



Town of Hilton Head Island  
Planning Commission  
LMO Rewrite Committee Meeting  
August 8, 2013  
8:30 a.m.  
Benjamin M. Racusin Council Chambers

## **AGENDA**

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As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.

- 1. Call to Order**
- 2. Freedom of Information Act Compliance**  
Public notification of this meeting has been published, posted, and mailed in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements.
- 3. Approval of the Agenda**
- 4. Approval of the Minutes – July 25, 2013 Meeting**
- 5. Unfinished Business**
- 6. New Business**
  - a. Review of Wetland Protection
  - b. Discussion of Public Education/Input Program
- 7. Adjournment**

Please note that a quorum of Town Council may result if four (4) or more of Town Council members attend this workshop.

TOWN OF HILTON HEAD ISLAND  
Planning Commission  
**LMO REWRITE COMMITTEE MEETING**  
July 25, 2013 Minutes  
8:30a.m. – Benjamin M. Racusin Council Chambers

Draft

Committee Members Present: Chairman Tom Crews, Vice Chairman Gail Quick,  
David Ames, David Bachelder, Irv Campbell, Chris Darnell,  
Walter Nester, and Kim Likins, *Ex-Officio*

Committee Members Absent: Jim Gant

Planning Commissioners Present: None

Town Staff Present: Teri Lewis, LMO Official  
Rocky Browder, Environmental Planner  
Kathleen Carlin, Administrative Assistant

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1) **CALL TO ORDER**

Chairman Crews called the meeting to order at 8:30a.m.

2) **FREEDOM OF INFORMATION ACT**

Public notification of this meeting has been published, posted and mailed in compliance with the Freedom of Information Act and Town of Hilton Head Island requirements.

3) **APPROVAL OF THE AGENDA**

The committee **approved** the agenda as presented by general consent.

4) **APPROVAL OF THE MINUTES**

The committee **approved** the July 17, 2013 meeting minutes as presented by general consent.

Chairman Crews welcomed the public and requested that the staff make their presentation on New Business, Sec. 16-6-104. Tree Protection.

5) **NEW BUSINESS**

A. **Review of Tree Protection**

Ms. Teri Lewis and Mr. Rocky Browder made a joint presentation on behalf of staff. Ms. Lewis stated that the consultant's recommendation on Tree Protection is based on the information that was previously provided to them by the committee. The consultant's recommendation is based on the committee's previous meetings and discussions regarding Tree Preservation and Management. The consultant brings the following explanation of Tree Protection (Section 16-6-104) to the committee for their consideration:

*Section 16-6-104, Tree Protection, carries forward and expands current specimen tree preservation regulations and consolidates and reorganizes general provisions regarding replacement trees. Current standards required development sites to include trees whose trunk diameters add up to 900 inches per acre. To simplify the tree protection regulations and focus them more on preserving tree canopy rather than individual trees, this section replaces the current 900 inches per acres standard with one with a sliding scale of requirements for retention of existing tree canopy. Such a standard provides more flexibility and reduces impediments to redevelopment. The section also includes a waiver process for use where application of the tree protection standards essentially precludes any reasonable development of a site. Measures for protecting trees during the development process are also substantially expanded.*

The consultant recommends changing 5 business days to 30 days for reporting the removal of a hazardous tree. The staff believes that 30 days is too long and the revision to 5 business days is recommended. The committee and staff agreed with the recommended revision to footnote “c”.

Ms. Lewis stated that staff has some concerns regarding the tree canopy provisions currently drafted by the consultant. Some of the staff’s questions and concerns are as follows:

- 1) A typical site often has an understory, middlestory and overstory layer. If the overstory layer is the only layer then habitat, humidity and diversity will be lost. Additionally what will be left will be as non-diverse area of similarly aged trees.
- 2) The staff is more comfortable if it is clear that the canopy includes all trees under the overstory canopy, not just the overstory trees.
- 3) Table 16-6-104.E2 is very confusing and even the examples given do not make it easier to understand. The new LMO is supposed to be easier to understand. The flexibility provided by protection of the canopy is not acceptable if it is too difficult to understand.
- 4) There appears to be a disconnect between preserving the trees in the canopy but then allowing activities within 12 feet of the dripline of a specimen tree.

The staff and the committee reviewed A. Purpose and Intent. Vice Chairman Quick presented statements in concern of the consultant’s language because it needs to be made more forceful in the protection of trees.

Chairman Crews presented statements in support of the perspective that was previously provided by environmentalist, Mr. Todd Ballantine. Vice Chairman Quick stated that the committee should consider Mr. Ballantine’s guidance in tree protection and management. Mr. Ballantine has extensive knowledge of natural resources specifically related to Hilton Head Island.

