CHAPTER 500 STAKEHOLDER ENGAGEMENT | TECHNICAL COMMITTEE MEETING #2 AGENDA

RE: **Chapter 500 Stakeholder Engagement, Technical Committee Meeting #2**
DATE: Monday, April 1st, 2024
TIME: **9:30am – 1:00pm**
LOCATION: Remote via Microsoft Teams
INVITEES: Cody Obropta, Jeff Dennis, and David Waddell (Maine DEP)
Bina Skordas and Maggie Kosalek (FB Environmental Associates)
Chapter 500 Technical Committee

MEETING OVERVIEW:

TOPIC	WHO	ESTIMATED DURATION
1. Review goals and procedures	Bina Skordas (FBE)	10 mins
2. Summarize Subcommittee Discussions	Cody Obropta (DEP) & Other Subcommittee Members	10 mins
3. Review tasks from Steering Committee	Cody Obropta (DEP)	10 mins
4. Discuss Precipitation Data Source	Bina Skordas (FBE) & Cody Obropta (DEP)	60 mins
Break (15 min)		
5. Discuss Culvert and Flood Design Standards to Apply to All Projects	Bina Skordas (FBE) & Cody Obropta (DEP)	20 mins
6. Discuss Flooding Standard Applicability – Return Interval Storms	Bina Skordas (FBE) & Cody Obropta (DEP)	60 mins
7. Discuss Watershed Approach to Flooding (if time permits)	Bina Skordas (FBE) & Cody Obropta (DEP)	30 mins
8. Next steps	Bina Skordas (FBE)	10 mins

DISCUSSION TOPICS:

Meeting Topic 1: Review goals and procedures

- After the next Technical Committee meeting there will be a Steering Committee meeting. Meeting schedule below. There is potential for more meetings if needed but it would be best to try fit into the calendar already established.
    - April 29: Technical Committee meeting #3.
    - May 13: Steering Committee meeting #4.
    - June 3: Technical Committee meeting #4.
    - June 10: Technical Committee meeting #5.
    - June 24: Steering Committee meeting #5.

- Reiteration of the goals of the SC versus the TC:
    - Steering committee's goal according to the Department's wording is to identify the areas of the stormwater regulations that need to be improved to define the technical committee's assignments.
    - Technical committee's goal is to develop scientifically, and technically defensible, practicable stormwater standards as assigned by the steering committee.

Meeting Topic 2: Summarize Subcommittee Discussions

i. Core LID subcommittee:
- "Major natural drainage ways" should just be called "natural drainage ways" because "major" confounds the term.
- How to best preserve core LID in the post-construction phase:
    - Adding buffers to natural intermittent channels and perennial streams.
    - Putting buffers on wetland areas ("non-permittable wetland impacts").
        - Referred to Scarborough's efforts to put buffers on their wetlands based on how large the contiguous wetland area is.
        - Subcommittee settled on 25 ft but will discuss it further in follow-up meetings.
        - Rationale of wetland buffer is to protect wetlands to the maximum extent feasible.
    - Buffers would be subject to similar regulations as vernal pools, where one can impact a certain amount of the wetland.
- Downgradient parcel setbacks: agreed the buffer from the property line (50 ft) is not feasible, especially on some of the more tightly spaced sites. Subcommittee agreed that probably would not make final cut.
- A&B soil exclusion: may not be necessary to include in the LID envelope but pending more information from the groundwater recharge group.
- Steep slopes: passed issue over to Definitions subcommittee to discuss definition of a "steep slope" further.
- Buffers could be located beyond the LID envelope and still count for credit.
- Linear portion caveat (where linear development is allowed outside the LID envelope): subcommittee agreed that this makes sense, but that at the same time hydraulic connectivity should be maintained, using rock sandwiches, culverts or some other means.
- Open conveyances:
    - Reiterated what had been discussed at last TC meeting that it may not be practical on all sites. DEP employees say pipes are fine and the focus should be on disconnecting impervious.
    - Future discussions will focus on disconnecting impervious surfaces rather than requiring open channels for conveyance features.
- Agreed that subsurface filters shouldn't be used anymore, and that they're not an effective BMP.
- Native species:
    - Want to emphasize and require native species wherever possible.
    - Low-hanging fruit would be to require native species in all stormwater management practices that require vegetation, such as the grass under drain soil filters, planted vegetated buffers, vegetated buffers around wet ponds, etc.

