Chapter 500

Steering Committee

Meeting #6

November 25, 2024 9:30am – 1:00pm

Deering Conference Room 101

90 Blossom Lane, Augusta, ME

& remotely via Microsoft Teams

Agenda

1. Overview of Schedule & Stakeholder Process (10 mins)
2. Summarize Technical Committee Progress (15 mins)
3. Overview of Existing Standards (15 mins)
4. Overview of Updated Standards (70 mins)

BREAK

5. Groundwater Recharge Subcommittee Consensus Report (25 mins)
6. Stakeholder Input (35 mins)
7. Action Items & Next Steps (10 mins)

Chapter 500 Progress Update: Technical Committee Meeting #5

- Reviewed the Memo: Overview of New Chapter 500 Standards
- Discussed Draft Consensus Report by the Groundwater Recharge Subcommittee
- Brief overview of using GIS for Natural Drainageway and Wetland Protection

Chapter 500 Progress Update: Subcommittees

- GW Recharge – October 21, 2024
- CORE LID – October 28, 2024
- SCM – November 4, 2024
- S&T – November 6, 2024
- SCM – November 18, 2024

Moo Deng thinks you're doing a good job.

Groundwater Recharge Subcommittee Outcomes

- Discussed Technical Memo prepared by DEP
- Determined soil testing criteria
- Identified areas to exclude from requiring infiltration
- Discussed submission standards

CORE LID Subcommittee Outcomes

- Discussed DEP's Technical Memo on the New Basic Standards
- Stormwater Permit-by-Rule for projects that can meet the "new basic standards" (CORE LID)
  - Assuming they aren't in a sensitive/threatened region

S&T Subcommittee Outcomes

- Discussed selection criteria for watersheds and regions
- Discussion on intent behind S&T standards and how it would evolve if adopted

SCM Subcommittee Outcomes

- Discussed redevelopment
- Determined a need to create examples & case studies for how certain scenarios meet standards
- Discussed maximum contributory drainage area requirements & an SCM hierarchy / decision matrix
- Reviewed Jeff's Chloride point system proposal
- Some discussion on Flooding Standard & UIS Standard

Existing Standard Overview

15 Minutes

Current Chapter 500 Rules

Permit types:

Stormwater Permit-by-Rule

Full Stormwater Permit (Individual)

Site Location of Development Permit

Current Chapter 500

Basic Standards

- Apply to all projects
- Erosion and Sedimentation Control (*Construction*)
- Inspection and Maintenance (*Construction and Post-construction*)
- Housekeeping

General Standards (Quality Treatment)

- Apply to all projects, except for PBRs
- Treatment of impervious & developed area
- Utilize stormwater control measures to provide quality treatment

Current Chapter 500 Rules (continued)

Phosphorus Standard (Sensitive Watershed)

- Applies to Projects in lake watersheds
- “Lakes Most at Risk from New Development” (Chapter 502) must meet project phosphorus budget

Flooding Standard (Quantity / Peak Flow Control)

- Applies to Site Law projects
- Peak flow matching
- Hydraulic capacity for stormwater conveyance (10-year 24-h storm)
- Flooding considerations for structures, roads, and downstream properties (10- and 25-year 24-h storms)

Current Chapter 500 Rules (continued)

Other Standards

- **Urban Impaired Stream Standard**
- Discharge to Wetlands Standard
- Easements and Deed Restrictions
- Redistribution of Stormwater Discharges
- Discharges to Public Storm Sewer Systems

Shortcomings of Current Ch. 500

- **Same General Standards required regardless of:**
  - Where projects are located
  - Potential for development in that location
  - What stressors impact the location
- **Installation of unnecessary engineered structural stormwater treatment**
  - Stream watersheds not threatened by land development
  - Better protected (short and long term) by preserving natural green infrastructure
- **Insufficient treatment not targeted to stressors**
  - Nitrogen, Phosphorus*, Chloride, Post-development stormwater volume

