

Comment Response Document
Regarding the Baltimore City MS4 Restoration and TMDL WIP

The Baltimore City Department of Public Works (DPW) conducted a public review of the draft MS4 Restoration and TMDL WIP. The public comment period was open from December 19, 2014 through January 30, 2015. DPW received written comments from 21 individuals and/or organizations*. Included in this list is one (1) set of comments that were received two (2) days after the deadline. The following is a list of those individuals and organizations that provided public comment:

Affiliation	Author	Date Submitted
1000 Friends of Maryland	Kimberly Golden Brandt [kim@friendsofmd.org]	01/30/2015
Baltimore City Planning Department	Amy Gilder-Busatti [Amy.Gilder-Busatti@Baltimorecity.gov]	01/16/2015
Baltimore Community Tool Bank	Noah Smock [Noah.Smock@toolbank.org]	01/20/2015
Baltimore Green Space	Miriam Avins [Miriam@baltimoregreenspace.org]	01/29/2015
Blue Water Baltimore	Halle Van der Gaag [HVanderGaag@bluewaterbaltimore.org]	01/30/2015
Chesapeake Bay Foundation	Alison Prost & Terry Cummings [TCummings@cbf.org]	01/30/2015
Citizen Comment	Charles Alexander [ch_a_alex@hotmail.com]	01/30/2015
Citizen Comment	Jim Lauria [jimlauria@teamchem.com]	01/28/2015
Citizen Comment	Kelly Lindow [kc.lindow@gmail.com]	01/05/2015
Citizen Comment	Linda Loubert [linda.loubert@morgan.edu]	01/27/2015
Citizen Comment	Nancy McCormick [nancymcc@aol.com]	12/20/2014
Citizen Comment	Nick Lindow [NLindow@biohabitats.com]	02/01/2015
Citizen Comment	Paul Nevenglosky [PNevenglosky@mofattnichol.com]	01/30/2015
Citizen Comment	Thomas and Kristina Ventre [tommy.ventre@gmail.com]	12/31/2014
Clean Water Action	William Fadely [wfadely@cleanwater.org]	01/29/2015
DPW Office of Legislative Affairs	Kristyn Oldendorf [Kristyn.Oldendorf@baltimorecity.gov]	12/29/2014
Interfaith Partners for the Chesapeake	Jodi Rose [jodi@interfaithchesapeake.org]	01/27/2015
National Aquarium	Eric Schwab; Laura Bankey [LBankey@aqua.org]	01/29/2015
Parks & People Foundation	Christina Bradley [Christina.Bradley@parksandpeople.org]	01/30/2015

Waterfront Partnership of Baltimore	Laurie Schwartz laurie@waterfrontpartnership.org	01/30/2015
Wildlife Habitat Council	Jeffrey Popp JPopp@wildlifehc.org	01/06/2015

* Other signatories on Blue Water Baltimore’s public comment letter were Jennifer Chavez and Khushi Desai, Earthjustice; Betsy Nichols, Waterkeepers Chesapeake; Claudia Friedetzky, Maryland Chapter of the Sierra Club; Rebecca Hammer, Natural Resources Defense Council; Dan Millender, Baltimore Tree Trust; Theaux Le Gardeur, Gunpowder Riverkeeper; and Julie Lawson, Trash Free Maryland.

The public comments included over 200 individual comments totaling 50 pages. Several organizations made the same or very similar comments; these were consolidated and noted as such. Additionally, some comments were shortened for clarity.

Note: The page, figure, table, and section numbers identified in the Comments refer to the original WIP submitted to MDE and for public comment. These numbers may have changed in the Final WIP.

GENERAL COMMENTS

1. *Page v, Executive Summary:* The reporting framework that will be established should include publically digestible and accessible real-time reporting and an annual report (possibly integrated with the annual healthy harbor report card).
Response: Thank you for your comment. DPW will take this under consideration as it develops documents to report the progress of the WIP.
2. *Page iv:* It is great that you put the alphabet soup up front rather than in the back.
Response: Thank you for your comment.
3. *Page vi:* As a planner, I love the 6 pillars
Response: Thank you for your comment.
4. *Page vii:* Glad to see a dedicated maintenance team for all City BMPs
Response: Thank you for your comment.
5. *Background:* The consistency of geography/formatting for this series of maps is really nice.
Response: Thank you for your comment.
6. *Page 2, Last paragraph:* Were those 8 the only remaining combined sewer structures at that time?
Response: Yes.
7. *Page 27, Section 2.7.6:* Frederick County has piloted an online green card training course. It would be great to see Baltimore City do the same.
Response: Frederick County no longer offers Responsible Personnel Certification for erosion and sediment control <https://frederickcountymd.gov/4724/Responsible-Personnel-Certification>; all Responsible Personnel Certification is administered by MDE <http://www.mde.state.md.us/programs/Water/StormwaterManagementProgram/SoilErosionandSedimentControl/Pages/Programs/WaterPrograms/SedimentandStormwater/erosionsedimentcontrol/index.aspx>
8. *Page 29, Green Pattern Book:* Comment more directed for the GPB, the permit process, fees, and requirements for the GGI should be further evaluated. I know that during this initial round of grants, many participants did not anticipate the engineering review, permits fees, and agreements necessary for implementation. The appendix begins to document this, but still not clear in the CBT grant process. In

order for this program to be more successful, the city should offer an incentive (waive permit fees, offer technical service providers for free, etc.)

Response: Thank you for your comment. DPW will pass this on to the Planning Department.

9. *Page 34, Section 4:* Target major loading issues (failing infrastructure, sewage breaches, land use in critical areas, storing Arena dirt on the water, etc.)

Response: As detailed throughout the WIP and especially in Section 4.2, the City has numerous programs to regulate and reduce stormwater pollution. These programs include: City-wide mechanical street sweeping, preventative cleaning of catchments and debris collectors, erosion and sediment control, public education and enforcement, and other methods discussed in Section 4.2.6. The scope of the City's MS4 Permit is limited to the Municipal Separate Storm Sewer System (see MS4 Permit, Part 1.B). Discharges from City's sanitary sewer are governed by the City's Consent Decree, available at:

<http://publicworks.baltimorecity.gov/Bureaus/WaterWastewater/Wastewater/ConsentDecreeProgram.aspx>.

10. *Page 34, 5th bullet point:* Soil Decompaction

Response: Unfortunately, DPW does not understand the comment.

11. *Page 40:* Who is supposed to open and then close the storm drain screens before and after 1" storms?

Response: The storm drain inlet screens are designed to open automatically for a given intensity of storm.

12. *Page 40, Section 4.2.3:* State that DPW will research and identify and conflicts in city code that contribute to nutrient loading risks.

Response: Thank you for your comment.

13. *Page 41, Section 4.2.6:* Thank you for including mention of a study to quantify the nutrient and sediment removal efficiencies of forest patch conservation and enhancement.

Response: Thank you for your comment.

14. *Page 41, Section 4.2.6:* City could also include a plan to streamline 311 calls regarding debris and waste complaints directly to DPW, rather than housing.

Response: Thank you for the comment. DPW will look into this recommendation.

15. *Page 42, Section 4.3:* Streamline credit reporting

Response: Thank you for your comment. Attachment A: Annual Report Databases in the MS4 Permit outlines the reporting process. DPW does not believe that streamlining is the issue, rather that groups do not understand the process or what documentation is needed. DPW will continue to outline the reporting process and engage with stakeholder groups to improve public understanding throughout permit implementation.

16. *Page 44, Table 7:* Can forest enhancement be included in the chart? Or is this chart just for BMPs whose value has already been assigned?

Response: The chart includes accepted BMP practices or locations where the practices would be installed (like school grounds). If forest enhancement includes the planting of trees then it is included under "Tree Planting".

17. *Page 46, Section 4.6.1:* It is important that the development of both the Technical Work Group and Outreach and Workforce Development Work Group occur without delay. What are the next steps for forming the Technical Work Group?

Response: The scope and the responsibilities of the Technical Group are in the process of being developed. A “Projects and Innovation” sub-committee of the Stormwater Advisory Committee has been formed.

18. *Page 49, Section 4.7:* DOT and/or DPW should plan to purchase a vacuum truck for maintenance of existing blue alleys, and future permeable pavement installations. There will need to be a way for partner organizations maintaining BMPs to dispose of polluted sediment and media after removing for routine maintenance in an approved manner.

