



Meeting Notes from the Beachfront Jurisdictional Line Stakeholder Workgroup February 4, 2019

The Beachfront Jurisdictional Line Stakeholder Workgroup met on Monday, February 4, 2019, in S.C. DHEC OCRM's 3rd Floor Conference Room, Charleston, SC.

WELCOME, REVIEW PROGRESS

At 10:00 a.m. S.C. DHEC OCRM Chief Elizabeth von Kolnitz welcomed the Workgroup members. She stated that the first half of this meeting would focus on extraordinary erosion discussions, and then shift to identification of recommendations for setting the baseline under various scenarios (Scenario #2 and Scenario #3). Ms. von Kolnitz then stated that some time will be reserved during the next Workgroup meeting to discuss the contents of the Final Report to ensure that the Workgroup discussions have been accurately captured by OCRM staff.

The following members were in attendance:

Nick Kremydas
Rocky Browder
Emily Cedzo
Tim Kana
Bill Eiser
Michael Katuna
Blanche Browne
Josh Eagle
April Donnelly
Jean Ellis
Ryan Fabbri

Additional public attendance consisted of Linda Tucker, South Carolina Beach Advocates (SCBA). Lawra Boyce and Kristy Ellenberg were the Workgroup Facilitators (Facilitators).

'EXTRAORDINARY' EROSION DATA AND QUESTIONS

Ms. von Kolnitz reviewed the current extraordinary erosion language in the Beachfront Management Reform Act (Act 173), emphasized the *erosion zone* terminology included in this statute and asked the Workgroup to consider the application of this language across a variety of storm impact situations (i.e. Hurricane Matthew (2016) impacted most of South Carolina's coastline, while the impacts from Hurricane Florence (2018) were localized).

Ms. von Kolnitz stated that South Carolina has 3 defined erosion zones (standard, stabilized inlet and unstabilized inlet) and that a single coastal island may exhibit a combination of these zones. A hypothetical example was provided, wherein, an island exhibiting two different erosion zones has

disproportionate storm impacts across those zones. A specific reading of Act 173 would indicate that baseline data could be collected and used for the portion of the island that did not experience extraordinary erosion, while data collection on the other part of the island which did experience extraordinary erosion would be delayed for 18 months. Is this the most practical implementation of this law?

Ms. von Kolnitz asked the Workgroup for input regarding the geographic/spatial extent of where 'extraordinary' erosion criteria should be implemented for data collection efforts. Should the extent of an 'extraordinary' erosion event be determined by erosion zone, by beach, by barrier island, etc.?

Workgroup questions and discussion regarding the geographic extent of 'extraordinary' erosion:

- Did Act 173 specifically define 'erosion zone'? Staff response: No
- Does FEMA or the USACE have designated coastal zones? Staff response: FEMA determines flood zones, but OCRM staff are unaware of other FEMA or USACE designated coastal zones.
- Assessing by beach seems reasonable. Splitting up single beaches by zone does not serve much purpose.
- This issue becomes more complicated if the 18-month data collection/usability window is continually triggered by erosional events. When data cannot be used due to multiple subsequent storm events and the jurisdictional baseline is not updated to address the active landward movement of the beach, what are the practical implications?
 - OCRM staff stated that during the last 40 years, there were two time frames where the coast of South Carolina was not in some way impacted by a storm for more than 2 consecutive years.
- What about using county lines to delineate the spatial extent for data collection?
- Optics of the situation are that OCRM should not collect and use data after a storm event that was a declared disaster, even if beach erosion was not significant)
- Due to how hurricane damage is distributed along the coast, utilizing disaster declarations in the determination of data collection efforts can be problematic. A more local, site-specific method, possibly by region or beach is needed.
 - Could extraordinary erosion be defined as a multiplier of the background erosion rate? (i.e. 20x the long-term/background erosion rate)
 - Consideration would be needed for those beaches that have a 0 (zero) ft/yr background erosion rate.
- Ms. von Kolnitz stated that it is important for staff to be able to capture field data more regularly to have a base knowledge of typical site conditions and expressed concern about OCRM having the resources to determine when extraordinary erosion occurs based on staff's current data collection timeframes and abilities.
 - Member question: What are the budgeting impacts of such collection efforts? Would additional staff and/or technology be required? Staff response: OCRM has not fully assessed or quantified needs.

For further Workgroup discussion and input, Ms. von Kolnitz posed the following questions:

- Chronic erosion vs. storm erosion: what data does OCRM need to differentiate these terms?
- What is the trigger for local governments to collect post-storm data for FEMA reimbursement?
 - What is the pre-storm data?
 - What is considered a significant sand volume loss? Should this scenario be applied equally to developed and undeveloped areas?

