

# Notice of Proposed Change - Final

METROPOLITAN GOVERNMENT  
OF  
NASHVILLE AND DAVIDSON  
COUNTY

METRO  
WATER  
SERVICES



Prior to the introduction of a code change or a change in departmental policy or procedure or a change to a plan which may significantly affect the development permit process, the use of real property, the development of real property, or construction thereon,

Metro Water Services has adopted a procedure to first submit a "Notice" of the proposed change to interdepartmental review by Codes, Planning, Water Services, Fire, and Public Works. The purpose of this review is to coordinate the change among the departments and to the greatest extent possible reduce impact upon the contractor/developer customers of the participating departments.

Copies of the "Notice" will also be submitted to the Deputy Mayor, Director of Finance and the Director of the Mayor's Office of Economic Development.

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**Date:** 4/22/09

**Division:** Stormwater

**Effective Date of Change:** Upon approval of the Mayor

**Copy of Proposed Change:** *Updated* Stormwater Management Manual revisions as a result of comments are attached.

## Outline Description of Change:

The purpose of the proposed change is to update the Stormwater Management Manuals Volumes 1, 2, 3 and 4. The revisions are primarily editorial in nature to provide consistent verbiage in all four volumes. The revisions also reflect updates in policies and procedures that have already been implemented but not reflected in the manuals since the previous update in 2006.

## Transition Plan for Change to Occur:

The proposed revisions were e-mailed to the Stormwater Advisory Council (SWAC) on October 15, 2008, and discussed at the November 5, 2008, SWAC meeting. The proposed revisions were presented to the Stormwater Management Committee (SWMC) on December 4, 2008.

*Following the first interdepartmental review and comments, the proposed revisions were emailed to stakeholders and appropriate Committee Chairs of the Metro Council on December 19, 2008, according to the Change Management Plan. After the 30 day comment period ending January 18, 2009, comments were extensively reviewed and responses prepared by SW staff. Updates to initially proposed revisions have been made as a result of Comments 1, 2, 4, and 5. Please see attached comments and responses.*

This final notice is being submitted for the second interdepartmental review as required by the Change Management Plan. The Director of Metro Water Services will then present the revisions to the Mayor for final approval. The changes will go into effect immediately following.

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This final Notice of Proposed Change including comments and responses will be posted on the Metro Water Services website, the Stormwater page, the MWS Development page, and the Development Services website.

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## **Editorial Changes:**

### **Volume 1:**

Pg. iii: Add "Prevention & Sediment Control Measures" after "6.10 Erosion"

Pg. 2-3: Remove space at top of page

Pg. 3-10, Section 3.7.3.2, #4: Add "to appeal the stop work order" after "Director"

Pg. 3-10: 2<sup>nd</sup> sentence in last paragraph, change "A hearing must be" to "Such an appellate hearing must be"

Pg. 3-10: 2<sup>nd</sup> sentence in last paragraph, change "are being" to "were"

Pg. 3-11: 2<sup>nd</sup> sentence in first paragraph, change "codes" to code" and "maybe" to "may be"

Pg. 3-11, #1: Change "on any other phases" to "on any phase"

Pg. 3-11, Section 3.8: Add "to MWS" to the end of the 2<sup>nd</sup> sentence

Pg. 4-3, #12: Change "1" (one inch) = 2000' (two thousand feet)" to "1 inch = 2000 feet"

Pg. 6-12: Correct figure references (Figure 6-3, 6-4, & 6-5 to Figure 6-1, 6-2, & 6-3)

Pg. 6-12: Add "streams with a Local Flood Study" to item 3.

Pg. 6-13: Move 6.9.3 heading to next page

Pg. 6-14: In item 3 change "release of the stormwater system bond" to "release of the Stormwater Bond or Stormwater Use & Occupancy Permit sign-off"

Pg. 6-15: Make "1" in the table note superscript

Pg. 6-18: In section 6.10.2, sentence #2, change "which" to "that"

Pg. 6-19: In section 6.10.6, replace "3 to 1 or greater" with "3 to 1 or steeper"

Pg. 6-19: In section 6.10.7, add "be" in front of "six inches" and add "," after thick

Pg. 7-2: Change website URL to [www.nashville.gov/stormwater/regs/index.htm](http://www.nashville.gov/stormwater/regs/index.htm)

Pg. 7-5: In item 2, change 7.5 to 7.6.2

Pg. 7-8: Add space between items 2 & 3

Pg. 7-8: Section 7.6.3.1.b, change “Environmental” to “Advanced”

Pg. 7-9: Line 1, remove space before “:”

Pg. A-3: Capitalize P in Planning

Pg. A-4: fix numbers (2 #7s)

Pg. A-5: Item #14 – Replace “greater than 3:1” with “3:1 or steeper”.