    - Higher level of control would be to incorporate native species throughout the site for landscaping purposes as well. This may elicit pushback from landscape architects.
        - Scarborough has tried to bridge the gap by having a species list put together with lots of landscape architect input. This list includes a variety of native species and acceptable alternatives. Then they would be required to use, for example, 75% native species and 25% could be acceptable alternatives for landscaping purposes to allow for flexibility.
- Was there any discussion about how to apply the LID credit? One of the reasons that it's challenging for people to use LID credit right now is that it's hard to figure out how to apply it. The current table in Ch500 makes you treat a large amount of LID to get very little credit.
    - What is in Ch500 currently will likely go away, and everyone will have to meet a core LID standard on all projects.
    - Core LID would apply everywhere, and if core LID can't be met to the full extent, the project can still proceed as long as it is justified. The project will then have to meet a slightly higher standard (i.e. the groundwater recharge standards).
    - Linear projects will still have to follow the core LID framework, but they will be excluded from the envelope requirement.

ii. Groundwater recharge subcommittee:

- There was a lot of push-back to the idea that blanket groundwater recharge requirements can be provided for certain watersheds.
- Discussed the process of digging stormwater test pits as it stands currently, the limitations of those test pits, and evaluating on-site hydrologic soil groups from those test pits. Useful documents to review were shared.
- Discussed type of testing and analysis that might be needed for infiltration.
- Discussed coming up with a way to incorporate infiltration on a site without necessarily having to do a massive amount of testing that would make it too expensive to even consider infiltration.
- Discussed limiting factors of infiltration in the soils themselves.
- Some mentioned that channel protection volume might better protect stream channels compared to groundwater recharge.
- Agreed that more case studies or examples are needed that show how this would look on projects.
    - Recommended to come up with a baseline level of what a groundwater recharge requirement would look like, and then come up with example projects having different soil types, development types, etc. on which this recharge requirement is applied.
- Agreed feedback was needed from John Hopeck (hydrogeologist at the Land Bureau) and the drinking water team.
- Putting chlorides into groundwater is one of the issues to be addressed.
    - One of the larger challenges is that stormwater infiltration does a really good job at pollutant removal, as shown by latest research from the UNH Stormwater Center and others. Infiltration is being relied upon heavily to accomplish removal rates and volume reduction standards, so it becomes difficult to square the advantage of its great pollutant removal properties while also protecting groundwater sources and not putting chloride into the ground.
- There was also discussion around development on A&B soils, and whether Type D soils should be excluded from having a groundwater recharge requirement. No consensus was reached, and the topic became quite complicated and left for further discussion.

iii. Definitions subcommittee:

- Reported out that they had a very productive sub-committee meeting.
- Pulled definitions from other areas that should be in Ch500, but that aren't there currently, and these will likely need to be based on the ongoing LID discussions.
- Set up a working document with different definitions: how they exist currently, the proposed changes to the definition, references, and additional comments on why the definition should or shouldn't be changed.

iv. Additional subcommittees:

- Open to adding any additional subcommittees, potentially a flooding subcommittee.

