



STORM Response to Formal Draft of NPDES Phase II Municipal Stormwater Permit 2019-2024

November 6, 2018

Overview & Methods

This report serves as the formal comment from STORM on the formal draft of NPDES Phase II Municipal Stormwater permit for 2019-2024. STORM members submitted individual comments via SurveyMonkey® to generate a collective response to the proposed permit requirements. This report does not reflect a consensus from STORM, rather, it serves to highlight opinions that two or more Permittees shared. A complete listing of individual comments is available in Appendix A, all of which are to be considered as formal comments. The survey was made available from September 21st – October 15th, 2018. Thirty-one responses were collected; the completion rate was 94% and respondents spent an average of 21 minutes completing the survey. For each proposed change, permittees:

1. Rated the extent to which they agreed with each permit requirement on a Likert scale of 1, *completely disagree*, to 5, *completely agree*. Means for each requirement are provided.
2. Provided comments describing the reasoning behind each rating. Themes within comments for each proposed requirement are highlighted in the body of the report. See Appendix A for all recorded comments.

Responses to Each Proposed Requirement

S5.C2. Public Education and Outreach: The SWMP shall include an education and outreach program designed to:

- Build general awareness about methods to address and reduce impacts from stormwater runoff.
- Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff.

Permittees were slightly positive about this proposed requirement, with an average rating of 3.87 (*SD* = 0.73).

Wording suggestion.

- Two Permittees suggested that rather than "create" stewardship opportunities, state "provide" or "connect residents with stewardship opportunities".

Clarity around behavior change expectation.

- Two Permittees wanted to know what DOE expects from behavior change – is an attempt at behavior change enough or is DOE looking for more?

Clarity around outcomes.

- Three Permittees either suggested the bullets were too vague or requested more explicit outcome expectations for one or more of the requirements.

S5.C2 (continued). Permittees may choose to meet these requirements individually or as a member of a regional group. Regional collaboration on general awareness or behavior change programs, or both, includes Permittees developing a consistent message, determining best methods for

communicating the message, and when appropriate, creating strategies to effect behavior change. If a Permittee chooses to adopt one or more elements of a regional program, the Permittee shall participate in the regional group and implement the regional program in the local jurisdiction.

Permittees were slightly positive about this proposed requirement, with an average rating of 3.74 (*SD* = 0.87).

Considerations for how “regional participation” is defined.

- Thirteen Permittees requested clarity over what constitutes “regional collaboration” with requests to:
 - Define a minimum level of participation to prevent social loafing
 - Give credit for either participating in a regional work group OR implementing a regional program within one’s jurisdiction
 - Clarify the extent to which a regional program must be implemented in one’s jurisdiction (is partial implementation acceptable for programs with multiple outreach components); Permittee should be able to decide the extent to which a regional program is implemented in their jurisdiction
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S5.C.2.a The minimum performance measures are:

a. Each Permittee shall implement an education and outreach program for the area served by the MS4. The program design must be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs. Based on the target audience’s demographic, the Permittee must consider delivering its selected messages in language(s) other than English.

Permittees were generally neutral about this requirement, with an average rating of 3.45 (*SD* = 0.96).

Clarify ambiguity.

- Two Permittees noted that this paragraph makes it unclear if behavior change and awareness can select the same behavior and target audiences or if they need to use separate programs.

Water quality information.

- Two Permittees stated that DOE should provide options as to where Permittees can obtain local water quality data or guidelines for how to acceptably document selection of a local water quality issue
 - What is meant by “local” water quality? – 3
 - Define what is acceptable “water quality information” – anecdotal? Sampling? Other? -6
 - Should not be based on “local water quality information” as this information is difficult to attain at jurisdiction level – 3

Resources for translation.

- Three Permittees commented on resources needed for translation services. One Permittee suggested that DOE should provide these services at little to no cost, another suggested that

regional translation resources should be available. One Permittee noted that their jurisdiction would not be able to afford this.

Other thoughts on translation

- One Permittee applauded translation requirement finally making its way into the permit
- Two Permittees felt translation requirements should not be included: one felt personnel should be able to make this call on a case by case basis. Another felt that requiring messages to be delivered in other languages seems redundant and unnecessary because the permit already requires the program to be designed based on target audience characteristics.

Audience selection

- Two Permittees had questions about audience selection – one wondered how this requirement should be documented to satisfy DOE; the other wanted to know if there was a short list of audience characteristics to make a selection form.

S5.C.2.a.i General awareness. To build general awareness, Permittees shall annually select at a minimum one target audience and one subject area from either (a) or (b):

(a) Target audiences: General public (including overburdened communities, or school age children), or businesses (including home-based, or mobile businesses). Subject areas:

- General impacts of stormwater on surface waters, including impacts from impervious surfaces.
- Low impact development (LID) principles and LID BMPs.

(b) Target audiences: Engineers, contractors, developers or land use planners. Subject areas:

- Technical standards for stormwater site and erosion control plans.
 - LID principles.
 - Permanent Stormwater facilities, and LID BMPs
- (c) Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.

(c) Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.

Permittees slightly positive about this proposed requirement, with an average rating of 3.82 ($SD = 0.80$).

Additional detail requested.

- One Permittee requested definition of “overburdened communities”
- One Permittee requested an example of what a “strategic schedule” looks like; another Permittee stated that S5.C.2.a.i.(c) does not add meaning to this section, stating, “*If it is meant to clarify that the outreach can occur on an ongoing or strategic schedule (i.e. anytime for a business or targeted towards school kids during the school year) it should be placed in a guidance document.*”
- One Permittee requested clarifying if “land use planners” included in-house planning staff

S5.C.2.a.ii Behavior change. To affect behavior change, Permittees shall select, at a minimum, one target audience and one BMP(s):

(a) Target Audiences: Residents, landscapers, property managers/owners, developers, school age children, or businesses (including home-based or mobile businesses). BMPs:

- Use and storage of: pesticides, fertilizers, and/or other household chemicals.
- Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials.
- Prevention of illicit discharges.
- Yard care techniques protective of water quality.
- Carpet cleaning.
- Repair and maintenance BMPs for: vehicles, equipment, and/or home/buildings.
- Pet waste management and disposal.
- LID Principles and LID BMPs.
- Stormwater facility maintenance, including LID facilities.
- Dumpster and trash compactor maintenance.
- Litter and debris prevention.
- Sediment and erosion control.
- (Audience specific) Source control BMPs (refer to S5.C.8).
- (Audience specific) Locally-important, municipal stormwater-related subject area

Permittees were generally positive about this proposed requirement, with an average rating of 4.00 (SD = 0.82).