Pg. A-6: Add boxes to item 21

Appendix C: Change template headings to same format

Pg. C-29: Change “Filtration Chamber fee of sediments” to “Filtration Chamber free of sediments”

Pg. F-3: Change “Variances” in title F1.1.1 to “Variance Requests”

Pg. F-4, Item 3: Remove “, preceded by a hyphen and the year of filing”

Pg. F-4, Item 5: Capitalize “C” in “committee”

Pg. F-8: Change Title “F.1.3” to “F1.3”

Pg. F-10: Add “VARIANCE REQUEST” after “1.”

Pg. F-11: Add “APPEAL” after “2.”

Pg. F-11: Add “Phone No.” and “Email Address” lines below “City” line

## **Volume 2:**

Change MDPW to MWS (universal)

Pg. 1-4: Update address & website address

Pg. 8-1, Section 8.1: Delete “presented in Volume 1, Sections 6.7.1 and 6.8” from paragraph 1

Pg. 8-1, Section 8.1: Change “Volume 1 PTP-01” to “Volume 4 PTP-14”

Pg. 8-2, Section 8.1.2: Change “PTP-02 and 03” to “PTP-01 and 06,”

Pg. 8-5, Section 8.2: Change “PTP-02 and 03” to “PTP-01 and 06”

## **Volume 4:**

Pg. 6-2: Change “Section 7.5” to “Section 7.6”

PTP - 8, pg. 3: Change “proprietary BMP” and “BMP” in the formula to “grass channel”.

PTP -10, pg. 2 & 3: Change “PTP-16” to “PTP-11”

### Other Changes:

#### Volume 1:

Pg. 2-6 (& 4-4, #5): Delete “straw bales”.

Pg. 3-2: Insert “, specific plans (SP), and” after “subdivision plats”

Pg. 3-2: Add the following after “...at the request of the Planning Commission”:

The following applies to subdivision plats only.

1. The Stormwater plat requirements are reflected on the “Subdivision Plan/Plat Application” checklist available under “Subdivisions” at following webpage:

<http://www.nashville.gov/mpc/applic.htm>.

The checklist incorporates by reference various requirements from the Stormwater Management Manuals.

2. Stormwater Review. All plats submitted for Stormwater review must comply with the requirements in the checklist. Since checklist items are not equally weighted, Stormwater will assign each plat a status of either “Approved Except as Noted” or “Returned for Correction” subsequent to plat review.

<u>Status</u>	<u>What does the status mean?</u>
Approved Except as Noted	Plat may be approved by the Metro Planning Commission subject to the noted revisions being made conditions of plat approval. Prior to the plat being recorded by the Metro Planning Department, all of Stormwater’s conditions of approval must be satisfied. If they are not, the Mylar (plat) will be returned for correction until all items are addressed.
Returned for Correction	Plat is not approved by Stormwater and is <u>not</u> ready for Metro Planning Commission review/approval. Until the requested corrections are made, the plat will not be given approval or conditional approval by Stormwater. Table 3-2 identifies those items Stormwater typically gives a plat status of “Returned for Correction,” if omitted from a plat.

**Table 3-2 Common Plat Requirements**

Checklist Item	Be sure plat shows...	Reference Info.
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Public Drainage Easements	Proper labeling and sizing of Public Drainage Easements	Vol. 1 Tables 6-1 & 6-2; required open channel easement widths and pipe easements widths.
Stream buffers; Floodway Buffers	Proper width and size of buffers	Vol. 1 Figures 6-1 thru 6-3; buffers are scaled from the respective tops of bank and not the stream centerline.
Water quality/quantity measures	Illustration and labeling of measures	
100 year Floodplain and Floodway	Accurate depiction of existing and proposed boundaries	
Minimum Finished Floor Elevations (FFE)	Labeling of FFE's on all lots affected by a 100 Year Floodplain	
Stormwater Maintenance Agreement	Labeling of recorded instrument # on plat	
Dedication of Drainage Easement	Labeling of recorded instrument # on plat	

Pg. 3-3, Section 3.2.2: Delete sentence, "All building permit and Grading Permit...department needs assessment."