Response: Thank you for your comment. DPW will consider equipment needs like vacuum trucks as it develops future maintenance plans.

19. *Pages 49 – 50:* Establishing a Stormwater BMP Maintenance Team for all city-owned facilities is a sensible, efficient way to ensure that investments in stormwater infrastructure are properly cared for. We strongly support this approach.

Response: Thank you for your comment.

20. *Page 53, tracking mechanisms:* Electronic as-built documentation would be a huge improvement, as now all city documents are paper and are difficult to access.

Response: The City is researching the options available to upgrade all as-built documents from paper to electronic format. Any person who wishes to view as-built documentation is encouraged to contact the DPW Office of Compliance and Laboratories. Any person who wishes to obtain copies of as-built records is encouraged to send a written request to DPW. For example, applicants may email DPW at PublicWorks@baltimorecity.gov.

21. *Appendix:* I only wish the best part of this report, the appendix of projects, could be much longer and cover so many more acres in the city.

Response: Thank you for your comment.

22. Lastly, we are disappointed at the lack of diversity in racial, cultural, and demographical representation on the SWAC. The makeup of SWAC does not mirror the many voices in Baltimore and thus does not do its residents justice.

Response: Thank you for your concern. DPW appreciates any suggestions on how to increase the diversity in racial, cultural, and demographical representation in SWAC. In the meantime, DPW will continue welcoming all individuals and organizations interested in joining SWAC subcommittees.

23. For example, there is no WAP for the Lower North Branch of the Patapsco River, and the WAPs on file for Moore’s run, Stony Run and Maiden Choice were completed over a decade ago.

Response: Thank you for your comment. DPW recognizes this and has listed in the Milestone Schedule a timeline for updating the 8-digit Watershed Small Watershed Action Plans (SWAPs).

24. Finally, consider conducting a City code and ordinance review to identify barriers to BMP/ESD implementation or other green design principles. See: Guidance from CWP’s Better Site Design: A Handbook for Changing Development Rules in Your Community (Part 1).

Response: Thank you for your comment. DPW will take this under consideration.

25. Enforce existing laws and regulations meant to protect the bay and more importantly create new policies necessary to reach targets and goals for overall success.

Response: DPW enforces all laws and regulations within the scope of its authority. Given this comment’s high-level focus on the Chesapeake Bay, DPW believes that this recommendation is more appropriately addressed by the State and will forward it to MDE.

26. Developers, some local elected officials, and agricultural interests, are not convinced that there will be any consequences for not complying with the new TMDL. Clean Water Action believes the contrary and suggests that DPW consequences for polluters be spelled out and straight forward, like withholding additional issuance of stormwater permits if an existing TMDL is not being met, as well as withholding funds for supporting infrastructure. In addition, DPW “consequences” for local jurisdictions might revolve around more comprehensive measures outlined in MS4 permits.

Response: DPW believes that this recommendation is more appropriate to the State and will forward it to MDE. Baltimore City does not have authority to enforce TMDL requirements outside of the City’s jurisdictional limits. DPW respectfully notes the 2007 Maryland Stormwater Act identifies consequences based on quantitative and qualitative controls, not on the Bay TMDL results.

27. In the past few years the environmental community with the support of other concerned citizens groups has offered policies to further develop processes and establish accountability for how our state makes future growth decisions. DPW should reexamine these policies and design new or improve on present standards for both commercial and residential growth to make sure we our curbing sprawl and not just slowing it. Another possibility is to expand the uses in county and municipal MS4 permits to require watershed restoration in sub-watershed jurisdictions and large commercial facilities. In addition, the WIP must enforce a specific standard requiring all new development and redevelopment in its design to implement regenerative stormwater conveyances. In addition these WIP regenerative stormwater conveyances for the significant reduction of sediment should be expressed in detailed plans along with a draft timeline.

Response: Regarding the first part of the comment, curbing sprawl is not an issue for Baltimore City. As to the second part of the comment, regenerative stormwater conveyances are not appropriate for all new development or redevelopment, so it is not practical to require this. Baltimore City has one regenerative stormwater conveyance. DPW will keep this comment in mind on the off-chance that more regenerative stormwater conveyances are installed.

28. Baltimore City and every other WIP in The Chesapeake Watershed needs to be *enforced*, not just *enforceable*. To accomplish this the Baltimore City WIP should have clear monitoring and enforcement plans and in addition lay out a timeline during which DPW would come up with an enforcement plan—not the plan itself To do this both DPW and DNR must be provided with adequate resources to ensure they’re capable of carrying out their statutory missions. In addition, the Baltimore City Department of Public Works needs to set up clear consequences for failure, so that local elected governments have good reason to prioritize pollution reduction over, say, granting a particular waiver to a developer or even restoring a public building. Consequences should be specific in relation to the sector at fault.

Response: DPW believes that this recommendation is more appropriate to the State and will forward it to MDE.

29. A training program should be developed for other city agencies and contractors to: a) ensure compliance with guidelines developed through this comprehensive plan, and b) identify competing practices to better plan for mutual success.

Response: Thank you for your comment. DPW will take this under consideration.

30. For the most part, the info is strong and readable. Bearing in mind a broad audience, I suggest condensing all City action points into 1-2 pages. There is deep history and context throughout the WIP, which is necessary incredible for me—an engaged, critical, environmentally-oriented citizen. For others, I think the document will be much more digestible if you lead with the actual action points, then list pages where deeper context can be found in case they want to dig deep. The action points then act as a table of contents. Some action points will be of more interest to certain readers than others, so organizing info around them will allow deeper engagement in material as selected by the reader.

Response: Thank you for your comment. DPW believes that the current format, particularly the Table of Contents and Appendices A-D, encapsulates the broad range of essential information in the most abbreviated format possible. DPW will consider adopting the format suggested in this comment in the development of other MS4-related documents for outreach to the public.

31. I also suggest 2 additional 1-2 pagers that condense info. These can be thought of as “takeaway” pages that list easy ways readers can help. The first can be a “How You Can Help Baltimore” page (aimed at individual citizens) and the other can be a “How Your Business Can Help Baltimore” page. Each can contain 10 – 15 items from the greater text that are geared toward citizen and business action. Put these at the front of the document to give a takeaway to readers. More marketing material could be developed around these 1-pagers (posters, social media posts, etc.).

Response: Thank you for your comment. DPW believes that this format is more appropriate for educational documents that will be developed pursuant to the WIP. DPW will take this comment under consideration for the development of future outreach documents and educational materials.

32. The draft MS4 Restoration and TMDL WIP is the outline of a solid plan to both address current poor water quality conditions and to put programs in place for long-term pollution prevention and maintenance strategies. It is important that it focuses on science-based decisions related to project/program benefits and prioritization, requires complete transparency, incorporates effective stakeholder input, develops and maintains publicly-accessible success measures, and is flexible and adaptive.

Response: Thank you; DPW will take this comment under consideration for the development of future outreach documents and educational materials.

33. It is commendable that this plan attempts to integrate the MS4, Chesapeake Bay TMDL WIP, additional TMDLs for city waters as well as a large number of other related planning efforts already underway in Baltimore City. As such, it will also be imperative that a regular effort to make sure updates to any of these supporting plans are incorporated into the planning strategy outlined in this document.

Response: Thank you for your comment.

34. For clarification, there are a number of properties and/or projects managed by other agencies that may not be applicable to the restoration goals address in this document. It would be beneficial to clarify which efforts will be included in the restoration goals as permitted through relevant regulations.

Response: See Section 5.1: Tracking Mechanisms, in the Final WIP.

35. The City has not made available important public documents germane to evaluation of the Plan. The Permit requires the City to submit annually a report of progress to the MDE. Permit, § V.A. The City last submitted an MS4 annual report to the MDE on August 29, 2013, covering the period from January 1, 2011 to June 30, 2012. Accordingly, the public is unable to access recent information and data germane to the progress and implementation of the City’s MS4 management programs (e.g. Public Education, IDDE, Erosion and Sediment Control, etc.), the current status of watershed conditions (e.g. watershed monitoring data and assessment, stormwater management assessment), and schedules for implementation and monitoring of watershed restoration projects. While the DPW leadership has publicly stated that the IPF has been finalized and was submitted to the U.S. EPA for their final review and approval, and, further, that the City has been directed by U.S. EPA to undertake public and stakeholder outreach for the IPF, the City continues to refuse both informal and formal Maryland Public Information Act requests to review the IPF and related documentation. Regardless, the City should distribute the IPF to the public to provide contextual information and justification for the selection and scheduling of MS4 compliance projects and programs presented in the Plan.

