Chesapeake Bay Local Assistance Board
Policy Committee Work Session
Monday, March 26, 2007
Stratford Hall, Lerty, Virginia

Chesapeake Bay Local Assistance Board Policy Committee Members Present

Walter J. Sheffield, Committee Chair
William E. Duncanson
Donald W. Davis
Gregory C. Evans

Chesapeake Bay Local Assistance Board Members Present

John J. Zeugner

Ad Hoc Committee Members Present

Dr. John Galbraith, Virginia Tech
Mike Kelly, Williamsburg Environmental Group
Bob Kerr, Kerr Environmental Services
Matthew Meyers, Fairfax County
Pat O'Hare, Home Builders Association of Virginia
Michael Rolband, Wetland Studies & Solutions

DCR Staff Present

Russell W. Baxter, Deputy Director
Joan Salvati, Division Director, Chesapeake Bay Local Assistance
David Sacks, Assistant Division Director, Chesapeake Bay Local Assistance
Ryan Brown, Policy and Planning Assistant Director
Shawn Smith, Principal Environmental Planner
Alli Baird, Senior Environmental Specialist
Michael R. Fletcher, Board and Constituent Services Liaison
Carolyn Elliott, Administration Specialist
Carrie Hileman, Policy and Planning Intern

Others Present

John Friedman, Fairfax County

Call to Order

Mr. Sheffield called the meeting to order and welcomed attendees. He asked members and guests to introduce themselves.

Staff Presentation on Nontidal Wetland Guidance

Ms. Salvati gave the staff presentation on the revised draft Nontidal Wetlands Guidance document. A copy of the document is included as Attachment #1.

Ms. Salvati gave the following presentation.

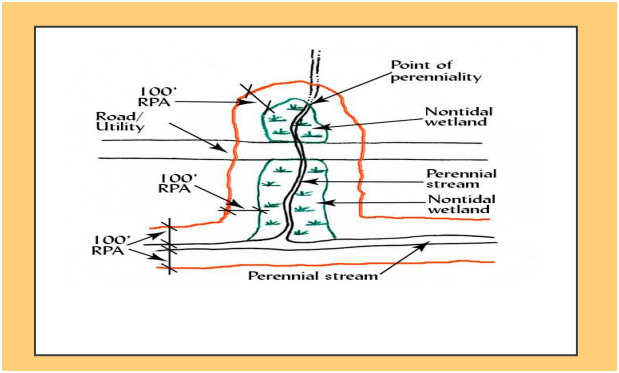
Nontidal Wetlands
Review of Draft Guidance Document

- January 26, 2007 – Policy Committee provided direction on remaining issues:
  - Interrupted and Disconnected Wetlands – differentiate between those with and without surface flow connection and between pre- and post-Bay Act situations
  - Definition of "Surface Flow" – requested staff suggest a definition
  - Channelized and/or Elongated and Narrow Wetlands - requested advice on a logical "break point"
- Revised Guidance Document text addresses 6 issues plus 2 definitions:
  - Interrupted and Disconnected Wetlands
  - Wetlands Associated With Lakes, Ponds and Other Impoundments
  - RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland
  - RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow
  - RPA Nontidal Wetlands Separated By A Channel Levee
  - On-site Designation of RPA Nontidal Wetlands
  - Definition of "surface flow" and "contiguous"

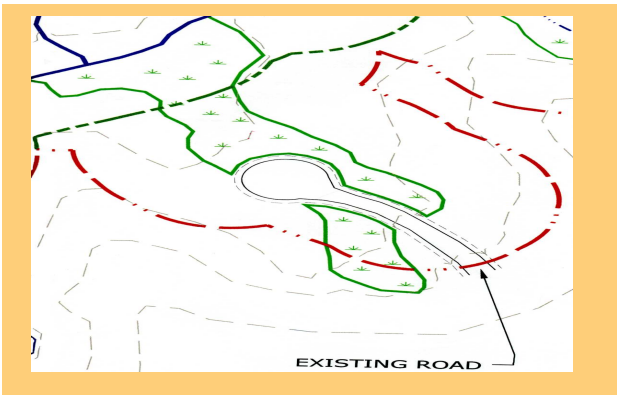
Interrupted and Disconnected Wetlands

Guidance:

•Buffer is required for all sections if flow remains, through (or under) bisecting element

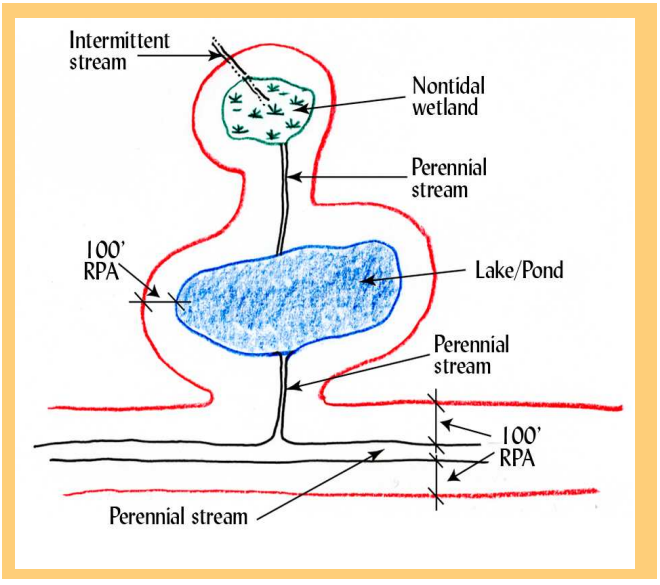


•Nontidal wetlands bisected pre-Bay Act and **not** having a flow connection are not required to have an RPA buffer

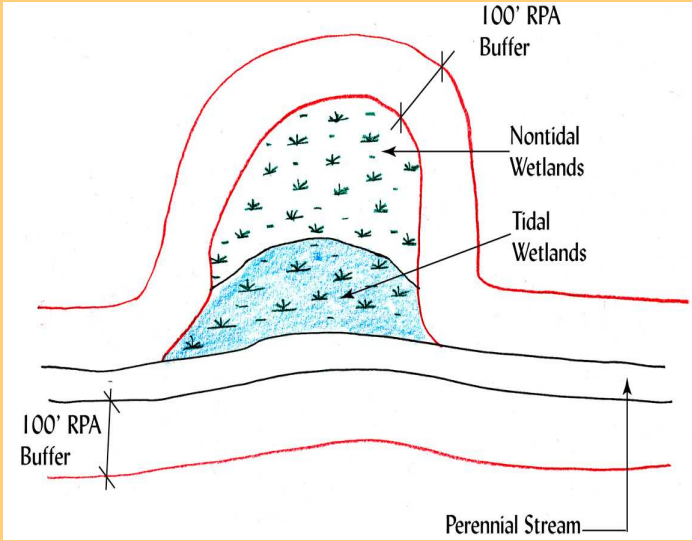


Wetlands Associated With Lakes, Ponds and Other Impoundments

Guidance:
Wetlands associated with impoundments that are not BMPs are considered contiguous if the lake or pond has a perennial stream flowing into **or** out of it and therefore should be included as RPA features
BMPs are exempt from inclusion as a required RPA feature, if they have been designed for water quality **and** quantity purposes