Mr. Browder and the committee discussed the definition of a specimen tree as defined in the LMO. Mr. Darnell presented comments regarding the existing and proposed requirements for the percentage of pervious/impervious coverage on a commercial site. The committee and staff discussed the 900 inches per acre requirement.

Mr. and Mrs. David White presented comments regarding tree management and tree harvesting on single family lots. Mr. Cousins presented comments related to development exempt from these requirements.

Ms. Lewis and the committee discussed the limitations on Development Applications Subsequent to Exempt Forestry Activity (i.e. the clearing of a site to circumvent the requirements of this section is prohibited.)

Mrs. Fran White and Mr. Thomas Barnwell presented comments related to the issue of harvesting timber on single-family lots. Mr. Barnwell and Mr. Irv Campbell presented statements in concern of the number and the size of trees in native islanders' cemeteries.

Ms. Lewis and Mr. Browder stated the staff's willingness to work with the public on removal of trees. There is nothing in the LMO that prohibits the removal of trees located in native islanders' cemeteries. No mitigation would be required in many of these instances. Mr. Browder stated that many trees are removed that do not need to be mitigated.

Mr. Darnell and the committee discussed the issue of aerial photography (to determine a percentage of canopy coverage on a lot.) The proposed requirement is in addition to the on-site tree inventory that is already required. This aerial photograph may be too burdensome.

The committee and staff then discussed item E. Tree Inventory. Mr. Cousins and the committee discussed the percentage of canopy issue. The committee questioned the need for an aerial survey in addition to the tree tally that is already required (as long as each individual tree is under specimen size.)

Mr. Browder stated his concern with a canopy approach to Tree Management because you cannot determine the understory trees in this approach. This type of approach saves the bigger, taller trees but results in the loss of understory trees (everything under the canopy can be lost.)

Mr. Browder discussed the need for a diverse growth of trees in both the overstory and understory level for good forest management. The committee discussed the need to protect the mid-level and understory trees. Mr. Ames and the committee discussed the need for forest management in buffer areas. The committee and staff discussed the purpose of overstory trees and understory trees. The committee discussed the need to preserve a variety of species of trees.

The committee and staff discussed the importance of trees in buffers. Vice Chairman Quick presented statements regarding the aesthetic value of trees and the unique character of Hilton Head Island.

Mr. Ames presented statements regarding the need to protect mature, specimen trees. The protection of mature, specimen trees should be a priority. The committee and staff discussed diversity and a healthy forest approach (an approach of protecting the forest rather than individual trees).

Ms. Lewis and the committee discussed the importance of making the LMO easy to understand. The committee and staff discussed a canopy approach versus an Urban Forest approach. Aerial photography might be an unnecessary step. Mr. Browder stated his agreement with these comments. An aerial photo approach (percentage of tree canopy approach) probably is not a good idea. A tree inventory on site approach is important for diversity and good forest management.

The committee recommended that the staff evaluate Bluffton's Tree Canopy Approach as an indicator of potential success. The committee and staff discussed the 'Todd Ballantine

approach'. The staff and committee discussed the issue of mitigation. Mr. Browder stated that the staff tries to work with each situation individually when considering mitigation requirements.

Mr. Nester presented statements regarding the existing LMO language with regard to caliper. Mr. Nester stated the importance of protecting the Town and staff. Perhaps a hybrid approach might be a good idea. We need flexibility in whatever we do to make sure that staff has needed flexibility. The Bluffton ordinance speaks to the issue of overstory and understory trees. A mathematical approach in the growth and management of trees should be considered (in deciding the best species of trees on a site). A tree inventory is based on the type of tree (the kind of overstory that the tree will provide.) This would avoid the need for an aerial photo which is an unnecessary expense for the applicant. The committee discussed the issue of buffers versus the development of a site.

Mr. Nester, the committee and the staff discussed the possibility of developing a Hybrid DBH/Canopy calculation.

Mr. Browder stated that the staff recommends that the applicant work with their landscaper in the development of a landscape plan and then return to the staff for approval. The applicant could show the staff what they would like to do and staff will work with them based on the number and sizes of trees. This way the applicant can manage their own property while staff makes the determination that is needed.

Mr. Darnell and the staff discussed the sizes and species of preferred trees. The committee discussed current LMO requirements for tree mitigation with regard to upgrading trees with Category 1 & Category 2 trees. Species diversity in understory trees is considered very important. Ms. Lewis presented statements in support of expanding the list of recommended Category 2 trees for needed diversity.

The staff will talk with Bluffton regarding their tree management program. The staff will also check with the consultant to see if they have additional information for the committee to consider. The committee stated that they would like the consultant to show them where and how their approach is working elsewhere.