Response: Thank you for your comment. However, DPW does not agree that the Integrated Planning Framework is germane to the progress and implementation of the City’s MS4 management programs. The MS4 WIP includes capital projects that Baltimore City will implement and enforce for restoration and

TMDL compliance conditions of the MS4 Permit. These requirements will be carried out in a five (5) year timeframe as mandated by the MS4 Permit. See, MS4 Permit, Part IV.E.2.a. DPW suggests reviewing the MS4 WIP for contextual information and justification for the selection and scheduling of MS4 compliance projects and programs.

CLARIFICATION

36. *Page 1 Introduction Header:* There isn't a header saying this is just for the MS4 - need to also introduce the WIP TMDL (see notes from Exec Summary). 2025 WQ goals, EPA->MDE->local jurisdiction.

Response: DPW does not understand this comment.

37. *Page 11, Section 2.2.1 Watersheds:* Include a map of the 8-digit watersheds. Data can be found here: <https://data.maryland.gov/Energy-and-Environment/Maryland-s-8-Digit-Sub-Watersheds/e9j9-vuxg>

Response: A map of the 8-digit watersheds is located on page 12. This differs from the map referenced by the commenter because the City's map reflects its storm sewersheds. For example, Watershed 263 empties into the Middle Branch and is thus in the Baltimore Harbor watershed, not Gwynns Falls.

38. *Page 16:* Housing manages the Green Building Standards – we [Planning] have a lot of say in what they should be, but we don't manage/implement them.

Response: This has been clarified in the Final WIP.

39. *Page 16:* Perhaps not seen as relevant, but Planning manages CIP process (which DPW capital projects go through)

Response: Thank you for the clarification.

40. *Page 17:* Is Real Estate not part of Housing?

Response: Real Estate is part of the Comptroller's Office.

41. *Page 18, Section 2.4 Non-governmental Organizations (NGOs):* Add Maryland Extension's Sea Grant program, and the Watershed Academy.

Response: Unfortunately, DPW is unable to add Maryland Extension's Sea Grant program and the Watershed Academy to the WIP Nonprofit/NGO partner list at this time. Those partners listed in the WIP are either active partners with DPW, or have an active stormwater management presence within the City. However, over time DPW expects that our partner list will grow and that new partners will be added.

42. *Page 19, Replace Parks and People Foundation description:* Parks & People Foundation - Parks & People is dedicated to supporting a wide range of recreational and educational opportunities; creating and sustaining beautiful, lively parks; and promoting a healthy natural environment for Baltimore City. They host a number of programs that have an impact on the environment and recreation spaces including the Community Greening Resource Network (CGRN), the Mayor's PowerInDirt Initiative, Community Greening grants, Environmental Education, and Green Infrastructure project implementation. During the winter of 2002, the idea for the Watershed263 (WS263) project was proposed by the Department of Public Works (DPW). It was recognized that in urban areas such as WS263, the human ecosystem was the largest component, and in order to restore the natural ecosystem, the human ecosystem would also need to be restored to health. Recognizing their work in community engagement, DPW sought the help of the Parks & People Foundation (PPF). Watershed 263 is a....

Response: This has been incorporated into the Final WIP.

43. *Page 25, Section 2.7.2: Strategy - use approved BMP 'fixing a discovered nutrient discharge (dry weather)*

Response: Unfortunately, DPW does not understand the comment.

44. *Page 25:* There is a statement regarding industrial permit holders: those who cannot do 20% restoration

on-site and require off-site mitigation are added to the city's baseline. How does this impact the baseline identified in the plan?

Response: See Section 2.7.1: NPDES Industrial Permit (General Permit Number 12-SW) in the revised WIP for clarification.

45. *Page 26:* May be worth mentioning that two of the requirements for development projects in the Critical Area are for IDA projects to reduce phosphorus levels in stormwater runoff by 10% and RCA projects are required to limit lot coverage (impervious surfaces) to 15-25% of the lot, depending on size of the lot.

Response: This has been incorporated into the Final WIP.

46. *Page 27 – 28:* I checked with Alice and the IgCC has been adopted by the City. She said that with the adoption of the IgCC, the requirements defer to the existing City/State standards for stormwater because they are stronger than what is required under the IgCC.

Response: This has been incorporated into the Final WIP.

47. *Page 29, Section 2.8.3, 4th paragraph:*

- a. Remove "Finally, the Power in Dirt program (originally part of Step Up Baltimore), a mayoral initiative currently operated as a partnership between Parks & People Foundation and Baltimore Housing that has been incorporated into the Growing Green Initiative. Through Growing Green Initiative, Parks & People Foundation staff will assist communities in planning for post-demolition greening projects, as well as providing technical assistance and resources for people adopting and re-using existing vacant lots".
- b. Replace with, ""Finally, the Power in Dirt program (originally part of Step Up Baltimore), a mayoral initiative currently operated as a partnership between Parks & People Foundation and Baltimore Housing that has been incorporated into the Growing Green Initiative. Through Growing Green Initiative, Parks & People Foundation staff will assist communities in planning for post-demolition greening projects, as well as providing technical assistance and resources for people adopting and re-using existing vacant lots."

Response: This has been incorporated into the Final WIP.

48. *Page 30, 8th line:* STORM is a new acronym, and not listed in the acronyms list. It is not defined until later in the document.

Response: STORM centers are now called GROW Centers - This change, and its addition in the list of acronyms, has been incorporated into the Final WIP.

49. *Page 32, Section 3.3, 1st sentence:* Provide footnote outlining where these documents [Unified Planning Work Program (UPWP) and Center for Watershed Protection / University of Maryland Environmental Finance Center] can be found.

Response: The two studies were developed as feasibility studies. They are still under review by the Departments of Planning, Public Works, and Transportation.

50. *Page 33:* Something is wonky with the line spacing for the last line of text on this page.

Response: This has been corrected in the Final WIP.

51. *Page 47, Section 4.6.2:* Including Baltimore Ecosystem Study. How will DPW continue to serve Baltimore Ecosystem Study? Pg. 45 states "Serve on partner-led committees and work groups, including the Healthy Harbor Steering Committee and Trash Work Group. Watershed 263 Council, Urban Waters Federal Partners Partnership, and the Baltimore Ecosystem Study;"

Response: This has been added in the Final WIP.

52. *Page 50, Section 4.7.2: Parks & People* has workforce development programs as well.

Response: This has been incorporated into the Final WIP.

53. Make earlier mention in the text that Herring Run is the City's main tributary in the Back River watershed. The first I see the two mentioned together is the chart on page 13. Some may not be familiar with Back River since the river itself is not within the City.

Response: This has been incorporated into the Final WIP.

54. *Appendices A-C: Detail projects, programs and partnerships respectively.* An appendix with this information sorted by watershed would be helpful.

Response: This has been incorporated in the Final WIP

55. *Appendix A, Estimated Capital Cost:* Specify what costs are included: project management, design, construction, construction oversight, and watering for establishment?

Response: Thank you for your comment. DPW will include a note as to what costs (design, construction, etc.) are included under estimated capital costs.

56. *Appendix A, Location:* Include Latitude and Longitude.

Response: Thank you for your comment. Unfortunately, DPW does not agree that this information is needed.

57. *Appendix B, Notes:* Include estimated program costs.

Response: Estimated program costs are included in Section 4.2: Programs in the Final WIP.

58. *Appendix C, Summary of Partnerships:* Include Parks & People planned street tree planting projects and BMPs.

Response: Street tree plantings are included in Afforestation. An estimate for NGO partner projects has been added in the final WIP.

59. Is there a way to get Wildlife Habitat Council listed as a non-profit/ NGO partner? Through the partnership with The US Forest Service and Parks and People Foundation we have done several projects aimed at improving water quality, community greening, and wildlife habitat in Baltimore. I believe you were on the fieldtrip this past spring, where several projects were highlighted. We plan to continue working in the city, working with corporations to improve their land for both wildlife habitat and water quality improvement. Is there a way to get us listed on the document?

Response: Thank you for your support. DPW recognizes and appreciates Wildlife Habitat Council's contributions to Baltimore City. The organizations listed in the WIP are those that DPW has been directly partnering with. However, over time it is expected that our partner list will grow and that new partners will be added.