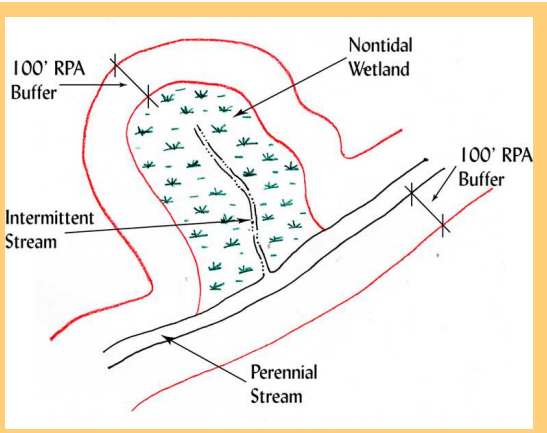


RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland

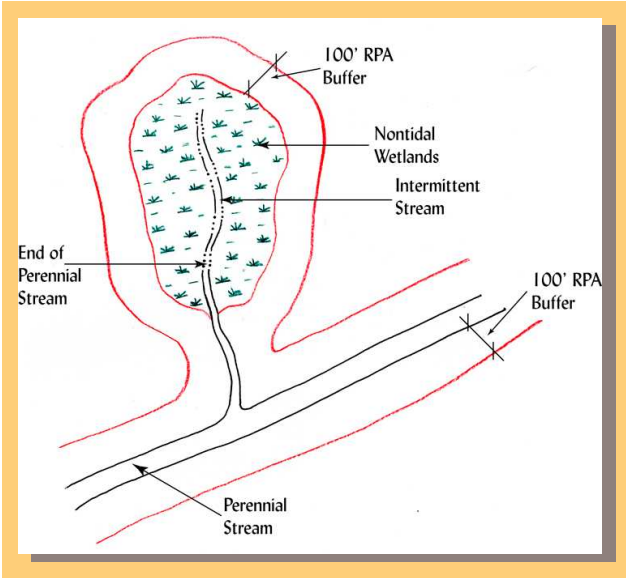


Guidance:
RPA should include all nontidal wetlands, which are both contiguous and satisfy a hydrologic connection, either singularly or as a continuous unit, by surface flow to a tidal wetland or water body with perennial flow for a week or more during the growing season.

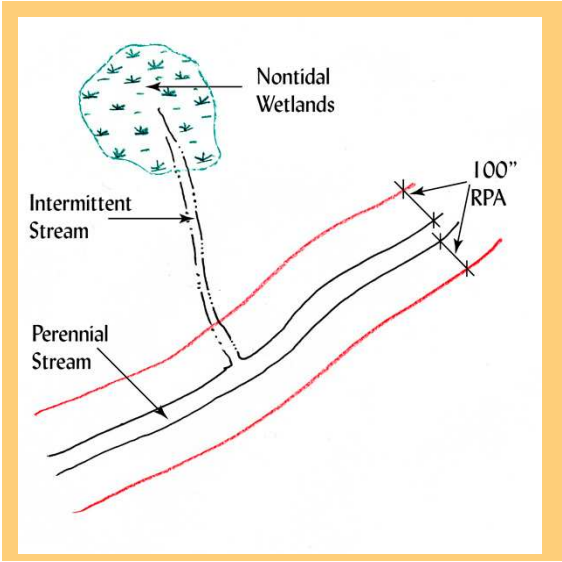
RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow.



This nontidal wetland is an RPA feature because it is connected by surface flow and contiguous to a water body with perennial flow.

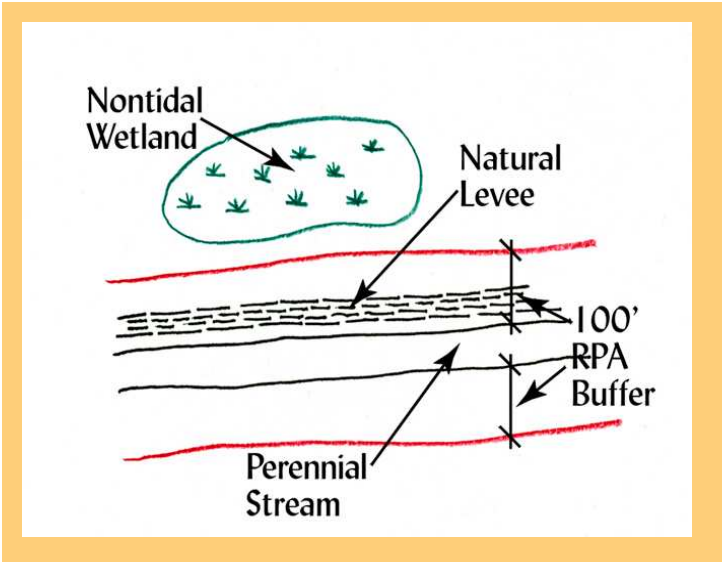


This nontidal wetland is an RPA feature because it is connected by surface flow and is contiguous to a water body with perennial flow.

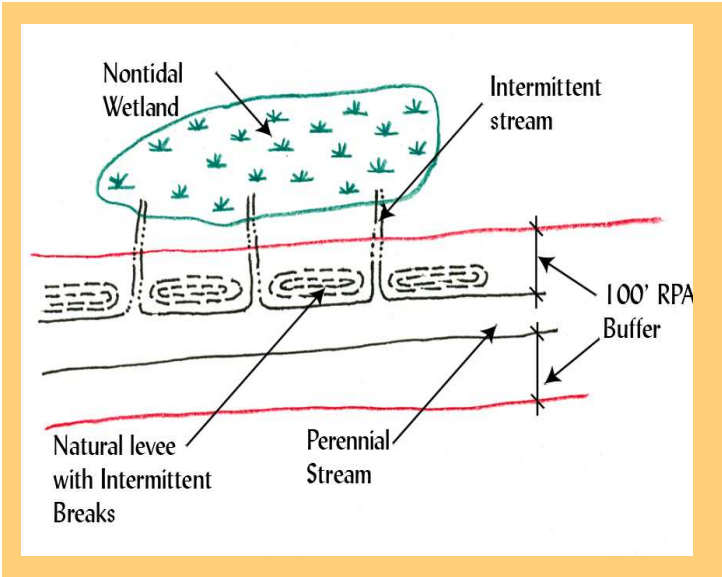


This nontidal wetland is not connected by a water body with perennial flow. This does not require an RPA buffer.

