# Commonwealth of Massachusetts Executive Office of Energy & Environmental Affairs

# Department of Environmental Protection

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# Meeting Summary Stormwater Advisory Committee - Meeting #5 December 2, 2020, 10:00 AM – 1:00 PM Online via Zoom

#### **ATTENDANCE**

#### **ADVISORY COMMITTEE MEMBERS**

Name	Affiliation
Henry Barbaro	MA Department of Transportation (MassDOT)
Jeffrey Brem	Home Builders and Remodelers Association of MA (HBRA-MA)
Sandra Brock	MA Association of Conservation Commissioners (MACC)
Ronald Burns	Boston Society of Civil Engineers Section
Rich Claytor	Member At Large
Ian Cooke	MA Rivers Alliance (MRA)
Cindy Delpapa	MA Department of Fish and Game
Patty Gambarini	Pioneer Valley Planning Commission (PVPC)
Ariela Lovett	MA Municipal Association (MMA)
Robert Lowell	MA Department of Conservation and Recreation (MassDCR)
Stacy Minihane	Association of MA Wetland Scientists (AMWS)
Stephanie Moura	Massachusetts Department of Environmental Protection (MassDEP)
Chip Nylen	National Association of Industrial and Office Properties (NAIOP)
Vandana Rao	MA Executive Office of Energy and Environmental Affairs (EEA)
Lisa Rhodes	MassDEP
Heidi Ricci	MA Audubon Society (MA Audubon)
Robert Roseen	Member At Large
Newton Tedder	U.S. Environmental Protection Agency (U.S. EPA)
Guy Webb	Home Builders and Remodelers Association of Central MA (HBRA-Central MA)
John Woodsmall, III	Central MA Regional Stormwater Coalition (CMRSWC)

#### MASSDEP, PROJECT TEAM, AND PRESENTERS

Name	Affiliation
Kathleen Baskin	MassDEP
<b>Lealdon Langley</b>	MassDEP
Thomas Maguire	MassDEP
Stephanie Moura	MassDEP
Jill Provencal	MassDEP
Lisa Rhodes	MassDEP

Laura Schifman	MassDEP
Judy Schmitz	MassDEP
Alice Smith	MassDEP
Matt Lundsted	CEI
<b>David Roman</b>	CEI
Kate Barrett	Regina Villa Associates (RVA)
Kyle Olsen	RVA
Amanda Poggenburg	RVA

### **PUBLIC**

Name	Affiliation
Michael Albro	Town of Agawam, Assistant Town Engineer
Derek Berg	Contech Stormwater Solutions
Janet Bernardo	Horsley Witten Group
Lauren Caputo	VHB (MassDOT Highway Consultant)
Nate Cheal	Tetra Tech
Patty Chesebrough	NEIWPCC
Liz Clark	Beals & Thomas
Stefanie Covino	City of Worcester
Jon Goddard	Town of Southwick
<b>Caroline Hampton</b>	VHB
Frank Harvey	Town of Longmeadow, Dept. Of Public Works
Anne Herbst	MAPC
Nancy Lin	MassDEP
Douglas McDonald	Northampton DPW
Theresa McGovern	VHB (MassDOT Highway Consultant)
Heather Miller	Charles River Watershed Association
Steven Miller	MassDOT
Robert Moore	City of Haverhill
Darrell Oakley	ESS Group
Cynthia O'Connell	Town of Braintree
Angela Panaccione	Town of Palmer
Beth Parent	Tetra Tech (MassDOT Highway Consultant for I495/I90 Interchange Project)
Jennifer Pederson	Mass Waterworks
Hung Pham	MassDOT
Carlton Quinn	Allen & Major Associates
Kerry Reed	CMRSWC
Jen Relstab	Horsley Witten Group
Virginia Roach	CDM Smith
Danielle Spicer	Green International Affiliates, Inc.
Kenneth Staffier	VHB
Nathaniel Stevens	McGregor & Legere, P.C
Vincent Thai	Town of Shrewsbury
Steven Tyler	Town of Spencer, Engineering and Conservation
Dan Van Schalkwyk	Town of Ayer, Dept. Of Public Works
Evan Watson	Prime Engineering and Clean Energy Collective
Julie Wood	Charles River Watershed Association

This document summarizes the discussion at the December 2, 2020 MassDEP Stormwater Advisory Committee meeting<sup>1</sup>. All references to slides relate to the presentation posted on the <u>website</u>.