60. Along with other regional planning efforts already incorporated into the plan, we would like to recommend another recent initiative being developed by the Greater Baltimore Wilderness Coalition (GBWC). The GBWC is a voluntary alliance of public agencies (including Baltimore City), non-governmental organizations, professional associations, and conservation coalitions that supports the vision of expanding a connected and protected green infrastructure network in populous central Maryland from the Chesapeake Bay to the Piedmont. Among its activities, the Coalition seeks to improve regional capacity to respond successfully to the impacts of a changing climate. Green infrastructure investments on a regional basis at all scales, landscape through site-specific, can provide cost-effective protection for valuable transportation, energy and water treatment infrastructure, shield homes and businesses from adverse impacts, and provide additional benefits, particularly for underserved and vulnerable populations. The Coalition is currently engaged in a project to develop a regional vision for climate resilience which will

identify key green infrastructure investments across the Patapsco, Patuxent and Gunpowder River watersheds.

Response: DPW recognizes and appreciates Greater Baltimore Wilderness Coalition (GBWC) contributions. Unfortunately, DPW is unable to add GBWC to the WIP Nonprofit/NGO partner list at this time. Organizations listed in the WIP are either active partners with DPW, or have a stormwater management presence within the City. However, over time DPW expects that our partner list will grow and that new partners will be added.

61. When mentioning the 20% restoration goal, make sure to include a direct measure (number of acres) and timeline.

Response: A direct measure (number of acres) and timeline for the 20% impervious restoration goal are mentioned throughout the WIP on pages VI, 34, and 51-53.

GRAMMAR

62. *Page iii:* STAFFING is in all caps, which is inconsistent with the rest of the TOC formatting

Response: This has been corrected in the Final WIP.

63. *Page v:* Under Existing Conditions and Challenges, 4th line – concentrate rather than concentration

Response: This has been corrected in the Final WIP.

64. *Page vi, 1st line:* “and” rather than “with”, or alternately, “living” rather than “live”

Response: This has been corrected in the Final WIP.

65. *Page vi, 5th pillar:* Lowercase T in the WIP (this appears in other places too, so you might want to search the document to be sure it is consistent everywhere)

Response: This has been corrected in the Final WIP.

66. *Page vii, 1st paragraph, last sentence:* Either “The monitoring program” or “Monitoring programs”

Response: This has been corrected in the Final WIP.

67. *Page 7, End of 1st paragraph:* Last two sentences run together with no punctuation.

Response: This has been corrected in the Final WIP.

68. *Page 8, 1st bullet point:* Critical Area Management Program (not Critical Areas Manual). Critical Areas with an S also appears on page 28, so I would suggest doing a search and replace in case it appears elsewhere.

Response: This has been corrected in the Final WIP.

69. *Page 11, Second to last line:* I would say tidally influenced rather than tidal influenced

Response: This has been corrected in the Final WIP.

70. *Page 11, Last sentence:* Doesn’t make sense – the existing 6% of open streams are not buried – they are not open if they are buried – reword.

Response: This has been corrected in the Final WIP.

71. *Page 32, MS4 Public Meetings, 3rd paragraph, 2nd line:* Should be either “The presentation” or “Presentations”.

Response: This has been corrected in the Final WIP.

72. *Page 36, Last paragraph:* Sedimentation should be singular here

Response: This has been corrected in the Final WIP.

73. *Page 37, 3rd paragraph, 3rd line:* Remove the word “are”

Response: This has been corrected in the Final WIP.

FIGURES

74. *Page 35:* Caption at the bottom should be Pierce’s Park (thanks for the photo credit!)

Response: This has been corrected in the Final WIP.

75. *Page 38:* No scale on map (similar comment for all maps)

Response: Due to the size of the maps, DPW does not think a scale is necessary.

76. *Page 39, Figure 22:* What are the units? How was this graph developed? (this comment was made by several groups)

Response: This has been revised in the Final WIP.

CORRECTIONS

77. *Page 2:* The three numbers I highlighted in blue sum to 4,236. There is a Footnote 1 at the bottom of Page 2 that says the projected impervious acres restored are actually 4,822, to account for contingency factors. I’m wondering if the blue numbers need to be changed to equal a sum of 4,822, or if the footnote value should be updated to 4,236?

Response: This has been corrected in the Final WIP.

78. *Page 9:* Might want to ask someone here in Planning for a map that doesn’t have Shelia Dixon’s name on it, or make that edit yourself.

Response: This has been corrected in the Final WIP.

79. *Page 11, Section 2.2:* City contains 81.6 sq. mi, not 81.6 acres

Response: This has been corrected in the Final WIP.

80. *Page 15-16, Section 2.3:* On pages 15 and 16 you list and describe offices and divisions within DPW and how they relate to implementation of the WIP. The Office of Sustainable Energy is not listed, since it was not part of DPW at the time of writing. I’m not sure if they need to be listed since they probably don’t directly affect the WIP but they are doing some related activities which are worth thinking about. They are planning to place considerable amounts of solar power on City Schools, which is something that should be coordinated with the efforts to place BMPs at City Schools. There may be possibilities for combinations of solar arrays and stormwater BMPs at some sites. OSE is also looking at improving the City fleets, which could lead to more efficient street sweeping and alley sweeping. I know that we’ve had issues in the past with vehicle failures that throw off the sweeping schedule.

Response: DPW does not agree that the Office of Sustainable Energy (OSE) should be listed. While DPW recognizes OSE’s contributions to improving the environment, there is insufficient connection between OSE and the WIP.

81. *Page 16, Under Other Agencies:* You may want to specify that it is agencies that undertake capital projects that require SWM facilities will have to construct and maintain facilities. Not every agency undertakes capital projects, which is what the wording currently sounds like. Also, in the Executive Summary, it said that there would be a maintenance group managed through DPW that would maintain all facilities. The two seem to contradict each other.

Response: This will be clarified in the Final WIP.

82. *Page 19, Parks and People Foundation:* For branding purposes, the name should appear as the "Parks & People Foundation" or "Parks & People". See text added below for proper information, programs mentioned throughout the MS4 WIP, and the correct history of WS263.

Response: This has been corrected in the Final WIP.

83. *Page 23, Section 2.6.1:* How many linear feet of streams were restored prior to 2010? Table 4 says 1,325 lf, but text states 13,225 lf

Response: This has been corrected in the Final WIP.

84. Page 24, first line: Major typo- 13,225 linear feet should be 1,325 linear feet.

Response: 13,225 linear feet is correct.

85. *Page 24, Section 2.6.1:* Lower Stony Run should not be accepted as a restored stream- the project has failed and needs to be re-built.

Response: Lower Stony Run was accepted as a restored stream before it failed. The failure occurred during an isolated storm event. Plans are in place for repairing the damage.

86. *Page 34:* On this page, it says that the proposed projects will restore an equivalent of 3,747 acres, which is not consistent with the 1,191 equivalent impervious acres stated in the Executive Summary

Response: This has been corrected in the Final WIP.

87. *Page 34, Last line:* FY20120 should probably be FY2020

Response: This has been corrected in the Final WIP.

88. *Page 36, Section 4.1.2:* Point 4 mentions WS 263 as a potential criteria, but none of those neighborhoods are WS 263 neighborhoods, so you might not want to mention it in particular (maybe mention 246 instead)

Response: This has been corrected in the Final WIP.

89. *Page 50, Section 4.7.3:* Second paragraph should be identified as “Community Greening Resource Network (CGRN)”

Response: This has been corrected in the Final WIP.

90. There appears to be discrepancies between the text of the Plan and the Appendices with respect to the number of acres of impervious surface that are expected to be restored under the Plan. On page 34, it states that projects will restore the equivalent of 3,747 acres; our calculation for the projects listed in Appendix A is 1,196 acres. On page 39, the text says 805 acres will be restored by the programs; Appendix B gives a figure of 2,766 acres. On page 42, the number of acres projected for restoration through partnerships is 271; Appendix C puts that acreage at 279. (We note that the numbers in the Executive Summary match closely to those in the appendices). The sum for all three categories in the text is 4,823 acres restored; the sum for the appendices is 4,241. Neither comports with the totals stated on pages 1 and 23 of 4041 total acres. Recognizing that all these are estimated and projections, the Plan should, nonetheless, reconcile them.

Response: This has been corrected in the Final WIP.

