Meeting Notes from the Beachfront Jurisdictional Line Stakeholder Workgroup January 23, 2019

The Beachfront Jurisdictional Line Stakeholder Workgroup met on Wednesday, January 23, 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, and noted the progress made during the January 11, 2019 meeting. She stated that the goals of this meeting include reaching consensus on Scenarios #2 (primary dune significantly landward of low dune field) and #3 (limited to no dunes), and further discussing how OCRM addresses renourishment projects with respect to the jurisdictional line process. Ms. von Kolnitz informed the Workgroup that the Legislature, which is now back in session, has made inquiries into the Workgroup's efforts, and that she would compile information to update the Legislature on the Workgroup's progress. The Workgroup will be asked for feedback on the compiled information prior to an update being provided to the Legislature.

The following members were in attendance:
Michael Katuna
Rocky Browder
Ryan Fabbri
April Donnelly
Nick Kremydas
Blanche Brown
Josh Eagle
Jane Darby
Emily Cedzo
Bill Eiser
Jean Ellis

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

REVIEW OF FINAL 'PRIMARY DUNE' DEFINITION DRAFT RECOMMENDATIONS

Ms. von Kolnitz presented the updated draft primary dune definition which incorporated the recommended language changes resulting from the January 11, 2019 Workgroup meeting. This definition is as follows:

> For the purposes of establishing the beachfront jurisdictional baseline within the standard zone and stabilized inlet zone, primary oceanfront sand dunes constitute the most seaward dune

ridge adjacent to the Atlantic Ocean which is nearly continuous for 500 linear feet; typically exhibits the presence of stable, native vegetation; and has a dune height of 3 feet as measured from the seaward toe to the crest of the dune.

The primary oceanfront sand dune is typically not scarped, eroded or overtopped by the highest predicted astronomical tides but may be inundated by storm surge which normally accompanies major coastal storm events.

Emergency berms that have been created as temporary barriers do not constitute a primary oceanfront sand dune unless the berm is situated along the historical footprint of the natural dunes system, and exhibits the characteristics of the defined primary oceanfront sand dune.

Nearly continuous sand dunes are defined as generally undissected dune ridges, but may exhibit minimal breaks such as those resulting from pedestrian and/or emergency vehicle access points.

Ms. von Kolnitz reiterated that the Final Report resulting from this Workgroup will capture previous discussion and non-consensus recommendations regarding this draft definition. The Workgroup had no additional comments or edits to make regarding this definition recommendation.

INFORMATIVE SESSION: REVISED SITE EXAMPLES FOR SCENARIOS #2 AND #3

A presentation entitled *Dune Scenarios: Part 2* was given by Jessica Boynton, DHEC OCRM Shoreline Specialist. In response to Workgroup feedback from the January 11, 2019 meeting, this slide presentation included revised site examples for Scenarios #2 and #3 using 2016/2017 Imagery.

<u>SCENARIO #2</u>

Ms. Boynton reminded the Workgroup that the Dune Scenario #2 area characteristics include a wide, low dune field and the presence of a primary dune that is significantly landward of a relatively stable vegetation line. This scenario applies to a relatively short stretch (~ 1 mile of developed coastline*) of South Carolina's shoreline, and makes up a smaller geographic extent than Scenario #3. The preferred action option for Scenario #2 as discussed during the January 11, 2019 meeting, was to use a buffer distance from the current vegetation line; while the Workgroup raised some concerns at that meeting regarding the variability of vegetation lines, buffering from the vegetation line seemed to be the consensus. The proposed draft language for Scenario #2 that Ms. Boynton shared with the Workgroup was:

> For the purposes of setting the baseline, [in which zones?], where a primary dune is more than 200' landward of the current vegetation line, the baseline shall be set 200' landward from the line of stable vegetation.

Ms. Boynton then explained that Scenario #2, as defined above, has areas where the currently established 2016-2018 baseline is landward of the current 200' vegetation line buffer, and that the baseline cannot move seaward in these locations. The exception areas include the following 6 developed sites and 1 undeveloped site: north end of North Myrtle Beach, south end of Garden City, north end of Pawleys Island, a section on Isle of Palms, a section on Sullivan's Island, a section on Seabrook Island, and parts of Waties Island.