#### WELCOME AND INTRODUCTIONS

Kathleen Baskin, MassDEP, welcomed the Advisory Committee members and welcomed discussion on the proposed updates to the MassDEP Stormwater Handbook.

Stephanie Moura, MassDEP, reviewed the meeting agenda and objectives and noted the importance of getting Advisory Committee input and feedback on the issues presented. She then introduced the MassDEP team and presenters.

Kate Barrett, Regina Villa Associates (RVA), outlined the meeting process via Zoom. She asked that all panelists remain muted during the presentation and to hold all questions and comments until after each presentation. At the conclusion of each presentation, Advisory Committee members could virtually raise their hand to submit a question or comment, waiting for Ms. Barrett to recognize them before unmuting themselves and speaking. After sharing their question or comment, they should mute themselves again. All public participants would be muted during the presentations but could send written questions at any time through the "Q&A" feature. Attendees could also virtually raise their hand to verbally submit a question or comment. During the public Q&A portion, the presenters would respond to written questions submitted through the "Q&A" feature before unmuting those who virtually raised their hands in the order which they were raised. Ms. Barrett encouraged attendees to submit any further questions or comments through the form on the Advisory Committee webpage if there was not enough time to respond to all questions during the meeting.

#### STORMWATER SCENARIOS

Thomas Maguire, MassDEP, reviewed the project background and presented an overview of the proposed revisions to the MassDEP Stormwater Handbook. He then reviewed the three scenarios (new residential development, roadway redevelopment, and tight urban lot redevelopment) designed by the project team. See slides 3-5

David Roman, CEI, reviewed overall conclusions for the three scenarios, including a cost estimate comparison of the existing standards, possible standards with NOAA Atlas 14, and possible standards with NOAA Atlas 14 PLUS. He then reviewed each scenario narrative, existing conditions, proposed project conditions without treatment, treatment options under existing regulations, and treatment options under proposed regulations. See slides 6-41.

#### FACILITATED O&A WITH ADVISORY COMMITTEE

Heidi Ricci: Said that to some extent, the designs incorporate a low impact approach, but it would be nice to see an
alternative that has an open space residential design option. The patch of existing forest proposed to be retained
could be connected to other existing portions of the forest, and not be disconnected as was proposed. She asked if
the project team considered narrowing the proposed subdivision road or if they looked at optimizing reducing costs
by not installing curbing or stormwater piping/infrastructure, etc. She also asked if they had looked at other
options, such as using pervious pavement for driveways.

MassDEP response: (D Roman (CEI)) - The team did a cost estimate for the entire stormwater system that showed good savings for a reduction of pipe, but what drove the cost savings was the larger peak runoff reduction requirement and size of the stormwater features. There are many different ways the team could have looked at these scenarios, but they were trying to represent design layouts and treatments that are commonly utilized. LRhodes: it is difficult to come up with one scenario that is representative. TMaguire: The scenarios that were evaluated minimized intrusion into the buffer zone, which was one of the goals to incorporate low impact development (LID). The team agreed that there are different strategies that could optimize cost reduction for the scenarios. MassDEP is also looking into adding LID credits that could help in that regard.

<sup>&</sup>lt;sup>1</sup> Please note that DEP is not recording the Advisory Committee meetings.