91. Looking at the bullets in the section above, the “programs” would restore more acres than the “projects”, but below the bullets it says that “projects” will restore the greatest amount of acres.

Response: This has been corrected in the Final WIP.

Section 2: BACKGROUND

92. Urban and suburban stormwater is the only major runoff to the Chesapeake Bay that has increased steadily over the years. As a first step, Clean Water Action suggests that City officials begin getting this increase under control by first fully enforcing the Baltimore City Stormwater Act of 2007 and its regulations. However, there is much to be done in this area as a result of uncontrolled growth, inadequate funding and enforcement. For example, outfalls throughout the state are becoming destabilized, a

therefore need to be surveyed to see what shape they're in before new discharges are allowed. There are current outfalls that aren't functional and any kind of loading exacerbates existing damage and problems.

Response: For clarification, the Baltimore City Stormwater Act was passed in 2010. Regarding the enforcement of the Act, many outfalls within Baltimore City are regularly examined during routine outfall inventory inspections. Additionally, the Office of Asset Management within the Department of Public Works is also responsible for the preventative inlet cleaning program, preventative DPW stormwater facility maintenance program, routine waterway maintenance and large debris collection system program; and infrastructure inventory and condition assessment program. The combination of maintenance programs and outfall inventory procedures ensures the functional status of Baltimore City outfalls.

93. The City has improperly excluded significant portions of City property from the Plan. The Plan states that the City-owned Back River Water Treatment Plant and drinking water facilities at Loch Raven, Prettyboy, and Liberty are not included within the purview of the Plan's "restoration [program] and TMDL compliance conditions of the MS4 permit[.]" The Plan fails to cite any authority that would allow for the City to exclude these portions of its property from any requirements of the Permit. Similarly, assuming, arguendo, that the Plan allowed such an exclusion, the Plan fails to cite any reference to an actual agreement between Baltimore City and either Baltimore County or Carroll County indicating that those jurisdictions have entered into agreements (or otherwise prepared plans) to take on Baltimore City's WLA obligations in the City-owned reservoir watershed lands and waters.

Response: DPW does not agree that the areas specified in Comment 93 are within the scope of the City's MS4 Permit. Although Back River Water Treatment Plant (BRWWTP) is owned and operated by Baltimore City, BRWWTP has its own industrial NPDES permit for stormwater. See, Discharge Permit No. 12-SW, NPDES Permit No. MDR 0000. Properties governed by industrial NPDES permits for stormwater are not within the jurisdiction of the City's MS4 Permit. Under the Reservoir Watershed Management Agreement of 2005, Baltimore City owns and operates the three (3) reservoirs: Loch Raven, Prettyboy, and Liberty. However, Baltimore County and Carroll County are responsible for the TMDL implementation plans associated with the drainage areas that discharge to the source surface waters (streams) of these reservoirs. The Waste Load Allocations and Load Allocations for the three (3) reservoirs are assigned, inter alia, to the Counties, not to Baltimore City. As a result, it is the Counties' responsibility to oversee and ensure that restoration plans and TMDL compliance conditions of their MS4 permits are in place for Loch Raven, Prettyboy, and Liberty watersheds.

94. It is widely recognized that Combined Sewer Overflows and Sanitary Sewer Overflows contribute to the problems and dangers to local water quality and public health. Unlike treatment plants however the state must consider a plan for both control and eventual elimination of the unhealthy and antiquated CSO system. Existing consent decrees and the process of reporting have had little effect in enforcing violations or structural upgrades. The state's WIP should not only acknowledge this, but as with municipal and industrial wastewater systems should include a list complete list of systems with timelines for review, repair work and eventual retirement.

Response: As discussed in response to comments 9 and 93, discharges from the City's sanitary sewer are governed by the City's Sanitary Sewer Consent Decree. Since 2002, Baltimore City has eliminated 60 engineered sewage overflow structures; completed 29 consent decree projects on schedule; and disconnected the Forest Park and Walbrook Combined Sewer Overflow systems. Since all Combined Sewer Overflow systems have been disconnected, we did not include a plan for the elimination of CSOs in the WIP. Baltimore City currently uses a separated sewer system. However, we agree that the state's WIP should acknowledge this problem. As such, we will pass this recommendation along to Maryland Department of Environment. For more information, please refer to Sections 2.2.2 and 2.7.2, respectively, of the WIP.

95. Plan presents various programs without sufficiently explaining how the programs are connected to the City's MS4 program

- a. The Plan cites various actions performed in furtherance of the City's responsibilities under its sanitary sewer consent decree, such as the elimination of 60 engineered sewer overflow structures and the construction of the Stony Run wet weather sewage pumping station. Plan at 25-26. However, the Plan fails to explain how these actions have improved surface water quality; how the baseline measurements for these putative improvements in water quality were calculated; and what are the impacts, if any, of these sanitary sewer improvements upon the MS4 infrastructure and MS4 discharges to the City's waterways. Further, the Plan fails to explain how the cited upgrades to the City's sanitary sewage operations and maintenance programming and the City's GIS and mapping database impact the MS4, surface water quality, and/or improve capacity for management of the MS4.

Response: The stated intent of the consent decree is to eliminate sanitary sewer overflows from the City's wastewater collection system. Sanitary sewer overflows may carry pollutants into the MS4 and the City's streams. The capital work performed under the consent decree and the operational improvements related to it have reduced and will continue to reduce the amount of wastewater that may enter the MS4 or surface waters as a result of sanitary sewer overflows. Reducing the amount of wastewater discharged from the sanitary sewer will improve water quality. Beyond this fairly basic link, the improvements resulting from the consent decree are too attenuated to the MS4 to include in the WIP.

- b. The Plan also fails to answer several basic questions about programs required by the Permit. E.g. Permit, IV.D.6.a and IV.F.1. The Plan indicates that the City's 3-1-1 Service Request program will address and resolve pollution "hotspots" but fails to describe, for example, what the criteria for identifying "hotspots" are and what are the procedures for addressing and resolving "hotspots". Plan at 33. Similarly, the Permit requires that the City collect surface water quality data, and the Plan indicates that the City will continue this data collection through its Stream Impact Sampling Program. Permit, IV.F.1; Plan at 33. However, the Plan fails to describe how the City has utilized its surface water quality data to "determine any capital investment programs or operational programs to implement". Plan at 33. It would seem that the assessment project described in this instance is a fundamental and integral component of the City's program to meet the Permit's 20% restoration requirement and applicable WLAs. If this is the case, the Plan should provide a more detailed description of the assessment's procedures and results.

Response: Hot spot investigations are listed under the IDDE program section. The City will use guidance documents previously developed by the Center for Watershed Development for Hotspot Investigations. Previous efforts for identifying locations were performed during NPDES permit coordination and the initiation of the FOG inspection program. Surface water quality data (obtained during ammonia screening and stream impact sampling) is listed in the IDDE program section of the WIP. Capital improvement projects were based on previous watershed assessments and feasible opportunities for project implementation.

- c. Finally, the Plan briefly describes various programs and initiatives that could provide positive water quality benefits and improved management of the MS4 but offers little to no detail indicating what impacts are anticipated. The Plan should provide greater detail about and explain how, for example, the City's Critical Area Management Program, Vacants to Value Program, and Waste to Wealth Program, will positively influence the City's MS4 compliance program and improve surface water quality.

Response: The programs identified in the comment, and others listed in the WIP, support the MS4's goals for restoration and water quality, and that the roles of these programs are implicit in the descriptions.

96. *Page 30, Section 2.8.6:* While the implications of climate change, in particular increased storm events (and severity of storms) and sea level rise, are mentioned in the Disaster Preparedness and Planning Project section, we would like to see additional language throughout the document that ensures both that the

design and planning for BMPs are taking relevant predictive models into account and that there is an intentional plan to update planning efforts as new data becomes available.

Response: Baltimore City is currently following the direction of Maryland Department of Environment on this subject. Current climate change models predict the worst case scenario and not historic results making it difficult to determine the best way to include this in the current designs. Since a standard policy has not been developed for this, it was not included in the report.

