

Mark Hackenburg & Len Bradley, October 24, 2024

Critical Understandings for Land Development

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1

2 Pennsylvania Housing Research Center

- The Pennsylvania Housing Research Center (PHRC) provides and facilitates education, training, innovation, research, and dissemination to the residential construction industry for the purpose of improving the quality and affordability of housing.
- Educational programs and publications by the PHRC address a wide range of topics relevant to the home building industry and are designed to reach a diverse audience: builders, code officials, remodelers, architects, developers, engineers, planners, landscape architects, local government officials, educators, etc. to provide professional development and continuing education

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2

8 Description


Throughout the Commonwealth, engineers and developers are facing the same challenge; balancing project development needs while meeting the stormwater management requirements. Over the past few decades, stormwater management requirements have become more complex as flooding, drought, and extreme weather frequency have become more apparent. Understanding the impact of Stormwater Management practices on the development process is critical; the impact of permitting timelines, criteria, and legal paperwork can be just as important to the success of any land development project.

This presentation will cover the basics of stormwater management permitting; changes to the NPDES permitting process; legal aspects and documentation needed for developers during design, construction, and property settlement; compliance trends for common developer situations during permit close-out; and some lessons learned over the years.

8

Learning Objectives


1. Review the basics of stormwater management regulations in Pennsylvania.
2. Learn about the NPDES permitting process and the timelines associated with the process.
3. Understand the legal aspects and awareness of critical requirements after the permit has been approved.
4. Identify compliance trends and solutions and provide solutions for meeting these regulations.



9

Disclaimer

- No individual product or method is being promoted in this webinar. Products and methods should be selected based on the designed assembly.



10

LEN BRADLEY, PE

Supervisor of Engineering // Associate
RGS Associates, Inc

Resume // Registrations
BS, Civil Engineering, University of Cincinnati - 2004
PE in Maryland, New Jersey and Pennsylvania
Governor's Statewide Water Resources Committee Member
Vice President (Central) - Pennsylvania Society of Professional Engineers
Engineer of the Year - Pennsylvania (PSPE) 2021
Top 10 Young Professional Nationally, SWS Magazine 2021
Forty Under 40 - Central Penn Business Journal 2019

My Passion and Expertise
Stormwater Management, Floodplain Restoration,
Hydrology & Hydraulics, and KCBS Certified BBQ Judge

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12

MARK HACKENBURG, RLA
Principal

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Resume // Registrations


BS, Landscape Architecture, The Pennsylvania State University - 1988
Registered Landscape Architect in Pennsylvania
Master Planning, Site Planning and Land Development experience - 35 years
Penn State College of Arts & Architecture Alumni Society - Board President
Penn State Alumni Association - Council Member

My Passion and Expertise
Creating Great Places, Senior Living Community
Planning and Design, Helping Clients Achieve Project
Entitlements, Cycling, and Winter Snowmobiling
Adventures.




13

OVERVIEW



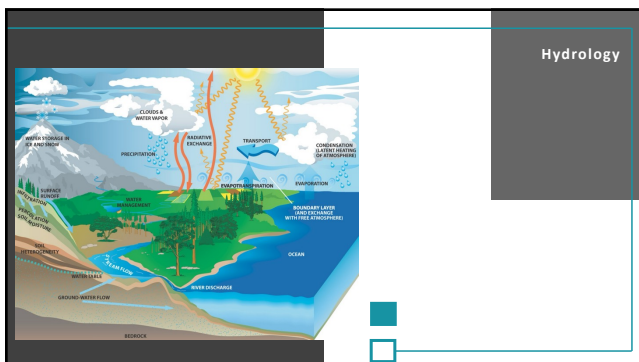
Learning Objective:
To understand the basics of stormwater management regulations in Pennsylvania. Learn about the NPDES permitting process and the timelines associated with the process. Understand the legal aspects and awareness of critical requirements after the permit has been approved. Identify compliance trends and solutions for meeting these regulations.