RPA Nontidal Wetlands Separated By A Channel Levee



The natural levee separates the nontidal wetland from the perennial stream, so it is not contiguous and does not require the RPA buffer.



This nontidal wetland is not connected by a water body with perennial flow, so it does not require the RPA buffer.

On-site Designation of RPA Nontidal Wetlands

Guidance:
•Designation of RPAs requires onsite field verification

•Guidance Document (Attachment #1) provides a description of field indicators and a field sheet for use in determining the extent of nontidal wetlands that are required components of a RPA

- evaluate whether there are observable variables that indicate **surface flow** for contiguous nontidal wetlands
- Surface Flow = water moving across the ground surface, either overland or through a channel
- in any field delineation situation, there will by necessity be some negotiation between local staff and consultants, and others when flagging actual RPA feature boundaries

Elongated Wetlands and "Surface Flow"

- Surface Flow = water moving across the ground surface, either overland or through a channel
- Determination of where "surface flow" occurs could be used to identify a cutoff point for elongated wetlands
- Would require a Regulation change

Mr. Rolband asked about cases where there was no continuous flow. He said that it would be important to add frequency and duration.

Ms. Smith said that staff believed that would be addressed in the protocol.

Mr. Rolband said that the protocol indicators were not finite enough to address the frequency issue.

Ms. Salvati said that the definition for surface flow was water moving across the ground surface, either over land or through a channel. However, she noted that a field verification procedure is warranted. She said this is referenced in Appendix A in the guidance document.

Ms. Salvati said there are a series of variables that are observable in the field that demonstrate surface flow.

Ms. Salvati said that while staff believes the process proposed in the guidance document will engender more consistency, there is a recognition that in certain situations consultants will have differences of opinion.

A more specific change would require a regulatory amendment.

Ms. Salvati said that the perennial flow methods have already been tested in Fairfax County and James City County. She said if the committee would like to continue advancing the draft guidance, then staff would like to have the opportunity to field test the methods.

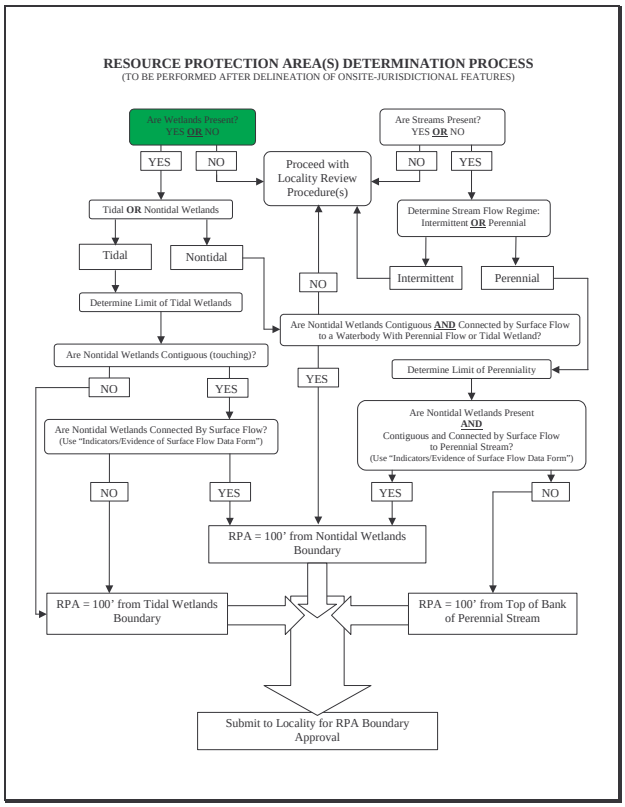
She indicated that staff had already begun some preliminary testing.

Ms. Salvati said that staff was requesting a general endorsement from the policy committee for the guidance document as well as for the approach of testing the new protocol. Staff would then bring this back to the full Board for discussion at the June 18, 2007 meeting.

Discussion on Nontidal Wetland Guidance

Mr. Sheffield led a discussion about the Nontidal Wetland Guidance as presented. He noted that the two points of discussion for the committee were the recommended guidance documents as distributed or amended and field testing.

Ms. Salvati introduced Mr. Nate Hughes for a presentation regarding the process flow chart.



Mr. Hughes reviewed the chart.

Mr. Evans said that he was much more comfortable with this approach.

Mr. Evans suggested amending Section 1 of the guidance document to better define the visual inspection.

Mr. Evans also noted that the last paragraph on page 9 of the draft needed to be worded more clearly. He said that the approach is for localities to conform to the regulations but that the conclusions made by localities based on this language may not be the same in all cases.

Mr. Sheffield directed the conversation back to the comments regarding visual observation of surface flow.

Mr. Baxter said that perhaps the term should be observed water. He said the other examples are evidenced when water is not readily observable.

Mr. Davis said that the length of time is a key element. He said there should be substantial discussion with regard to the time limitation.

Mr. Rolband said that one of the key issues to decide was duration. He noted that the designation of a week was from the 1989 manual.

Mr. Davis asked for clarification regarding the term clear perennial feature. He said that many times intermittent streams may only be a few feet wide.

Ms. Salvati said that Figure 3A showed that the intermittent stream would be a broadband of wetlands.

Mr. Baxter said the issue was a matter of connection. If the wetland is touching the perennial water then it almost doesn't matter if there is a perennial stream.

Mr. Sheffield recognized Mr. Kerr, a member of the Ad Hoc committee.

Mr. Kerr asked for a clarification of the current policy. He said the current policy seemed to refer to the need to have indicators of observable water for a week or more.

Mr. Kerr pointed out that Figure 1 did not appear to be an accurate example of the description in the general discussion. He said the write up indicated that nontidal wetlands must be mapped as RPAs.

Mr. Kerr said that the duration criteria should be applied in this circumstance. He said that he was not certain that there needed to be a regulatory clarification if duration is being used in all circumstances.

Dr. Galbraith said that the wetland definition extends for more than one week.

Mr. Kerr said that the wetlands definition is not for surface water. He said that wetlands can be saturated but still have no surface water.

