

**Implementation and Standards Committee**  
**April 7, 2005**  
**Crystal Coast Civic Center**  
**Morehead City, NC**

**Bob Emory, Chair**

**Sediment Criteria - Work Plan for Evaluation Phase (I&S-05-09)**

Jeff Warren began by reviewing what the sediment criteria were and how they came about for the benefit of the Committee's two new members, Bob Wilson and Chuck Bissett. Melvin Shepard asked if the discussion was going to address the recent white paper by Dr. Orrin Pilkey. Bob Emory stated that Warren's progress report was focused on early results from the evaluation period adopted by the Committee at their January meeting. The Pilkey paper might be taken up at a different time. Mr. Warren continued by reporting that native beach sediment data had been acquired for more than 11 separate beaches from Dare County to Brunswick County.

Using native beach data for Oak Island and Holden Beach, Mr. Warren compared how the sampling protocols recommended by the Science Panel differed from those used by the US Army Corps of Engineers (USACE) and pointed out there were many different ways to sample a beach both physically and statistically. In these two locations, the coarse fraction ( $>4.76$  mm) differed by less than 1% and the fine fraction ( $<0.0625$  mm) by less than 2%. These preliminary analyses suggested that the Science Panel methodology would not drastically alter beach characterization yet illustrated how the USACE's distribution of a high number of offshore samples decreased the average grain size of a composite sample by pushing towards the fine-grained end of the spectrum. Further, the Science Panel approach was able to normalize most historic sediment data to allow an "apples to apples" comparison. Ongoing analyses and results for additional beaches will be presented to the Committee during future reports during the evaluation progress. Analyses would also be expanded to include potential and historic borrow sites.

Ray Sturza expressed concern on achieving and/or defining minimal environmental impact during dredging operations. Mr. Sturza also cautioned the identification of "native beach samples" on developed areas of the coast that had not experienced nourishment but has undergone human alteration of the natural coastal system (e.g., bulldozing, dune construction, dumping of truck-hauled sediment, etc.). Mr. Wilson wondered if potential sediment criteria rules would disallow nourishment altogether in certain cases. Mr. Bissett queried how economic impacts would be assessed. Mr. Emory stressed the importance of this evaluation period in order to understand how the Science Panel recommendations and potential rules would affect North Carolina.

**Effect of Stabilization Structures On Shoreline Habitats**

Dr. Carolyn Currin of NOAA's Fisheries Habitat Research Laboratory reviewed the science regarding shoreline stabilization structures. Dr. Currin provided a characterization of natural shorelines, the value of the habitats, types of structures used in stabilization and the effects of

those structures on those habitats. In reviewing the ecosystems services of the habitats, she emphasized that half of the primary productivity is due to the microscopic algal community that is dependent on adequate light penetration. Dr. Currin also stated that shallow water habitat is also important in providing juvenile fish and shrimp refuge from predation by larger fish.

Dr. Currin stated that the values associated with a salt marsh and how these values are impacted by vertical stabilization structures are well documented in the peer-reviewed literature. The physical impacts, including wave refraction and scouring can be found in 232 peer-reviewed articles over the past ten years. Ecosystem impacts are documented in over 25 articles. Dr. Currin further stated that the CHPP contains a very good review of the science and is a good reference to guide Commission decisions on the issue.

Dr. Currin reviewed impacts associated with bulkheads that include scour and erosion, effects of wood preservatives, increased turbidity, decrease benthic primary production, loss of intertidal habitat and loss of shallow water refuge. She stated that the scientific literature supports the assertion of bulkheads being associated with decreased fish, shrimp and clam abundance when compared to other forms of shoreline stabilization such as sloped riprap. She further stated that similar to a marsh, sloped riprap also accumulates woody debris. Dr. Currin advised that when it comes to alternatives to non-vertical stabilization measures, there is no one solution that will address all shoreline situations. In some cases, bulkheads can be appropriate such as on low energy shorelines, provided that they are positioned well upland of the high tide line. Dr. Currin stated that there are also concerns with marsh and stone sills such as the creation of tomobolos and crenulated shorelines. These structures cover soft bottom substrate with the rock and their long-term effectiveness has not yet been determined. There is also concern about the survival of SAV in front of sills. She stated that another alternative that needs further study is the use of oyster reefs for stabilization purposes.