The committee stated that we should work with Todd Ballantine because he knows and understands the island so well. The committee discussed possible funding that may be available for Mr. Ballantine to review the draft natural resources chapter. Ms. Lewis stated that staff will need to look into the budget issue. Ms. Lewis stated that the committee will ultimately need to decide the approach that they want to take (canopy approach or dph).

Mr. Chris Darnell and the committee agreed that accomplishing this is a bit of a balancing act. The committee stated that they should look at the current LMO and consider doing some type of hybrid (i.e. include DPH in the calculation.) We want to maintain as much tree canopy as possible while still encouraging redevelopment and still making sure that the LMO is easy to understand. Flexibility is important. It will also be important to have objective standards to protect the staff and to protect the Town's ordinance to make sure that what we have is enforceable.

Vice Chairman Quick and the committee stated that perhaps we do not need to make many changes to the current language after all. New development is not a very big issue to consider any more. Redevelopment and maintenance issues are the bigger ones to consider at this time.

Perhaps it would be better to codify the existing language so that it is not as subjective on the staff's part in making their determination.

Following final comments, Ms. Lewis and the committee briefly reviewed the committee's upcoming meeting schedule. After the committee has completed their review of the draft LMO, they will begin to work through the public hearing process with the Planning Commission. The committee stressed the importance of the public education process. Following final comments, the meeting was adjourned.

**7) ADJOURNMENT**

The meeting was adjourned at 10: 20a.m.

Submitted by:

Approved by:

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Kathleen Carlin  
Administrative Assistant

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Tom Crews  
Chairman

DRAFT



# TOWN OF HILTON HEAD ISLAND

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## *Community Development Department*

**TO:** LMO Rewrite Committee  
**FROM:** Teri Lewis, *LMO Official*  
**DATE:** August 1, 2013  
**SUBJECT:** Review of Proposed Wetland Protection

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At the meeting on August 8<sup>th</sup> the committee will review the **Wetland Protection** portion of the draft LMO.

Copies of the relevant sections are included for your review prior to the meeting.

Per the consultant:

*Section 16-6-102, Wetland Protection, largely carries forward current wetland protection regulations, reorganizing them to make them easier to read. Those standards include general performance standards for wetland areas and specific regulations requiring the mitigation of any unavoidable alteration of wetlands areas. They also include requirements that certain structures be set back from wetlands. This section converts those setback standards into standards establishing and regulating buffers around wetlands. Buffers are generally deemed the most effective means for protecting wetlands. To retain and enhance development flexibility adjacent to wetlands, the buffers allow limited development activities that do not threaten their effectiveness. The section also expands standards authorizing the establishment of view corridors through the buffers.*

### ***General Notes about Wetland Protection***

- Existing wetland buffer table (listed below for referral) required a minimum and an average wetland buffer – staff has heard for years that the average is complicated to figure out
  - The proposed table eliminates the average wetland buffer requirement
    - Staff agrees with the elimination of the average wetland buffer
- Existing wetland buffer table broke the type of development into several different use categories, some with only a five foot difference in the buffer requirements for different uses
  - The proposed table has only two uses: single family dwelling and everything else
    - Staff believes that the existing list of uses is too complicated but that the proposed list is too simple
    - Staff suggests the following:
      - Single Family Dwellings to include ancillary structures and driveways
      - Non Single Family Pervious Improvements
      - Non Single Family Impervious Improvements
- There are provisions for a 10% reduction in the buffer based on certain conditions
  - Staff thinks this provides the flexibility related to wetland buffers that applicants have requested, however we do have concerns about subjectivity

- A setback is provided between the outer edge of the wetland buffer and any driveways, buildings or parking lots
  - This provides an area that can be disturbed during construction and allow more flexibility for site development while staying out of the wetland buffer
    - Staff likes this provision but thinks it may need to be a note in the table so that applicants are more aware of the requirement
    - Since the setback is only proposed to be five feet, staff recommends the deletion of the reduction provision for the setback
- In Section 16-6-102.D.4.b.i.01 staff recommends that 'existing' be added in front of buffer and that the remainder of this sentence beginning with 'including' be deleted
- Consider whether or not the wetland mitigation banking provision is still needed

**Existing Wetland Buffer Table**

Use	Tidal Wetland	Freshwater Wetland
Multifamily Residential/Nonresidential Impervious Paved Surfaces	50 feet average 25 feet minimum	40 feet average 20 feet minimum
Multifamily Residential/Nonresidential Pervious Paved Surfaces	35 feet average 15 feet minimum	35 feet average 10 feet minimum
Multifamily Residential/Nonresidential Structures	40 feet average 20 feet minimum	35 feet average 20 feet minimum
Single Family Dwelling including accessory structures and impervious or pervious paved surfaces.	20 feet	---
Lagoons and Stormwater Retention/Detention Areas	---	20 feet minimum

# Chapter 16-6: Natural Resource Protection

## Sec. 16-6-101. General

### A. Purpose and Intent

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The intent of this chapter is to establish standards to conserve or restore the natural resources that help define the character of Hilton Head Island and enhance the well-being of Island residents and visitors. Wetlands, dunes, beaches, and trees contribute substantially to the functioning of the Island's natural systems and processes, protection of water quality, control of flooding, community resiliency to natural hazards and disasters, and economic viability. Protection of wetlands and dune and beach systems

### B. Applicability

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Except as expressly provided otherwise, the standards in this chapter shall apply to all development.