Pg. 3-9, Section 3.6: Replace last sentence with "MWS may issue a Stop Work Order or the Metro Department of Codes may withhold the Use and Occupancy Permit for a project until any problems identified by a Metro department with the variance are resolved to the satisfaction of the issuing department."

Pg. 3-9, Section 3.7.2: Add #4, "Fill in excess of 100 cubic yds. was brought from the site to a location without a valid Grading Permit, creating a violation of the SWMM."

Pg. 3-9, Section 3.7.3: Add sentence "A NOV may be issued to any or all of the following: the property owner, the contractor or subcontractor, the developer, or the homebuilder."

Pg. 3-10, Section 3.7.3.1: Change "of the property owner" to "of either the property owner and/or the party that created the violation"

Pg. 3-10: Delete "At this Hearing" in last paragraph

Pg. 3-10: Add "hereinafter referred to as Director" after "or his designee" in the third sentence of the last paragraph

Pg. 3-10: Change, "A written decision shall be mailed...within five (5) business days" to "A written decision shall be mailed...within ten (10) business days"

Pg. 3-11: Change, “A written decision shall be mailed...within five (5) business days” to “A written decision shall be mailed...within ten (10) business days”

Pg. 3-11, first paragraph, add “No such continuance shall excuse the violation for purposes of the assessment of fines for continuing violations.” before the last sentence

Pg. 3-11: Replace “3. Request that the ....with regulations.” with “3. Withhold the Stormwater Use & Occupancy permit sign-off on any phase of the development until the phase in question is in compliance with these regulations and all associated fines have been paid.”

Pg. 3-12: Delete the first paragraph in 3.9.1 & replace it with the following:

For non-residential construction, prior to the issuance of a Use and Occupancy (U&O) permit for any structure in a development (unless exempted by Sections 3.4 and 3.5), a Tennessee registered engineer shall submit to MWS a certification letter stating that the site has been inspected and that the stormwater management system and stormwater BMPs (both structural and non-structural) are complete and functional in accordance with the plans approved by MWS. Any deviations from the approved plans shall be noted on as-built drawings submitted.

To insure the adequacy of stormwater quantity detention facilities, stormwater quality management practices, and public infrastructure, the certification submittal shall also include as-built drawings showing final topographic features of all these facilities. This shall include invert elevations of outlet control structures. Hydrologic and hydraulic calculations may be required for as-built conditions. Cut and fill balance certification should also be included for floodplain and sink hole alterations.

Pg. 3-12: Delete the first paragraph in 3.9.2 & replace it with the following:

For residential construction, prior to the full release of the performance bond for the development (unless exempted by Sections 3.4 and 3.5), a Tennessee registered engineer shall submit to MWS a certification letter stating that the site has been inspected and that the stormwater management system and stormwater BMPs (both structural and non-structural) are complete and functional in accordance with the plans approved by MWS. Any deviations from the approved plans shall be noted on as-built drawings submitted.

To insure the adequacy of stormwater quantity detention facilities, stormwater quality management practices, and public infrastructure, the certification submittal shall also include as-built drawings showing final topographic features of all these facilities. This shall include invert elevations of outlet control structures. Hydrologic and hydraulic calculations may be required for as-built conditions. Cut and fill balance certification should also be included for floodplain and sink hole alterations.

Pg. 4-1: Delete “the Pre-Construction Meeting Application,”

Pg. 4-2: Add “(or the permit applications)” after “Copies of all permits”

Pg. 4-2, Section 4.2.2.1, #1: Change “1” = 100’ (one inch equals one hundred feet)” to “1 inch = 50 feet (smaller scale may be used if pre-approved by staff)”

Pg. 4-3, #16: Add “A note should be placed along the buffer indicating the number of required buffer signs and that they will be installed every 100 feet.”