Meeting Topic 3: Review tasks from Steering Committee

Flooding Technical Committee tasks:

i. Decide on which source to use for precipitation data.
ii. Determine the uncertainty that persists after changes are made and decide how this will be delt with.
    - This goes along with testing the standard after changes are made by running it through scenarios, similar to LID standard.
iii. Clarify language to ensure standards can be understood by less technical audiences.
    - Hoping to accomplish this with the Definitions subcommittee, mostly by organizing things better to make it easier to read through.
iv. Define DEP scope and consider how this can be framed around a watershed-wide perspective as opposed to project site specific view. Consider how regulations from other agencies and municipalities impact this.
v. Specify flood requirements based on stream risk/classifications (similar to LID TC task).
    - Are there going to be different flood requirements based on whether the watershed is threatened or sensitive?
vi. Ensure proper education of changes made (this is a task related to all Ch500 changes made, not just the flooding standard).
    - Educate the engineers, towns, delegated reviewers, etc. so that everyone is on the same page regarding the changes made.
vii. How to incorporate environmental justice?
viii. Additional context for flooding discussion
    - EPA EJ Screening Tool
        - Two items specifically related to flooding: Flood Risk and 100 Year Floodplain.
        - Ch500 limited in its capacity to deal with sea level rise, which is another item in the screening tool.
        - Tool could potentially be a good way to address EJ through the flooding discussions.
    - Maine Climate Council's Vulnerability Mapping Report
        - From 2020 (older than EPA EJ screening tool).
        - Map showing riverine and coastal flood risk (1% and 0.2% chance annual flood).
        - Map showing culverts vulnerable to riverine flooding. Important because culverts are a significant contributor to riverine flooding.
    - Scientific Assessment of Climate Change and Its Effects in Maine
        - 30% increase in annual precipitation in the state from 2005-2014.
        - Increase in heavier rain event frequency, but also the smaller rainfall events.

Meeting Topic 4: Precipitation Data Source

Background: Designers and engineers currently use a static data table located in Appendix H to model flooding standards. This data table uses information extracted from the Northeast Regional Climate Center Extreme Precipitation Tables back in June of 2014. The average design life for stormwater infrastructure is between 50 and 100 years. The Maine Climate Council released a scientific and technical assessment for the State of Maine which found precipitation intensity and storm event frequency are changing due to climate change. Using data from 2014 to model infrastructure that will potentially still be in use in the year 2100 is out of alignment with Maine's climate resiliency goals. Further, needing to engage in major substantive rulemaking to update the precipitation table when new data sets are released is a hinderance to using best available science and data.

Objectives:

1. Determine a new data source to use to be used for stormwater modeling and infrastructure design.
    a. Discussion item: factor of safety multiplied to data source?
2. Develop a streamlined process to update precipitation data moving forward (in the event that new, better data is released).
    a. Establish a procedure with public comment?
    b. Move to stormwater BMP manual?

Discussion:

i. Current data source (appendix H in Ch500)

- 24-hour rainfall events for each of the different storm events for the 1-year through 500-year events, for the different counties in Maine.
- Data comes from extreme precipitation tables produced by Cornell University's Northeast Regional Climate Center in 2014. At that time Cornell was doing a great job projecting extreme precipitation events.
- Data seems good, but some of the stormwater infrastructure we plan to install in the ground needs to last 50-100+ years, which is the impetus for having a discussion around updating the data source.
- We don't want to have to go through major, substantive rulemaking in order to change which precipitation data is being used for stormwater modeling.

ii. Introduction to objectives
- Objective 1:
  - Should we be using a new source of data for stormwater modeling and to base our infrastructure design off? If so, what data source are we going to use?
  - One of the possibilities could be to add a factor of safety to some of the data. For example, an adjustment factor of 11% (or some value agreed by the committee) could be added to the current dataset until a more accurate source is established.
- Objective 2:
  - We want to establish a procedure so that we can update the precipitation tables if new, better data becomes available.
  - Could be a public comment procedure, or the precipitation data could be moved to the BMP manual and then come up with a way to update the BMP manual more regularly without having to go through major substantive rulemaking.