Nine comments were made in regards to this language, but no two comments were similar. Please see appendix for complete listing of comments.

S5.C.2.a.ii.b No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of the ongoing behavior change program (required under S5.C.1.a.ii and S5.C.1.c of the 2013-2018 Permit). Permittees shall document lessons learned and recommendations for which option to select from S5.C.2.a.

Permittees were neutral about this proposed requirement, with an average rating of 3.14 (SD = 0.93).

Remove the word “ongoing”.

- Eight Permittees stated issues with the word "ongoing". “Ongoing” suggests that the program implemented in the prior permit must be continued. If this is not DOE’s intention, wording should be changed to reflect that Permittees may evaluate on an ongoing or new behavior change program. See comments in Appendix A for specific wording suggestions.

Training and resources for behavior change evaluation.

- Four Permittees raised concerns about being able to effectively measure behavior change. Requests for DOE providing a compilation of evaluation methods and funding training were both mentioned.

Any expectations or guidelines for behavior change evaluation?

- Two Permittees wanted more clarity on DOE’s expectations for conducting behavior change evaluations.

Campaign v Program

- Two Permittees brought up differences between behavior change campaigns and programs. One suggested changing program to campaign. The other requested clarification on the difference between a behavior change "campaign" (a time-bound effort to change one target audience's singular discrete behavior specific to one BMP) and an ongoing behavior change program" (a Permittee's programmatic strategy and efforts to effect behavior change for any of the target audiences and BMPs identified in S5.C.2.a.ii).
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S5.C.2.a.ii.c Based on the evaluation from S5.C.2.a.ii.(b), by February 1, 2021, each Permittee shall follow social marketing practices and methods, similar to Community-Based Social Marketing,⁶ and develop a program that is tailored to the community, including development of a program evaluation plan. Each Permittee shall:

1. Develop a strategy and schedule to more effectively implement the existing program; or
2. Develop a strategy and schedule to expand the existing program to a new target audience or BMPs; or
3. Develop a strategy and schedule for a new target audience and BMP behavior change campaign.

Permittees were generally neutral about this proposed requirement, with an average rating of 3.2 (*SD* = 1.05).

Require social marketing, not Community-Based Social marketing.

- Five Permittees noted that Community-Based Social Marketing is a specific brand and method of social marketing and the permit should not require it for two central reasons:
 - Training or consulting services from this brand of social marketing is expensive; DOE should not require it, unless they plan to pay for all education and outreach staff to receive training or to provide funding for consulting services
 - The permit should not endorse one type of social marketing brand over another. CBSM is a proprietary term.

Resources required to implement CBSM/social marketing.

- Social marketing is needed in order for outreach programs to be effective. However, seven Permittees commented on the significant increase in costs and skills required to effectively implement a social marketing campaign. Permittees suggested that DOE provide training for staff to be able to effectively conduct a social marketing campaign or provide funding in order to hire consultants. Several mentioned this is especially needed if the permit dictates the use of CBSM, a branded and more expensive form of social marketing, as it would pose significant financial burden to some Permittees.

Timeline suggestions.

- Three Permittees provided timeline suggestions.
 - If education and outreach programs are to be based on local water quality data, final decisions on a behavior change strategy should come after SMAP is completed in order for jurisdictions to use water quality data and basin prioritization information. One Permittee specifically suggested 7/31/2022 due date, which would allow 6 months after the SMAP is completed to develop behavior change program.
 - Two Permittees asked for clarification: does program development COMMENCE no later than February 1, 2021 or is it to be COMPLETED by that date?

Difficult for smaller jurisdictions.

- Three Permittees noted that this requirement would be very difficult and costly for smaller jurisdictions that have limited staff and/or budgets.
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S5.C.2.a.ii.d No later than April 1, 2021, begin to implement the strategy developed in S5.C.2.a.ii

Permittees were neutral about this proposed requirement, with an average rating of 3.15 (*SD* = 1.2).

Timeline suggestions

- **Five Permittees made specific suggestions regarding this timeframe.**
 - Move this date to align with when SMAP is completed.
 - Three Permittees noted that two months not enough time for a municipality to begin implementing strategy. One Permittee stated that, after selecting a strategy, a jurisdiction will need to secure funding and, per the CBSM model, pilot the program before implementing the campaign/program. A deadline for piloting and a deadline for implementing the program should be included in the timeline.
 - Will Ecology be reviewing and commenting on individual strategies? The timeline may be challenging for organizations with 2-yr budgets, if implementation requires new programming or additional resources.
 - This timeline may not be appropriate, if we are focusing on a seasonal behavior.
 - **Clarification requested.**
 - Above, Five Permittees suggested the timeline is too tight for beginning to implement a social marketing campaign. Two Permittees requested clarification on what this exactly this requirement entailed: does DOE intend for a social marketing campaign to be implemented at this point? Piloted? Or the plan for targeting a specific BMP and audience begins (e.g., audience research).
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S5.C.2.a.ii.e No later than March 31, 2024, evaluate and report on the changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy and any planned or recommended changes to the program in order to be more effective; describe the strategies and process to achieve the results.

Permittees were generally neutral about this proposed requirement, with an average rating of 3.38 (*SD* = 0.90).

- Two Permittees noted that this would be difficult or not warranted for very small jurisdictions.
 - Two Permittees suggested a longer timeline to complete program evaluation.
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S5.C.2.a.ii.f Permittees shall use results of the evaluation to continue to direct effective methods and implementation of the ongoing behavior change program.