Section 2.5: TMDLs

97. The addition of a clear differentiation between the MS4 and the TMDL WIP requirements would be beneficial. The MS4 plan requires treatment or restoration of 20% of the City's impervious surface over five years. The TMDLs, on the other hand, require different levels of pollution reduction depending on the pollutant (E.coli, nitrogen, phosphorus, sediment, chlordane, PCBs, trash, etc.). (Reference for TMDL WIP - http://www.epa.gov/reg3wapd/pdf/pdf_chesbay/BayTMDLFactSheet8_26_13.pdf)
98. While we agree that it is reasonable to combine these plans in order to avoid redundancy and capture the impact that projects and programs have on multiple pollution sources, we are concerned that the draft document does not successfully combine the required elements of both the MS4 permit and the City's sixteen TMDLs. The MS4 plan requires treatment or restoration of 20% of the City's impervious surface over five years. The TMDLs, on the other hand, require different levels of pollution reduction depending on the pollutant (E.coli, nitrogen, phosphorus, sediment, chlordane, PCBs, trash, etc.). Therefore, to adequately combine these plans into a single document each project and program must be assessed on how it meets the requirements of both the MS4 permit and the TMDLs. This would mean a project or program would need to be assessed on how many acres of impervious surface it restores/treats and the estimated pollution load reduction for each TMDL. The current document does not include such an assessment.
99. *Appendix A, Notes:* Which TMDL will each project be meeting? By how much? What is the cumulative impact on each TMDL as total at the bottom?
100. The draft plan also lacks an explanation or demonstration of how the projects identified in Appendix A will lead to attainment of WLAs in EPA-approved TMDLs that are assigned to the City's MS4. We are all the more concerned about this omission because the estimated load reductions provided in the appendices do not appear to add up to the relevant WLAs, and in some cases seem to fall far short of the reductions needed to meet the WLAs. [To this end, the Plan should allocate "city-wide" pollutant load reduction estimates, provided for all planned programs and several projects, to individual watersheds. Plan, Appendices A-B.]
101. Notwithstanding these clear statements of the need for specific attention to meeting – or at least making progress – on each TMDL for each receiving water body, the Plan contains no analysis on how the proposed projects, programs, and partnerships will impact such TMDLs. Instead, the Plan adopts a "regional" approach to them, stating, "The local nutrients and sediment TMDLs are expected to be folded within the Bay TMDL." (Sec. 2.5.2). It is impossible to know whether this expectation is being met in the absence of both an analysis of the impacts the proposed "regional" actions will have on local TMDLs, including a projection on when their attainment is likely to be met, and – as called for in the permit – a robust program for monitoring, documentation, and periodic reporting of any progress being made toward their attainment. The Plan should provide an analysis of how it will make substantial progress on attaining the specific local TMDLs for water bodies in the City, as well as describing the means by which the City will monitor and report on such progress.
102. Page 22, Other TMDLs: How are outcomes being tracked separately under each?

Response (Comments 97 - 102): More detailed information as to how the City is meeting the load reductions for various TMDLs, including monitoring and tracking, has been included into the Final WIP.

103. The Waterfront Partnership of Baltimore recommends that the City either create separate plans for the TMDLs, as is done by other municipalities, or that the current plan be revised to include significantly more detailed information on each TMDL including:
- a. Background on each TMDL
 1. Why is the TMDL needed?
 2. Monitoring data
 3. Likely sources of pollution
 - ii. What are the pollution reduction targets of the TMDL?
 - iii. How is the pollution reduction target divided between point and non-point sources?
 - b. Best Management Practices for addressing each TMDL
 - i. How will each BMP impact the pollutant load reduction specified in each TMDL?
 - ii. What implementation actions does DPW plan to take to address each TMDL specified in the plan and what assumed pollution reductions will result?
 - iii. We recommend the plan include a series of charts showing the required pollution load reduction for each TMDL and how the planned projects and programs will meet those reductions.
 - iv. The projects and programs listed in the appendix have estimated pollution removal rates for nitrogen, phosphorus, and sediment, but no pollution removal rates are given for E.coli, chlordane, or PCBs. It is also not clear if the projects in the appendix would meet, fall short of, or surpass required pollution load reductions for neither the MS4 permit nor the TMDLs.

Response: Thank you for the comment. This outline was very helpful in revising the Final WIP.

104. *Page 22, Other TMDLS Section:* How do other MS4s and TMDLs relate to this WIP? Such as those for the Stadium, Port, Univ. of MD, SHA, Industrial MS4s.

Response: The properties cited each have their own NPDES Permit, which include their own baselines and requirements. MDE regulates these Permits directly. They are not included in the calculations for the City's MS4 permit or WIP.

105. *Page 20, last line:* Bacterial removal has been documented for ESD practices (runoff reduction and filtering practices) by Montgomery County DEP (see online "Guidance Document"). 75% reduction is generally accepted.

Response: Thank you for your comment.

106. The Plan does not meet the requirements of Section IV.E.2.b.i of the Permit because it lacks final dates and detailed schedules for achieving each WLA assigned to the City's MS4. The current Plan needs to be developed substantially in order to meet the above-stated requirements for detailed compliance schedules and final deadlines for achieving compliance with applicable TMDL WLAs. As proposed, the only dates for implementation appear in the "Milestones Schedule" in Table 8 and in Appendix A, which lists the City's proposed stormwater projects. Plan at 51-53. The Milestones Schedule states the fiscal year by which the City intends to meet general programmatic milestones, but it does not include a detailed schedule for implementing the programs described, as Section IV.E.2.b.i of the Permit requires. Appendix A notes the year in which the City plans to begin design and construction of the various projects identified, but without providing dates for completion and specifics regarding each project, it does not satisfy the Permit's requirement for a "detailed schedule." Permit, IV.E.2.b.i.

107. The MS4 permit has a five year timeline, but it will likely take the City more than five years to meet the required TMDL pollution reductions. The current document ends in 2019, but it is unclear what restoration goals and pollutant waste load allocations will be met by that time. The executive summary states that the City will restore 4,041 acres by 2019, thus meeting the restoration requirement for the MS4 permit. However, the plan makes no mention of when the pollutant reductions goals of the TMDLs will be met. What degree of progress is expected by the end of the permit period? How is progress defined – are there incremental reduction goals or benchmarks? If the five-year timeline of the MS4 permit is not adequate for meeting the pollution load reductions then the plan should project beyond the MS4 permit to a time when the TMDL reductions can be met.

Response (Comments 106 and 107): DPW recognizes that meeting the WLAs will extend beyond the period of this MS4 Permit. Schedules and final dates for meeting the various WLAs are included in the Final WIP.

108. The Plan fails to delineate any specific plans, projects, programs, or initiatives for achieving the assigned TMDL WLAs for PCB, chlordane, fecal coliform, and E.coli. Despite mentioning other pollutants, the Plan only identifies estimated pollutant removal for nitrogen, phosphorus, and sediment. . The IDDE and TMDL-focused sections of the Plan also fail to explain how the illicit discharge “monitoring program” will focus on meeting the applicable pollutant WLAs or achieve any specified reductions whatsoever.

Response: See Section 2.6.2.3: Local TMDLs for Bacteria in the Final WIP.

109. *Page 40, Section 4.2.2:* Specify schedule. It is recommended to clean them annually, at minimum, or when sediment reaches 1/3 of the way to the lower pipe's invert. Frequency for inspection and cleaning will depend on catch basin size and adjacent land uses. Removed debris and sludge should be disposed of properly, not back into storm drain system.

Response: Thank you for your comment. DPW is developing a schedule for proactive maintenance and will include this in subsequent MS4 Annual Reports.

110. Of particular interest is whether the proposed projects, programs, and partnerships in the Plan will achieve the nutrient and sediment load targets for 2017 assigned to the City by MDE as part of the Phase II WIP process. It is difficult for us to make this calculation with a high degree of confidence for a variety of reasons, including: 1) the MDE assigned targets are for the total loads discharged in 2017, not the load reductions for that year. Although it is possible to compare projected reductions in annual discharges in 2017 to annual discharges in the base year of 2010, it is not clear to us whether this is a proper way to compare the annual reductions in the Plan to the annual reductions needed to achieve the MDE target loads in 2017; 2) We used the annualized reductions for all projects shown for completion by 2017, but cannot know whether those projected annual reductions will be in place for a full year or will only be partially realized; and 3) we accepted the annual reductions for programs and partnerships, even though it is not clear whether those will be fully in effect by 2017.

Response: See Section 2.6.1: Chesapeake Bay Total Maximum Daily Load (TMDL) in the Final WIP.