- Henry Barbaro: Said that he regarded scenario 2 as a Maintenance project, not as a Redevelopment project. He indicated Standard 4 for pollutant removal should only have to be met to the MEP. He said 80% Total Suspended Solids (TSS) removal and 50% Total Phosphorus removal should not have to be fully met. He asked if that was an oversight or if the team meant that treatment standards do apply to maintenance projects, as limited roadway maintenance projects are exempt in the MS4 Permit.
  - MassDEP response: Under MassDEP's criteria, this project is currently classified as Redevelopment, not Maintenance. In any case, the existing definition of Redevelopment at 310 CMR 10.04 classifies "maintenance and improvement" of existing roadways as Redevelopment. The team is proposing the 80% TSS/50% TP criteria be fully met for Redevelopment projects to be consistent with the MS4 permit requirement for Redevelopment. Scenario 2 does not meet the existing definition of a Maintenance project since a sidewalk and bicycle lane/shoulder are proposed, so it is classified as Redevelopment. The MS4 permit requirement is to improve existing conditions for roadways unless infeasible, but in this case, the improvement was feasible, so the scenario included the treatment. LRhodes indicated that MassDEP is proposing Standard 4 has to be met to remove 80% TSS/50% TP. HBarbaro commented MassDEP is going beyond MS4 requirements. TMaguire indicated that MassDEP is not going beyond the MS4 permit requirement for roadway redevelopment, since if treatment is found to be feasible, the MS4 permit requires it to be done. LRhodes: This is proposed for Standard 4. For Standard 7, Redevelopment, we are not proposing to make any changes, meaning most of the Stormwater standards will continue needing to be met to the MEP and improve existing conditions.
- **Jeffrey Brem:** Said he characterized the proposed residential subdivision scenario 1 as an open space project it included ½ acre lots on a 40-acre site and opted to keep open space. Asked if the scenario slides are available. He also said he is concerned about the costs associated with the scenarios and asked if MassDEP is proposing any mitigation for cost increases.
  - MassDEP response: The slides were emailed to the Advisory Committee and are also available to view on the website. Regarding the scenarios, the team focused on meeting the proposed standards to MEP for Redevelopment projects (Scenarios 2 and 3), but only showed one way to meet the regulations. There are other less expensive treatments that could be explored. LRhodes: For redevelopment projects, no changes are proposed other than Standard 4, meaning most standards for redevelopment will continue only to need to meet the standards at the MEP and improve existing conditions. The largest change in cost comes from compliance with the NOAA 14 update to handle the current precipitation that is seen now rather than designing to the 1960s hydrology with TP40. The next bump in cost to comply with NOAA14PLUS is marginal.
- Sandra Brock: Asked if the scenario calculations are available for review. She expressed concern about how realistic the options are, specifically around green roofs (e.g. how was it modeled?) and surface basins. She suggested a subsurface infiltrator may have reduced cost over the options that were analyzed. Said MassDEP was going in the right direction but needs to provide guidance.
  - **MassDEP response:** When the scenario report, which includes the calculations, is finalized, it will be available. The team considered a subsurface infiltration basin in scenario 3 but did not include it to minimize alteration to the buffer zone as a LID measure and to meet setback requirements from the wetland. The green roof was modeled with the TR55 method and was only used to meet peak rate reduction.

#### FACILITATED ADVISORY COMMITTEE DISCUSSION – ALL STORMWATER TOPICS

Lisa Rhodes, MassDEP, explained that MassDEP reviewed and categorized comments received to date by topic area. She then summarized what DEP has heard and invited the Advisory Committee to provide further comments and questions on any of the stormwater topics the team has addressed. See slides 42-44.