Permittees were slightly positive about this proposed requirement, with an average rating of 3.71 (*SD* = 0.71).

Remove the word “ongoing”.

- Five Permittees asked that the word “ongoing” be removed; it limits the flexibility jurisdictions should have to begin a new program, if evaluation shows this is the best course of action. One Permittee requested that DOE define “ongoing”.
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S5.C.2.a.iii Stewardship. Each Permittee shall create and advertise stewardship opportunities and/or partner with existing organizations (including non-permittees) to encourage residents to participate in activities or events planned and organized within the community, such as: stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.

Permittees were slightly positive about this proposed requirement, with an average rating of 3.96 (*SD* = 0.92).

Change the word “create”.

- Four Permittees stated that the requirement should not be to “create” stewardship opportunities but to “provide” or “connect” residents with stewardship work.
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Appendix A

S5.C2. Public Education and Outreach: The SWMP shall include an education and outreach program designed to:

- Build general awareness about methods to address and reduce impacts from stormwater runoff.
- Effect behavior change to reduce or eliminate behaviors and practices that cause or contribute to adverse stormwater impacts.
- Create stewardship opportunities that encourages community engagement in addressing the impacts from stormwater runoff.

Although the language is ambiguous and without actual goals and measures I do agree with the concept and permit condition.

Some stewardship opportunities can be challenging in a union environment. We can't have volunteers doing work reserved for union members.

One of my coworkers interpreted this as "you are required to effect behavior change, and if you don't change behavior, you are out of compliance." I read it as "your program should be designed to try to change behavior, but you won't be out of compliance if you try and it doesn't work. So now I'm confused about whether the requirement is to actually change behavior, or whether the requirement is to create a program that TRIES to change behavior. Maybe changing the word "effect" to something like "encourage" or "promote" in the second bullet point would help clarify.

The word "reduce" in the examples above could be open to interpretation by individual jurisdictions and might lead to some level of regional inconsistency. Consider removing the word.

The Permittee should provide stewardship opportunities instead of create them since the S5.C.2.a.iii. requirement allows for partnerships with existing organizations. The partner may create the opportunity while the Permittee provides advertising and in-kind services. Change "create" to "provide".

They seem like three good goals for stormwater education and outreach.

I agree with the approach; however, please try to be explicit on expected outcomes. Having clear expectations makes it easier for MS4 to prepare programs that achieve targeted outcomes.

Education and outreach program included in the SWMP to build general awareness, create stewardship opportunities, is great,,,,, but how to determine, effectively, efficiently, acceptably by DOE, to determine if we effect behavior?

I do not believe that you need to be a Phase II to have stormwater outreach and education.

Rather than "create" stewardship opportunities, seems like "provide" or "connect residents with stewardship opportunities" would be better phrasing.

Stronger emphasis should be put on behavior change programs. Awareness campaigns on their own are not especially effective at bringing about changes in behavior. Therefore, to realize improvements in water quality, behavior change should be the primary focus with awareness being secondary.

Measurement of behavior change is difficult to achieve at a small city scale.

S5.C2. (continued). Permittees may choose to meet these requirements individually or as a member of a regional group. Regional collaboration on general awareness or behavior change programs, or both, includes Permittees developing a consistent message, determining best methods for communicating the message, and when appropriate, creating strategies to effect behavior change. If a Permittee chooses to adopt one or more elements of a regional program, the Permittee shall participate in the regional group and implement the regional program in the local jurisdiction.

I like that we are allowed the choice to accomplish the condition individually or as member of a regional group. Yet, if a jurisdiction decides to be a member of a regional group it would be more beneficial to the regional group and the collaboration effort if standards were set for membership. If the effort by member jurisdictions is only to show up for regional meetings, as it currently frequently happening, then that really is not enough for any real regional effort to be successful. Funding regional efforts and a coordinator to oversee the efforts continues to be a challenge, and it would be helpful if Ecology would help to address this challenge.

I think permittee's should get extra points or credit for participating in a regional program. Regional programs give a more consistent message to the public.

I would like to see a minimum level of participation defined. And what if you are able to only partially implement a regional program? For example, you promote the Don't Drip & Drive campaign, but you aren't able to actually hold any leak inspection workshops in your city. Would you still get credit?

To what extent must the permittee participate in the regional group? Not all programs may be fully implemented at individual jurisdictional level.

This section needs a bit more clarification. What exactly is meant by “participate in the regional group”? Does this mean attending meetings for this group and providing input or does it go as far as contributing monetarily to the program? This also leads into the following requirement “implement the regional program in the local jurisdiction”. Does this require holding an event for the program in your city or would advertising for the program and its’ events fulfill the intent of this statement?

Please clarify what it means to "implement the regional program in the local jurisdiction."

Assuming that messaging is consistent and communication methods and strategies are appropriate, there should be leeway for the local jurisdiction to implement the regional program in a manner that adjusts for local factors/conditions whether it’s jurisdiction capacity or community conditions.

The desire to create regional consistency is understood and a very worthy objective but rigidity could also discourage some from participating.

The Permittee should have the ability to determine how much they “participate in the regional group and implement the regional program” and this statement capture that intent.

This section is important, especially for Tumwater, as we are a part of the Stream Team, a regional working group that collaborates with Lacey, Tumwater, Olympia, and Thurston County to accomplish the three goals from the previous question.

Collaboration is always welcome. Messaging is one thing, program implementation may be another. Permittee's should have option when it comes to participation or not. A menu if possible. What makes sense for one jurisdiction relative to implementation may be different for another.

I do not believe that you need to be a permittee to have a regional group and a regional message. There are plenty of regional groups to participate with that do not require all the overhead of being a permittee.

I like the intent of this section, allowing jurisdictions to either work individually or as a regional group, but I find the phrasing of the last sentence to be confusing. Couldn't jurisdictions adopt elements of a regional program and implement them locally without being part of the regional group - and still be meeting permit requirements?