- ☐ Stormwater 101
- ☐ NPDES Permitting and Timelines
- ☐ Permit Conditions and Paperwork
- ☐ 2019-2024 New Requirements
- ☐ Questions and Answers

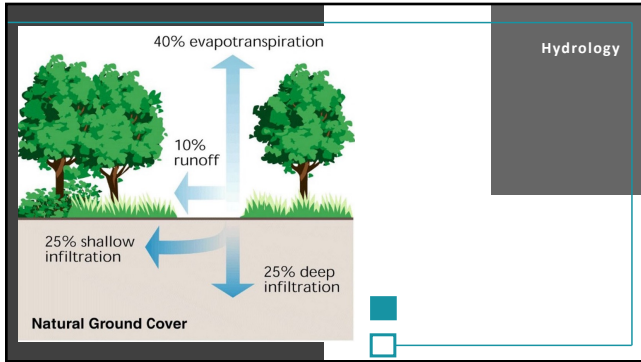


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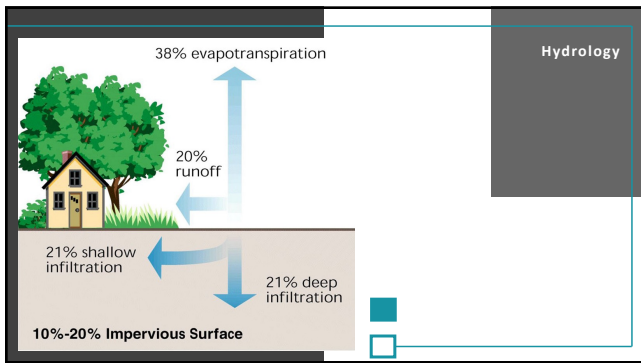
Hydrology



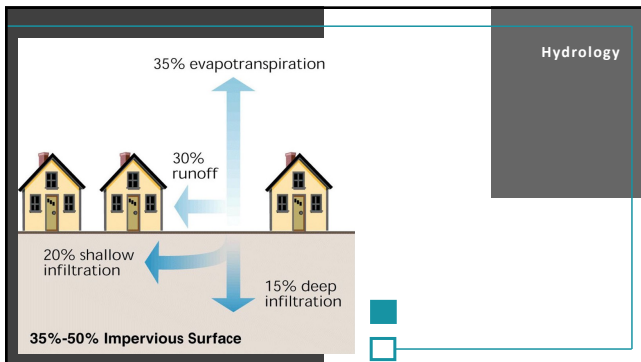
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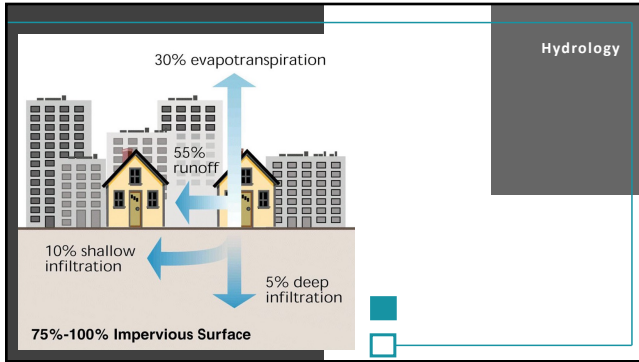
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17



18



19

REQUIREMENTS AND REGULATIONS

Municipal Approvals

- Zoning
- Subdivision & Land Development
- Stormwater Management
- Floodplain

State & Federal Authorizations

- PennDOT HOP
- NPDES Permitting (102)
- Floodway Permitting (105/404)
- Sewage Planning (537)

20


NPDES Permitting

National Pollutant Discharge Elimination System (NPDES)

- 15 different types of NPDES permits
- Most Land Development (PAG-02)
 - Regulates construction "pollution"
 - Regulates post-construction
- Federal Permit
 - Delegated to the State
 - Delegated to the Conservation District

21

REQUIREMENTS AND REGULATIONS



State & Federal Laws


- 1972 - Clean Waters Act (CWA)
- 1987 - Clean Streams Law (CSL)

CWA> NPDES + CSL = Chapter 102 Regs.

- 2012 - Chapter 102
- No change to Rate, Quality or Volume of stormwater runoff from existing to post construction conditions

22

REGULATIONS AND REQUIREMENTS



0 - 4,999 sf

- NPDES: Nothing Required
- Municipal: Check Ordinance

4,999 sf - < 1 acre

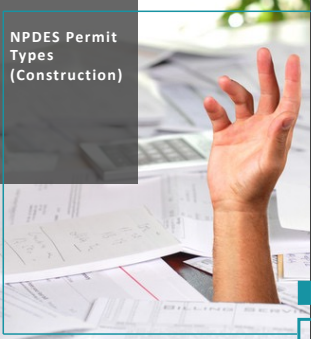
- NPDES: E&S "Narrative"
- Municipal: Typically SWM Approval

> 1 acre

- NPDES: NPDES Permit
- Municipal: SWM Approval

23

NPDES Permit Types (Construction)