- Patty Gambarini: Said that one thing that has stuck with her during this process is about substandard developments passing on costs to others, such as those living downstream. It is important to look at the bigger picture of the costs. She said that providing the bigger picture would provide a greater understanding of why DEP is making these changes.
   MassDEP response: The NOAA 14 Atlas numbers show that the current standards are outdated. There has been a change in average and extreme precipitation, and it is imperative that MassDEP address that. DEP, in conjunction with CEI, had a lot of discussion on what scenarios would be used, but there was a timeline and budget. The team wanted to strike a real-world balance and include treatments that are being used.
- Ian Cooke: Asked if the country drainage and swales were fully captured in the calculations, how the team did the
  models, and if they were taking as much credit as they could have. He also asked how the current regulations credit LID.
   MassDEP response: The team did not model specific roadway swales. Country drainage did change the time of
  concentration. Under the current Stormwater Handbook specifications, developers cannot take credit for peak rate
  reduction in bioretention cells. The team is looking at credits to see if they can better incentivize different treatments,
  such as shared use paths and encouraging buffer zones to be left more natural.
- Ian Cooke: Expressed concern about the increased cost of stormwater treatments. He suggested looking at a watershed scale to optimize cost reduction rather than a site scale. He commented that the scenario objective was not necessarily trying to be efficient, and that developers will be resourceful in making designs more cost effective he also noted that costs can be shifted onto municipalities or downstream property owners. On a watershed scale, there are few tools to assess runoff from private lands. When doing redevelopment to the MEP, we need to move away from unmitigated conditions.
- Robert Roseen: Said that scenario 1 is driven largely by peak, the scenario 2 by recharge, and scenario 3 by both peak and recharge. He suggested developing a set of curves through a continuous simulation model for recharge. He said curves would increase recharge (at least for redevelopment) and drive the costs down. He said there hasn't been a lot of focus on improvements that could be made on streamlining the permitting or easing rigidity, but it would be nice if there were ways MassDEP could consider some flexibility to create opportunities for innovation from a design standpoint. With the large cost increases, it would be nice to find ways to reduce the overall costs in permitting. He suggested high performance permitting create an incentive in the permitting process for projects that design to higher standard.

  MassDEP response: The team considered continuous simulation to model the scenarios but did not have enough funding. The team is also considering high performance permitting as they move forward.
- **Jeffrey Brem**: Said some of the zoning bylaws for some municipalities have not been looked at in 40 years and suggested that MMA work with MassDEP to develop a zoning template to change how subdivisions are designed. He suggested, for example, allowing country drainage in place of curb and gutters, elimination of sidewalks, narrower roads by reducing lane widths, and reduced frontage and side-yard setbacks.
  - **MassDEP response**: The subdivision rule adoption process is not something MassDEP has approval over, but that is a good comment. It might be helpful for home builders and commercial builders to work on the idea with MMA and collectively figure out who could help with the process.
  - **MMA response:** They would like to connect offline to discuss this further.
- John Woodsmall, III: Said that with MS4, communities are supposed to look at their planning board regulations and report on how they can be changed to implement LID. He suggested the team develop a template to create a commonality across the state. The scenarios were effective in highlighting the differences between existing regulations and proposed regulations. He also echoed Mr. Brem's concern about zoning bylaws for subdivisions.
   MassDEP response: There are a couple of bylaw examples for MS4 communities that include a checklist to evaluate existing bylaws to see if there are provisions that allow them to meet MS4 requirements. Those examples are posted on

the website. The team also suggested including Mr. Woodsmall in the discussions with Mr. Brem and MMA. MassEEA has a model bylaw to implement LID through their Smart Growth Toolkit.