iii. Discussion:
- The precipitation calculations aren't extremely important when calculating culvert size. When they fail it's mostly because they get blocked by debris, rather than because they were built too small. Many of the existing culverts are small because they're old but when they fail it's usually because of blockage or because they're in bad condition, not their size.
- The data NOAA is using is what should be used (Atlas 14).
  - Atlas 14 includes a confidence interval which is beneficial in stormwater design.
- What kind of guidance do you want to provide when designing for projected rainfalls? Where do you find those projected rainfalls?
  - Atlas 15 can address these questions, but it won't be available until 2027.
- Federal Highway developed a tool that creates a projection based on numerous climate models, which is a cumbersome process for design engineers to do themselves. However, even this tool is cumbersome to be used on a project-by-project basis, unless it's a huge project. A crude use of the tool for the state of Maine that averaged between about 30 sites came up with a 20% increase in precipitation by 2100, and a similar but more robust model from NY DOT came up with 15%. These are quite close, and the suggestion is that a simple number like 10% or 15% be used until Atlas 15 comes out with a more detailed dataset.
- The life cycle of the BMP is important to consider when deciding to use projected rainfall data. Stormwater BMPs are only expected to last 25 years, unlike a large concrete box culvert that's expected to last 75-100 years. There is no reason to design a stormwater BMP for 2100 precipitation if such a short life span - that would be needlessly expensive.
  - By the time the stormwater BMP is updated or replaced in 25 years, a new precipitation projection dataset will be out.
  - Keeping perspective is important. Does it make sense to design for 2100? Case-by-case determination.
  - DOT input in this discussion is very important and helpful as they've been working on this issue for a long time.
  - BMPs should be designed for storm events that are within their lifespan – don't design a 25-year BMP for the 50 or 100-year storm event. We shouldn't be telling the public that these systems will be safe beyond the 25-year storm because we are putting our stamp on these structures.
  - The importance of the asset to human life is another factor to consider when choosing the design standard. DOT deals with highways and culverts that carry people and so need to be more robust to the 50- and 100-year storms. Lives will not be at risk if a stormwater pond fails. Water quality isn't being controlled in those big events anyway.

    - Designing for the 100-year storm isn't going to change a BMP's life expectancy- at the end of the day it comes down to maintenance.
    - A concern is that the public assumes that the technical committee should be designing for the bigger storm events at all times, and there needs to be a good justification or explanation to give to them if that is not what we do.
    - Another concern is that the public doesn't know the difference between a 25-year storm surge and 25-year rainfall event.
- Going with Atlas 14 approach is a higher (10-20%) storm standard than the Cornell dataset, which would help address these concerns.
- "Design for the 25, check for the 50" is a design standard that Ryan followed when working in Brunswick.
- Another consideration to remember is that Ch500 isn't regulating storm drain systems in municipalities, which is what people really care about, along with DOT and Turnpike infrastructure.
- USGS statistical analyses are not showing strong evidence that peak design flows are increasing. The assumption is that 25-year rainfall events are equivalent to 25-year runoff events, but it's not a very good assumption. The smaller the watershed and the more impervious the cover, the more accurate that assumption of rainfall equaling runoff becomes, but it should be kept in mind that it's not always true.
- Watersheds should be looked at from both the broader lens of blanket design standards, and the more detailed watershed-specific details that are often spelled out in WMPs.
    - It may not be smart to put a detention pond in certain structures where that money could be used to fix flooding in another location by using something like a flooding CFUP. Essentially, upgrade infrastructure along the entire drainage way instead of building a larger stormwater detention structure.
    - A challenge with this is the cost difference between BMPs. Funds for a $40-60k detention pond will not be able to fund a $500k culvert, which has high impact fees.
- What will our education and outreach component be? Selling this story to both engineers and the public will be critical.
    - No concrete plans yet but we know there will be an education and outreach component at some point in the process.
        - Will probably include guidance documents posted to Ch500 website that explain the changes made.
        - Webinars/in-person trainings for people this information might affect.
        - Groups like the Lakes Environmental Association and CCSWCD will help get the word out.
- NOAA Atlas 15 projected timeline: preliminary estimate version for continental US by 2025, final continental US by 2026, and including non-continental US by 2027.
- NOAA might be good because it doesn't get updated every six months, which is something that makes it difficult for engineers to keep track of when following regulations.
- Atlas 14 data is very location-specific (not county-wide) because it triangulates the position of the site.
- NOAA is the authoritative climate source and should be used for Ch500.
- The best way to approach a project is risk-based, project-specific, and with thought given to the uncertainties and the consequences of under- or overdesigning.
    - There needs to be a balance between the Ch500 regulations being clear enough for people to understand why they should do things a certain way, but not so prescriptive that engineers or their clients can't have control over their site-specific projects; if they want to overdesign, they should be able to.
- Another advantage of Atlas is that many drainage softwares can automatically input the NOAA data.
- An option would be to require designing to the 90^{th} percentile of Atlas 14 until Atlas 15 comes out.
- An aspect of Appendix H is that it includes Type 2 and Type 3 storm events- not sure if Atlas 14 does the same, or if Atlas 14 is closer to Type 3 storm events, but based on the way Atlas 14 triangulates rainfall between areas, it might not matter that it doesn't produce different Type 2 and Type 3 values.
- Is it worth doing a modelling exercise to compare Appendix H with Atlas 14 values for the different counties?
    - It would be useful for educational purposes to show that the decision the committee ultimately makes is informed and based on science. (Cody to run this exercise)
- Agreement among committee to use NOAA's Atlas 15 when it comes out; until then, Atlas 14 or Appendix H will be used pending output of the modelling exercise. The comparison will also help determine whether to apply a factor to Atlas 14 data or require the upper confidence interval values.