Workgroup discussion regarding these questions:

- Ms. von Kolnitz stated that BERM (beach profile) data collection would continue annually regardless of storm frequency/impact; however, other data collection efforts may not occur annually. She further explained that erosion rate determinations are currently calculated by OCRM using wet/dry lines.
 - Member question: Should post-storm data be collected regardless of usability for establishing the jurisdictional lines so that OCRM has a complete knowledge of beach conditions to inform decisions?
- When differentiating erosion types (i.e. chronic vs. storm) it is important to first understand the natural, seasonal cycles of erosion and accretion of a beach. Normal/background erosion rates can be measured on a volume basis. 'Extraordinary' erosion would be storm-driven with an impact above and beyond background erosion.
 - A member commented that too many terms (i.e. normal, extraordinary, chronic, storm) are being used and suggested that it should just be normal/long-term or extraordinary
 - Several members suggested using the term "background" erosion instead of normal/long-term.
 - Ms. von Kolnitz stated that the term 'chronic' is used by OCRM to signify a continuous erosion event.
 - Member statement: The term 'extraordinary' was included in the Beachfront Management Reform Act based on public concerns that were raised during the 2016-2018 jurisdictional line review process, wherein the term 'extraordinary' was meant to explain those situations where the primary dune was now gone.
 - What about areas that did not have a primary dune to begin with?
- Approximately 70% of South Carolina's developed beaches are conducting annual and post-storm surveys at the local level to determine sand loss.
 - Local jurisdictions likely have the most frequent and best-available data and could share that data with OCRM.
- Ms. von Kolnitz stated the importance of having an inventory of background/normal erosion rates statewide.
 - Local jurisdictions have the best knowledge of 'normal' beach conditions.
 - Determining a 'normal' beach cycle requires repetitive measurements which may be costly.
 - There is a large amount of data that has been collected by consultants and engineering firms, academics (i.e. thesis and dissertation work) and others who would be willing to share this information with OCRM.
 - How to assemble, combine, and analyze these data?
 - An information clearinghouse designed to provide extraordinary erosion information could also contain "normal" conditions for use as a baseline.
 - Not all local jurisdictions have conducted monitoring to establish normal/background erosion rates.
 - Ms. von Kolnitz – Should an OCRM task be to compile this inventory, then prioritize data collection in areas where data is lacking?
 - Should data comparisons be based off sand volumes? Erosion rates? Dune Toe/Dune Crest measurements? Etc.?
 - Staff response: Through its BERM beach profile database, OCRM has sand volumes at approximately 400 discrete locations statewide (along transects at BERM beach monuments).

- The primary dune definition includes dune crest – if the primary dune remains then there are no implications for the baseline; however, if the dune is gone then erosion is defined as extraordinary.
 - Facilitators: referencing the notecard report-out information from the January 23, 2019 meeting – does the dune need to be completely gone or just severely eroded for an ‘extraordinary’ determination?
- Should a scenario in which there is a king tide during an unnamed winter storm be considered extraordinary? These storms can cause significant damage.
 - Can ‘extraordinary’ determination be tied to “erosional event” instead of “named event”?
- To determine the severity of erosion, from a consultant/engineering perspective:
 - Step 1: assess the recession of the vegetation line
 - Step 2: analyze the volume of sand on the visible beach to determine the amount of sand lost due to the erosional event.
 - Significant recession of the vegetation line and significant sand volume loss compared to average rates (by a factor of 2 or 3) would likely be considered ‘extraordinary’.
 - Step 3: conduct deeper water profiles to evaluate if the sand is still in the system (i.e. underwater but still in the littoral sand sharing system)
 - If sand is still in the system, the beach will likely recover without assistance.
 - If sand is no longer in the system, the beach is less likely to recover without assistance.
 - Knowing the type of event responsible for the erosion can be helpful in determining if sand may still be in the system.
 - Member comment: if data shows the sand is still volumetrically in the system, maybe that is an indicator that the erosion wasn’t extraordinary?
 - Member comment: this consultant/engineering approach is based on knowing what the beach looked like prior to the storm – having pre-event and post-event data is necessary.
- Something similar to DHEC’s MyCoast application could be used to document and collect quantitative data (i.e. volume).
 - Take multiple photos over time using the same point of reference in all weather conditions.
 - Usable data should be available for the approx. 70% of the developed coast where beach profile data are collected at the local level – how to address areas that are not collecting beach profile data?
- Ms. von Kolnitz asked the Workgroup if one end of a beach could be representative of a whole beach? Can data be translated from one beach to another?
 - Rule of thumb is that standard erosion zones are in some level of equilibrium and are not influenced by an inlet; however, there can be significant differences within a single island (i.e. the north end of Pawley’s Island and the south end of Pawley’s Island represent two different erosion scenarios).
- If, in quick succession to an erosional event, it has been determined that sand is still volumetrically in the beach system, what is the timeframe for beach recovery to become apparent?
 - There are some data which distinguish seasonal changes from extraordinary changes in standard zones.
- It will be difficult to convey volumes and underwater sand sharing systems to property owners. Determination of ‘extraordinary’ erosion should be based on the dune. It would be easier to explain and measure if the dune is eroded/scarped/gone.

