Workgroup Meeting 1 Notes – May 19, 2025, 1 – 3 pm via Teams

Attendees

- Thomas Ballestero – UNHSC
- Ryan Barnes – Gorrill Palmer
- Kris Bears – ME DEP
- CGA – 2 attendees
- Jeff Dennis – ME DEP
- Cindy Dionne – ME DOT
- Kerem Gungor – ME DEP
- Nicole Haggerty – CEI
- James Houle – UNHSC
- Tracy Krueger – ME DEP
- Kylie Mason – Sebago Technics
- Dave Moore – Maritime Farms
- Matt Lundsted – CEI
- Cody Obropta – ME DEP
- Rodney Kelshaw – FlyCatcher
- Ahmed Shkara – ME DEP
- David Waddell – ME DEP
- Lauren Walsh – Cianbro

Agenda

- Introductions
- Background
    - Workgroup Expectations
    - Rulemaking Timeline
    - Overview of Proposed Rules
    - List of Preliminary Needs Assessment Topics
- Discussion
    - Current Manual
    - Needs Assessment Topics
- Next Steps

Background

Workgroup Expectations

- Discuss and provide guidance on Stormwater Manual Updates
- Approximately 6 meeting over ~2 years
- Primary update tasks:
    - Perform Needs Assessment
    - Perform research on identified topics
    - Prepare detailed Stormwater Manual outline
    - Perform Manual updates

Rulemaking Timeline

- Goal is to have final adoption of Chapter 500 Rules and final Manual complete by November 2026

Overview of Proposed Rules

- Goals:
    - Add LID requirements
    - Add elements to consider climate change adaptation and resilience
    - Improve day-to-day operation of State's stormwater program

    - Develop a framework for the rules
- New set of Basic Standards and General Standards; Minor updates to Other Standards (i.e., Urban Impaired Stream Standard, Discharge to Wetlands Standard)

List of Preliminary Needs Assessment Topics

Topic	Preliminary Notes
Ch 500	
Stormwater Regulatory Framework	General vs. Basic vs. Other Standards | **Flow Charts.**
Chapter 500 Compliance	
Design Criteria / Example Calcs	Flooding, Runoff Reduction, Treatment, Phosphorus | **New vs. Redev.**
Technical Guidance on Standards	Soils / Inf. Testing, SCM Selection Tool, Modeling Guidance
Feasibility / Alternatives Analysis	Exhaust LID alternatives
Climate Change: Adaptation & Resilience	e.g., precip data, NOAA 14 plus modifier
Infiltration	e.g., soil testing
BMPs / SCMs (General)	
BMP Selection	SCM Hierarchy
BMP Operation and Maintenance	SCM specific O&M guidelines and inspection frequency
BMP Design & Implementation	Update Schematics / Criteria / Specs based on state of the practice
BMPs / SCMs (Individual)	
Rainwater Harvesting	
Retrofit BMPs	
Proprietary BMPs	
LID / Green Infrastructure	SCM Hierarchy - Retention vs. Structural |**General Standards**
Nature-based solutions	Vegetation, Soil Decompaction, Amendment, Buffers | **Basic Standards**
Source Control BMPs	e.g., for chloride
Smart BMPs	e.g., Continuous Monitoring and Adaptive Control for chloride
BMPs for Emerging Contaminants	
Other	
Stormwater Monitoring	
General Formatting / Editorial	New Headings, Cover, Etc. Merge into single document

Discussion of Current Manual/ Needs Assessment Topics

Big picture topics:

- Clarification of BMP details and consistency with Chapter 500 (e.g., filter media)
- Expand on general Operation and Maintenance (O&M) requirements (e.g., when to do major maintenance or repair)
- SCM applicability table or chart to include minimum thresholds for implementation
- Introduction to SCM Performance Removal Curves (PRCs)
- Consideration for unintended consequences of LID (e.g., increased development footprint)

- Allow for creative solutions and adaptability
    - Consideration for the objectives of stormwater treatment vs. growing plants (e.g., grow vegetation next to stormwater filters, rather than in them, for a better chance of survival)
- Consideration for the conflict between design intention and modeling requirements (e.g., drain time, ponding water)
- Provide a clear pathway for alternative design and DEP acceptance (i.e., Alternative Analysis)
- Provide a flow chart for SCM design to clarify what needs to be done under what circumstance (e.g., test pits)

Detailed discussion notes:

- BMP details- could be clarified (e.g., depth of media for soil sand filters)
- Porous pavement materials- should be some level of soil testing, clarify sweeping requirements; Belt and suspender design for parking lot to stay dry if porous pavement fails
    - General O&M requirements in addition to the porous pavement
- Minimum threshold/ impact – e.g., lot size, impervious cover – for selection criteria
    - Ch 500 generally for ≥ 1 acre
    - Applicability chart (e.g., good for TP? good for small sites?)
- A lot of design requirements found in Chapter 500- everything “not needed” in the law should be in the BMP manual
- Are there innovative things that people are using to improve BMPs?
- Introduction of PRCs in Chapter 500
    - ME DEP has separate contract ongoing to develop PRCs for stormwater buffer LID measure
- LID language- unintended consequence of growing development footprint, maybe due to lack of understanding
    - Goal should be to minimize development footprint- clarify in Manual
- BMP details- stormwater treatment vs. plant establishment; find better ways to grow in media (e.g., not just sand trap, needs good amount of organic material); want a partnership to allow for creative solutions
    - Offer adaptability from reviewer and consulting standpoint- might not fit into a rigid checklist
    - In Portland, ME- bioretention roadside cells installed, excessive turnover of plant material
        - Matting of 1-1.5” sediment from roadway
        - Grass species have done best, some loss, but less yearly turnover, more cost effective
        - Important consideration for municipality budgeting
        - Dry periods- sand and mulch not helping plant growth
    - Treebox filters- sidewalk intrusion, growth into the road, obstruction to plow trucks
        - Dave Moore to provide before/ after maintenance pictures
    - Most successful BMPs fail first- soil loads might help bring organic content
    - Trees can’t survive for long in the footprint of a treebox filter
        - Roots take shape of structure- hard to remove
- Address the idea that BMPs are supposed to somewhat pond water
    - Filters that actually work and grow vegetation are due to all things it’s accumulated over the years
    - What media should be used and how do we make it available?
    - Counting on filters for channel protection storage- need plant community to tolerate inundation
- For flow through devices (e.g., Filterra)- shouldn’t worry about these growing vegetation
    - All stormwater action is in the media, not in the vegetation