## Sec. 16-6-102. Wetland Protection

### A. Purpose and Intent<sup>418</sup>

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The purpose and intent of the standards in this section are to protect and conserve natural wetlands that control flooding by absorbing and retaining flood waters, minimize erosion and sedimentation, maintain and enhance the chemical, physical, and biological integrity of open bodies of water, provide important wildlife habitat and native vegetation, and otherwise enhance the sustainability of the coastal island environment so important to the livability and economy of Hilton Head Island. The standards are intended to regulate development and activities in and around wetlands so as to:

1. Avoid the disturbance or alteration of wetlands wherever practicable;
2. Minimize any unavoidable alteration of wetlands;
3. Mitigate any loss of wetlands or wetland integrity by the revegetation or restoration of altered wetlands, creation of new wetlands, and conservation of existing wetlands;
4. Minimize erosion, sedimentation, and pollution of wetlands;
5. Limit the placement of fill in and excavation of wetlands;
6. Provide buffers along the perimeter of wetlands that will protect the wetlands from impacts of adjacent development and allow for filtration of stormwater runoff before it enters wetlands, and allow for wetland views; and
7. Require development to be set back from wetland buffers to protect the integrity of buffer functions.

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<sup>418</sup> This is revised to better relate to and focus on the standards in the section.

## **B. Applicability**

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Except as expressly provided otherwise, the standards in this section shall apply to all development.

## **C. General Performance Standards**

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1. Fertilizers, pesticides, and other potential pollutants shall be prevented from directly entering into wetlands, whether by surface flow, groundwater flow, or outfall structures.
2. During development, every precaution shall be taken to prevent the disruption of adjacent wetlands and open bodies of water. Siltation fences and other best-management practices shall be used at all times to minimize siltation, sedimentation, erosion, and disturbance of vegetation.
3. To ensure that sediment is not transported into adjacent wetlands or open bodies of water, erosion and sediment controls shall be left in place until filled areas are stabilized with permanent vegetation that will prevent the transport of sediment off the site of land-disturbing activities
4. When the use of fill is permitted, fill material shall be clean and shall not consist of garbage, refuse, toxic or contaminated material, or any material that through the actions of soil leaching may cause the degradation of surface or ground water quality.
5. Filling shall be limited to the minimum amount to achieve the purpose for which the fill is permitted.
6. Slopes resulting from the placement of fill shall be no steeper than a 3 to 1 (horizontal to vertical) ratio and shall be stabilized with vegetation to prevent erosion and sedimentation. The stabilization shall be completed at least 30 days before issuance of a temporary or final Certificate of Compliance. The vegetation used for fill stabilization shall be maintained in a living condition.
7. Where wetlands are filled for road construction and culverts are deemed appropriate, a sufficient number of culverts shall be used to allow for the passage of water and maintain the natural hydrologic regime.

## **D. Wetland Buffer Standards<sup>419</sup>**

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### **1. Applicability**

Wetland buffers shall be provided along the perimeter of all wetlands.

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<sup>419</sup> Although the definitions section of the current LMO defines water shed buffers as areas next to wetlands that are left undisturbed, the "wetland buffer" standards in current Section 16-6-204.B only require various types of structures to be set back from the edge of wetlands. This subsection incorporates the approach reflected in the definition of "wetland buffers" and most commonly applied by wetland protection regulations—treating wetland buffers as areas adjoining wetlands in which little or no land disturbance is allowed.

**2. Wetland Buffer Width<sup>420</sup>**

- a. Wetland buffers shall comply with the minimum width standards in Table \_\_\_ for the type of development and the type of wetland.

<b>TABLE : MINIMUM WETLAND BUFFER WIDTH (FEET) <sup>1</sup></b>		
<b>TYPE OF DEVELOPMENT</b>	<b>TYPE OF WETLAND<sup>421</sup></b>	
	<b>TIDAL WETLAND</b>	<b>FRESHWATER WETLAND</b>
Single-Family Dwelling	20	n/a
All Other Development	35	25
NOTES: 1. Measured from the outer edge of the wetland, as certified in writing by U.S. Army Corps of Engineers (USACE), a Town-approved wetlands consultant, or Ocean & Coastal Resource Management (OCRM) Buildings, surface parking lots, and vehicular accessways shall be set back at least 5 feet beyond the outer edge of the wetland buffer.		