Meeting Topic 5: Culvert and Flood Design Applicable to All Projects

Background: Contained within the flooding standard are requirements to design piped or open channel systems based on the 10-year 24-hour storm event without overloading or flooding beyond channel limits. Additionally, requirements for projects to not flood primary access roads during the 25-year 24-hour storm event are contained within flooding standards.

Objectives:

1. Discuss moving these requirements to General Standards or a separate standard that applies to all projects.
2. Discuss whether these requirements should be made more protective.
3. Discuss any additional flooding requirements that should apply to all projects.

Discussion:

- In order for the two standards (within the Background section) to kick in, you have to meet the flooding standard.
  - On-site location of development projects of 3 acres or more of impervious cover.
  - Should these two standards be applicable to broader projects?
  - Are there any other flooding-type standards that should be applied to all projects that require a stormwater permit/site location development permit/stormwater review?
- There are certain Ch500 stormwater projects that if they don't require flooding, they don't have to provide a HydroCAD study or any analysis. Changing the requirements will therefore require everybody to run a HydroCAD analysis on every project, which might add extra costs to some projects.
- Is the 10-year storm the right storm to be sizing for, or should we be sizing for lager infrastructure?
  - DOT closed system requirements are for 10-year storms.
  - This becomes a pinch point in the system when others are designing for 25-year storms.
  - There is no anticipated policy for DOT to change their standards from 10 years.
- What would be the impact of this change on smaller municipalities that don’t always have their own stormwater overview? It might be more impactful for them than the more urbanized southern parts of the state.
- [Sebago Technics] tends to overdesign for larger projects anyway, usually using the 25-year storm event as a minimum for culverts in closed channel systems.
- Giving as much flexibility and discretion to the design engineer would be preferable.
- How do we address watershed-wide infrastructure improvements in a meaningful way when we are just looking at single projects?
- A dual standard could be applied: for projects under 3 acres in size of impervious cover the 10-year storm is appropriate, and for those over 3 acres it could be the 25-year storm.
  - But taking into consideration whether the flooding from a 10-year storm occurs on or off the site. If it is on the site, it’s up to the designer, if it is off the site, that can’t be allowed.
- A reason that these standards may have been placed in the flooding standard, is the third standard between the two that are being considered for moving: if your area is proposed to be flooded in a 10-year storm event, it can't contain a building- you can have parking lots, recreation areas, etc., but not a building. It then goes on to say if you are going to flood downstream, the site has to have a drainage easement. But not having these standards apply to all projects makes it difficult to regulate the few exceptions where engineers are making the wrong choices.
- Another aspect to consider is that getting a waiver for the flooding standard does not waive a developer from meeting these specific standards being discussed.
- Is there a way to separate standards into wetland, urban impaired, general standards? Is there a conveyance standard? Could smaller projects need to meet standards from a conveyance standpoint, while larger scale and site law projects have to meet another standard? And potentially tie this to threatened watersheds too?
- Adjacent to these topics is the municipal waiver for connecting into a closed drainage system.