- Staff question: What is the timeframe between a local jurisdiction requesting data collection post-storm to the contractor/consultant providing a determination of volumetric impacts?
 - Member response: days/weeks with weather dependency.
- Jurisdictions with large renourishment projects in place will typically collect data after every erosion event to assess funding possibilities through Category G reimbursement from FEMA.

Ms. von Kolnitz stated that OCRM will use these 'extraordinary' erosion discussion points to inform additional recommendation questions at the next meeting. She further stated that OCRM is seeking process recommendations for the determination of extraordinary erosion as opposed to a finite definition.

REVISIT STATUS OF 'PRIMARY DUNE' DEFINITION RECOMMENDATION

Ms. von Kolnitz informed the Workgroup that the Notice of Drafting for these regulations will likely occur at the end of March while the proposed Notice of Regulations should occur in early summer. Public input opportunities will occur throughout these Notice processes. She then provided the Workgroup with the draft of an informational summary intended to be used as an update to the Legislature on the progress being made by the members. The Workgroup was asked to provide feedback on this document language; specifically, regarding the 'primary dune' definition recommendation and whether "consensus" is the appropriate terminology to use. Furthermore, the Workgroup was provided with an additional explanation that the term "consensus" has been used in this context to indicate that the majority of the Workgroup agrees with the recommendation; it is not denoting that a vote has been taken and that a unanimous decision was made.

Workgroup response is as follows:

- A majority expressed their opinions that the final 'primary dune' definition recommendation was reached at the previous Workgroup meeting through consensus; however, a dissenting opinion by a member was that "consensus" is too strong of a word and that the Workgroup has gone beyond the initial charge in drafting this definition recommendation.
- Should "consensus" be removed from the Legislative update information?
 - If "consensus" is used, there should be a clear indicator that a dissenting opinion exists.
- Since the Workgroup process is ongoing:
 - Using terminology such as "is developing" instead of "has developed" is preferred until the report is released.
 - Recommendations are pending and details will be included in the Final Report.
- Concern was expressed for the potential of Workgroup members to speak publicly about this process and the ongoing meetings prior to the Final Report being released.

SCENARIOS #2 AND #3: FURTHER DISCUSSION

A presentation entitled *Dune Scenarios: Part 3* was given by Jessica Boynton, DHEC OCRM Shoreline Specialist. In response to Workgroup feedback from the January 23, 2019 meeting, this slide presentation included revised site examples for Scenarios #2 and #3 using 2016/2017 Imagery. The Workgroup was then divided into 3 smaller groups of members. Each smaller group was asked to discuss the presented questions and considerations for both the Scenario #2 and Scenario #3 proposed draft language. After the small workgroup dialogue, the Facilitators opened discussion on these topics to the Workgroup.

SCENARIO #2

Ms. Boynton reminded the Workgroup of the Dune Scenario #2 area characteristics: a wide, low dune field and a primary dune that is significantly landward of a relatively stable vegetation line. During the January 23, 2019 meeting, a suggested method for establishing the baseline in this scenario was to buffer seaward from the established primary dune rather than buffer landward from the vegetation line. Ms. Boynton provided visual examples of this buffering method using both a fixed distance and a percentage of the dune field. The proposed draft language for Scenario #2 that Ms. Boynton shared with the Workgroup was:

For the purposes of setting the baseline in [standard and stabilized inlet zones?], where the primary dune is more than 200 feet landward of the current line of stable vegetation, the baseline shall be set [number of feet?] seaward of the primary dune, or shall be set seaward [percentage?] of the distance of the dune area between the primary dune and the current line of stable vegetation, whichever is greater.

For further Workgroup discussion and recommendations regarding the proposed draft language for Scenario #2, Ms. Boynton posed the following questions and considerations:

- Is this method applied in standard and/or stabilized inlet zones?
- If using the number of feet option, what should that value be?
- If using the percentage option, what should that value be?

The following is the information provided as part of the report-out from the small workgroups:

- Regarding application in [standard and stabilized inlet zones?]
 - Member consensus that both zones are included.
- Regarding [number of feet?]
 - Member consensus to remove this language.
- Regarding [percentage?]
 - Member consensus to use 30%.