Questions and discussion resulting from Ms. Boynton's presentation included:

- Regarding the 'current vegetation line' and 'stable vegetation' language in the proposed draft language for Scenario #2
    - A workgroup member commented that if the meaning of these terms is meant to be the same, then the language should be consistent and offered "current stable vegetation line" as the terminology to be used in this proposed draft.
- If using 'stable vegetation line' as a measurement feature in the definition language for Scenario #2, then the 'stable vegetation line' would also need to be further defined.
- As an alternative method for establishing the baseline in Scenario #2 areas that have a specified width of low dune field, a Workgroup member proposed the idea of buffering seaward from the established primary dune instead of buffering landward from the vegetation line.
    - OCRM staff agreed to provide examples of how this method would impact applicable sites.

For further Workgroup thought and discussion regarding Scenario #2, Ms. Boynton posed the following questions and considerations:

- Should this scenario cover standard and stabilized inlet zones? Or just standard zones?
- Should this scenario be applied equally to developed and undeveloped areas?

*Further measurements made post-meeting indicate that the distance is ~2 miles of developed coastline.

<u>SCENARIO #3</u>

Ms. Boynton reminded the Workgroup that Dune Scenario #3 is applicable in areas that have no primary dune, limited to no dunes, and limited or no vegetation line. The preferred action option for Scenario #3 as discussed during the January 11, 2019 meeting, was to use the Ideal Dune Analysis methodology for determining the jurisdictional baseline. An additional option that was offered for review is to leave the baseline where it was established in the 2016-2018 line review cycle.

For further Workgroup thought and discussion regarding Scenario #3, Ms. Boynton posed the following questions and considerations:

- Regarding the Ideal Dune Analysis:
    - Should there be more than 1 reference profile? If yes, how many? How would they be averaged? What if there isn't more than 1 reference available?
    - Do the reference profiles need to be in the same beach zone as the site profiles? What if there aren't any profiles in the same beach zone that exhibit a primary dune?
- Regarding leaving the baseline where it is:
    - Should this apply to developed and undeveloped islands equally?
    - What happens when the baseline is underwater or on active beach?
    - Does this option provide an advantage to vulnerable areas vs. less vulnerable areas?

SMALL WORKGROUP DIALOGUE, FACILITATED WORKGROUP DISCUSSION
SCENARIOS #2 AND #3

The Workgroup was divided into 3 smaller groups of 3-4 members. Each smaller group was asked to think through the presented questions and considerations for both Scenario #2 and Scenario #3.

The Facilitators noted that the application of Scenario #2 is narrow, but that it is still important to discuss. For Scenario #3, the Facilitators requested that the Workgroup think through the two action options discussed (Ideal Dune Analysis, leave baseline where it is) to determine a favored option, or if there is another option that should be considered.

After the small workgroup dialogue, the Facilitators opened discussion on these topics to the Workgroup. The following is the information provided as part of the report-out from the small workgroups:

SCENARIO #2

- As an alternative method for establishing the baseline in Scenario #2 areas that have a specified width of low dune field, a Workgroup member proposed the idea of buffering seaward from the established primary dune instead of buffering landward from the vegetation line.
    - The increased stability of the primary dune ridge vs. the vegetation line may provide for increased defensibility of method.
    - Buffer may be determined as a percentage of size of dune field.
    - What is the qualifying distance between the primary dune and the vegetation line for applicability of this method?
    - OCRM staff agreed to provide examples of how this method would impact applicable sites.

SCENARIO #3

- Ideal Dune Analysis
    - As an alternative process to averaging local profiles for the determination of the ideal dune reference, DHEC OCRM could determine the volume of an ideal 3' dune, and use that value as the "standard" minimal criteria for the Ideal Dune.
        - This volumetric standard would be based on the 3' height requirement from the primary dune definition.
        - Site-specific characteristics such as grain size and wave energy dictate the slope of the beach.
        - Given the variation in South Carolina's beaches, would a single standard be appropriate?
            - Grain size affects volume and differs across beaches due to natural variation, renourishment projects, etc.
            - To address concerns regarding grain size variation, an ideal 3' dune volume ("standard") could be determined for each beach
        - Additional comments and considerations regarding this volumetric approach
            - Provides benefit of being consistent with the primary dune definition.
            - DHEC OCRM staff stated that this option could be feasibly implemented; however, a Workgroup member expressed uncertainty in the application of this method and the technical approach, which could be difficult to explain to property owners.
            - The Workgroup needs to see site examples to further evaluate impacts. OCRM staff agreed to look for examples of using the 3' dune would impact applicable sites.