111. [The WIP] Does not include proof supporting several TMDL MS4 Baseline Load estimates presented. The Plan presents “MS4 Baseline Load” figures for the Back River and Baltimore Harbor TMDLs for Nitrogen and Phosphorus and the Gwynns Falls, Jones Falls, and Herring Run TMDLs for Fecal Bacteria that are not presented in the corresponding TMDL main reports or supplementary point source technical memoranda.

Response: DPW is unclear as to what the commenter means by “Does not include proof...”. All Baseline Loads and WLAs are derived from the various TMDLs cited in the WIP.

112. *Page 20:* TMDLs – will the new trash TMDL need to be incorporated into the plan?

Response: The Baltimore Harbor Trash TMDL was approved January 5, 2015. DPW is developing a Trash TMDL WIP that we will be submitted to MDE by January 5, 2016. See, MS4 Permit, Part IV (D)(4)(d). EPA

approved the Trash TMDL in January 5, 2015.

<http://www.mde.state.md.us/programs/Water/TMDL/DataCenter/Pages/index.aspx>.

113. The Patapsco River Trash TMDL was not incorporated into this version of the plan but many of the programs (street sweeping, inlet screen, etc.) that will address regulations related to debris reduction are mentioned here. It will be important to more fully integrate the planning, implementation projects/programs and measures of success as both efforts are more fully developed.

Response: See response to comment 111.

114. [The WIP] does not indicate how the City has developed a public strategy to reduce and/or has analyzed opportunities to improve control of trash and litter pollution. The Plan neither presents a cohesive inventory, evaluation, or efficiency analysis of all of the City's trash and litter reduction practices, programs, and efforts, nor does the Plan appropriately cite this required analysis in sections germane to the topic of trash and litter and MS4 management programming. Similarly, the Plan includes some limited discussion about public education, indicating that the City "will develop and provide educational material and training in support of the MS4 WIP and the Department's stormwater management efforts, and assist in the promotion and dissemination of this information."

Response: This is included in Part IV.D.4, "Trash and Litter" of the MS4 Permit that was submitted to MDE. Also, Baltimore City will be developing a separate WIP for the Baltimore Harbor Trash TMDL.

115. Under 'Programs' I do not see municipal trash cans listed. Although it is only a pilot program at this point, there is potential for expanding it. Perhaps it should be at least mentioned or listed under 4.2.6 "Proposed Methods for Load Reductions." It's a very popular program and has resulted in decreases in dirty alley complaints.

Response: Municipal trash cans are not an accepted practice for meeting the 20% restoration requirement. However, they are being reviewed for potential inclusion in the Trash TMDL WIP.

116. *Page 20, Section 2.5.2:* Please list what progress has been made in these TMDLs and in the consent decree.

Response: These are two separate issues. See Section 2.6.2: Local Baltimore City TMDLs in the Final WIP regarding TMDLs. Refer to the response to Comment # 95 regarding the Consent Decree.

Section 3.1 WIP DEVELOPMENT: MS4 PUBLIC MEETINGS

117. *Page 32:* Only 74 people attended? I would have expected more. I guess you get the same old faces.

Response: Thank you for your comment.

118. A point of clarification - on page 32 under "MS4 Public Meetings" it states "A total of 74 people attended the meetings." Is that a sum of how many people were at each meeting or is the total number of *individuals* who attended all the meetings? I ask because a lot of people attended multiple meetings, so are they being counted for each meeting they went to?

Response: This has been clarified in the Final WIP.

119. *Page 46, Section 4.6.1, Annual Public Progress Meeting:* Please specify how the information will be disseminated for those not attending the meeting.

Response: This has been incorporated into the Final WIP.

120. *Page 32, MS4 Public Meetings:* Overall, the outreach for DPW has not been effective at meeting this concerned citizen. I receive the mayor's newsletter, and feel like I am fairly plugged into the city stormwater initiatives. Yet I did not hear about the public meetings, nor did I receive info that the WIP was released until January 25th, 5 days before comments were due. I did get an email from a SWAC member, alerting me to the WIP.

Response: DPW is sorry that the commenter did not receive information regarding the public meetings or WIP public review period, and will make sure that they are added to DPW's stakeholder list.

121. It is disappointing that only 74 people attended the MS4 public meetings, given that every homeowner and business owner plays a role in helping to improve the City's water quality. Please consider starting an email list through the cleanwaterbaltimore.org website or directing people to the appropriate City email subscription so that people are better informed about upcoming meetings and website updates. People will be more likely to check the website if they are informed that something has been updated.

Response: Thank you for your comments. DPW will take these under consideration for future communications and public outreach.

MONITORING & EVALUATION

122. *Page 45, Section 4.6:* Note a plan for city agency training in stormwater facility types, maintenance, MS4 goals and mandates, myths and FAQs.

Response: Thank you for your comment. DPW will take this under consideration.

123. [The WIP] fails to present a plan for monitoring progress towards meeting WLAs. The Permit plainly requires that the City present a plan to “[e]valuate and track the implementation of restoration plans through monitoring or modeling to document progress toward meeting established benchmarks, deadlines, and stormwater WLAs[.]” Permit, § IV.E.2.b.iii. The Plan does not present, nor merely indicate, whether a monitoring or modeling program has been, or will be, implemented in order to document progress towards meeting its applicable WLAs, and corresponding benchmarks and deadlines. For example, the Plan does not present a plan to monitor or model the pollutant load reductions estimates presented for individual project and programs in Appendices A through D.

Response: DPW uses the “Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated” guidance document (Aug 2014) in documenting and tracks progress toward meeting the stormwater WLAs. See sections 2.6.2: Local Baltimore City TMDLs and 5.1: Tracking Mechanisms in the Final WIP.

124. [The WIP] does not provide information sufficient to indicate that the planned projects can be successfully implemented. The successful implementation of the planned and contingency projects, as presented in the Plan, is contingent upon robust assessment involving field measurements and utility review. However, the Plan does not present any detail indicating that field measurements and utility reviews have been performed for planned projects, partnerships projects, and contingency projects. Plan, Appendices A, C, and D. As a result, the Plan does not sufficiently describe the City's process for selecting projects for implementation without fully explicating the process beginning with, for example, initial identification of prospective projects and programs from concepts presented in watershed action plans through and including final selection of projects and programs for design and implementation.

Response: DPW agrees that field measurements and utility reviews are critical steps to the success of the Plan's implementation. However, one year of planning is not sufficient time to conduct a design process. DPW will conduct field measurements and utility reviews during the Design Process in the following months.

125. If we are to rely on the current practice of MS4 County and municipal permit system to affect this non-point sector, then it is expected that that system must establish high bench marks, identify long-term solutions and remediation methods and anticipate the control future loads from development and growth. It is important then to recognize all existing projects while categorizing their value to reducing loads during the period covered by the WIP, but also into the future. To do this the WIP should identify the following things issues; projects and areas within state sub-watersheds and territory and acreage of developed land that will be retrofitted and or preserved.

Response: Thank you for the comment. DPW believes that this comment is more appropriately addressed by MDE – the comment has been forwarded.

126. [The WIP] does not explain how the City’s Illicit Discharge Detection and Elimination Program prohibits illicit discharges. The Plan includes limited discussion of the City’s strategy for eliminating illicit discharges, but there is no demonstration of how the Plan will achieve illicit discharge eliminations.

- a. The Plan lacks detail or a proposal for specific projects that the City will implement to prohibit illicit discharges. Instead, the Plan only notes that the City has some form of alternative illicit discharge detection and elimination (IDDE) program that involves ammonia screening to “identify potential pollutants with the intent to initiate pollution source tracking.” The City must submit a detailed plan that shows how the City intends to eliminate them, and why the City believes its plan will be effective. Finally, the Plan should also discuss how the City plans to take “reasonable steps” to ensure that illicit discharges are minimized or prevented by other DPW programs and City agencies. Permit, §VII.A-B.

Response: Additional details related to both the detection and elimination program have been added to the revised WIP. The primary field screening methodology is detailed in the 2014 MS4 Annual Report.

- b. The City states that the “[ammonia screening] program is alternative to the prescribed sampling listed in the City’s NPDES MS4 permit” for IDDE. Plan at 40, n. 29. Under the Permit, the City may only use an alternative IDDE program in place of the one stated in the permit, if the alternative program was submitted to the MDE for approval by December 27, 2014, and if it “methodologically identifies, investigates, and eliminates illegal connections to the City’s storm drain system.” Permit, § IV.D.3.a. The City has not provided any evidence that it has satisfied those requirements. In any event, since the City relies on the alternative IDDE program to meet the Permit and Clean Water Act requirement to prohibit illicit discharges, the program should be described in detail in this plan. As with the City’s detailed plans for meeting WLAs, the public must be allowed to review and comment on any alternative IDDE program.