Pg. 4-9, Section 4.3: Delete first two sentences and replace with “Applications for *building* permits are made to the Department of Codes Administration and applications for *Grading* Permits are made to MWS.”

Pg. 4-10, Section 4.3.3: Replace “Sign and be identified as the EPSC Professional on the Pre-Construction Meeting Application submitted to MWS.” With “Review the EPSC plan for the project prior to the Pre-Construction Meeting.”

Pg. 4-11: Delete “included in Appendix A” and replace with [www.nashville.gov/stormwater/forms/swgrprecon.aspx](http://www.nashville.gov/stormwater/forms/swgrprecon.aspx)

Pg. 4-11: Insert “Pre-Con Applications can also be obtained from the Stormwater NPDES Office (615-880-2420).” after “...before a Pre-Con can be scheduled.”

Pg. 4-11: Delete “The Pre-Construction Meeting Application contains additional information about these requirements.”

Pg. 4-11: Add sentence to the end of Section 4.3.3, “MWS reserves the right to revoke a person’s ability to serve as an EPSC Professional for a Metro Grading Permit sites.”

Pg. 4-11: Replace “The applicant must attend a Pre-Con within six months of being contacted by MWS for scheduling.” with “The applicant must attend a Pre-Con within six months of technical review completion.”

Pg. 6-4, Section 6.2.4: Add “Public Drainage Easements for open channels must be properly sized, labeled and identified on all plats submitted for review. Furthermore, applicant must illustrate and label the respective Tops of Banks on any plat submitted for review.” After “...from 6-1.”

Pg. 6-4, Table 6-1: Add “, centered over channel” after 10 feet

Pg. 6-5, Section 6.3.1: Add sentence to end of section “The two materials for pipes allowed within Right of Ways (or pipes that carry public water) are concrete and corrugated metal.”

Pg. 6-5: Insert “Public Drainage Easements for all storm water infrastructures must be properly sized, labeled and identified on all plats submitted for review.” after “...determined from Table 6-2.”

Pg. 6-10: Insert “existing” in front of “surface outlet” in item b.

Pg. 6-10: Delete “Note: The 50 percent...undisturbed state.”

Pg. 6-10, Section 6.8: Add sentence to end of section “Any cutting or filling below the contour elevation that defines the storage equal to 50 percent of the 100-year, 24-hour sinkhole floodplain storage volume, unless satisfied by the existing surface outlet criteria, will require a variance from the Stormwater Management Committee.”

Pg. 6-10, Section 6.9: Replace “New development and significant redevelopment sites” with “New Development, significant redevelopment, and sites needing a Grading Permit”

Pg. 6-10, Section 6.9: Insert “plats,” before “and/or concept plans.”

Pg. 6-12: Insert “The tops of bank must be properly illustrated and labeled on plats submitted for review.” after “...marked by a break in slope.”

Pg. 6-14, #3: Replace “Signs can be purchased through MWS approved vendors” with “The number of required buffer signs should be indicated along the buffer line on the Grading and Drainage plans. More detailed information about the signs can be found at [www.nashville.gov/stormwater/WQBuffers.htm](http://www.nashville.gov/stormwater/WQBuffers.htm).”

Pg. 6-14: Delete “as defined by a 50 percent loss on a lot or parcel,”

Pg. 6-14, Section 6.9.4: Add “d. Woody vegetation growing on a levee or within 15’ of the levee toe may be removed to protect the integrity of the levee.”

Pg. 6-15: Table 6-3: Add “at least 1,000 feet between crossings” to both Driveway and Road crossings

Pg. 7-2: Add sentence “Please contact MWS Plan Review staff for TSS removal efficiency requirements for sites located in Nashville’s combined sewer area.”

Pg. 7-11: Add sentence to Natural Area Conservation section - “Previously disturbed areas are subject to staff review to determine if they qualify as a natural area.”

Pg. A-1: Delete “Pre-Construction Meeting Application”

Pg. A-3: Delete “Apply with Codes”

Pg. A-4: Delete items #1 & replace it with the following:

1. Project Fee Computation Worksheet completely filled out. Do not include payment with initial submittals. Calculated fees will be reviewed and verified during sufficiency review. Payment for Plan Review Fees will be required prior to technical

review. Payment for Grading Permit fees, if applicable, will be required prior to a Pre-Construction meeting being scheduled.

