was submitted to the Department on October 31, 2016.
6. Pursuant to 1976 Code Ann. Section 48-39-320(C), the Department is tasked with determining whether the WDS has been successful in addressing an erosional issue and whether it is allowed for continued use in emergency situations under SC Code Ann. Regulations §30-15(H).
7. Data and information from The Citadel’s final report and GEL Engineering’s final report, along with Department observations and evaluations, were considered in formulating this recommendation. The Citadel report and the GEL report are submitted as Attachments B and C.

III. ANALYSIS:

As detailed in the Staff Recommendation document (Attachment A), Department staff concludes that the WDS has not been successful in addressing an erosional issue and results in negative impacts to the beach. Staff is therefore recommending that this technology, methodology or structure not be approved for future or continued use at these pilot locations or additional locations.

Observations and survey data results collected during the study demonstrated that the WDS does not hold the scarp line position at locations where the WDS was the sole erosion mitigation technique. The scarp line stabilized in areas where properties employed sandbags for additional protection.

Survey data collected by GEL Engineering documented the loss of sand volume landward of (behind) the WDS. Net accretion of sand observed by GEL during the study was always on the seaward side (in front) of the WDS. Sand volume data indicates that the WDS does not increase or retain sand landward of (behind) the system and blocks the natural accretion of sand on the shoreline during calm conditions.

Other impacts to the beach are outlined in the Staff Recommendation document including trenching and scouring around the WDS, impacts of periodic excavations, impacts to adjacent properties, and similar issues associated with seawalls. Impacts on lateral public beach access and potential effects on sea turtles were also noted.

IV. RECOMMENDATION:

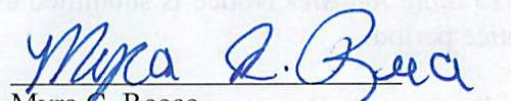
To ensure that the general public and potential affected parties have the opportunity to provide input to the Board regarding the Staff Recommendation, Department staff requests that the Board grant approval to publish the Staff Recommendation for a 45-day public comment period. Following the public comment period, staff requests that the Board conduct a public hearing to receive additional information for consideration in determining a final agency decision.

Submitted By:



Elizabeth B. von Kolnitz
Chief
Office of Ocean and Coastal Resource Management

Approved By:



Myra C. Reece
Director
Environmental Affairs

Attachments:

- A. Staff Recommendation and Request for Public Hearing to Inform the Final Agency Decision - Wave Dissipation System
- B. The Citadel: Wave Dissipation System – OC/SS/BWE/HI Report
- C. GEL Engineering: Wave Dissipation System Monitoring Report

ATTACHMENT A

**STAFF RECOMMENDATION AND REQUEST FOR PUBLIC HEARING TO INFORM THE
FINAL AGENCY DECISION - WAVE DISSIPATION SYSTEM**

December 8, 2016

ATTACHMENT B

THE CITADEL: WAVE DISSIPATION SYSTEM – OC/SS/BWE/HI REPORT

December 8, 2016

ATTACHMENT C

GEL ENGINEERING: WAVE DISSIPATION SYSTEM MONITORING REPORT

December 8, 2016