Would like to see the language give credit for either participating in the regional group, OR implementing the regional program in their local jurisdiction. Jurisdictions (particularly smaller ones) with limited resources may not have the time to devote to participating in the regional group who develops the program. The requirements of a regional committee can be substantial, factoring in communication, project management, meetings, travel, and the additional workload to help develop a regional project. Maybe you have a great local partnership that you can lean on to implement the program, but do not have the staff time at your agency to devote to a committee. Conversely, a jurisdiction may have that time available to them, but not have a good way to fully implement the program that has been developed by the committee in their area. For example, the committee could determine that the best way to change behavior around car leaks may be to have a leak detection event at the campus of a major employer, utilizing a partnership of many agencies. If your jurisdiction has been helping to develop this campaign, but is geographically located far from where the other jurisdictions are partnering, this may not be effective for you. If you don't have an equivalent location, and are unable to staff a major event on your own without partners, this may also not be effective for you. We recognize that the intent of this section is to require substantial contribution from jurisdictions before getting 'credit' for a partnership of this type. However, the Permit should recognize contributions that are equal in effort but still flexible enough for jurisdictions to be able to choose which approach they are able to manage. Better language for this line, while still meeting the intent of this section, would be "If a Permittee chooses to adopt one or more elements of a regional program, the Permittee shall participate in the regional group and/or implement the regional program in the local jurisdiction."

Local implementation of regional programs has proven challenging in the past for some jurisdictions. For example, Kitsap participated in developing the Don't Drip and Drive campaign, but found it difficult to implement locally.

Please add "aspects" to the last sentence to read: implement aspects of the regional program in the local jurisdiction.

The last sentence of this implies that being involved in the program development whether that be as part of the advisory committee, web development committee, or using a "piece" of the program is not full implementation. "The Permittee shall participate in the regional group and implement the regional program in the local jurisdiction." We disagree with the word "implement," there should be different verbiage to allow participation at many levels whether you are able to fully implement a program or being involved in program development. Smaller jurisdictions resources are limiting when it comes to full implementation.

Depending on content and audience similarities across jurisdictions, regional collaboration may be effective on a case-by-case basis. This kind of language may also help encourage jurisdictions to collaborate on regional efforts where applicable for other permit requirements, such as training, IDDE public info, source control outreach, etc. - Ecology could consider including similar language for these other sections too.

S5.C.2.a The minimum performance measures are:

a. Each Permittee shall implement an education and outreach program for the area served by the MS4. The program design must be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs. Based on the target audience's demographic, the Permittee must consider delivering its selected messages in language(s) other than English. I interpret this as very broad audiences and subject areas.

Clarify that this is one of two new, different, campaigns (general awareness as one and behavior Basing education and outreach efforts on known science and data is a good idea. Of course utilizing science and gathering data is expensive and can be controversial, creating the need for more education and outreach.

Harder for a smaller jurisdiction to base it on local water quality information. Although illicit discharges and spills into waterways have not been a problem, we continue to educate the public on it to keep things clean.

I think it is vital that including messages in other languages than English is finally included in the permit. I think Ecology should give specific options as to where permittee's can obtain local water quality data.

I agree with focusing education and outreach on areas where poor water quality is a known issue. When it comes to target audiences, I would like to have translation services provided at little to no cost for jurisdictions when languages other than English are required. Translation services can be costly, and it is not something we necessarily budgeted for in our upcoming budget cycle, which covers years 2019/20.

What is "local water quality information" defined as? Within City limits? Within County limits?

What is meant by "local"? Is this referring to city, county, regional or statewide water quality information? Also, what can the city use as local water quality information? Does this information need to come from a formal report or monitoring results, or could it come from known issues in the city as well as public comments/concerns?

Not sure an alternative language component should be established in the permit. Outreach personnel should be able to make this call on a case by case basis and then have access to regional resources to accurately and effectively accomplish the objective if deemed appropriate.

None.

There is some ambiguity in how each element (behavior change, general awareness, and stewardship) are governed by this paragraph, for example, could one program be used to meet all three, or multiple section requirements, i.e. general awareness, behavior change and stewardship opportunities? Or, do there need to be separate programs to meet each element. And, does each element need to be tied to a different local water quality issue/demographic?

I agree that this section makes sense, it's important to realize that messaging and language needs to be thoroughly reviewed so all audiences can understand the information. My only concern is the section that reads "the program design must be based on local water quality information and target audience characteristics". First, what is considered water quality data, is this sampling, is this anecdotal data, is it inferred? Second is about the target audience characteristics, is there some sort of list for what these characteristics might be or some baseline for judging? I feel with this broad of a definition each city might have a very different approach and therefore identify a very different target audience.

This makes sense; however, please be aware that significant funds are being directed to Ecology to collect water quality data that may not be locally relevant, and many permittees are continuing to collect water quality information to better understand local needs.

Our MS4 consists of between 853 and 930 people. It is not reasonable to have a special program for such a limited audience.

What documentation will be required to show connection to wq info and target audience characteristics?

Concur with tailoring the program to fit the issues relevant to each jurisdiction. However, the sentence "The program design must be based on local water quality information and target audience characteristics to identify high priority target audiences, subject areas, and/or BMPs." is vague. What is defined as "local"? Could this be regional data? IDDE issues? Anecdotal information gathered from maintenance staff? This sentence could use more clarity into the scope of acceptable information that could potentially be used to base our program design upon.

"Local water quality information" needs to be more clearly defined. Could anecdotal information from community or staff count? What about addressing specific needs of the jurisdiction that may not be reflected in water quality data collected by that jurisdiction. For example, we do not collect local data on pesticides or herbicide runoff so it would be difficult to justify a campaign to promote yard care alternatives based on our water quality data (or lack thereof).

Determining and providing messages in selected languages will take more resources to provide outreach than we currently have

Specifically requiring messages to be delivered in other languages seems redundant and unnecessary, because the permit already requires the program to be designed based on target audience characteristics. Please define what "local water quality information" could entail - obviously monitoring data or scientific studies or IDDE reports perhaps, but could this also be based on other indicators, such as anecdotal observations by field staff?