- b. The Official may authorize a reduction in the minimum wetland buffer width by up to ten percent on determining that pollution of the wetlands due to adjacent land disturbance is comparably reduced due to site-specific conditions (e.g., the buffer area drains away from the wetlands) or because the adjacent development is designed to reduce the flow, and maximize the filtration, of stormwater runoff towards the wetlands beyond the extent required by stormwater management regulations.

**3. Setback from Wetland Buffers**

- a. Buildings, surface parking lots, and vehicular accessways shall be set back at least five feet beyond the outer edge of the wetland buffer.
- b. The Official may authorize a reduction in this minimum setback on determining that pollution of the wetlands due to adjacent land disturbance is comparably reduced due to site-specific conditions (e.g., the setback area drains away from the wetlands) or because the adjacent development is designed to reduce the flow, and maximize the filtration, of stormwater runoff towards the wetland buffer beyond the extent required by stormwater management regulations (e.g., consists of previous surfaces).

<sup>420</sup> Proposed wetland buffer width standards carry forward the current lesser standard for single-family dwellings (providing a narrower buffer, and only next to tidal wetlands), but would otherwise be consistent for the type of wetland. These more consistent buffer widths are easier to understand and administer than the current wetland setback standards (which vary by type of wetland, type of adjacent use, type of structure, and whether adjacent land cover is impervious or impervious), and they can be readily mapped or otherwise determined on the development site.

NOTE: The Ballantine Summary Report mentioned by the LMO Rewrite Committee recommended that wetland buffer width standards reflect the relative value of the wetland being buffered. The report specifically suggested buffer width standards be based on scores resulting from the wetland evaluation forms currently required as part of a wetland alteration permit. There is one form for permanently and intermittently flooded wetlands, and one form for seasonally flooded or saturated wetlands. In response to the Ballantine Report, we suggested alternative wetland buffer width standards that, for each of these two wetland types, requires increased buffer width minimums ( 15 feet, 25 feet, 35 feet, and 50 feet) for four point threshold. Town staff felt this alternative, however, would be too onerous on applicants and Town staff.

<sup>421</sup> In response to comments from the LMO Rewrite Committee, we originally suggested having reduced minimum buffer widths alongside isolated freshwater wetlands that are man-made—e.g., constructed ponds that do not drain into streams, channels, or other wetlands. Such a reduction was eliminated in response to request by Town staff. Elimination of the reduction may be appropriate from an environmental perspective, for isolated freshwater wetlands can be considered more sensitive to pollutants because they are not flushed out by tides or flowing water and thus accumulate pollutants.

#### 4. Development Within Wetland Buffers

##### a. Prohibited Development Activities

The following activities are specifically prohibited in a wetland buffer unless expressly authorized in subparagraph b below or elsewhere in this Ordinance:

- i. Removal, excavation, or disturbance of the soil, except for minimal disturbance associated with the installation of trees and plants as approved by the Official, where the wetland buffer is re-established;
- ii. Dumping or filling with any materials;
- iii. Grassed lawns and gardens;
- iv. Placement of structures or other pervious or impervious surfaces; and
- v. Removal or destruction of trees, plants, grasses, or vines.

##### b. Allowed Development Activities

- i. The following activities may occur in a required wetland buffer, subject to specified limitations and the requirements in subparagraphs ii and iii below.
  01. Maintenance of buffer landscaping in a manicured fashion, as approved by the Official, including the winter mowing of vegetation in buffers around lagoons to prevent the growth of woody vegetation;
  02. Construction and maintenance of public multi-purpose pathways , including minor associated structures such as footbridges, benches, and signage—provided the pathway is not more than ten feet wide;
  03. Construction and maintenance of pedestrian walkways, including minor associated structures such as benches and signage, that provide public access to adjacent wetlands for wildlife management and viewing, fishing, and recreational purposes, or that provide access to approved water-dependent development activities—provided the walkway is not more than four feet wide, is not paved, and is not boarded;
  04. Construction and maintenance of bulkheads, including associated backfill in tidal wetland buffers—provided:
    - (A) A wetland buffer in accordance with the standards in this section is re-established; and
    - (B) The Official approves the replanting plan and any tree removal;
  05. Clearing needed to establish or improve view corridors in accordance with paragraph 5 below;
  06. Essential development activities such as stormwater management facilities and water, sanitary sewer, telephone, natural gas, cable TV, or other utility lines—provided:
    - (A) Stormwater management facilities and utility lines that must cross the buffer shall do so at approximately a right angle to minimize the area of buffer width disturbed;