Small Project NPDES Permit

- PAG-01 Authorization
- New in 2019
- <5 Acres & No Impaired Waterways

General NPDES Permit

- PAG-02 Authorization
- PAC Permit Number
- General Permit Conditions

Individual NPDES Permit

- PAI Authorization
- PAD Permit Number
- More Complex Projects
- Special Conditions & Requirements

24

NPDES PERMITTING MILESTONES

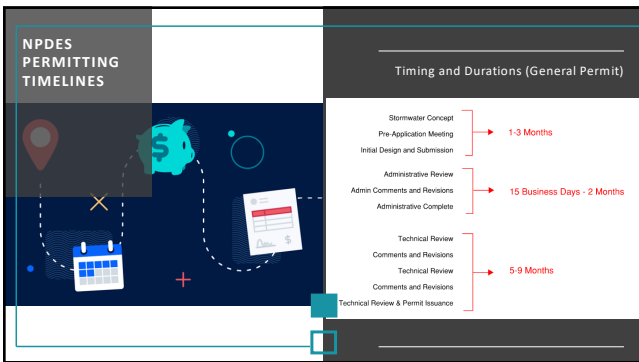


Pre-Application Meeting
 Notice of Intent (NOI)
 Administratively Complete
 Technical Approval – NPDES Permit
 PCSM Document Recording
 Pre-Construction Meeting (Pre-Con)
 ----- Construction Begins -----
 Professional Oversight
 ----- Construction Ends -----
 Notice of Termination (NOT) Submission
 NOT Approval/Acceptance
 PCSM Long Term O&M

25

NPDES PERMITTING TIMELINES

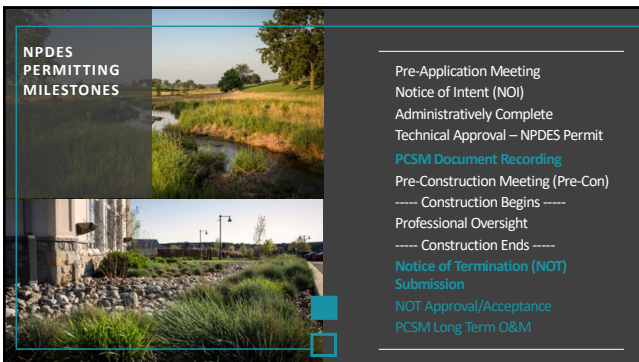
Timing and Durations (General Permit)



Stormwater Concept Pre-Application Meeting Initial Design and Submission	→	1-3 Months
Administrative Review Admin Comments and Revisions Administrative Complete	→	15 Business Days - 2 Months
Technical Review Comments and Revisions Technical Review Comments and Revisions Technical Review & Permit Issuance	→	5-9 Months

26

NPDES PERMITTING MILESTONES



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27

REQUIREMENTS SINCE 2012

Items that should already be incorporated into your workflow & project delivery

Note:
In 2012 PA CODE Chapter 102 was legislatively changed. These are legal requirements **and** permit conditions.

28

PA Code 102.8(m)2

"[I]f for any property containing a PCSM BMP, the permittee or co-permittee shall record an instrument with the recorder of deeds which will insure disclosure of the PCSM BMP and the related obligations in the ordinary course of a title search of the subject property. The recorded instrument must identify the PCSM BMP, provide for necessary access related to long-term operation and maintenance for PCSM BMPs, and provide notice that the responsibility for long-term operation and maintenance of the PCSM BMP is someone that runs with the land that is binding upon and enforceable by subsequent grantees, and provide proof of filing with the recorder of deeds under § 102-79(5) (relating to permit termination)."

PAG02 NPDES General Conditions (14.f)

"Unless a later date is approved by the Department in writing, the permittee shall record an instrument as required under 28 Pa. Code § 102.8(m)(2) and Condition 14b of this permit within 45 days from the date of issuance of this permit or authorization. Unless the Department authorizes a different procedure, the long term operation and maintenance plan shall be recorded along with the instrument. Unless a later date is approved by the Department in writing, the permittee shall provide the conservation district and the Department with the date and place of recording along with a reference to the docket, deed book or other record, within 90 days from the date of issuance of this permit or authorization"

29

INSTRUMENT FOR THE RECORDATION OF RESTRICTIONS AND COVENANTS

THE PAPERWORK AND RECORDINGS

PCSM Document Recording

- PA DEP Instrument (Sample Document)
- Appendix A – PCSM Plan
- Appendix B – Land Owner Notification (SD)
- Appendix C – O&M Plan
- Appendix D – Transfer of Responsibility

30

Appendix B – Land Owner Notification

New Property Owner Post Construction Stormwater Management Best Management Practices Notification and Operation and Maintenance Agreement

I HEREBY ACKNOWLEDGE AND AGREE WITH THE EROSION CONTROL AND MAINTENANCE REQUIREMENTS OF THIS PERMIT AND MY OBLIGATION TO THE PCSM DISTRICTS AND PROPERTY OWNERS.