I disagree because "based on local water quality" is vague and often unattainable. I rarely receive water quality data that I can act on for ed & outreach! And, because I don't do water quality monitoring myself, I am limited to what I receive from others. If you could tell me what is worse (car wash, roof treatment, pressure washing, dumpster juice....) and some BMP's I'd gladly move those to the top of my list but more often than not we're basing our work on educated assumptions and tackling issues that make sense for the general public or have clear BMP's.

The part I disagree with is basing programs on "local water quality information" as we rarely get this data let alone in a way that it can be translated into education and outreach material. Please, tell me what's worse: roof moss treatment, vehicle leaks, pressure washing, fleet maintenance, or leaky dumpsters. I assume these are all issues but I don't have any recent data that can help me decide what to target and what BMP's we would recommend. We also often go for the gateway behaviors for awareness like car washing.

S5.C.2.a.i General awareness. To build general awareness, Permittees shall annually select at a minimum one target audience and one subject area from either (a) or (b):

(a) Target audiences: General public (including overburdened communities, or school age children), or businesses (including home-based, or mobile businesses). Subject areas:

- General impacts of stormwater on surface waters, including impacts from impervious surfaces.
- Low impact development (LID) principles and LID BMPs.

(b) Target audiences: Engineers, contractors, developers or land use planners. Subject areas:

- Technical standards for stormwater site and erosion control plans.
 - LID principles.
 - Permanent Stormwater facilities, and LID BMPs
- (c) Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.

We'll just keep choosing the same target audience. We could target developers, but we only have one developer in the city and they have their own stormwater permit (and no stormwater leaves their site).

I would like to see language containing the definition of "overburdened communities." I would also like to expand on "ongoing or strategic schedule" by adding an example of what that means. (i.e. strategic meaning what makes the most sense for the Permittee...like promoting hazardous materials storage during flooding season, car washing during the summer, natural yard care during spring and fall, etc.)

Define "Land Use Planners." Does this mean in-house planning staff?

These efforts would be more effective in wider regional campaigns or maybe grouped together in jurisdictions that are maybe considered similar areas (e.g. greater eastside, north or south seattle, etc.)

S5.C.2.a.i.(c) is language that doesn't add useful meaning to the requirement. If it is meant to clarify that the outreach can occur on an ongoing or strategic schedule (i.e. anytime for a business or targeted towards school kids during the school year) it should be placed in a guidance document.

This audience list is not very specific and limited to General Public / Businesses. If more it is intended that the permittee select more specific target audiences than what is listed here, some indication of that should be given.

This seems broad enough to encompass a number of different external education plans, both in terms of audience and subject. I also assume that as long as one of these audiences and areas are meet each Permittee is allowed to try different subject areas for education based on their specific water quality findings?

Outreach and education can be done and is done without having to be a permittee.

I interpret "annually" as meaning that new awareness programs need to be developed each year. Is this the expectation? Could lead to jurisdictions dropping effective programs in the need to devote staff time to developing a new annual program

If the intent of this section is to break up target audiences/subject areas into two types, a suggested change would be to rewrite as follows, for increased clarity:

(a) General public (including overburdened communities, or school age children), or businesses (including home-based, or mobile businesses).

Subject areas:

- General impacts of stormwater on surface waters, including impacts from impervious surfaces.
- Low impact development (LID) principles and LID BMPs.

(b) Technical audiences: Engineers, contractors, developers or land use planners.

Subject areas:

- Technical standards for stormwater site and erosion control plans.
- LID principles.
- Permanent Stormwater facilities, and LID BMPs

(c) Permittees shall provide subject area information to the target audience on an ongoing or strategic schedule.

I appreciate the outreach efforts to overburdened communities.

S5.C.2.a.ii Behavior change. To affect behavior change, Permittees shall select, at a minimum, one target audience and one BMP(s):

(a) Target Audiences: Residents, landscapers, property managers/owners, developers, school age children, or businesses (including home-based or mobile businesses).

BMPs:

- Use and storage of: pesticides, fertilizers, and/or other household chemicals.
- Use and storage of: automotive chemicals, hazardous cleaning supplies, carwash soaps, and/or other hazardous materials.
- Prevention of illicit discharges.
- Yard care techniques protective of water quality.
- Carpet cleaning.
- Repair and maintenance BMPs for: vehicles, equipment, and/or home/buildings.
- Pet waste management and disposal.
- LID Principles and LID BMPs.
- Stormwater facility maintenance, including LID facilities.
- Dumpster and trash compactor maintenance.
- Litter and debris prevention.
- Sediment and erosion control.
- (Audience specific) Source control BMPs (refer to S5.C.8).
- (Audience specific) Locally-important, municipal stormwater-related subject area.

It can be difficult to find the right behavior to change. Those that care about stormwater do what they can to prevent pollution. Those that don't care aren't going to listen to us.

Carpet cleaning is its own bullet point, but we are getting mixed messages about what the proper BMP is for carpet cleaning. Some say dump it in your toilet, others say the sewage treatment plants don't want all the fibers. We need clear direction and regional buy-in on what message to send before including it as its own topic.

The more these messages and behavior change requests can be established and communicated from Ecology the more consistent and effective the result will be.

To add clarity, "(Audience specific)" target audiences should be a separate subsection called S5.C.2.a.ii.(b), shifting the remaining requirements to S5.C.2.a.ii.(c) through S5.C.2.a.ii.(g). Define "audience specific" and list the two subject areas.

Same comment as above: if this list is not intended to be exhaustive, some indication should be given.

My only questions are as to why the target audience list isn't the same target audiences listed in the last question? Are the target audiences a little more fluid, at least in terms of what category they fall into?

We do this already.

Outreach and education can be done and is done without having to be a permittee.

Should be "effect" behavior change - not "affect." Would prefer to see litter and debris prevention in the awareness section instead of or in addition to behavior change.

S5.C.2.a.ii.b No later than July 1, 2020, each Permittee shall conduct a new evaluation of the effectiveness of the ongoing behavior change program (required under S5.C.1.a.ii and S5.C.1.c of the 2013-2018 Permit). Permittees shall document lessons learned and recommendations for which option to select from S5.C.2.a.ii(c).