- (B) Stormwater management facilities and utility lines may run approximately parallel to the edge of the wetland if the utility or drainage easement allows the vegetation necessary to provide for significant filtration of stormwater runoff before it reaches the wetland; otherwise additional buffer width shall be required to provide the space for such filtration;
  - (C) Any lagoon or stormwater management pond or structure shall be set back at least 20 feet from the outer edge of the wetland;
07. Water-dependent development activities such as docks, boat ramps, shoreline stabilization, and stream and wetland restoration;
08. Limited removal of:
- (A) Trees or other vegetation determined by the Official to be dead, dying, or diseased, provided the root system is retained intact;
  - (B) Non-native trees or other vegetation determined by the Official to constitute a threat to the growth or reintroduction of native species of vegetation;
  - (C) Fallen trees, tree limbs, brush, and similar debris that have accumulated in or along stream beds and are determined by the Official to substantially impede stream flow
  - (D) Falling trees, tree limbs, and brush that are determined by the Official to impede pedestrian or bicycle traffic along approved multi-purpose pathways and pedestrian walkways.
- ii. Any impervious surfaces shall either be sloped away from the wetland and stormwater runoff from them shall be routed over a greater distance for filtration purposes, or constructed or installed in accordance with an alternative filtration design approved by the Official as ensuring that the impervious surfaces do not adversely impact the natural functionality of the wetland buffer.
- iii. The allowed development activity incorporates any additional measures the Official deems necessary to adequately protect the wetland's water quality and mitigate any loss of or damage to wildlife habitat or native plant communities.

## 5. View Corridors<sup>422</sup>

Vegetation within wetland buffers may be removed or selectively pruned to establish view corridors to the wetlands, in accordance with the following standards:

- a. To the maximum extent practicable, view corridors shall be located where the least amount of native vegetation is required to be removed or pruned (i.e., where little vegetation exists or where existing vegetation is non-native), and the pruning of trees and vegetation adjacent to the corridor can be done in a manner that maintains the health of such trees and other vegetation.

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<sup>422</sup> Sec. 16-6-204.C.5 of the current LMO allows selective pruning to provide views into the wetland. In accordance with the Code Assessment (pp. 2-44 and 3-15), this expands that current provision to expressly authorize the establishment of view corridors to the wetlands through the removal or pruning of buffer vegetation. Although the Code Assessment recommends that standards address the maximum width and minimum spacing of view corridors, Town staff asked that such limitations not be included.

- b. No healthy specimen tree may be removed to create a view corridor. Selective pruning of trees (including specimen trees) is allowed, in accordance with accepted International Society of Arboriculture practices.
- c. Any trees removed shall be cut flush with existing grade and their root systems left intact. All removed vegetation shall be replaced with shrubs or other low-growing vegetation (not turf) that will maximize the buffer's function in slowing runoff and removing pollutants before they reach the wetland system.

## **E. Wetland Alteration and Mitigation Requirements<sup>423</sup>**

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### **1. Wetland Alteration Allowed Only Where Unavoidable<sup>424</sup>**

- a. Alteration to a wetland shall be allowed only when the applicant clearly demonstrates that wetland alteration cannot be avoided. Wetland alteration shall be considered unavoidable only if there no feasible alternative layout or design that would avoid disturbance of wetland and still practically accomplish the overall basic purpose of the proposed development or activity, or if an overriding public interest in the alteration can be demonstrated. Examples of alternative layouts and design that might allow wetland alteration to be avoided include, but are not limited to: using wetland as required open space; locating buildings, parking, and other disturbed areas in non-wetland areas; using existing wetland crossings for needed road or utility access to upland areas; renovating, remodeling, or expanding existing buildings rather than constructing new buildings; using already disturbed areas as sites for new development; and minimizing the footprint of buildings and parking areas (building "up" rather than "out").
- b. Where alteration to a wetland is allowed, any impact of the alteration on the wetland shall be minimized through the use of best management practices, re-design, innovative technology (e.g., pervious parking areas), preservation, and legal protection (e.g., deed restrictions, conservation easements).
- c. Any mitigation proposal to alter a wetland shall ensure that, upon completion, there will be no net loss to the wetland's values, functions, and area.

### **2. Mitigation Required for Altered Wetlands**

- a. Where alteration of a wetland cannot be avoided, mitigation to compensate for the loss of wetland shall be required through any approved combination of wetland revegetation, wetland restoration, wetland creation, wetland preservation, wetland mitigation banking, or the payment of fees in lieu of mitigation, in accordance with the following standards.
- b. The applicant shall demonstrate every effort to avoid and minimize the impact prior to pursuing mitigation through wetland revegetation, wetland restoration, wetland creation, wetland preservation, wetland mitigation banking, or the payment of fees in lieu of mitigation.