BE ADVISED, THE PROPERTY USE AND OPERATIONS OR OBTAINING, VIA OTHER THAN THE METHODS, CONDITIONS AND PROCEDURES STATED IN THE MANAGEMENT BEST PRACTICES PLAN FOR THE PROPERTY AND WHICH IS A LONG-TERM OPERATION AND MAINTENANCE PLAN, SHALL BE IN FULL COMPLIANCE WITH THE PCSM DISTRICTS AND PROPERTY OWNERS. THE PCSM DISTRICTS AND PROPERTY OWNERS SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE PROPERTY AND SHALL BE RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF THE PROPERTY.

Property Information:
 Municipality: _____
 Parcel Number: _____
 The Project: _____

The following PCSM BMPs are located on this property:

The inspection schedule and reporting requirements for the PCSM BMPs are as follows:

The person or entity responsible for the long-term operation and maintenance of the PCSM BMPs is: _____
 Describe how access to the PCSM BMPs shall be obtained: _____

If purchase, grantee or transferee is responsible for the long-term operation and maintenance of the PCSM BMPs, describe the necessary operation and maintenance obligations in attach a copy of the BMP Plan: _____

THE PAPERWORK AND RECORDINGS

31

NPDES Permit Condition – Sale of a Unit/Parcel

14.g. "Unless an alternative process is approved by the Department in writing, upon the sale or other transfer of any parcel, lot, road or other real property included within the permit boundaries, the permittee shall notify the purchaser, grantee, or transferee of the long term PCSM BMP operation and maintenance requirements. The permittee shall expressly identify the PCSM BMPs on each property, the schedule for inspection and reporting, the person or entity responsible for long term operation and maintenance of the PCSM BMPs and how access to the BMPs will be achieved and shall obtain approval from the purchaser, grantee or transferee. Unless a later date is approved by the Department in writing, the permittee shall provide the conservation district and the Department with notice of compliance with this section within 45 days from the date of transfer of the property and at the time the permittee files a Notice of Termination."

REQUIREMENTS AND REGULATIONS

45

32

Common Issue

Landowner Notifications are required (PCSM Instrument Appendix B)
 Copies must be sent with 45 days of a closing (permit condition)

Potential Solution

Add Appendix B to your closing documents or initial purchase agreement paperwork

Compliance Trends & Solutions

33

Compliance Trends & Solutions



Common Issues
Purchasers are unaware of on-lot SWM facilities or easements
Sales staff do not understand the lot constraints

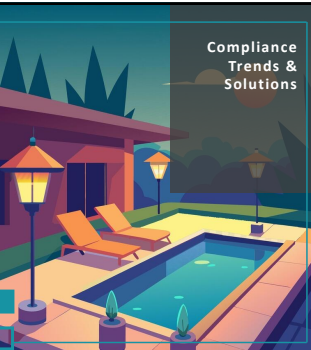
Potential Solutions
Per Lot fit list
Color sales map/rendering highlighting easements, SWMF, etc

34

Compliance Trends & Solutions

Common Issue
2nd Generation Lot Owner constructs a patio, pool, etc beyond what is permitted on the NPDES permit ... sometimes even with a Municipal Permit.
Developer cannot close out (NOT) the permit.

Potential Solution
One of the items that 2024 permit requirements are attempting to address.



35


Long Term Operation & Maintenance

1. NPDES Requirement & Municipal SWM Agreement
2. Understand the requirements, frequency, and cost
3. Most Municipal SWM Agreements require an annual report
4. If you don't have records ... the maintenance never happened in the eyes of the reviewer




36

REQUIREMENTS SINCE 2019
Items that should already be incorporated into your workflow & project delivery



Note:
There have been no regulatory changes since 2012.
All changes noted are revisions to checklists, instructions, forms, applications, preferences, SOPs, or guidance documents.