Pg. A-4: Item #2 – Change “Engineering Section” to “Stormwater Development Review”

Pg. A-4: Item #3 – Change “stamp” to “note” & add the following to the end, “before a Grading Permit will be issued. Enter date NOC applied for:\_\_\_\_\_.”

Pg. A-4: Item #4 – Add “(or copies of the permit applications)” after “State and Federal permits,”

Pg. A-4: Item #5: Add “on separate sheet” after sediment control plans and change “four (4) sets of plans” to “three (3) sets of plans”.

Pg. A-4: Delete Item #6

Pg. A-5: Delete Item #10 and replace with the following 2 items:

10. Existing and proposed stormwater management structures on and in the immediate vicinity of the property. Must include the location, size, and capacity of the next two structures immediately downstream in every direction that will receive runoff. Must include size, type, slope, and invert elevation of the structures. (only an Included box will follow this item)

11. Calculations showing no adverse impact of the development on downstream structures to the point where the site makes up 10% of the drainage area OR that pre=post construction flows. (both Included & Not Applicable boxes)

Pg. A-6, #22: Add sentence “A note should be placed along each water quality buffer indicating the number of required buffer signs and that they will be installed every 100 feet.”

Pg. A-6: Replace “visit [www.nashville.gov/stormwater/asbuilt.htm](http://www.nashville.gov/stormwater/asbuilt.htm)” with “contact Stormwater Development Review staff”

Pg. A-9: Delete page

Pg. B-4: Add buffer definition:

Buffer: A vegetated area, including trees, shrubs and herbaceous vegetation, which exists or is established to protect community water. Alteration of this natural area is strictly limited.

Pg. B-12: Change significant redevelopment definition to:

Significant Redevelopment - Development improvements that have a value greater than 50% of the current assessed value, increases the floor area by 25% or more, increases in the impervious surface area by 25% or more, redirects the flow of storm water, or

modifies the storm sewer system. Demolition and reconstruction is considered development and not redevelopment. Note: this is different than redevelopment.

Pg. B-17: Add “M.C.L. – Metropolitan Code of Laws”

Pg. B-17: Add “SWMM – Stormwater Management Manual”

Pg. C-9: Add Letter of Authenticity to end of Inspection and Maintenance Agreement

Appendix C: Add infiltration trench template

Pg. C-29: Delete “Oil and Grease” and move “Any evidence of filter(s) clogging” to “Other” section on pg. C-30.

Appendix F: Delete SWMC Variance Checklist from SWMM & title sheet reference (so that it can be changed as needed)

Pg. F-3: Delete “of \$50” and “(M.C.L. §15.64.100 A.1.)

Pg. F-5, Item I. i.: Replace “as defined as 75% of the total property area outside of the floodway accepted by MWS, for a principal structure and necessary utilities” with “as decided by the Committee”

Pg. F-7, Section F1.1.5: Add “Unless otherwise stated, every decision of the Committee shall be final and valid for one (1) year from the date of the decision unless a grading permit or building permit is issued within that period, in which case, the variance expiration date will run concurrent with that permit expiration date.” to the end of the 2<sup>nd</sup> paragraph

Pg. F-11: Add “For Variance Request – Please return this completed application along with the additional materials in the Variance Checklist on MWS’ Stormwater website ([www.nashville.gov/stormwater](http://www.nashville.gov/stormwater)),” before “2.”

Pg. F-11: Replace “Adverse decision appeals...Metro Water Services” with “For Appeal Only – Please return this completed application along with the filing fee made payable to Metro Water Services.”

Pg. F-11: Insert “of Property Owner” after “Signature”

Pg. F-11: Replace “\$50.00” in the last sentence with “THE FILING”

## **Volume 2:**

Pg. 5-2: Change 1<sup>st</sup> sentence & second paragraph to read “The two materials for culverts allowed within Right of Ways (or culverts that carry public water) ...”

Pg. 6-2, Section 6.1.4: Add sentence to end of section “The two materials for pipes allowed within Right of Ways (or pipes that carry public water) are concrete and corrugated metal.”