- Leaving the Baseline in 2016-2018 established location
    - In locations where the baseline is currently underwater, how are the hazards of this situation effectively articulated/explained to the property owner and what are the impacts to the property owner?
    - Matt Slagel, DHEC OCRM Beachfront Project Manager, clarified to the Workgroup that structural rebuilding on beachfront property is currently allowed through either the Major Critical Area Permit process or the Beachfront Notification process, provided the house would not be located on active beach.

The Workgroup offered the following additional action options for consideration as methodology for determining the jurisdictional baseline in a Dune Scenario #3 area:

- Measuring the distance landward from the Mean High Tide Line with consideration for slope.
    - While this methodology would provide a known elevation, the mean high tide line is difficult to determine in the field.
    - What would be the buffer distance and how is that distance chosen? Is there data showing how slope and distance affects damage?
    - How is this method applied?

- Placement of baseline on the seaward edge of the 'built' environment
    - Porches, pools, etc. do not count as qualifying structures.
    - This method would enable habitable structures to be captured within the setback area but not be seaward of the baseline.
    - Where would the line be located when house placement is staggered along the beachfront? Would the line be jagged? Consideration needs to be given to the process for extrapolating the line across vacant lots.
    - How long would a lot be required to sit vacant before placement of the baseline can be reconsidered? Could this concern be handled on a local/municipality level?
    - The state could take into consideration the protection ordinances already provided for by some local governments.

During Workgroup discussion of the above action options for Scenario #3, the following topics were revisited multiple times:

1) What will be the impacts to private property rights for each of these methods?
2) The ability to explain the chosen method to the public and obtain the public's understanding is important; however, this should not be the only factor used to determine the appropriate method for this scenario. The process needs to be science-driven.

RENOURISHMENT PROVISION – FACILITATED DISCUSSION

As a response to the January 11, 2019 Workgroup discussion on renourishment considerations, Ms. von Kolnitz presented draft language which addressed this topic for further Workgroup review. This draft language is as follows:

During a jurisdictional line review cycle, communities with an issued OCRM Critical Area Permit for a renourishment project, or a federal renourishment project with associated state Coastal

Zone Consistency Certification may submit a request to OCRM for a one time, one year extension of the jurisdictional line review.

The purpose of the extension is to allow the renourishment project to be completed and the sand dunes to begin to stabilize.

The community requesting the extension must demonstrate that funds are encumbered to complete the renourishment project, the project has been initiated on the beach, and the project has been designed to include a primary oceanfront sand dune.

Workgroup discussion about the draft language as presented:

- Timing considerations
  - Life of Permit (issuance date, effective date, expiration date)
    - Impacts of appeals process?
  - Potential to incorporate renourishment planning into the Local Comprehensive Beachfront Management Plan (LCBMP) update process?

- Regarding the 'one year extension' language
  - One year may not be sufficient for dunes to stabilize and equilibrium to be reached.
  - Mandatory survey/monitoring data may be used to determine when stabilization has occurred.
    - What parameter is used to establish when stabilization has occurred?
    - Stabilization could be determined to have occurred when the accelerated erosion rate begins to cease (i.e. return to pre-nourishment erosion rate).
  - Establishing a timeframe may require legislation.

- Regarding the term 'completed' as part of "…the renourishment project to be *completed* and the sand dunes to begin to stabilize."
  - This term has different definitions (i.e. USACE requires project completion).
  - Suggested language is "construction completion".

- Regarding the term 'initiated' as part of "…the project has been *initiated* on the beach…"
  - This term needs clarification. What constitutes 'initiated'? A signed contract? Sand actively being pumped onto the beach?
    - There are many variables to this process that are outside of a community's control.

- Regarding the term 'designed' as part of "…the project has been *designed* to include a primary oceanfront sand dune."
  - Project design should include storm damage mitigation procedures, which may or may not include a primary oceanfront sand dune as defined (3 feet tall, nearly continuous, vegetated, etc.).