38



12/2019 Changes

December 2019 Changes for Developers

- Qualified Personnel
- Site Inspection Forms
- Co-permittee forms
- Permit Transfer Form
- Co-permittee Liability Release Form

39



12/2019 Changes



Qualified Person after every measureable rainfall event (0.25 inch within 24 hrs)

40

Location: \\library - FOLDERS / FORMS / CLEAN WATER / CHAPTER 102 FORMS 3800-FM-BCW0271 /

CHAPTER 102 FORMS 3800-FM-BCW0271

Name
01 - CO-PERMITTEE LIABILITY RELEASE FORM FOR PERMITS ASSOCIATED WITH 25 PA CODE CHAPTER 102.DOCX 3800-FM-BCW0271
01 - CO-PERMITTEE LIABILITY RELEASE FORM FOR PERMITS ASSOCIATED WITH 25 PA CODE CHAPTER 102.PDF 3800-FM-BCW0271
02 - CO-PERMITTEE ACKNOWLEDGEMENT FORM FOR CHAPTER 102 PERMITS INSTRUCTIONS.PDF 3800-FM-BCW0271A
02 - CO-PERMITTEE ACKNOWLEDGEMENT FORM FOR CHAPTER 102 PERMITS.DOC 3800-FM-BCW0271A
02 - CO-PERMITTEE ACKNOWLEDGEMENT FORM FOR CHAPTER 102 PERMITS.PDF 3800-FM-BCW0271A
03 - CHAPTER 102 COUNTY NOTIFICATION FORM INSTRUCTIONS.PDF 3800-FM-BCW0271B
03 - CHAPTER 102 COUNTY NOTIFICATION FORM.DOC 3800-FM-BCW0271B
03 - CHAPTER 102 COUNTY NOTIFICATION FORM.PDF 3800-FM-BCW0271B
04 - CHAPTER 102 MUNICIPAL NOTIFICATION FORM INSTRUCTIONS.PDF 3800-FM-BCW0271C
04 - CHAPTER 102 MUNICIPAL NOTIFICATION FORM.DOC 3800-FM-BCW0271C
04 - CHAPTER 102 MUNICIPAL NOTIFICATION FORM.PDF 3800-FM-BCW0271C
05 - CHAPTER 102 VISUAL SITE INSPECTION REPORT INSTRUCTIONS.PDF 3800-FM-BCW0271D
05 - CHAPTER 102 VISUAL SITE INSPECTION REPORT.DOC 3800-FM-BCW0271D
05 - CHAPTER 102 VISUAL SITE INSPECTION REPORT.PDF 3800-FM-BCW0271D



Updated Forms

41

2019 CHANGES

ABACT BMPs Only (Chesapeake Bay)

Anti-degradation best available combination of technologies

42

Calendar Year 2024 Changes

Changes Since Labor Day 2024



Note:

There have been no regulatory changes since 2012.

All changes noted are revisions to checklists, instructions, forms, applications, preferences, SOPs, or guidance documents.

43




2023/2024 Updates

- Landscaping Requirements for Vegetation Credits (2023)
- All NPDES General Permits Expire in December 2024
- Draft PCSM Manual and the Impacts to Development

44

The Final Countdown to December 2024



PASPGP-06 Expires December 2024

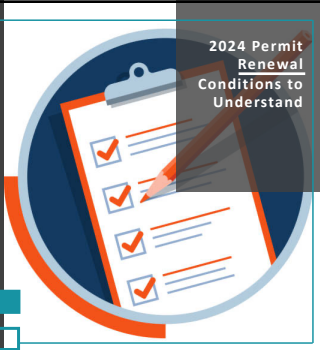
2 Options:

- Submit a Notice of Termination
- Renew your current permit and accept the new permit conditions

45

2024 Permit Renewals

- Infiltration testing during construction for PCSM BMPs (12 month grace period; anything constructed after 12/7/2025 will require it)
- Monthly E&S and PCSM inspection reports submitted to CCD (starting December 2024)
- Annual Inspection Reports for E&S and PCSM inspection (first report due 12/8/2025)
- "Qualified" person training for inspections
- PCSM Installation certification by Licensed Professional within 30 days of conversion/construction (new forms)



2024 Permit Renewal Conditions to Understand

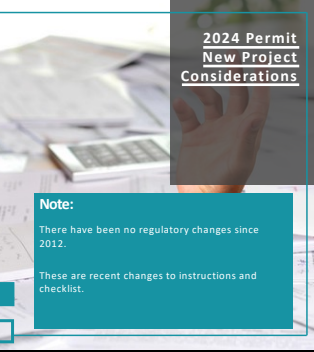
46

New Project NPDES Permit Submissions "Requirements"

- Environmental Site Assessment (ESA Phase 1)
- Offsite Erosion Potential Analysis
- Pre-Development Site Characterization
 - Changes Geotech Testing Requirement from:
 - 4-6 test per one (1) acre of facility footprint to
 - 1 test \ 40,000 sf of total project area (not just LOD)


2024 Permit New Project Considerations

Note:
There have been no regulatory changes since 2012.
These are recent changes to instructions and checklist.