Change occurs over a longer period of time, generations even. It's difficult to adequately evaluate the effectiveness of a behavior change campaign so soon after implementation.

In a small city, getting a good response is a problem.

I absolutely agree, as this is very important to behavior change. However, Ecology needs to provide funding for training in order for permittee's to accomplish this effectively.

The word "ongoing" is throwing a lot of people off, because the current permit does not state that we needed to have an ongoing program in the 2013-2018 cycle. Suggest changing language to: "...each Permittee shall conduct a new evaluation of the effectiveness of a specific behavior change program..."

Remove the word "ongoing" otherwise I feel I am trapped into the same program. If a program is evaluated as ineffective, it would be dropped and a new program would begin. Also, change the word from program to campaign.

The term "ongoing" is a somewhat confusing. In the past some programs ran seasonally or were stopped due to ineffectiveness. "Ongoing" could give the impression that the same program needs to be used and ran continuously through the term of the permit. If a program is started and then determined to not be working, is the jurisdiction required to tweak the program to address the problem or will they be able to develop or find a more suitable program?

Clarify that the evaluation shall COMMENCE no later than July 1, 2020 - or - that it shall be COMPLETED by that date.

None.

This section should be revised to clarify whether or not this is a new evaluation of the same, particular program/campaign the permittee evaluated in the last permit cycle, or if there is room to conduct a baseline evaluation for a different behavior change campaign/program.

Perhaps compiling a list of evaluation methods would be useful for this one. Some of the BMPs are hard to track, such as carpet cleaning, other than getting information from residents on how they did carpet cleaning or trying to test water quality for surfactants and detergents before and after the campaign?

Evaluating effectiveness is a standard management tool for improving program metrics. Is there an expectation on how this is measured? Community surveys? What is Ecology's expectation? Is there an expectation to tie this evaluation to water quality?

not sure of the validity of a "new evaluation" compared to previous evaluations. The responses of questionnaire's and surveys are hit or miss, and participation #'s of programs and such are sometimes not an accurate determination of behavior change. ??? just not sure how to do this accurately.

Outreach and education can be done and is done without having to be a permittee. Having a limited audience of 853 to 930 people for an MS4 that consists of roadside ditches and curb and gutter, will be hard to obtain change since it is mostly rad issues that do not apply to them.

Change to ongoing OR NEW behavior change program The text in parentheses referring to the 2013-18 permit makes it seem like we need to be re-evaluating the program that we evaluated for 2013-18. If this is a new program, this would be baseline evaluation with no lessons learned.

The issue in this section is in including the word "ongoing". We strongly suggest eliminating that term from this section, or changing it to "...ongoing or new behavior change program". The current permit did not have a requirement that programs or campaigns be "ongoing", only that we develop them and then evaluate whether they were working. For jurisdictions that may have determined through that evaluation that a particular program was not working and shifted to something new, there would be no "ongoing" program to evaluate. As written, this section would seem to indicate that one would have to re-evaluate a campaign that had been dropped, as it calls for a "new evaluation" beyond the one in the previous permit. Part of "us(ing) resulting measurements to direct education and outreach resources most effectively" is to determine whether to continue with a program or discontinue it in favor of something that may move the bar further. Jurisdictions should not be penalized for performing adaptive management of programs. If this section does allow for a new behavior to be evaluated, it would be a baseline evaluation and not able to include "lessons learned". This sentence could be rewritten "Permittees shall document lessons learned (if applicable) and recommendations for which option to select from S5.C.2.a.ii(c)."

Are there expectations for how this evaluation should be conducted? Should the scope and scale of the evaluation be defined in the permit?

There is a disagreement that the word ongoing is being used in this sentence. The 2012-2018 NPDES permit E&O campaigns were never intended or required to be an ongoing. Ecology can not require a jurisdiction to continue these campaigns. We believe there needs to be a concerted effort to distinguish between the different terms "campaign" and "programs". Campaigns are efforts directed towards a specific topic or behavior for a limited duration of time. Programs are broader and generally ongoing. We consider Education and Outreach the "Program", while behavior change efforts are discrete "campaigns". Propose the following text: No later than July 1, 2020 Each permittee shall conduct a new evaluation of a behavior change campaign. Or the permittee may choose to conduct a new evaluation of an expired/existing campaign from the 2012-2018 NPDES Permit.

I think I still struggle to understand how to best measure this.

While we agree with evaluation, there are problems with this section primarily because of the lack of clarity on what is meant by "ongoing behavior change program."

There is some confusion among Permittees on how to interpret what "the ongoing behavior change program" means. Some believe this refers to the same target audience and BMP used in a behavior change campaign conducted in the previous 2018 permit cycle, and therefore believe that Ecology is directing Permittees to conduct a new evaluation of the same campaign or at least the same target audience and BMP. However, others believe that "the ongoing behavior change program" refers to a Permittee's behavior change efforts and campaign(s) in general, which now may have shifted to new target audiences or new BMPs compared to the original campaign, based on the results of the original evaluation required under the 2013 Permit.

In a scenario where a behavior change campaign was evaluated and found to be so ineffective that it was discontinued in favor of a new target audience, BMP, or a completely new behavior change campaign/strategy/schedule (similar to language used in S5.C.2.a.ii(3)3, page 22), would an evaluation of this new strategy or approach that is already underway in fact meet this requirement? The 2013 Permit did not require Permittees to continue the same campaign, target audience, or BMP after evaluation.

If a new behavior change campaign has just begun during this time, it is possible that there may not have been lessons learned generated for that specific campaign yet. In such cases, could

"baseline" data or preliminary analysis be documented and used to inform selection of a new target audience and BMP (option 3)? Ecology needs to allow for the fact that "documenting lessons learned" may not be possible for this evaluation if it is a new one for a new campaign that has not yet been deployed.

We recommend that Ecology provide clarification on the difference between a behavior change "campaign" (which would be a timebound effort to change one target audience's singular discrete behavior specific to one BMP) and an ongoing behavior change program" (which would be a Permittee's programmatic strategy and efforts to effect behavior change for any of the target audiences and BMPs identified in S5.C.2.a.ii).