- Heidi Ricci: Agreed that subdivision and zoning regulations need to be updated as well. She said MassAudubon developed a <u>bylaw review tool</u> based on the <u>Neighborhood Road Design Guidebook</u> from MA-APA and the Homebuilders Association. She said it has been a long, slow process to get communities to see these regulation updates as a priority, but the Stormwater Handbook update could be an incentive for communities to update their bylaws. She expressed concern about the cost versus benefits and said the team needs to look beyond just the straight cost of developing stormwater systems. There is also a concern about communities that do not adequately maintain stormwater systems. She also commented that there is value to developments that have open space, and there is a need to keep water on site as much as possible.
- Rich Claytor: Said that the affordable housing crisis and climate crisis are both impacted by the updates to stormwater regulations. He said the science for updating precipitation data seems valid and updating to the NOAA 14 Plus is an appropriate target, but encouraged the team to update it as new data comes in. Regarding the housing costs, he also encouraged DEP to look at the credits and incorporate small scale stormwater into a creditable approach, including the number of trees (e.g. incentivize trees and disincentive for removing trees). He said this is an opportunity to link zoning, stormwater systems, site design, and climate change.
- **Robert Lowell**: Thought Rich Claytor comments were excellent. Said MassDCR supports the review of precipitation data. He questioned if surface basins were a good use of public land when vegetative swales and other techniques could be more feasible. He suggested a credit for open space to compensate with tree cover or green space to show that the areas do not constitute a pollutant load. He said it is more difficult to meet regulations in some urban areas. He also requested preserving credits for pervious surfaces.
  - MassDEP response: DEP supports expanding the treatment credits for keeping areas vegetated and is looking into it. There are three credits right now for LID, but DEP is looking to expand the use. The LID credit for substantial open space is not utilized much now so the team is looking at ways to reduce some of the burden on the credit to make it more reasonable. The team, with CEI, will look into including credits for maintaining tree canopy in the Stormwater Handbook.
- **Stacy Minihane**: Said she thinks flexibility could go a long way to meet some of these regulations. She suggested the team have a method of updating the precipitation data with public input. She also suggested looking at demand-based parking to reduce unnecessary impervious areas.
- Ronald Burns: Said it is nice to have prescriptive regulations and expressed concern on the issue of cost. He asked for
  more discussion and recognition on cost. He said he would like to see a global public perspective and local developer
  perspective reflected in the Stormwater Handbook. Integration with bylaws is also important, as there are conflicts there.
  He said he and his organization would be happy to work with DEP to help disseminate information and educate
  stakeholders on the updated requirements.
- Henry Barbaro: Said that the forum of the Advisory Committee holding meetings through Zoom was difficult because it was stiff and rushed and not as interactive. He said it would be nice to share comments and benefit from each other's expertise. MassDOT submitted a letter and he would like to share it with people on the committee. He noted that there are a variety of changes that DEP is proposing that do not align with the MS4 Permit and they need to be thought out better. He requested additional meetings for further discussion. He asked how committee members can share their comment letters with each other.

**MassDEP response**: The advisory committee meetings are being held remotely due to the pandemic. The team is doing its best under the circumstances. For those committee members who would like to share their comment letters with others, they can let the team know. Regarding the meeting facilitation, the team is trying to be respectful of people's time while making sure all committee members have the opportunity to share their comments and questions.