    - Suggest removing requirement of vegetation for these systems and let them simply filter
    - Though vegetation provides other benefits (e.g., aesthetics)- could grow vegetation next to filter, rather than trying to multitask
    - Is stormwater system functioning as designed? Often do with or without vegetation- are you designing a stormwater system or a garden? Two different objectives
- Suggest tying material specifications to DOT specifications
    - Biggest difference is what to add to either grow plants or remove specific pollutants
    - Problems with meeting clay limitation requirements
        - Less fines = larger footprint
        - UNHSC decreased from 5% to 2%- will increase infiltration rate
- High flow filters- getting the needed contact time for pollutant removal?
    - Conflict between design intention and modeling requirement to show required drain time
        - Needs to be a pathway to allow for flexibility in the model
- Clear pathway for alternative design and DEP acceptance (Alternative Analysis)
    - Hopefully will not require multiple design iterations (costly, leads to “what if” iterative process)
    - Want to also allow for smooth, quick permitting process
- Want more shallow profile SCMs; deeper = more likely to hit restrictive layers
    - Orange soil- Iron ochre = becomes restrictive layer, gets overlooked
- Discoloration of Filterra media (black, 15 years old) vs. crystal clear media where inlet is closed off
    - Resource for testing how long the media has left before requiring replacement?
    - Current recommendations for replacement are based on gradation
    - Color of media might be good indication of how much stormwater the system is actually getting
- Test pit requirements- can hold up permit applications, specifically for lined SCMs
    - Add understanding of knowing what the test pit info is for, allow for some flexibility
    - Hard to get test pits in winter
- “Exhausting LID alternatives” – rather put forth preference, don’t want reviewer to be suggesting design guidance (e.g., have you tried this LID in the Manual?), want the engineers to design the site and show how it works in the general framework of the rules
    - Maybe a meeting with DEP where designers can provide alternative analysis
    - Challenge with adding flexibility- when a developer wants to maximize development; new runoff volume reduction standard should help with creative thinking
    - Set it up as there are always exceptions, rather than rules against exceptions
        - Regulating to the exception = loss of creativity
- UNHSC deconstructed treebox filter- tested for PFAs, microplastics, etc.- did not find much
    - Metals (e.g., zinc) would take decades to become special waste
    - Probably not contaminants causing need for replacement of media
- Drain time- lined BMPs drain too quickly, others too slowly
    - Offsite water (e.g., groundwater) often entering systems, resulting in biological growth that blocks systems
        - Not evaluated/ anticipated during design
- Chapter 500- Discourages use of lined systems, reasons for pushing test pits
    - No SCMs should be lined unless necessary
    - Often a directive for water heading to it (e.g., vehicular area not allowed to infiltrate)
    - Designers sometimes line systems based on practicability- don’t want to bring an excavator in (costly, sometimes not possible if there’s a lot of trees)
    - Could be additional reasons such as high water table (i.e., buoyancy issue)
- Add consideration for adversity with O&M- e.g., HOAs have spent a lot of money removing cattails that have caused SCM failure (mostly detention basins)- turns into a money grab

- Structures designed and permitted, but site conditions may change prior to final installation, these changes need to be further considered in Manual
    - Appendix D of MCGP to help contractor preparation
    - Consider stepwise approach in design of systems to account for contractor phasing- include construction phase in design of SCMs: (e.g., use of permanent stormwater ponds as temporary measures for construction stormwater management)
    - Current manual has guidelines on using permanent ponds for sediment control during construction- can expand
- Non-functioning vs failing: Opportunity to separate these terms? Might not need to be replaced
    - E.g., design of detention basin, morphed into wet pond, works really well, should be fine
    - Provide clarification on what circumstances require major maintenance and repair operations
- Other considerations for test pits:
    - Mass Handbook- HSG or soil horizon where recharge is proposed
    - Hard to scope out projects; Help people think about these things ahead of time to minimize site visits/ data collection (though sometimes it is just needed, want to balance)
- Suggest coming up with a reasonable flow chart for SCM design- what needs to be done under what circumstance- to avoid people wasting money/ to be as efficient as possible

Next Steps

- Workgroup to provide any additional thoughts/ comments to Kerem in the next week or two
- Kerem to send out the Needs Assessment survey to a broader audience for feedback
- For next meeting:
    - Come up with specific questions for subject experts
        - E.g., Discuss PRCs with UNHSC- actual reductions vs. curves