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<sup>423</sup> This subsection carries forward regulations in Sec. 16-6-205 through 16-6-214 of the current LMO. They are reorganized and modified to eliminate redundancies and otherwise make them easier to read and understand.

<sup>424</sup> This paragraph is revised to add guidance in determining when wetland alteration cannot be avoided. The additions reflect SC coastal policies that prohibit wetland alteration "unless no feasible alternative exists or an overriding public interest can be demonstrated," and add examples of design measures that might allow wetland alteration to be avoided.

### 3. Minimum Mitigation Ratio

- a. Mitigation completed prior to grading or during construction of an approved development shall compensate for the altered wetland at a ratio of at least 1:1 (e.g., an acre of restored or created wetland for each acre of altered wetland). A higher mitigation ratio may be required based on the value of the altered wetland as evidenced by the completed evaluation form, or as required by OCRM. Although OCRM will accept upland buffers for wetland mitigation, this provision does not allow replacement of altered wetlands by upland buffers, since the goal is no net loss of wetland value, function, and area.
- b. Mitigation completed post-construction for an approved development shall compensate for the altered wetland at a ratio of at least 3:1 (e.g., three acres of restored or created wetland for each acre of altered wetland).

### 4. Location of Mitigation

Wetland revegetation, restoration, creation, or preservation shall be provided on the site of the altered wetland wherever practical and beneficial to the wetland resources. If such mitigation cannot be provided on-site, it may be provided off-site, but only within the same hydrologic unit area (HUA) containing the altered wetland.

### 5. Wetland Revegetation

Wetland revegetation involves the replanting of native vegetation in wetland areas where man-made changes have altered vegetation, but where wetland hydrologic and soil conditions have been retained. Wetland revegetation shall comply with the following standards:

- a. All plants used for revegetation shall be native plants. Refer to U.S. Fish and Wildlife Service, 1988, National List of Plant Species that Occur in Wetlands: 1988 National Summary, Biological Reports 88(24).
- b. Revegetated areas shall be protected from vehicular encroachment.
- c. Trees and plants required herein shall be inspected periodically after installation to determine whether they are surviving in a healthy condition. If the trees or plants appear unable to promote healthy future growth, they shall be replaced by other native plants.
- d. The size and species of vegetation shall be appropriate to the location being revegetated and the type of habitat being created, and shall be of the same species and diversity as that being removed.
- e. All revegetation shall be done in accordance with best management practices.
- f. Wetland restoration, enhancement, or creation may be permitted only where the proposed project exhibits that the hydrologic, soil, side slope, and other basic characteristics of the wetland are adequate to achieve the proposed project goals.
- g. Wetland restoration or creation may be permitted to compensate for new wetland losses only where the restored or created wetland will be at least as persistent as the existing wetland system it is intended to replace.

## 6. Wetland Restoration

Wetland restoration involves the restoration of wetland conditions on lands altered by man-made changes in vegetation, hydrology, or soils. Areas suitable for wetland restoration include agricultural lands, mining sites, silvicultural lands, industrial sites, and other degraded wetland systems. Wetland restoration projects shall comply with the following standards.

- a. The degraded nature of the system shall be documented by the applicant before a restoration plan can be considered.
- b. A wetland restoration plan shall be submitted to demonstrate achievement of a long-term wetland hydrologic regime through the re-establishment of natural hydrophytic vegetation and/or the planting of hydrophytic vegetation species, as appropriate to the site.
- c. The wetland restoration plan shall include a planting plan that identifies the species composition, sizes, plant spacing, and planting schedule for any new plants.
- d. The wetland restoration plan shall include a monitoring program to ensure the success of the project. Success criteria include a predominance of hydrophytic plant species from natural regeneration or the reasonable growth of planted hydrophytic vegetation with a survival rate of at least 75 percent over a three-year establishment period.
- e. Any problems detected during monitoring shall immediately be evaluated as to the cause and measures shall be taken to alleviate the problem and/or readjust the mitigation plan. A contingency plan shall be developed on how detected problems will be corrected to meet the success criteria.

## 7. Wetland Creation

Wetland creation involves the conversion of uplands into wetland systems. Sites suitable for wetland creation are prior converted wetlands, cut-overs, agricultural lands, or very young forest stands. Creation adjacent to existing wetlands may be beneficial to obtain hydrology. Wetland creation projects shall comply with the following standards.