Ms. Smith clarified that Figure 1 was intended to show that different types of wetlands can be connected. The scenarios in the document are intended to show the different types.

It was suggested that the phrase "provided they are contiguous" be added to this section.

Mr. Rolband reviewed several technical edits.

On page 2, he suggested deleting the words "impossible" and "or" and replacing that with "wetlands are costly to replace."

On page 4, Mr. Rolband noted an issue with the reference to growing season. He said that the regulations do not reference surface flow being limited to the growing season.

On Page 6, in the first paragraph, Mr. Rolband suggested changing " might" to "is" and to delete the word "be." At the bottom of the same paragraph he suggested adding the phrase "only if they include an intermittent stream."

Mr. Davis noted that change would not give the localities any options.

Mr. Evans said that he would prefer not to limit the localities.

Mr. Baxter suggested including a reference from the regulation about the process for identifying other lands. That would clarify what the locality is doing with regards to "other lands."

It was suggested on Page 8 that localities include the local board adoption date for ordinances.

Mr. Davis said that the Board has consistently used the date of October 1, 1989 for pre-Bay area lots.

Mr. Rolband suggested that in the figure on Page 7, a lake or pond with no stream or wetland connecting be added to the graphic.

Mr. Kerr said that there was a clarification memo a couple of years ago about how to treat ponds with regard to the RPA. The thought was that the pond should have a perennial stream connection.

Ms. Salvati said that is incorporated into the perennial flow definition that is being revised. She said that it is the staff's opinion that if there is enough water flowing into a pond to sustain it, then the pond is a perennial feature.

Mr. Rolband said that on the flow chart, he thought that the regulations allowed the measurement to be 100 ft. from the high water mark, not the top of the bank.

It was suggested that the language be revised to say 100 ft. from the seaward edge or the original high water mark.

Mr. Kerr said that he agreed with the section regarding impoundments excluding BMPs that are man made structures. He said that he had a concern with putting RPA buffers around a farm pond if it is only an intermittent stream that causes water to flow over a dam.

Mr. Kerr said a simple solution would be to keep the policy the way it is. If a pond is self-supporting and there is a perennial stream downstream, perhaps there should be buffers around the pond.

Dr. Galbraith said that he had concerns with the structure and location of the definitions of the draft. He said that it would be helpful for duration, frequency and timing to be defined at the beginning of the document.

He said that it would be helpful if figures and flow charts included the statement "as defined in" the policy document.

Mr. Davis asked Mr. Brown if, in his opinion the term "surface flow" would stand the test of time as a definition if it is included only in guidance.

Mr. Brown said that he would defer to Ms. Salvati as to whether a regulatory change is desirable at this point in time, but that he would be in favor of having it all spelled out in the regulations.

Ms. Salvati said the definitions may be better suited for guidance due to the length. However, she said the policy committee and or the Board may wish to include these in the regulations.

Mr. Brown said the other issue was how the term was already used throughout the regulations and whether a new definition of the term would be problematic.

Mr. Kerr noted that the NRCS has definitions of flooding frequency and suggested those terms be utilized or at least that the source be referenced.

Mr. Sheffield opened the discussion for comments from the public.

Mr. Myers from Fairfax said that with regard to Figure 1, it is likely that the Corps of Engineers would have certified the wetland. He said that the County would have to rely on a consultant for the determination of the RPA.

Mr. Myers said that while the graphics make sense, adding the field indicators could add another level of complexity.

Dr. Galbraith said that he could provide references from the National Soil Survey Handbook. He said that it is important to recognize that the definition of flooding is different than the definition of surface flow.

Dr. Galbraith said that with regard to the issue of the duration of frequency and timing it appears that the document confuses the issue. He noted that there is always surface flow in an intermittent channel.

Mr. Friedman from Fairfax County said that he failed to see any rationale for making the distinction for farm ponds with BMPs. He said that he did not see such a distinction in the regulation.

Mr. Friedman echoed comments regarding intermittent channel flow. He said that an intermittent stream can flow 70% of the year and still not qualify as perennial.

Mr. Friedman said that he did not understand the connection between flooding and surface flow. He believes two are entirely different things.

Mr. Sheffield turned back to the members of the Policy Committee. He said that he would prefer to refer changes to the staff and, as a continuing process, bring the revisions back to the next committee meeting prior to taking this to the full Board. The following changes to the draft "Resource Protection Areas: Nontidal Wetlands" guidance document were agreed to:

- On page 2, first full paragraph, first sentence, remove the words "impossible or" such that the sentence reads: "Wetlands in their natural state perform ecological functions which are important to the environment and are costly to replace."
- On page 2, the definition of "surface flow" will be revised to address concerns relating to frequency, timing and duration of surface flow.
- On page 3, last paragraph, delete the first sentence which read: The phrase "surface flow" means water moving across the ground surface, either overland or through a channel." and revise the next sentence as follows: While the definition of "surface flow" is straightforward…."
- On page 3, last paragraph, third sentence, revise to read: "…surface flow; among these are observation of flow…"

- On page 4, Figure 1, revise the explanation to read: "These nontidal wetlands must be mapped under the Resource Protection Area (RPA) designation provided that they are contiguous…"
- On pages 4 and 5, delete "saturation to the surface of the ground throughout most of the growing season", "for a week or more during the growing season" and "again, for a week or more during the growing season."
- On page 4, under the heading "RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland" revise the second sentence as follows: "Figure 2…landscape is connected by surface flow and part is not."
- On pages 5-6, revise references to Figures 4A and 4B so that they are properly referenced.
- On page 6, amend the last sentence in the paragraph to include a reference to Section 9 VAC 10-20-80 4 of the Regulations which permits "other lands" to be included as RPA components.
- On page 8, under the second full paragraph, last sentence, revise to reference "October 1, 1989", deleting "the adoption of the Bay Act Regulations in 1989."
- On page 9, under "On-site Designation of RPA Nontidal Wetlands" revise the second to last sentence to delete "approach" and insert "conclusions."

The following changes to "Section II Indicators/Evidence that Surface Flow has Occurred" document were agreed to:

- Under Section II.A.1, revise to read: "Observed flow – Observation of water movement as overland or channelized flow. Other evidence may include gauges and/or field instruments that record water flow."

MOTION: Mr. Davis moved that the Policy Committee preliminarily adopt the draft document based on the suggested changes and that staff make those changes to bring back to the May 8 meeting of the Policy Committee for the purposes of sending the draft to the full Board on June 18.

SECOND: Mr. Duncanson

DISCUSSION: It was clarified that this would include the draft document and any appendices to it.