- Robert Roseen: Said that the current approach to determining the seasonal high-water table is not very good. The issue is that the height varies. He said that reliance on redoximorphic staining on soils is one method but should not be the only method and the team should consider alternatives. He suggested the USGS Frimpter method as one alternative. If a site is in a condition where redoximorphic soil staining may not be representative, they could put in a well to find the water level, and compare it with one of the USGS index wells and add the 90%. Design rigidity increases costs because it reduces designers' options. He requested the team relax the rigidity of application as the design process evolves.
- **Robert Lowell**: Said that MassDCR has embraced the NOAA 14 Atlas but not necessarily NOAA14 Plus and indicated MassDCR submitted comments. He said they are happy to share those comments as well.
- Chip Nylen: Requested that the team share the scenario calculations before the proposed updates go out for public comment. He said the team should find a way to accommodate urban areas that have site constraints. He hopes those concerns can be addressed through MEP and offsite mitigation as the credits might not be as helpful in those situations. NAIOP submitted a letter; it can be shared with the committee. He reiterated the issue of providing a transition period as new regulations go into effect so that projects already under design don't have to go through costly redesign.
- John Woodsmall, III: Said that MassDEP has been a great help in educating the Central MA Coalition and state stormwater coalitions. He said that design by cookbook is helpful when dealing with less sophisticated municipalities who do not have the engineering support that might be found in the Boston area. Being able to have a checklist for design makes life easier in those situations. He said shame on the regulatory community for not having updated the precipitation data until now but recognized that some of these updates will have a greater cost for developers. He asked if MassDEP has coordinated with the Governor's office and if MassDEP is trying to develop strategies to counter arguments on rising housing costs and why these regulations have to change.
  - MassDEP response: Developing the scenarios was a large part in understanding how the changes would affect not just design but also cost. The team will continue to consider this as it prepares draft updates for public comment. MassDEP has worked with EEA and RMAT on the development of the precipitation evaluation and their decision tool. These efforts were required by the State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), that was adopted to implement the Governor's Executive Order 569. The precipitation update is something MassDEP and EEA understand is needed.
- Vandana Rao, EEA, response: The Secretary of EEA is well aware of this package and, from a climate perspective, it's unquestioned that the Commonwealth needs to think more critically about how lands and properties are able to withstand extreme precipitation. As a society, looking at how to be more resilient, there will be some kind of cost, but it's about how to balance it, how slowly can we phase it in, how we can do more now to help mitigate or lessen the cost in the long run, or even the higher cost implications of not doing anything to make homes, businesses, and our way of life more resilient to these changes. It is about thinking through more carefully, from a long-term perspective, the changes we are already seeing and making reasonable, risk-based protective decisions now that position us in a better place.
- **Jeffrey Brem**: Said that the forum of the Advisory Committee has been convenient but is not as fluid as previous inperson forums. He also said that, in reference to Ms. Rao's comments, he has never heard anyone say there are problems with stormwater basins that have been designed. He asked if that referred to things prior to the Handbook. He asked if there are case studies for problems that the committee may be unaware of. He said that he thought it was climate change because there are precipitation rate increases, but she indicated past problems and asked for elaboration.

MassDEP response: The proposal that MassDEP has put forward is not based on climate change projections, it is based on current, observed extreme precipitation from the NOAA 14 Atlas data. NOAA 14 PLUS is not a climate change projection; it accounts for the range of variability in actual storms that have occurred. There are areas where flooding occurs, and we have sometimes seen that the flooding is exacerbated by development prior to wetlands protection act and has uncontrolled runoff in those areas. The design standards for today's developments are not reflecting current

precipitation trends and that exacerbates that issue further. It is common for MassDEP to get comments or concerns during project review about people receiving uncontrolled runoff or flooding in their neighborhood. A lot of those comments are anecdotal but it's a daily occurrence to have those concerns expressed. Ms. Rao was probably referring to Tropical Storm Irene, which washed out several culverts that were probably undersized. MassDEP can provide a paper about culverts in Green Mountain National Forest that were designed with stream crossing standards. There is also a paper by USGS and the Nature Conservancy that evaluated flow conditions in culverts after MassDEP adopted stream crossing standards. We are not dealing with the politics of climate change but instead are updating the precipitation data from 1960 to reflect current conditions. LRhodes: EEA is proposing to address precipitation under climate change, whereas MassDEP in this proposal is addressing the range of variability that is currently occurring.