- a. A wetland creation plan designed by a qualified wetland consultant shall be submitted to demonstrate achievement of a long-term wetland hydrological regime through the creation of new wetlands.
- b. The wetland creation plan shall include a planting plan that identifies the species composition, sizes, plant spacing, and planting schedule for any new plants.
- c. If at all possible, hydric soils from a wetland area to be filled or excavated shall be used for the base soils of the created wetland. To provide a stock of seed and rhizomes to assist in vegetating the creation site, the creation site shall be excavated below grade and backfilled with the hydric topsoil to a depth of six to 16 inches. Usable hydric soils shall be moved and spread quickly. If hydric soils are not available, nonhydric topsoils shall be used. Under no circumstances shall bare sub-soil be used as a planting medium.
- d. Vegetation shall match that being altered as to species, density, and diversity.

- e. The wetland creation plan shall include a monitoring program to ensure the success of the project in terms of both vegetation and hydrology. Unless otherwise established in the mitigation plan, success criteria include a predominance of hydrophytic plant species from natural regeneration or the reasonable growth of planted hydrophytic vegetation with a survival rate of at least 75 percent over a three-year establishment period.
- f. Any problems detected during monitoring shall immediately be evaluated as to the cause and measures shall be taken to alleviate the problem and/or readjust the mitigation plan. A contingency plan shall be developed on how detected problems will be corrected to meet the success criteria.

## 8. Wetland Preservation

Wetland preservation involves the conservation of a wetland area in perpetuity through legal limitations on the use and disturbance of the area. Wetland preservation projects are allowed under the following conditions:

- a. No more than 50 percent of required mitigation shall be in wetland preservation.
- b. Total wetland area preserved shall be multiplied by a factor of 0.2 to obtain the amount eligible to be applied toward required mitigation.

*Example: If the mitigation requirement for a site is 1.0 acre, then a maximum of 0.5 acres is eligible for mitigation through preservation. To obtain maximum credit for preservation mitigation in this case, at least 2.5 acres of wetlands and their associated upland buffers must be preserved through deed restrictions or conservation easements (2.5 acres \* 0.2 adjustment = 0.5 acre credit).*

- c. Upland buffers shall be included in all preservation mitigation, but only wetland area shall be applied toward the mitigation requirement.

## 9. Wetland Mitigation Banking

Wetland mitigation banking involves the purchase of credits from an established mitigation bank for wetland area that has previously been restored, created, enhanced, or preserved on another site to compensate for wetland lost to development. Wetland mitigation banking is allowed under the following conditions:

- a. The bank to be debited is in the same watershed as the altered wetland.
- b. The mitigation bank to be debited has received federal, State, and local approval prior to allowance of debits for wetlands impacts.
- c. The ownership, design, control, and maintenance of all mitigation bank sites shall be under the control of the Town.
- d. Town staff will provide Town Council with annual reports on status and effectiveness of mitigation banking within Town limits.

## 10. Payment of Fees in Lieu of Mitigation<sup>425</sup>

If the applicant has made all reasonable efforts to mitigate altered wetland through wetland revegetation, restoration, creation, and preservation, and no mitigation bank credits are available, then the applicant may pay a fee to the Town in lieu of mitigation, subject to the following standards:

- a. The fee shall be calculated by the Official based on the area of wetland altered but not mitigated in accordance with this subsection, the current cost of land in the watershed, and the cost of wetland mitigation design, construction, plant installation, and maintenance.
- b. The fee shall be submitted to the Town prior to approval of a Development Plan for the development proposing the wetland alteration.
- c. The Town shall establish a separate accounting fund in which the fees in lieu of wetland mitigation shall be deposited, subject to the following requirements:
  - i. Such funds need not be segregated from other Town monies for banking purposes.
  - ii. Any yield on the accounting fund shall accrue to that fund and be used for the purposes specified for the fund.
  - iii. The Town shall maintain and keep financial records for the accounting fund showing the revenues to, and disbursements from, the fund, in accordance with normal Town accounting practices. The records of the fund shall be open to public inspection in the same manner as other financial records of the Town.
  - iv. Fees in lieu of mitigation shall only be spent on qualifying wetland creation projects. Qualifying debits include land acquisition, design, construction, plant installation, and maintenance of wetland mitigation areas.

## 11. Maintenance and Monitoring

- a. For all mitigation projects, the Official shall require, at a minimum:
  - i. Maintenance of all plantings at a survival rate of at least 75 percent over a three-year establishment period;
  - ii. Replantings as necessary to maintain the required survival rate; and
  - iii. Removal of exotic species.
- b. The applicant shall submit monitoring reports every six months for a three-year establishment period (unless otherwise established at the time of project approval).

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<sup>425</sup> NOTE TO STAFF: This carries forward Sec. 16-6-214 of the current LMO. Town staff indicates that the in-lieu payment option doesn't work well. The provisions themselves are quite similar to those used for similar programs in other codes. What are the specific problems staff sees with the current program?