Mr. Evans said he would like staff to address duration and timing in the definitions.

VOTE: Motion carried unanimously

Mr. Davis noted that the document is a preliminary draft document. He said that work needs to be done on the data form.

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Mr. Davis suggested that the data form be field tested by staff for the purposes of making the form more specific.

It was noted that staffing for this verification is often a problem for localities.

MOTION: Mr. Davis moved that the Policy Committee schedule the next meeting for May 8, 2007 between the NARC and SARC meetings.

SECOND: Mr. Evans

DISCUSSION: Mr. Davis suggested that, according to the agendas for the NARC and SARC meetings that the time for the Policy Committee meeting be revised.

VOTE: Motion carried unanimously

Mr. Sheffield thanked staff and members of the Ad Hoc committee.

There being no further business, the meeting was adjourned.

Respectfully submitted,

_____ _____

Walter J. Sheffield, Chairman Joseph H. Maroon, Director

Attachment #1

NOTE: Due to formatting issues with the merging of documents, page numbers for this attachment may not correspond exactly as noted in comments above.

Resource Protection Areas: Nontidal Wetlands
Guidance on the Chesapeake Bay Preservation Area
Designation and Management Regulations

Purpose:
This document provides guidance on requirements of the Chesapeake Bay Preservation Areas Designation and Management Regulations (Regulations) for determining which nontidal wetlands are required to be part of the Resource Protection Areas.

The Regulations establish the Resource Protection Area (RPA) as the shoreward component of Chesapeake Bay Preservation Areas. RPAs are composed of: tidal wetlands; *non-tidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow*; tidal shores; such other lands considered necessary by the locality to protect the quality of state waters; and a 100-foot wide vegetated buffer adjacent to, and landward of, these features.

What is not completely clear to many concerned local governments impacted by the Bay Act regulations and wetlands professionals is the question of how a distinction should be drawn between nontidal wetlands that are required for inclusion in the RPA and other nontidal wetlands where the inclusion as RPA features is optional at the discretion of a local government. Questions have been raised regarding the definitions of "contiguous" and "connected by surface flow" and the extent to which whole wetland systems meeting these criteria must be included in RPAs. The focus of this document is to provide guidance on determining which nontidal wetlands the Regulations require to be included as part of the RPA.

This document addresses the following nontidal wetlands situations:

- RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Tidal Wetland
- RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow
- RPA Nontidal Wetlands Separated By A Channel Levee
- Interrupted and Disconnected Wetlands
- Wetlands Associated With Lakes, Ponds and Other Impoundments
- On-site Designation of RPA Nontidal Wetlands

Background:
Wetlands are found throughout the United States and can be classified into two main groups: coastal or tidal wetlands and inland or nontidal wetlands. Tidal wetlands are

largely comprised of coastal salt and brackish marshes, mudflats, mangroves (tropical maritime trees or shrubs) and other swamps subjected to periodic tidal influence.

Nontidal wetlands principally include freshwater marshes, ponds, shrub and wooded swamps, bogs, and bottomland hardwood forests. Nontidal wetlands represent a complex assemblage of inland wet environments. Wetlands falling under the jurisdiction of the US Army Corp of Engineers and the Virginia Department of Environmental Quality are delineated by trained experts. For classification purposes, wetlands are subdivided into five primary systems: marine, estuarine, riverine, lacustrine (lakes and ponds) and palustrine (swamps and marshes).

Wetlands in their natural state perform ecological functions which are important to the environment and are impossible or costly to replace. Wetlands protect the quality of surface waters by retarding the erosive forces of moving water. They provide a natural means of flood control by reducing flood peaks, thereby protecting against loss of life and property. Wetlands also improve water quality by intercepting and filtering out waterborne sediments, excess nutrients, heavy metals and other pollutants.

Regulatory Framework:

- Section 9 VAC 10-20-40 defines nontidal wetlands as follows: *"Nontidal Wetlands means those wetlands other than tidal wetlands that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions, as defined by the U.S. Environmental Protection Agency pursuant to § 404 of the federal Clean Water Act, in 33 CFR 328.3b."*

- Section 9 VAC 10-20-80 B 2 requires nontidal wetlands connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow to be designated as a component of Resource Protection Areas (RPAs).

- Section 9 VAC 10-20-80 B 5 requires the 100-foot buffer to be designated as the landward component of the RPA, notwithstanding the presence of permitted uses, encroachments, and permitted vegetation clearing.

- Section 9 VAC 10-20-105 requires site-specific boundaries of RPAs to be established or confirmed by a local government as part of their plan-of-development review process.

Definitions:
The following definitions will be used for the purpose of interpreting these terms as they relate to the requirements in the regulatory sections discussed above:

- **Contiguous** shall mean touching along a boundary or at a point (as determined by the 1992 Report by the Board-appointed Chesapeake Bay Preservation Act Program Study Group.)

- **Surface Flow** shall mean water moving across the ground surface, either overland or through a channel.

Discussion:

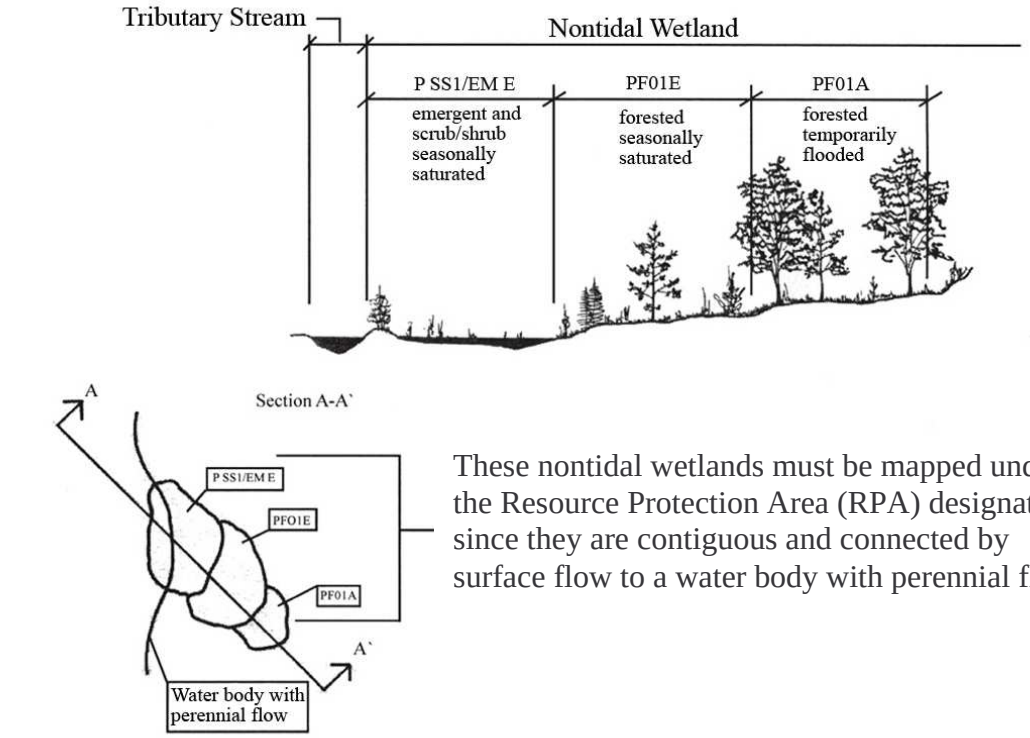
The Regulations state that the designation of RPAs must include tidal wetlands, as well as nontidal wetlands, which are both contiguous and connected by surface flow to either tidal wetlands or water bodies with perennial flow.