*: Except for projects in lake watersheds

CH.500 Updates – Special Stream Watersheds

- **Urban Impaired Streams**
  - "Urban impaired stream" (UIS) definition remaining the same
- **Sensitive & Threatened Regions and Watersheds (STRW)**
  - Stormwater Law mandates creation of list of STRW
  - Many urbanizing streams at risk, not listed as impaired
  - Prevention easier & more cost-effective than restoration
  - Urban/urbanizing municipalities included as Sensitive and Threatened Regions
  - STRW list and criteria included in Chapter 502
  - List regularly updated using updated GIS data

CH.500 Updates – Basic Standards

- All projects must meet New Basic Standards
- Erosion and Sediment Control moved to Construction General Permit
- Incorporate Low Impact Development to limit impact of projects
  - ➢ Protect Wetlands and Natural Drainage Networks through site layout and design
- Add Permit by Rule (PBR) process

CH.500 Updates - Basic Standards

- **Wetland Protection**
  - No disturbance area
  - Impervious area setbacks
  - Exception for wetland crossings
- **Natural Drainage Network Protection**
  - No disturbance setbacks for Natural Drainage Ways (NDW)
  - Post-Development NDW Catchment Size
  - Redistribution of Stormwater at the Property Boundary
  - Maintenance of channel continuity and catchment area at road crossings
- **Stormwater Conveyance Hydraulic Capacity**

CH.500 Updates - General Standards

- **Applies to Site Law Projects, UIS, STRW**
- **Treatment and Control:**
  - Nitrogen and Phosphorus
  - Runoff volume and Chloride
- **Use Stormwater Control Measure (SCM) Performance Curves**
- **Hierarchical approach to select SCMs**
  - Non-structural Retention Measures
  - Structural Retention Measures
  - Structural Treatment Measures

CH.500 Updates - General Standards

- **Runoff Volume Reduction Standard**
  - Compensate for infiltration loss, reduce post-development runoff volume, approximate pre-development hydrology
  - UIS - 100%
  - STRW, Site Law, Cannot meet Basic Standards - 75%
- **Stressor Guided Stormwater Treatment Standard**
  - Nitrogen and Phosphorous Stressors
    - Minimum average annual reductions using SCMs
    - Reduced requirements for Redevelopment
  - Chloride Stressor
    - Proposed point system