- These topics could be discussed in a subcommittee. No consensus was reached on this discussion topic in this meeting, but it will be revisited in a future (subcommittee) meeting.

Meeting Topic 6: Flooding Standard – Return Interval Storm Events

Background: Current flooding standards require peak matching for the 2, 10, and 25 year 24-hour storm events. Maine Department of Transportation is currently designing stormwater conveyance structures for the 50 and 100 year 24-hour storm events in certain contexts.
Bankfull discharge for most streams has a recurrence interval of between 1 and 2 years, with approximately 1.5 years as the most prevalent (Leopold, 1964 and 1994), and maintaining this discharge rate should act to prevent downstream erosion. Recent research, however, indicates that two-year peak discharge control does not protect channels from downstream erosion and may actually contribute to erosion since banks are exposed to a longer duration of erosive bankfull and sub-bankfull events (MacRae, 1993 and 1996, McCuen and Moglen, 1988). Consequently, 2-year peak discharge control may have some value for overbank flood control, but is not effective as a channel protection criterion, since it may actually reach peak flow that is too high and extend the duration of erosive velocities in the stream and increase downstream channel erosion.

Objectives:
1. Discuss removing 2-year peak matching requirement.
2. Discuss merits of peak-reduction standards in some settings.
3. Discuss adjusting peak flow control for higher intensity storm events (50-year/100-year).

Discussion:
- Under current requirements, developers are required to match or reduce peak flows to match existing, predevelopment conditions.
    - Matching the predevelopment peak does not necessarily mean following the same hydrograph, it just means not going above that peak discharge rate.
    - The peak rate could last a longer time period than the predevelopment condition, and that would be allowed.
- The concern is that this prolonged exposure/drain-down time leads to a higher channel erosive volume, and therefore contributes to additional stream erosion.
    - Not having this specific requirement might help mimic more natural channel-forming situations.
- Potential options presented to address this:
    - No Exceedance option: at no point in the graph should the post-development hydrograph exceed the pre-development hydrograph (discharge rate never rises above, at any time interval).
    - Peak Reduction option: instead of peak-matching requirement, there's a peak reduction requirement (e.g. reduce the peak of the 2-, 10- and 100-year events by 50% compared to the predevelopment).
        - This option comes from a highly developed watershed. Might be worth considering for areas with particularly flashy streams or large projects.
- Original standard (stream protection standard) was designed to address this issue. It involved releasing over 24-48 hours, which was enough in many cases (especially for small streams) to get back under the non-erosive velocity, but this doesn't work everywhere.
- If using an infiltration standard, a large volume under the storm hydrograph will be removed and stored on-site, then infiltrated.
- The committee was asked if they should consider changing the peak flow controls for the flooding standard from 2-, 10- and 25-year storms to 2-, 10-, 50-/100-year storms.
    - Consensus was to leave the standard, based on earlier discussions around how BMPs are for the most part not designed to be active beyond 25 years.
    - It was noted that it is difficult to make a decision because in some cases it is appropriate to design for a higher standard. Such as for wet ponds, which have longer lifespans than other BMPs.
    - USGS is trying to move away from the 10-year, 25-year, etc. terminology and replace it with annual exceedance probabilities, because the recurrence interval is misunderstood by the public.