A 1992 Report by the Board-appointed Chesapeake Bay Preservation Act Program Study Group determined that "*contiguous*" means *touching*. For the purposes of this interpretation, Figure 1 illustrates a contiguous nontidal wetland that meets the federal definition of a wetland established in the *Corps of Engineers Wetland Delineation Manual* (Technical Report Y-87-1, Waterways Experiment Station, January 1987 hereafter referred to as the 1987 Manual), which is the officially recognized basis for Corps regulatory wetland determinations. The fact that the wetland in Figure 1 has been subdivided according to the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) Classification system has no bearing on the contiguity of the wetland community in question, since the contiguous polygons represent a wetland system that meets the Corps definition.

Since the Regulations require that RPAs must include only those nontidal wetlands that are both connected by surface flow and contiguous to tidal wetlands or water bodies with perennial flow, it is clear that not all nontidal wetlands that have been determined to be subject to the jurisdiction of the US Corps of Engineers are required to be included as a component of a Resource Protection Area. However, the Regulations provide that a local government has the discretion to include all nontidal wetlands as part of a Resource Protection Area.

The phrase "surface flow" means water moving across the ground surface, either overland or through a channel. While this definition is straightforward, its application in the field on a case-by-case basis may not be as simple. Therefore, as with determining whether a water body has perennial flow or not, determining whether a wetland is connected by surface flow should be determined based on site conditions, using indicators of surface flow. A number of hydrologic indicators can be used to determine surface flow; among these are visual observation of flow, deposition of materials, and evidence of water flow. In conjunction with this document, the Department of Conservation and Recreation has developed a protocol for use in the field to evaluate whether surface flow exists or not. The protocol, along with explanatory documentation and worksheets, is included in this document as Appendices A.

Figure 1 - Nontidal Wetland Connected to a Water Body with Perennial Flow

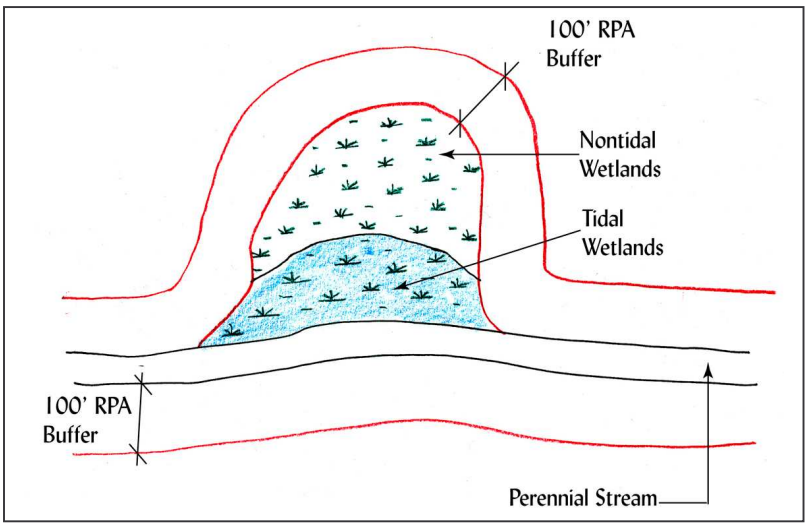


These nontidal wetlands must be mapped under the Resource Protection Area (RPA) designation since they are contiguous and connected by surface flow to a water body with perennial flow.

FIGURE 1

RPA Nontidal Wetlands Connected by Surface flow and Contiguous to a Tidal Wetland

The following guidance addresses the general criteria for wetland hydrology related to designation of nontidal wetlands that are contiguous to tidal wetlands part of the RPAs. Figure 2 illustrates a nontidal wetlands system in which part of the landscape is saturated to the surface of the ground throughout most of the growing season and part that is not. Designation of a nontidal wetland within an RPA should include all nontidal wetlands, which are both contiguous and satisfy a hydrologic connection, either singularly or as a continuous unit, by surface flow to a tidal wetland or water body with perennial flow for a week or more during the growing season.



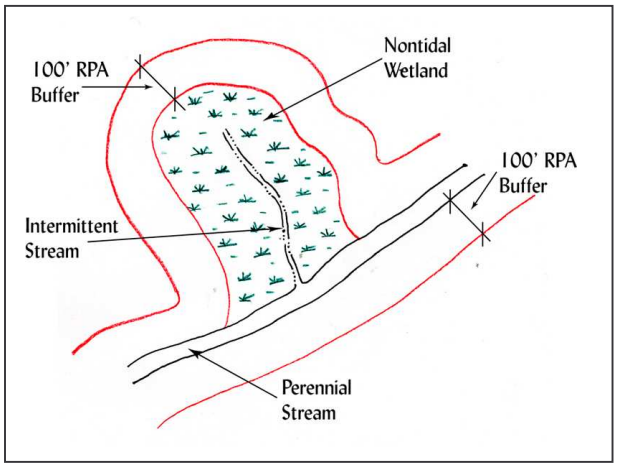
This nontidal wetland is an RPA feature because it is connected by surface flow and is contiguous to a tidal wetland

FIGURE 2

RPA Nontidal Wetlands Connected by Surface Flow and Contiguous to a Water Body with Perennial Flow.

Figures 3A and 3B demonstrate the same hydrologic connection and contiguity as shown in Figure 2 but this time it is connected to a water body with perennial flow and there is no evidence of tidal wetlands. In these cases, the nontidal wetland demonstrates a hydrologic connection to the water body with perennial flow at some point other than through the intermittent stream channel.