Dr. Currin advised that it is important not to overlook the value of small fringing marshes since most of the ecological benefits of a marsh occur along its edge. She further advised that the Commission should continue to develop alternative approaches to shoreline stabilization and strengthen GPs to minimize loss of shoreline habitats. Dr. Currin stated that NOAA provided the USACE with comments relating to marsh sills and the backfilling of bulkhead and would be happy to provide the Committee with a copy of those comments.

After many appreciative comments, Dr. Currin was thanked for her excellent presentation. It was then suggested that staff follow up this informative presentation with an encore presentation given by the Wildlife Resources Commission some time ago. Staff will attempt to schedule the presentation in front of the full Commission during the June meeting.

### **Buffer Exemption for Local Gov't Stormwater Ordinances (I&S-05-05)**

At the January CRC meeting, staff was instructed to explore local government incentives for exceeding CRC rules, particularly as they relate to the buffer requirements. Mike Lopazanski stated that there has been a propensity for the CRC to grant variances to the buffer rule when an engineered stormwater system is proposed as part of the development activity. Mr. Lopazanski

advised that an option available to the Commission is to develop an exemption to the rule for local jurisdiction with a stormwater ordinance containing specific elements that would lead the CRC to grant a variance. As a starting point, he suggested using the Town of Ocean Isle Beach stormwater ordinance as a model. He cautioned that staff still has reservations about these systems since they require maintenance and repair and expressed concern about the responsibility for these systems being passed on to subsequent property owners. Mike cautioned the Committee that in creating such an exemption, they would be giving up their ability to review some specific projects within the buffer. He stated that there have been several cases in the past year that the Commission did not grant a variance even when a stormwater system was proposed. Bob Emory stated that he felt a limited exemption could be developed that would provide property owners some relief from having to appear before the Commission with a variance request that included a stormwater design. The Committee discussed the early history of the buffer rule including its original intent through its evolution to focusing on stormwater runoff. Some committee members expressed concern that the cumbersome nature of variances was driving the decision to develop an additional exemption to the rule. In the end, the Committee directed staff to outline an exemption that would include certain elements such as:

- limiting the exemption to those jurisdictions with a stormwater ordinance,
- limiting encroachment into the buffer to a certain percentage,
- limiting the types of development activities allowed,
- not exceeding the impervious surface limits for the AEC,
- determining where the water goes, and
- tying maintenance of the system to the deed.

### **Removal of Oceanfront Areas in New Hanover, Pender, Carteret and Onslow Counties from Unvegetated Beach Designation NCAC 7H.0304(4)(b) (I&S-05-06)**

Mike Lopazanski advised that the removal of oceanfront areas in New Hanover, Pender, Carteret and Onslow Counties from the unvegetated beach designation was strictly a house-keeping measure. These areas were originally designated following Hurricanes Bertha and Fran in 1996. Mike reviewed the process for determining the setback line in unvegetated areas in NCAC 7H .0304, including the removal of the designation when the vegetation has recovered and is no longer needed. He advised that during the development of the unvegetated beach designation for Hatteras Village, it was discovered that the designation existed for these other areas although it was no longer being used to determine oceanfront setback. However, the issue was not addressed at the time in order not to delay adoption of the designation for Hatteras Village. Ray Sturza made a motion to accept staff's recommendation to remove the 1996 Unvegetated Beach designation for the aforementioned counties and to take it to the full Commission. A friendly amendment to send the rule change to public hearing was made and seconded. The motion passed unanimously.

### **Concrete Driveways in the Oceanfront Setback (I&S-05-02)**

At the October 2004 CRC meeting, Commissioner Langford asked staff to look into the conflict of the CRC rule that prohibits concrete driveways with the zoning language of many coastal municipalities that actually requires the installation of concrete driveways.