    - There's a 63% chance that a structure that is in the ground for 25 years will experience a flow equal to or higher than a 25-year event. Same for a structure that is in the ground for 50 years, that it will experience flow equal to or greater than a 50-year storm event.
    - Wet pond design requirements: you have to do a plug flow calculation for the 25-year event, but also for a 50 to make sure it doesn't over-top. You are also required to have one foot of freeboard for the berm at the 50-year storm, not plugged, and it has to be able to hold the 100-year flood without going over the top of the berm. This builds in protection for the municipality or whoever receives that water.
    - A concern about newer systems, such as underdrain soil filters or anything porous, is that they often end up flooding municipalities because they are not maintained properly. Often, even after the first season, the pores become blinded and the porous surfaces end up acting as paved surfaces.
    - How can we encourage better maintenance through this process? The five-year recertification program is in place, but it was not effective for a few years when there was not enough staff to work on it.
        - The updated environmental licensing system will give MEDEP more capability to issue reminders to people who are not submitting. The state needs to do a better job at supporting municipalities deal with people that are non-compliant.
    - It is not really clear how many cases of under-designing are occurring because it is not something that engineers self-report. Anecdotal data shows that often the porous pavement BMPs are not working, for example observation ports are paved over. But there is no real data on how well these BMP types are working.
    - More common than complete BMP failures, are erosion and the inability to stabilize sites long-term.
    - Microtopography is very important when designing BMPs. Some catch basins sit an inch or two above the surrounding pavement, meaning sheetflow will not drain into the basin rather around it.
    - MEDEP doesn't receive many as-built drawings to make sure they conform to the original project designs.
    - Another maintenance issue is cattails growing in BMP systems, which retard flow and reduce catchment volume, changing the functioning of the system from how it was designed.
- General consensus to not change the peak flow to 50/100-year events (Objective 3).
    - Justification: these BMP systems are not realistically going to last beyond 25 years in most cases, so it doesn't make sense to require their design to meet the 50- or 100-year storm events.
        - It comes down to designing it to the realistic lifespan of the system, not designing it to what would be ideal given unlimited resources.
    - This wording shouldn't be spelled out in Ch500, it should just say that we are guaranteeing that the 25-year storm passes through the site with some level of safety.
    - What is being left out of the discussion is that it is on the property owner to update or replace their system at some point so that it can keep handling 25-year events in the future.
- General consensus not to get rid of the two-year peak matching requirement (Objective 1). Committee will reach out to John Field for his technical expert opinion but if there's not enough justification to change it, the requirement will most likely be kept.
    - Don't want to give a designer the chance to bypass the two-year storm requirement, for flashy UISs.
    - It would be a hard-sell to communities that experience flooding that DEP is getting rid of the two-year storm peak-matching requirement.
    - Some municipalities deal with the two-year flooding more frequently and it would have to be up to them to possibly rewrite their stormwater ordinances to be stricter than the Ch500 regulations if the language is changed to remove the two-year peak requirement.
    - Might be worth reaching out to technical experts that are not part of the technical committee, such as John Field, to get a better understanding of the erosion/flooding/force equation of this objective.
- Subcommittees to meet before the next technical committee meeting. No consensus reached on whether to establish a flooding subcommittee.

Meeting Topic 7: Watershed Approach to Flooding

Background: DEP regulates flooding at a site level through permitting, but flooding challenges are often expressed at a watershed scale level. Some flooding standard waivers already exist as an attempt to combat this issue – notably the waiver for direct discharge into a great pond, major river, or coastal area.

Objectives:

1. Identify opportunities address flooding issues in a larger watershed through site permitting.

Attendees:

TAC members:

Al Palmer
Angela Blanchette
Aubrey Strause
Chris Baldwin
Charlie Hebson
Mark Bergeron
Paul Ostrowski
Phil Ruck
Rodney Kelshaw
Ryan Barnes
Peter Newkirk

DEP & FBE:

Bina Skordas
Tracy Kreuger
Cody Obropta
Dave Waddell