There are circumstances where a wetland that is contiguous and connected by surface flow to a water body with perennial flow continues beyond the point where the stream ceases to be perennial. Figures 4A and 4B illustrate the

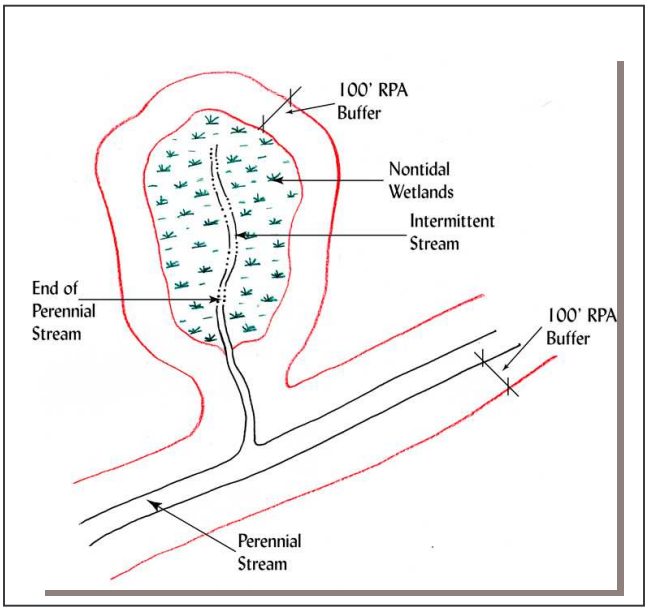


This nontidal wetland is an RPA feature because it is connected by surface flow and contiguous to a water body with perennial flow.

FIGURE 3A

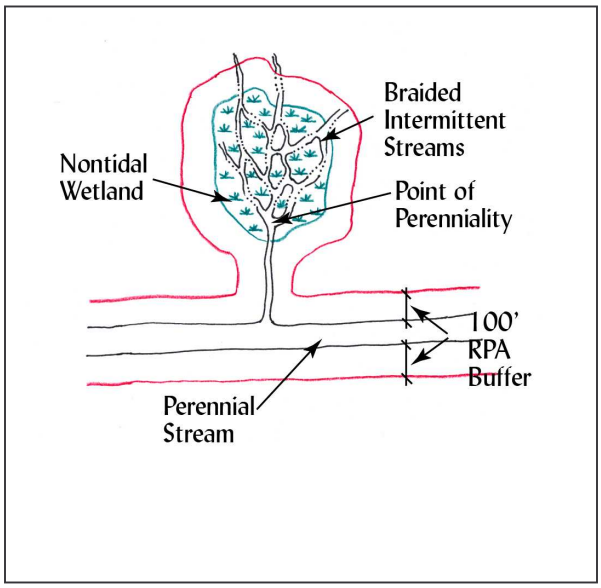
same concept depicting a braided intermittent stream. In such cases these nontidal wetlands are contiguous to water bodies with perennial flow, and a hydrological connection by surface flow (again, for a week or more during the growing season) will exist during any year of normal rainfall. Such nontidal wetlands should be designated as RPAs

Conversely, as Figure 4C shows a nontidal wetland may be contiguous and hydrologically connected to an intermittent stream and might be spatially separated from the water body with perennial flow or other nontidal wetland by an intermittent stream or intermittent channel. Such wetlands are not required to be designated as RPAs because the surface flow connection between the nontidal wetlands does not exist outside of the intermittent stream channel. However, a locality may define such wetlands as "other lands," and designate them as an RPA component at their discretion.



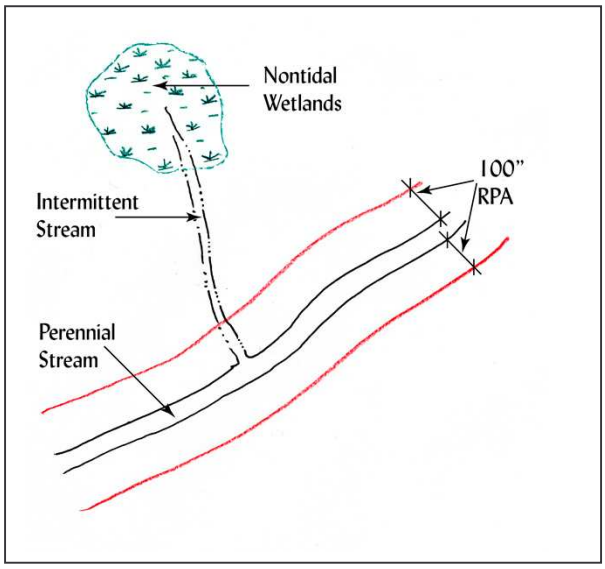
This nontidal wetland is an RPA feature because it is connected by surface flow and is contiguous to a water body with perennial flow

FIGURE 3B



This nontidal wetland requires an RPA buffer because the wetlands are contiguous to the stream

FIGURE 4B

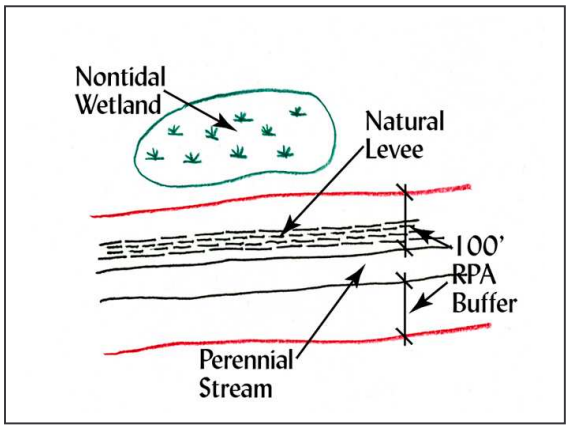


This nontidal wetland is not connected by a water body with perennial flow. This does not require an RPA buffer.