SCENARIO #3

Ms. Boynton reminded the Workgroup of the Dune Scenario #3 area characteristics: no primary dune, limited to no dunes, and limited or no vegetation line. The action option methodologies for Scenario #3 determined by the Workgroup during the January 23, 2019 meeting as needing further review were:

- 1) Ideal Dune Analysis – 3' reference dune
 - A volumetric comparison of a reference profile with a primary dune to an adjacent profile without a primary dune. The adjacent profile has little to no dunes.
- 2) Placement of the baseline at the 'built' environment.

Ms. Boynton provided visual examples on Edisto Island for the Ideal Dune Analysis using a 3' reference dune, as well as, placing the baseline on the 'built' environment line. Additionally, Ms. Boynton noted that OCRM needs further guidance regarding a previous suggestion to utilize the vegetation line for establishment of the baseline in undeveloped areas. The proposed draft language for Scenario #3 that Ms. Boynton shared with the Workgroup was:

For the purposes of setting the baseline in [standard and stabilized inlet zones on developed islands?], where there is no primary dune, the baseline shall be set at [ideal dune analysis,

the built environment, leave it where it is]. For the purpose of setting the baseline in [standard and stabilized inlet zones on undeveloped islands], where there is no primary dune, the baseline shall be set at [the current line of stable vegetation].

For further Workgroup discussion and recommendations regarding the proposed draft language for Scenario #3, Ms. Boynton posed the following questions and considerations:

- For developed islands:
 - Is methodology applied in standard and stabilized inlet zones?
 - Will the baseline be set using the Ideal Dune Analysis, the built environment or leaving it where it is?
 - For the built environment option, Ms. Boynton requested that the Workgroup consider OCRM needs for data collection and application.
- For undeveloped islands:
 - Is methodology applied in standard and stabilized inlet zones?
 - Should the line be set at the current line of stable vegetation?

The following is the information provided as part of the report-out from the small workgroups:

- Developed islands:
 - Application in [standard and stabilized inlet zones] was not addressed.
 - Regarding [ideal dune analysis]
 - Viewed by member as being based on existing regulations.
 - It provides a sensible, quantitative methodology that gives property owners an understanding of the volume of sand needed in front of property to represent an ideal dune.
 - A member suggested that OCRM use a reference profile around groin numbers 15, 16 or 17 on Edisto Island as an example. These groin cells are more stable due to a nodal point where accretion is occurring to the north of this point and erosion is occurring to the south.
 - Regarding [the built environment]
 - To be useful, the line would need to be smoother than the line in the example slides.
 - Smoothing could be accomplished by averaging the position of a block of houses (quantity: 5).
 - Smoothing could also be accomplished by using the seaward side of the most landward house (also in blocks of 5 houses).
 - Easy to explain to property owners.
 - The line would need to be updated as houses are destroyed over time and there should be an inclusion of language that could accommodate future beachfront conditions.
 - If houses are rebuilt under a Special Permit, they should be located as landward as possible.
 - Consideration should be given to the impacts on houses over 5,000 sq. ft.
 - As long as municipalities are committed to renourishment and receive credit for such projects, placement of baseline at built environment is sensible because the active beach drives permitting decisions.

- A member suggested that the state's shift from policy of retreat to a policy of preservation supports this point.
 - Clarify 'built environment' term as the seaward side of habitable space.
- Alternative option: establish baseline by Ideal Dune Analysis if applicable but also have an "or" option for moving the line to the built-environment if certain criteria apply.
 - What would these criteria be?
- Regarding [leave it where it is]
 - Not favorable to the Workgroup as it is not a defensible course of action.

Additional discussion:

- The jurisdictional lines should serve as a warning parameter, but people incorrectly interpret the baseline and setback area as a no-build zone.
 - Workgroup member expressed needed clarification of the Special Permit process since it involves a time and money investment from the property owner and can be appealed.
- Undeveloped islands:
 - Application in [standard and stabilized inlet zones] was not addressed.
 - Regarding [the current line of stable vegetation]
 - Member consensus to use current line of stable vegetation.
 - Member question: what would be the development threshold for an island to transition from undeveloped to developed?
 - Member question: What are the implications to private property owners versus public property? Could implementation of this method invoke a "Lucas" situation by effectively denying a private property owner use of their property? Response: A special permit can be applied for as long as the house isn't on active beach.

NEXT STEPS

- 1) The Workgroup will continue discussion of the renourishment recommendation language at the next meeting;
- 2) OCRM staff will consider today's Workgroup comments on extraordinary erosion and work towards conclusion of this topic at the next meeting;
- 3) The Final Report will be discussed in more detail at the next meeting.

The Meeting was adjourned at 2:00 p.m. by Ms. von Kolnitz.