- Is this language true to the original intent of the renourishment concerns expressed during the January 11, 2019 meeting? The idea was that if a beachfront community is

committed to renourishment, then the baseline should be placed in the location of the historic primary dune.

- Not all renourishment projects include a primary dune
  - How does OCRM identify where the primary dune would be?
    - Option 1: use historic location
    - Option 2: base location on engineered design
    - Option 3: allow for renourishment and subsequent stabilization prior to determining location OR require stability features when constructed.
    - Option 4: follow normal procedure to establish jurisdictional line and then allow submittal of petition for the primary dune/baseline to remain in previous location (if it would move landward otherwise)
- Is this language necessary given the 3-year window of the line review process (i.e. every 7-10 years)?
  - A renourishment provision can be beneficial to Scenario #3 beaches.
  - The ability to request an extension which allows for renourishment prior to setting the baseline is preferable to setting the baseline and then petitioning for the line to be revised after the renourishment.
  - A petition to move the baseline seaward following renourishment is similar to language that was formerly included in statute as S.C. Code Ann. Section 48-39-280(A)(4). The Legislature removed this section of law with passage of Act 173.

REINTRODUCTION OF 'EXTRAORDINARY' EROSION

Ms. von Kolnitz reminded the Workgroup about the initial discussion of 'extraordinary' erosion during the December 5, 2018 meeting and highlighted Tim Kana's presentation which provided Coastal Science and Engineering's scientific approach to measuring erosion. She then asked the Workgroup to contemplate defining terminology when discussing extraordinary erosion. Specifically, what words/phrases/ideas come to mind in relation to the following: dunes, vegetation, sand, structures, and water.

SMALL WORKGROUP DIALOGUE – 'EXTRAORDINARY' EROSION

The Workgroup was divided into 3 smaller groups of 3-4 members. Each smaller group discussed identifying characteristics of 'extraordinary' erosion and recorded this information on notecards. This activity provided quick Workgroup feedback on the topic which allowed the Facilitators to compile this information for further discussion.

The following is the information provided by the small workgroups and compiled by the Facilitators:

- Beach (overall)
  - Beach Debris
  - Steep beach-face
  - Changing beach topography
  - Channels opened/closed
  - Creation/distinction of islands/peninsulas

- Dunes
    - Decimated dune fields
    - Total loss
    - Total primary dune loss
    - “The primary dune is gone”
    - Eradicated primary (jurisdictional) dune
    - On beach w/primary dunes, the primary dune is eradicated (completely)
    - Missing or severely scarped
    - Escarpment
    - Dune scarp (truncation or elimination)
    - More than escarpment alone
    - Breach
    - Breached dune ridge
    - Narrow berm at high tide
    - Berm width change (pre/post)
    - Berm scarps on beach
    - Loss of/% of volume
    - Measured island by island if percentage of primary dune system of beach is gone

- Beach/Dune Systems
    - Missing the attributes of dune system
    - Channelization of berm
    - Loss of sand in system
    - Sand displaced
    - Wash-over deposits
    - In no pre-storm dune, then the scarp line/vegetation line moves 50’ landward
    - On beaches without primary dunes, measured by scarp line moving X feet backward or dry/wet line or vegetation line if it exists
    - If 2/3rds or all dunes are eradicated on island, that is extraordinary erosion

- Vegetation
    - Uprooted trees
    - Uprooted
    - Stripped or buried vegetation
    - Total loss of groundcover, not just bare roots from escarpment
    - Death of vegetation (then becomes fire hazard; more like maritime forest vegetation)

- Structures
    - Damaged
    - Pools filled with sand
    - Ruined beach walkways
    - Decimated/totaled
    - Leveled to foundations (homes/buildings)

- Other
    - Mobilization of resources (before/after)
    - Moving things inland
    - Dead critters on beach

- Application of extraordinary erosion should be island by island
- Predict future erosion rate based on historical erosion model, if erosion from an event exceeds that rate (or X percent higher) it is extraordinary erosion.

NEXT STEPS

1) The Workgroup will continue to discuss communications, public outreach and explanation efforts as it relates to the jurisdictional line review process;
2) Extraordinary erosion will be discussed at the next meeting;
3) Goals of the next meeting is for the Workgroup to finalize Scenario #2, Scenario #3 and renourishment recommendation language.

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