We also recommend that Ecology specify that the new evaluation of "the ongoing behavior change program" in fact means that a Permittee can evaluate the effectiveness of their overall program and efforts to effect behavior change. This could include or consist entirely of a new evaluation of any current behavior change campaign, which may in fact be a different campaign with a different target audience and/or BMP compared with the one evaluated in the 2013 permit cycle.

S5.C.2.a.ii.c Based on the evaluation from S5.C.2.a.ii.(b), by February 1, 2021, each Permittee shall follow social marketing practices and methods, similar to Community-Based Social Marketing,⁶ and develop a program that is tailored to the community, including development of a program evaluation plan. Each Permittee shall:

1. Develop a strategy and schedule to more effectively implement the existing program; or
2. Develop a strategy and schedule to expand the existing program to a new target audience or BMPs; or
3. Develop a strategy and schedule for a new target audience and BMP behavior change campaign.

Social marketing is a great tool, but some small cities do not have the resources to stay on top of social media platforms.

Yes, this is needed in order for programs to be effective. However, permittee's need to be provided training from experts, paid for by Ecology, in order to properly do this.

Community-Based Social Marketing is a very specific method, and unless all Ed/O staff is able to receive training on it (which is pricey), we should not be expected to follow the Doug McKenzie-Mohr model. In a phone call with Ecology, it was explained as "incentivizing behavior change," but CBSM argues that we should not be providing incentives. It's a mixed message, and in order for jurisdictions to carry it out properly, we need to better define it and provide any necessary training. I would remove the "similar to Community-Based Social Marketing" phrase altogether.

Explain the principles behind Community Based Social Marketing. You're using a specific methodology but not providing the background information behind it. CBSM is often expensive to learn and implement which provides a financial burden. Expand on "existing" program? Clarify.

This section implies that the Permittee needs an employee/consultant well versed in Community-Based Social Marketing to comply with this requirement. If the Permittee is not participating in a regional group to meet this requirement it might create a hardship and prevent the Permittee from meeting the real intention of this section.

Education and Outreach programs (including behavior change programs) are supposed to be based on local water quality data. Jurisdictions will performing a receiving waters basin assessment and prioritization (S5.C.1.c), and writing a Stormwater Management Action Plan (SMAP), due 12/31/2022. Due dates for the behavior change program should be after the SMAP is completed so that we can use the water quality data and basin prioritization information to inform where we should implement our behavior change programs. I suggest a due date of 7/31/2022 for this requirement. This would give us 6 months after the SMAP is completed to develop our program.

Clarify that the program development shall COMMENCE no later than February 1, 2021 - or - that it shall be COMPLETED by that date.

Community-Based Social Marketing (CBSM) is a branded method developed by one person, but the social marketing approach is generic and provides greater flexibility to meet this permit requirement. If CBSM is specified, it implies that the best way to meet the permit requirement is to use CBSM, which would require either take a training to learn how to use CBSM or hire the founder of CBSM to consult on and/or implement a program, creating a monopoly. Instead of using the term CBSM, replace it with "social marketing approach" language. CBSM should be included in guidance materials along with other social marketing methods.

This may be burdensome for small Phase II's with limited staff. It may require having to hire outside consultants to do the work. Will funding sources be available to help smaller jurisdictions meet this requirement?

Is CBSM analysis expected to be done by each municipality internally or by outside consulting groups?

So long as there is flexibility for how the adaptive management strategies are implemented, giving consideration to Permittee size and demographics, I think these are logical next steps.

Having a full program for between 853 to 930 people will be very expensive and the benefits will not pencil out. A better use of time and behavior change will be to have outreach and education for the entire county.

The use of the term "Community-Based Social Marketing" is problematic. This is a proprietary term for Doug MacKenzie-Mohr's technique, and as such, could be construed as promoting one particular vendor over another, which is an issue for a public policy document. Understanding that the intent was to provide a clear framework for the social marketing BMP that is being asked for here, a better way to handle this section would have been to drop "Community-Based" and the title case ("Social Marketing" to "social marketing"), and to more clearly define the framework in the footnote (7). The fact sheet that accompanies this Permit review copy does a better job of describing the framework. This footnote could borrow that language and still convey the intent. To the original footnote, drop "Community-based" and add the following to the end of the paragraph: "Social marketing is pragmatic and generally involves: identifying the barriers for a specific demographic (target audience) to a desired behavior, developing and piloting a program to overcome those barriers, implementing the program across a community, and evaluating the effectiveness of the program."

It would better to use the term social marketing instead of Community Based Social Marketing. Principles of CBSM can be incorporated into a social marketing campaign. In addition, there is a well established and growing community of practice for social marketing locally (the Pacific Northwest Social Marketing Association), meaning that there are supports in place for learning about social marketing. Calling it CBSM is overly specific.

In (c) above, recommend replacing the term program with the term "campaign". Also, in 1 and 2 above, recommend including the term "expired" in front of or after "existing"

We agree with this assuming that this deadline can be the time that Permittees must START developing the process involved before deciding on strategy/schedule, for example by beginning to explore possible target audiences and BMPs to target for a behavior change campaign. We recommend Ecology clarify this more strongly in the Permit language itself.

S5.C.1.d: Provides the due date to report on the effectiveness of the strategy and any potential changes to improve effectiveness of the behavior change program. This provision provides time for the program to develop and be implemented, with time to evaluate and report on the effectiveness of the behavior change program – or how well did the target audience receive the message and change their behavior to the desired actions?

Please consider and comment on whether the timeframe provided above in this preliminary draft is appropriate and compliance with this schedule is feasible. If not, please explain.

S5.C.2.a.ii.d No later than April 1, 2021, begin to implement the strategy developed in S5.C.2.a.ii.(c).

See #9

See comments above. I suggest moving this due date to September 1, 2022, 2 months after revised due date above.

There needs to be at least three months between development and implementation of the behavior change program. The annual report is due one day before this requirement is scheduled for implementation and in this jurisdiction, the annual report and education and outreach tasks are delegated to the same person. Ecology should take this into consideration and delay the implementation date to May 1, 2021 at the earliest.