- Stacy Minihane: Said, from a natural resources' perspective, it is important not to oversize stormwater basins for the sake of being oversized, the increase in size should be meaningful. Perhaps there is a difference between the hydraulics of a culvert versus a basin in terms of risk and size needed. She asked if there are examples of failed basins that can be shared or if there could be further discussion.
  - MassDEP response: If we look at NOAA 14 and TP40, design storms are larger State-wide. If we design something for the 100-year storm using TP40, it is undersized to handle the NOAA 14 100-year storm, so we are not getting the benefit we think we are getting. Basins may be overtopping and impacts from that are local. One example, during some research we conducted we looked at impaired wetlands and were trying to determine the cause of the impairment. When we followed a trail of sediment, we found an overtopped basin that caused the vegetation in the wetland to change. Basins may have a spillway and are overtopping or not functioning properly, but instead of a failed basin the result is downstream flooding or local damage to a homeowner. It is not just about basins failing, it is also the need to keep recharging the water to aquifers rather than washing downstream.
- **Rich Claytor**: Requested that the team reconvene the Advisory Committee after the draft Stormwater Handbook is out for comment in the spring.
- MassDEP response: We will take that suggestion seriously.
- **Robert Lowell**: Said an unintended impact of recharge basins is possible negative effects on vegetation and die-off of the local trees equal to or larger than the size of the basin itself.

#### **GENERAL Q&A WITH THE PUBLIC**

Ms. Barrett invited questions from the public.

- Liz Clark: Asked if the full studies presented will be available to the public.
   MassDEP response: The presentation is on the website already and the scenario report will probably be posted to the website in December.
- Theresa McGovern (VHB, MassDOT Highway Consultant): Said that she works a lot with MS4 communities and that there are a lot of inconsistencies between the proposed updates and the MS4 requirements that create more confusion and don't promote the use of EPA's performance curves for taking credit for BMPs. The 1" recharge requirement will often dictate the design and doesn't reflect the annual recharge goals that vary by soil type. When the 1" recharge requirement is not there, you need to treat 1" but cannot use the curves. She asked what scenario would use the curves to optimize and help drive the design into more cost effective, potentially smaller systems with highly infiltrating soils. She said the update takes away a lot of the flexibility provided using the performance curves. She asked for consistency with the MS4 requirements.

MassDEP response: The MS4 permit does not address long standing MassDEP requirements in place since 1996 to reduce the stormwater peak runoff rate and loss of recharge caused by land development. One of the stipulations presented was to be able to use the performance curves for most sites that are "normal," when the site does not discharge runoff to an ORW or critical area or other resource areas with special considerations. If you have a site with

Hydrologic Soil Group D soils, that have high groundwater, have bedrock at the surface, you would not be able to use the curves. The current wetland regulation requiring recharge be induced to offset the loss that otherwise would occur on an annual basis is not being met, with the existing recharge targets of 0.1- to 0.6-inches. Requiring e 1-inch of recharge will meet the Standard 3 regulation that requires the recharge to be met on an annual basis, for current precipitation. You can use Standard 3 to meet Standard 4. Recharge is necessary to support wetland hydrology, including public dinking waters. It does differ from MS4 permit. EPA adopted the rules and created the inconsistency and part of the purpose of this Advisory Committee and update process is to reduce inconsistencies without weakening existing requirements. MassDEP has required recharge be provided to offset annual loss. What is proposed here will offset the annual loss. By getting rid of the recharge requirement, the interests of the Wetlands Protection Act would not be met, because wetlands may shrink in extent. s. The recharge structures help maintain baseflow to wetlands including rivers, and it has been a longstanding wetland regulation. The only thing that is different is the MS4 permit changing the game on sizing for water quality.

#### **NEXT STEPS & REGULATORY UPDATE SCHEDULE**

Ms. Rhodes reviewed MassDEP's next steps and schedule. DEP will prepare the draft Stormwater Handbook and regulatory updates between now and March 2021. The team expects to release the drafts for public comment in late March or April 2021, with a month for public comment, and promulgation by late Summer 2021. See slide 45.

Ms. Barrett directed attendees to submit any additional questions or comments through the website or via email to Ms. Rhodes.

Ms. Moura thanked attendees for the quality of discussion and input. She stated that the meeting summary would be posted on the website and the team would email the group when they are available. The team will consider reconvening the Advisory Committee before the draft Stormwater Handbook is released for public comment.