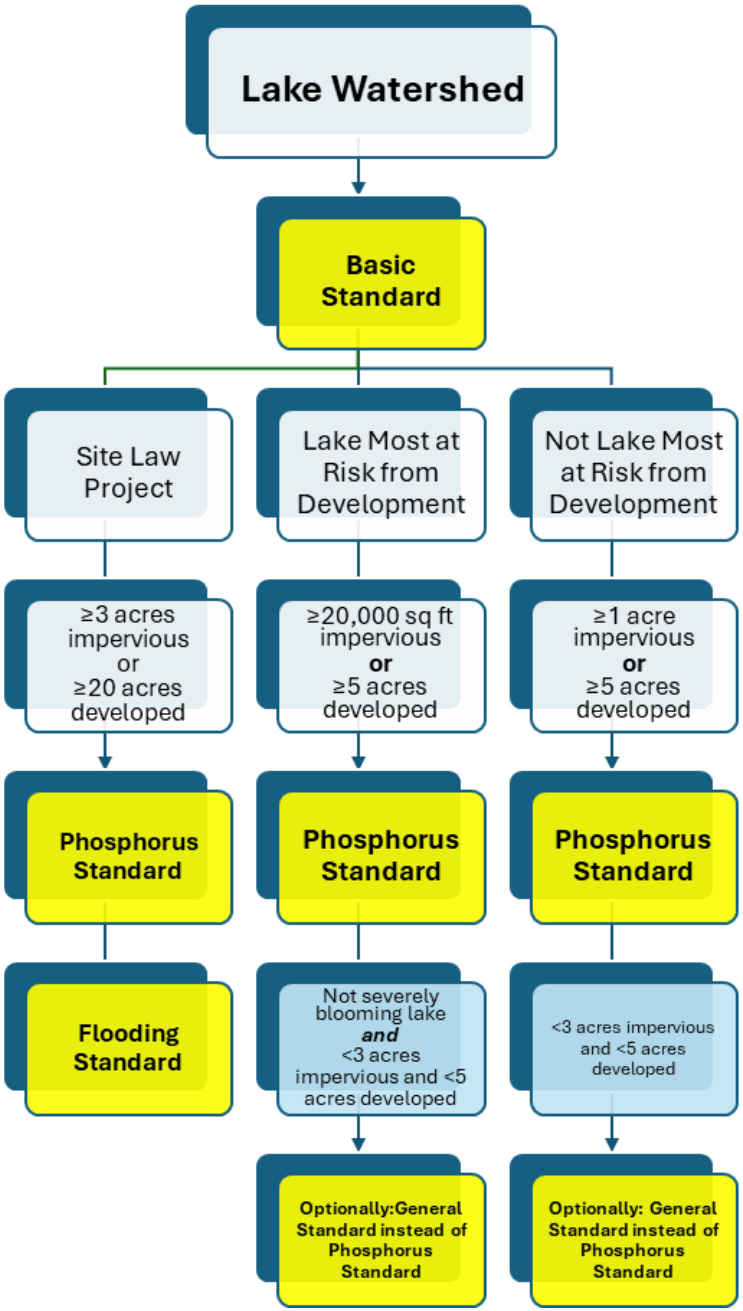
CH.500 Updates - Phosphorus Standard

- Existing Phosphorus Standard remains unchanged
- Per-acre Phosphorus allocation
- Applies to Site Law Projects in Lake watersheds, "Lake Most at Risk from New Development"