Two months doesn't seem like enough time for a municipality to begin implementing strategy, especially the first time they are required to use CBSM. It could take municipalities longer than two months to figure out how to analyze their results and how to change their current BMPs based on those results.

Will ecology be reviewing and commenting on individual strategies? The timeline may be challenging for organizations with 2-yr budgets, if implementation requires new programming or additional resources.

You do not need to be a permittee to implement a strategy.

This timeline may not be appropriate, if we are focusing on a seasonal behavior,

Does this mean that the actual social marketing campaign should begin to be implemented? Or the pilot? Or does this mean that the plan for developing a social marketing campaign should begin being implemented?

The timeline is insufficient to begin implementing the strategy. For example if you are planning on conducting workshops, two months is not enough time to secure a venue, hire speakers, advertise the event, carry out all the planning and implementation logistics, and secure the funding. Also, CBSM recommends running a pilot project and evaluating it, implementing changes before implementing the full campaign broadly. So you don't waste money and time. There is nothing in the timeline that allows for this step. Recommend that the third step be a timeline (No later than August 1, 2021) to implement a pilot campaign with evaluation. This should take six months. The fourth step would then be implementation of the modified strategy based on the evaluation of the pilot campaign. This would take another six months. (No later than February 1, 2022) Then the last step ((e) No later than March 31, 2024 evaluate and report on the changes in understanding and adoption of targeted behaviors)...

We agree with this assuming that the Fact Sheet clarification that this deadline can be the time that Permittees must START developing the process involved before deciding on strategy/schedule, for example by this time a target audience and BMP would be selected as a likely candidate, and Permittees will then begin to conduct research, audience analysis, focus groups, etc. We recommend Ecology clarify this more strongly in the Permit language itself.

I disagree with the language "similar to Community-Based Social Marketing" because I don't think it should be so specific. I know it says 'similar to' but why say Community-Based at all? Many of us have taken Doug Mackenzie M's trainings but he's not the only well known social marketer out there. Just seems weird to be that specific.

S5.C.2.a.ii.e No later than March 31, 2024, evaluate and report on the changes in understanding and adoption of targeted behaviors resulting from the implementation of the strategy and any planned or recommended changes to the program in order to be more effective; describe the strategies and process to achieve the results.

Once again, it's hard to measure in a small city as sample sizes are very small.

Suggested revised due date, based on comments above. August 31, 2025

None.

This timeline seems reasonable.

Is 2.5 years enough time to determine - particularly through some set of empirical measurement tied to water quality - whether behavior change was meaningful? May take a little longer.

Does not seem warranted for a population of 853 to 930 people.

Understanding should not be assumed to be a goal of behavior change campaigns. While some behavior change campaigns will necessitate increasing knowledge or awareness among a target audience before behavior change can occur, in many other cases knowledge deficit will not be a barrier to behavior change. Permittees should have the freedom to design their behavior change campaign to be most effective, which may mean NOT attempting to change understanding. In fact, recent research has shown that in many cases attempting to change an audience's understanding can have a boomerang or backfire effect and can result in resistance to behavior change. Please remove the requirement to evaluate changes in understanding. We agree that this timeline is feasible, given that Appendix 3 (Annual Report Questions) specifies that the strategy/schedule must be developed and reported on by March 31, 2022. That would leave another year to implement/pilot and another year to evaluate, for example. We recommend that Ecology ALSO include these specifics, especially the March 31, 2022 deadline here in S5.C.2.a.ii(e). It is currently only in Appendix 3 which could slip past Permittees radar.

S5.C.2.a.ii.f Permittees shall use results of the evaluation to continue to direct effective methods and implementation of the ongoing behavior change program.

Remove the word ongoing. If a program is evaluated as ineffective, it would be dropped and a new program would begin. Also, replace the word program with campaign.

None.

Again, some clarity is needed on whether the "ongoing behavior change program" refers to having a behavior change component as an aspect of the overall education program, or if it is meant to refer to the particular campaign/program evaluated and implemented in this cycle.

Seems reasonable.

Sounds like adaptive management to me... Logical

You do not need to be a permittee to use results to direct effective methods and implement behavior change. That is just humankind.

Again, drop the term "ongoing".

If the evaluation results show that the ongoing campaign is ineffective or no longer a local priority, permittees should have the opportunity to develop something new to take its place.

Ecology must provide in clarifying terms whether or not the permit is requiring that these campaigns be ongoing into the next permit cycle. The result of this campaign may not be positive or effective, and priorities may change based on best available sciences, therefore it should not be ongoing.

Agree, as long as Ecology better defines what they mean by "ongoing behavior change program."

S5.C.2.a.iii Stewardship. Each Permittee shall create and advertise stewardship opportunities and/or partner with existing organizations (including non-permittees) to encourage residents to participate in activities or events planned and organized within the community, such as: stream teams, storm drain marking, volunteer monitoring, riparian plantings, and education activities.

Partnering with and supporting local organizations and community groups, aka stakeholder collaboration, is imperative to our effort to repair and protect water quality.

It would be nice, but it can be difficult in a union environment where these opportunities may fall under the job descriptions of union members.

Could use some clarity on what level of partnering meets this requirement.

"Create" is an ambiguous word. I'm not sure if this means we need to create entirely new opportunities that are different from what we typically offer, or if it just means to come up with something. I suggest changing "create" to "provide" instead. What is the minimum level of participation from a jurisdiction if they are partnering with a non-permittee? Do they always have to attend the event themselves, or can they just advertise/promote it if they are not able to attend?

The Permittee should provide stewardship opportunities instead of create them since the requirement allows for partnerships with existing organizations. The partner may create the opportunity while the Permittee provides advertising and in-kind services. Change "create" to "provide".

The word "create" should be changed to "implement," in order to reflect the permittee's ability to participate with programs created by other existing organizations.

We do this already.

You do not need to be a permittee to advertise stewardship opportunities or partnering. We already do this and are not a permittee.

Change "create" to provide or "connect residents with"

Stewardship requirement is difficult for smaller jurisdictions to meet, even through partnerships.