FIGURE 4C

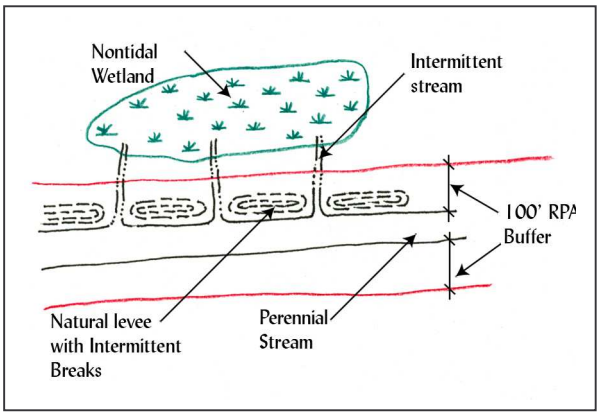
RPA Nontidal Wetlands Separated By A Channel Levee

The following guidance addresses the inclusion of nontidal wetlands as an RPA feature when the area is separated from a water body with perennial flow by a natural river levee or berm, which is not a wetland itself and therefore separates the wetland from the stream channel. The formation of a raised depositional area adjacent to the bank of a stream or river channel can range from almost imperceptible on small streams to very high and wide along major rivers. The designation is centered on the two requirements for nontidal wetlands that mandate they be included in the RPA: that the wetland be part of a system that is (1) connected by surface flow; and (2) contiguous to (touching) a tidal wetland or perennial stream (Figures 5A and 5B). Such nontidal wetlands are not required to be included as RPA features.



The natural levee separates the nontidal wetland from the perennial stream, so it is not contiguous and does not require the RPA buffer.

FIGURE 5A



This nontidal wetland is not connected by a water body with perennial flow, so it does not require the RPA buffer.

FIGURE 5B

Interrupted and Disconnected Wetlands

The following guidance addresses the inclusion of nontidal wetlands as an RPA feature when the wetlands are interrupted by man-made obstructions (such as roads, levees, utility lines and crossings, etc.) In these instances, the wetland was one contiguous system prior to the man-made interruption, so that the contiguity requirement would have been evident prior to the interruption. See Figure 6 for a depiction of this situation. As a result of the interruption, the separated portions of the wetland may or may not remain connected by surface flow through a pipe, culvert, or other conveyance.

Nontidal wetlands that have been interrupted by man-made obstructions, but which remain connected by surface flow should be included as RPA features.

There are also situations where the interrupted wetland is not connected by surface flow at all. In these instances, the issue becomes a question of whether the disconnected portion of the wetland should be included as part of the RPA and subject to the 100 foot buffer given that it may no longer be contiguous or connected by surface flow

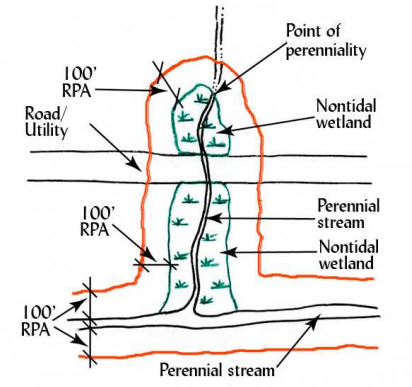


FIGURE 6

The Regulations provide some clarity under Section 9 VAC 10-20-80 B 5, which notes that the 100-foot buffer is not diminished when permitted uses, encroachments and removal of vegetation occurs. Under this subsection, post Bay Act interruptions should not diminish the original RPA, as the RPA should be determined based on the condition of the RPA feature that existed prior to land disturbance, and the development activity should not be used to remove or diminish the RPA. Thus, where the interruption occurred subsequent to the adoption of the Bay Act Regulations in 1989, the entire wetland should be treated as an RPA feature and subject to the 100 foot buffer

Wetlands Associated with Lakes, Ponds and Other Impoundments

The following guidance addresses situations where there are wetlands adjacent to ponds, lakes, and other impoundments out of which perennial flow is present, but where there is no perennial flow into the impoundment. The types of impoundments addressed include those lakes and ponds developed as amenities rather than those developed as Best Management Practices (BMPs) to address the water quality stormwater requirements of the Bay Act or water quantity requirements that were in effect at the time of the development. In order for BMPs to be exempted from inclusion as a required RPA feature, they must have been designed and installed in accordance with the standards in effect when they were developed. Figure 7 shows the type of impoundment and wetland that

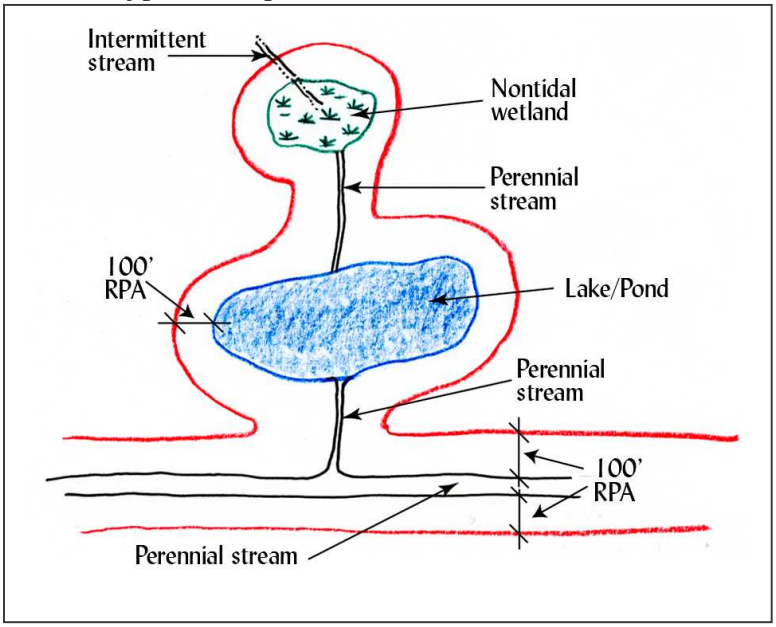


FIGURE 7

should be considered as part of the required RPA. Wetlands associated with impoundments that are not BMPS would be considered to be contiguous if the lake or pond has a perennial stream flowing into or out of it and therefore should be included as RPA features.

On-site Designation of RPA Nontidal Wetlands:

The designation of RPAs requires onsite field verification as does the determination of water bodies with perennial flow. The onsite field verification is necessary to determine whether nontidal wetlands meet both the contiguity and surface flow connection conditions. Appendix A includes a description of field indicators and a field sheet that should be used when determining the extent of nontidal wetlands that are required components of a Resource Protection Area. The basic premises of the field verification procedure are two-fold. First, it is to evaluate whether there is observable variables that indicate surface flow for contiguous nontidal wetlands. Secondly, the procedure acknowledges that field conditions may indicate small, but significant changes in topography, drainage patterns, and wetland vegetation that may be used to determine the onsite extent of the RPA. A final comment on the procedure is that in any field delineation situation, there will by necessity be some negotiation between local staff and consultants, and others when flagging actual RPA feature boundaries. In this context, it is unlikely that each of the Tidewater localities will end up with the same exact approach in determining onsite RPA nontidal wetlands. The purpose in developing the field indicators was to give localities a better framework in which to make and review onsite RPA delineations.