With that guidance, Ted Tyndall made a presentation to the Committee on the Ocean Hazard Area Exception rules and how it allows structures to be located seaward of the oceanfront setback requirements when certain conditions are met. One of those conditions being that driveways and parking areas must be constructed of clay, packed sand or gravel. He stated that even in those cases, the structures must still meet a minimum 60' setback from the first line of stable natural vegetation.

Mr. Tyndall stated that the situation Mr. Langford mentioned has become common in the northern Outer Banks after the severe erosion caused by Hurricane Isabel. In those areas, the vegetation line is often located adjacent to the street or highway limiting the application of the exception rule. He stated that staff believes that the oceanfront rules as currently written provide a solid foundation for management of the Ocean Hazard AEC and are hesitant to recommend any substantial changes to the rule. However, staff did provide a proposed rule amendment to the Ocean Hazard Area Exception rule that would allow for the use of concrete, asphalt, or turfstone so long as the development does not directly abut the ocean and is located landward of the public street or highway currently in use and continues to meet those specific conditions including meeting a 60' setback from the first line of stable natural vegetation.

After a few comments, Melvin Shepard made a motion to take the rule amendment to the full Commission for action. Lee Wynns made a second and the motion passed.

#### **Address Changes to NCAC 7A, 7H, 7I, and 7J (I&S-05-07)**

Tancred Miller presented the Committee with eight rules that require non-substantive amendments to update the physical address for the Division along with various editorial changes. He stated that the CRC is permitted under the APA to adopt these changes immediately, meaning that public notice and a hearing are not required. The Committee approved a motion that the Commission adopt the proposed amendments as proposed.

#### **Inclusion of New Sites in the Coastal Reserve (I&S-05-08)**

Rebecca Ellin told the Committee that the NC Coastal Reserve staff currently manages ten sites, but that only eight are named in Commission rule 7O.0105. Bird Island and Emily and Richardson Preyer Buckridge were acquired for the Coastal Reserve system, but have not yet been incorporated by rule. Staff recommended that the I&S Committee commence rulemaking (including a public hearing) to include these two sites into the NC Coastal Reserve complex. Bob Wilson made a motion to take the amended rule to the full Commission. Larry Pittman made a second and the motion passed unanimously.

#### **Update on Refining NCAC 7H.2700 – GP for Marsh Sills**

Doug Huggett explained staff's plans in attempting to further streamline the existing general permit for the construction of riprap sills for wetland enhancement. He stated that the current

general permit, which was implemented as a temporary rule in 2004, and became a permanent rule on April 1, 2005, contains numerous conditions that may limit the public's desire to use the general permit. Due to the fact that many of these conditions were placed on the general permit at the request of various state and federal review agencies, staff intends to initiate a series of stakeholders meetings with these agencies to determine whether some of the more burdensome conditions can be removed or simplified. During this stakeholder process, evidence from previously permitted and constructed sill projects will be revisited to see whether or not this information will help to alleviate resource agency concerns. Scheduling of the first stakeholder meeting will take place shortly, and a more detailed report on this issue will be delivered to the I&S Committee at the next CRC meeting.

### **CRC Variance Procedures**

Dr. Hackney asked the I&S Committee to review and discuss how the CRC handles the many variances brought before it in an attempt to be as efficient as possible. Jill Hickey started the discussion by suggesting the possibility of a "subcommittee" comprised of a member or members hearing the variance, making a recommendation to the Committee and then the Commission could make a decision. Numerous members stated that they felt that the full CRC should hear the variances in order to be "fair" to the citizens. Bob Emory suggested that there are some things that could be done immediately to speed the process up including simply sticking to the stipulated facts. He stated that the chairman could exercise more authority when the petitioner or staff vary from the stipulated facts and suggested that Commissioners themselves limit their questions to a clarification of the facts. A discussion on the merits of hearing oral arguments for variances that staff and petitioners agree on followed as did a discussion on other ways to hear variances. It was agreed upon that Jill Hickey and other staff would look into the regulations for ways to improve the process. The importance of this issue was emphasized numerous times and it was finally agreed upon to suggest to the chairman that the variance process be placed as an agenda item at a future CRC meeting to allow all Commission members a chance to participate.