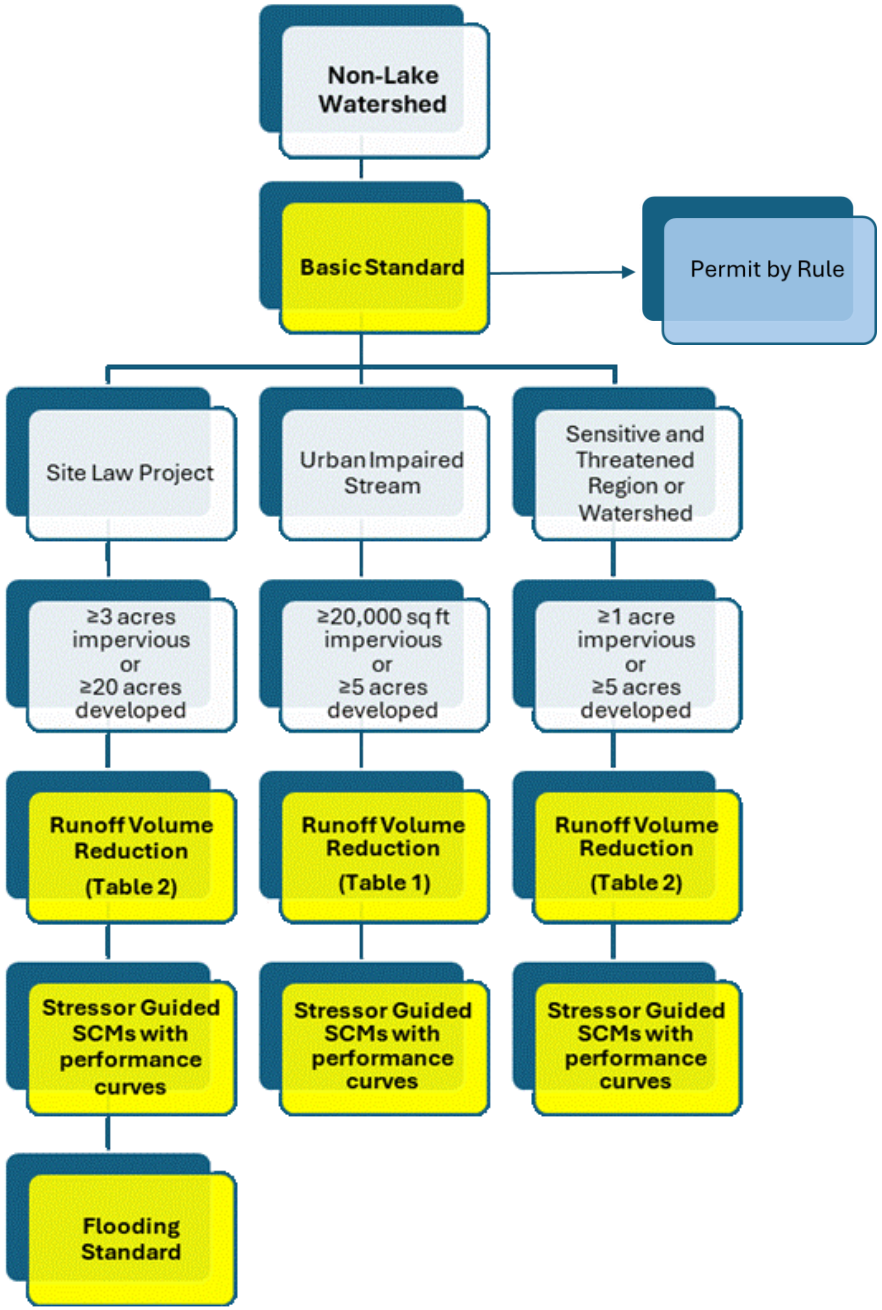
CH.500 Updates - Flooding Standard

- Flooding Standard remains unchanged
  - Except for source of precipitation data and optional detention waiver for UIS watersheds
- Use NOAA Atlas 14 with an 18% for climate change until NOAA Atlas 15 is released
- Applies to Site Law Projects

New Development in a Lake Watershed



New Development in a Non-Lake Watershed



Break

15 min

Groundwater Recharge Subcommittee Consensus Report

- Goals of this standard:
  - Maintain/mimic natural hydrology
  - Compensate for infiltration loss from development
  - Clarify rules and regulations concerning the infiltration of "clean" stormwater runoff and treated stormwater runoff
  - Not conflict with existing drinking water protection standards / subsurface injection rules

Groundwater Recharge Subcommittee Consensus Report (2)

- Standard to be called "Runoff Volume Reduction Standard"
- Determined applicability:
  - Full standard for all projects in Urban Impaired Stream watersheds
  - Reduced Standard for:
    - S&T Watersheds
    - Site Law projects not in a UIS watershed
    - Projects that cannot fully meet the new Basic Standards

Groundwater Recharge Subcommittee Consensus Report (3)

- Established runoff volume reduction design requirements (Table 1).

Table 1. Average annual impervious cover runoff volume reduction requirements as they apply to the urban impaired stream projects.

Predevelopment Land Cover Being Converted to Impervious Cover (IC)	Percent Reduction in Average Annual IC Runoff Volume (Meadow/Forest)
Meadow/Forest (HSG A)	68% / 73%
Meadow/Forest (HSG B)	62% / 70%
Meadow/Forest (HSG C)	51% / 58%
Meadow/Forest (HSG D)	40% / 50%

- Accomplish this with SCMs that infiltrate, capture & re-use, evaporate runoff, or some combination there-of

Groundwater Recharge Subcommittee Consensus Report (4)

- Soil testing to confirm soil mapping (for undeveloped areas being replaced with IC)
- Hydraulic conductivity testing requirements for infiltration-only BMPs.
- Updated separation requirements from SHWT with maximum contributory drainage area requirements to be established by SCM Subcommittee.

Groundwater Recharge Subcommittee Consensus Report (5)

- Exclude stormwater infiltration (or provide more protective standards) for specific sites
- Wavier from strict adherence will be available
  - Will still need to meet runoff volume reduction standard to maximum extent practicable
  - Enhanced channel protection drawdo[illegible] any remaining volume

Groundwater Recharge Subcommittee Consensus Report (6)

Discussion, questions, and/or clarifications?

Stakeholder Input

20 min

Stakeholders online may provide input and ask questions. Mention in the chat box you would like to speak so we may call on you or put your question/comment directly in the chat box.

Next Steps

10 min

Future Meetings

- *Technical Committee #6 – Wednesday, December 4th*
- *Technical Committee #7 – Wednesday, December 11th*
- **Steering Committee #7 – Monday, December 16th**

Contact:

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