Pg. 8-2, Section 8.1.2: Change “10-year” to “100-year” (3 references)

Pg. 8-2, Section 8.1.2: Delete “with emergency overflow capable of handling the 100-year discharge except where waived or altered by MDPW (see Volume 1, Section 6.6.1)”

Pg. 8-2, Section 8.1.2: Delete “as presented in Volume 4 Figures PTP-02-3 and PTP-03-3”

Pg. 8-4, Section 8.1.4: Add “No freeboard is required for underground detention systems.” before “Impoundment depths greater than...”

Pg. 8-5, Section 8.3: Change “2, 10 and 100-year events” to “2, 5, 10, 25, 50, and 100-year events”

Pg. 8-6, #1: Change “2-, 10-, and 100-year” to “2 through 100-year”; change “2- and 10-year” to “2 through 100-year”; delete “Only the post development hydrograph is required for the 100-year design storm.”

Pg. 8-6, #2: Change “10-year” to “100-year”

Pg. 8-6, #5: Change “2- and 10-year” to “2 through 100-year”; delete “Consider emergency overflow from the 100-year design storm and establish freeboard requirements.”

#### **Volume 4:**

PTP-01, pg. 7, #28: Change “2 feet of freeboard” to “1 foot of freeboard”

PTP-01, pgs.17, 18, 20, 21, and 22: Change “2.0 FT. MINIMUM FREEBOARD” to “1.0 FT. MINIMUM FREEBOARD”

PTP-01, pg. 22: Change “2’ Freeboard” to “1’ Freeboard”

PTP-02, pg. 8, #36: Change “minimum of 2 feet” to “minimum of 1 foot”

PTP-02, pgs.14, 15, 16, 17, and 18: Change “2.0 FT. MINIMUM FREEBOARD” to “1.0 FT. MINIMUM FREEBOARD”

PTP-06, pg. 3, #14: Change “minimum of two feet” to “minimum of one foot”

PTP-14: Delete Straw Bale Barrier TCP & add new TCP for Weighted Sediment Tube

## 2009 SWMM Revision Comments

### Comment #1

Submitted by: Michael Garrigan, Dale and Associates

Contact information: [michael@daleandassociates.net](mailto:michael@daleandassociates.net), (615) 297-5166, Ext. 115

Date submitted: December 30, 2008

On the 8th page of the pdf document emailed, appears a text change on Page 6-11 of Volume 1.

Currently Proposed Amendment: "However, no structures, impervious surfaces, fill, or water quality BMPs shall be placed in Zone 2 without SWMC approval."

Suggested Amendment: "However, no structures, impervious surfaces, fill in excess of 4:1 slopes, or water quality BMPs shall be placed in Zone 2 without SWMC approval."

Zone 2 Bufferyards are currently allowed to be disturbed by grading activities, then revegetated and maintained using grass or other vegetation. In almost every circumstance, the only reason to disturb a Zone 2 buffer is to begin a slope for fill necessary to construct a development outside of the stream buffers. There may be a rare instance where a Zone 2 buffer would be disturbed by cutting, but the majority of the time their disturbance is for the purpose of fill. All that said, I do understand the intent of adding the word fill into this sentence. It is to prevent steep slopes of 2:1 from being installed and eliminating the true intent of the Zone 2 Bufferyards. We would recommend that fill slopes be allowed...but not in excess of a 4:1 slope. This could allow for Zone 2 buffers to be disturbed, revegetated and utilized as "usable property", but also meet the intent of a grassy area for sheet flow runoff. It is our fear that by eliminating all fill practices in a Zone 2 Bufferyard, it would essentially create another non-disturbance buffer area, resulting in further land losses of our clients and other land developers.

### Response #1

Submitted by: Tom Palko

Language in 2006 Stormwater Management Manual unchanged.

### Comment #2

Submitted by: Michael Garrigan, Dale and Associates

Contact information: [michael@daleandassociates.net](mailto:michael@daleandassociates.net), (615) 297-5166, Ext. 115

Date submitted: December 30, 2008

This item did not appear in the proposed amendments but we feel that it should. It most areas of all four manuals, the required freeboard on stormwater ponds is 1 foot (measured from the 100 year water surface). This is the current "rule of thumb" that is enforced by the staff reviewers and what we use in our designs. Conflicting with that is language in Volume 4, under the PTP-01 section. Under Item #28, in the subsection

"Emergency Spillways" located on Page 7 of PTP-01 it reads "A minimum of 2 feet of freeboard must be provided, measured from the top of the water surface elevation for the 100-year storm event...". Two feet of freeboard is also specified on Figures 1.1, 1.2, 1.4 and 1.6 of the same PTP-01 section. A simple fix would be to replace the reference to 2' of freeboard to 1' freeboard in these places. This would bring it in line with all other Volumes, current staff reviews and design practices.