47


Upcoming Changes and Updates
Details to be finalized in the next year +/-



Note:
Changes which are being considered and those that are already in draft form.
None of these are definite but worth considering for project planning and forecasting.

48

PCSM Draft Manual



DRAFT – PCSM Manual
755 Pages of New Design "Guidance"
Requires Public comment period

Potential Issues
Potential Impact to Land Development
Specific "special" requirements for Residential Development

49

PCSM Draft Manual

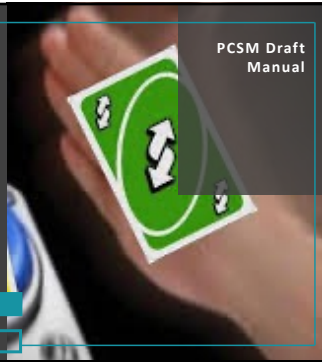
RGS Submitted a 17-page comment letter to PA DEP our questions, comments, and opinions on the aspects of the new "guidance."

Draft comment reviewed by PA DEP

Comment Response documents

Revised document

Issued as Final Version (projected 2026 +/-)



50


IMPACTS to Residential Construction

Residential Construction

Designed for 110% of Impervious Coverage Proposed or max coverage for zoning

Deed restriction against future impervious without additional SWM

DEP attempting to address 2nd, 3rd, etc owners from installing additional impervious. Could assist NOT efforts for developers.




51

General Areas of Concern

- Offsite Erosion Potential Analysis
 - Required for most discharge to UNT <1/2 SM
- MS4 Discharge Acceptance Required
 - Any discharge to an existing storm pipe
- Geotech Requirements 3-7 times more expensive per site
- Licensed Professional onsite at all times during SWMF construction

Impacts to Residential Construction



52

IMPACTS to Residential Construction

General Areas of Concern

- "Function-based Stream Assessment" for offsite discharges
- Minimum 50 feet wetland buffer
- Dewatering time now limited to 48 hours (was 72)
- Multiple Professionals required for every project
 - PE, RLA, Surveyor, Geotech
 - Hydrogeologist & Soil Scientist




53

Geotech Requirements

- New Methods and Testing Criteria
- Testing the entire parcel not just development area
- 1 test/40,000 sf of the site
- Testing 3 times for each project
- Mounding analysis
- Soil Boring required for embankments
- Standard infiltration test is now 8 hrs long (was about 3 hrs +/-)

Impacts to Residential Construction

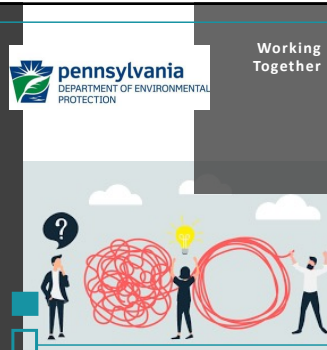


54

Seems like a lot ... How did we get here ?

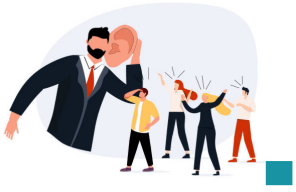
- Stakeholders, including developers, expressed concerns about permits.
- The guidance documents are due for an update.
- Some changes are required as part of the Commonwealth's obligations to the Federal Government
- DEP is working with all stakeholders to try and find solutions that address all concerns, and it is not an easy task.
- There will be more changes and more changes after that.

Working Together



55

WHAT WE ARE HEARING




Potential Upcoming Changes

- Updates to the NOT process
Recording of Record Plan required ... again
- Removing the release of liability co-permittee form
- Updated sample language for the PCSM Instrument
- New Managed Release Concept Design Standards

56

What Will Happen?



57

Questions?

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58

58

Thank you for attending!
Check out the next webinar on:

Tuesday, Nov. 12 @ 1pm ET
2021 PA UCC Residential Code: Update 1



60



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61