Also, there currently is no mention or reference (that I am aware of) in any of the Volumes or their sections to freeboard on underground detention. Since underground detention typically has minimum covers of 1.5'-2', it has freeboard in the concept of the head supplied to it. Therefore, if deemed applicable, we would like that a sentence referencing no freeboard requirement is required on underground detention. To this point, we have handled this on a case-by-case basis but it would be helpful if it were included.

### **Response #2**

Submitted by: Steve Mishu

Change Volume 4, PTP-01, Page 7, Item 28 from 2 feet of freeboard to 1 foot of freeboard. We also need to change the details on Pages 17, 18, 20, 21, and 22 to reflect 1 foot. Also change PTP-02, Page 8, Item 36 to 1 foot. Same with the details on pages 14, 15, 16, 17 and 18. Lastly, change PTP-06, Page 3, Item 14 to 1 foot.

The following sentence will be added to Volume 2, Section 8.1.4, Page 8-4: "No freeboard is required for underground detention systems."

### **Comment #3**

Submitted by: James V. Armstrong, Armstrong Engineering

Contact information: ja@armstrongengineer.com, (615) 943-0773

Date submitted: January 02, 2009

I must reiterate my comment from the meeting of the Storm Water Advisory Committee. The replacement of wording "3 to 1 or greater" with wording "3 to 1 or steeper" is erroneous. If the objective is to have slopes that are 3 to 1 stabilized with rock riprap, geosynthetic material, or other methods, then the correct wording would be "steeper than {appropriate width} to 1". The correct way would be to cite the point at which the rule considers the stability a given. The wording as proposed does not state the point at which stability is considered adequate and therefore defeats the purpose of having written requirements. It only implies that slopes of 3.000001 to 1 are acceptable without additional stabilization.

If, as has always been the case, the intent is that of slopes 3 to 1 are acceptable without additional measures but those steeper than 3 to 1 must be stabilized to the stated degree, then the correct wording would be "steeper than 3 to 1". This would be consistent with Metro Nashville Department of Public Works standards (see DWG. No. ST-255) or as an example of how to word the standard correctly is illustrated in The Tennessee Erosion & Sediment Control Handbook second edition – Disturbed Area

Stabilization – SO-2 “On slopes steeper than 3:1”, and in National Engineering Handbook 653, Stream Corridor Restoration: Principles, Processes and Practices “However, they can be applied on slopes steeper than 2:1”.

**Response #3**

Submitted by: Tom Palko

The phrasing on pg. 6-19 and pg. A-5 was changed in order to match the wording in Section 4.2.2.2, #11, Pg. 4-5, in the existing SWMM. The change is for consistency.

**Comment #4**

Submitted by: Walter H. Davidson, Walter Davidson & Associates

Contact information: walterhdavidson@bellsouth.net, 615-331-2156

Date submitted: January 14, 2009

Pg F-7 Section F1.1.5 The committee has been saying that the varainace was for 1 year but if a grading permit was issued within the 1 year limit the variance would run with the grading permit even if this was for more than the 1 year limit.

**Response #4**

Submitted by: Paula Kee

The following sentence will be added to the end of the second paragraph in Section F.1.5, pg. F-7:

Unless otherwise stated, every decision of the Committee shall be final and valid for one (1) year from the date of the decision unless a grading permit or building permit is issued within that period, in which case, the variance expiration date will run concurrent with that permit expiration date

**Comment #5**

Submitted by: Walter H. Davidson, Walter Davidson & Associates

Contact information: walterhdavidson@bellsouth.net, 615-331-2156

Date submitted: January 14, 2009

PG F-11 Should the application also request an e-mail address?

**Response #5**

Submitted by: Paula Kee

A line for the e-mail address of the property owner will be added to pg. F-11.