Response: The City has been the same alternative analysis (Ammonia Screening) as reported since 1998, with MDE commending the City on its approach. A summary document of the Ammonia Screening program is available on the Cleanwater Baltimore website.

- c. To the extent the program is in fact tied to the claimed reductions, the Permit requires the City to detail the bases for its estimates, provide a detailed explanation of the specific project to be implemented (stating more than simply “asset management inventory” or “education,” for example, and explain exactly how and when the program will lead to compliance with particular WLAs. Permit, § IV.E.2.b.i.; Plan, Appendix B.

Response: DPW uses the “Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated” guidance document (Aug 2014) in documenting and tracks progress toward meeting the stormwater WLAs.

127. [The WIP] relies significantly upon stream restoration practices without providing sufficient detail and technical justification. The City plans to rely heavily on stream restoration projects to meet the 20% restoration with phosphorus and sediment reductions presented in the Plan. We are concerned with such a heavy reliance on stream restoration projects without further detail and technical justification. Without complementary watershed-scale BMPs and green infrastructure installations that prevent excess nutrients and stormwater volume from entering into streams and waterways in the first place, the City is unlikely to meet its projected pollutant reductions for applicable TMDL WLAs through stream restoration projects alone.

Response: DPW uses the “Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated” guidance document (Aug 2014) for determining nutrient and sediment load removal. Additional,

see section 4.1.2: ESD Practices for a description of targeting neighborhoods for complementary BMPs and green infrastructure.

Section 4: PROJECTS, PROGRAMS, AND PARTNERSHIPS

128. [The WIP] relies significantly upon street sweeping practices without providing sufficient detail and technical justification. The City plans to rely heavily on street sweeping programming to meet the 20% restoration and nutrient and sediment reductions presented in the Plan. Plan at 39 and Appendix B. We are concerned with such a heavy reliance on street sweeping practices without further detail and technical justification.

- a. The Plan claims that a prospective decrease in litter and trash loading to City streets and alleys will “be monitored and attributed to education and outreach programs” but does not provide any technical justification for excluding other putative confounding factors, such as potential population fluctuations, the seasonality of outdoor traffic, and hopefully, a City-wide ban on single-use plastic bags. Plan at 39. The Plan must also provide greater detail and explanation for the litter reduction “outreach and education programs” cited, such as the program design, whether and how it will prioritize target neighborhoods, and whether and how behavior change will be monitored and assessed for potential credit.

Response: See response to Comment 112.

129. The Plan lacks sufficient detail and technical justification regarding the proposed ESD practices.

- a. The Plan should explain and include information about how ESD projects will be measured and verified, especially with regards to collection of data sufficient to evaluate whether the ESD projects will meet the requisite 1.0” water quality treatment volume.

Response: All data sufficient to evaluate the 1.0” water quality treatment volume is reviewed as part of the formal stormwater management plan review process. ESD facilities are also inspected and verified as part of the as-built process. Finally, maintenance inspections occur every 3 years after the facility is constructed.

- b. Furthermore, the Plan states that “other [ESD] projects will be identified during the Permit period” without further explaining how these identified projects will be prioritized for design and implementation during the permit period.

Response: Projects will be prioritized based on the factors outlined in Section 4.5 of the WIP.

130. *Page 37, 4th line:* Why was a higher EIA restoration adopted rather than the MDE rates? The Expert Panel recommendations and MDE rates are well documented, and should be utilized for the WIP.

131. Has DPW considered whether the amount of impervious surface credited as restored for stream restoration projects in Baltimore’s urban setting will likely be less than the standard reductions provided in MDE guidance documents.

132. [The WIP] indicates that credit will be taken for alternative best management practices without providing any technical justification. The Plan states that “[t]he estimated efficiency in Appendix A [Projects] assumes a holistic approach, including invasive species removal and habitat restoration. Therefore, the equivalent impervious area restoration was estimated higher than listed in MDE’s guidance document.” Plan at 37. While we encourage the City to undertake meaningful invasive species management and habitat restoration projects, the additional crediting above what is permitted in MDE guidance is completely inappropriate without further providing detail about the design and implementation of the “alternative BMPs,” monitoring or modeling procedures to verify their effectiveness, and reference to other guidance or scientific research supporting the additional impervious area restoration or pollutant reduction crediting. Again, where the City relies on certain projects like this, it must, under the Permit, provide detail as to exactly how and when the projects will yield compliance with WLAs. Permit, IV.E.2.b.

Response (Comments 130 - 132): MDE’s comment letter to DPW regarding the MS4 WIP states, “As discussed in the Guidance, MDE is willing to consider different restoration credits for alternative practices if justified by supporting information...”. Also see section 4.1.3.1: Stream Restoration. As to the accounting for WLAs, see response to Comments 97-102.

133. *Page 39, 10th line:* 6-months into the street sweeping program, and only 1,600 tons reported? This falls well shy of the rates of sediment removal listed in the appendices.

Response: The initial statement should have read, “... *an additional* 1,600 tons...”. Additionally, based on comments from MDE, the accounting for street sweeping in the City’s baseline changed and restoration credit changed, “An updated baseline that does not include areas treated by alternative BMPs that are reported as an annual credit (eg., street sweeping/inlet cleaning). These BMPs may not be deducted from the baseline.” MDE 2015.

134. *Page 40, Section 4.2.3:* Define "illicit discharge". The MS4 plan will be critical in defining exactly what is considered to be illicit discharge, and will set the parameters for any subsequent codes, policies, or procedures. "An illicit discharge is defined as any discharge to the municipal separate storm sewer system that is not composed entirely of storm water, except for discharges allowed under a NPDES permit or waters used for firefighting operations." –EPA. Investigate records and document locations where for decades DPW maintenance regularly interconnected stormwater and sewer lines to provide overflow relief and prevent basement flooding through sewer or storm back up.

Response: Illicit discharge is defined in Baltimore City Code, Article 25, Section 2. Furthermore, the Chesapeake Bay Program expert panel has defined eight specific discharges and estimated nutrient reductions related to IDDE. DPW does maintain a list of structured overflows where an connection between a public sanitary system and storm system were necessary for immediate protection of public safety. DPW continues to abate these locations.

135. *Page 41, Section 4.2.4:* Specify what the inspectors will be hired to inspect. For example, inspecting sediment and erosion controls required during construction, inspecting sediment and erosion coming from un-stabilized sites, and inspecting installed BMPs for functionality.

Response: The roles and responsibilities of inspectors have been clarified in the final WIP

136. *Page 43, Table 6:* Why are BMP retrofits only suitable in Back River? Also, aren’t there opportunities for micro-practices city-wide in the right-of-way and also at institutional sites throughout the city? Why are micro-practices only listed under Jones Falls and Direct Harbor?

Response: The chart is meant to illustrate where opportunities to install practices are greatest, and recognizes that it does not exclude any practices in a watershed. Micro-practices have been added to the Back River watershed.

137. The current administration has already shown that forest preservation is a priority and must continue to identify forest areas that will not be developed. We suggest a program must be created to encourage and enforce reforestation as well as quantify both urban environmental site design and reforestation as reduces nutrient and sediment loads. In addition, identify areas providing the greatest benefit to local ecosystems as already suggested, but require there be no net loss in these areas as well. A program and funding source, in addition to Program Open Space, should be explored to provide for the complete tracking and implementation to a successful result of no net loss forest. Finally, if we are to turn the ever increasing tide of nutrient and sediment runoff from urban areas, we are going to have to do more than stormwater retrofit and require new environmental site design for new and re-development. State policies will need to be put into place to require a true assessment and program for significantly increasing urban tree canopy.

Response: Thank you for your comment. We will forward this comment to Maryland Department of Environment.

138. Similar to the effort to have DPW establish a team to maintain city-owned Stormwater BMPs, regardless of which agency installed them or is responsible for the facility, it would be beneficial to also develop a consistent framework and set of guidelines for planning, design, and installation of the BMPs throughout all city agencies.

Response: Thank you for your comment. DPW will take this under consideration as we continue to coordinate with other city agencies.

139. We must recognize that as we do more based on reductions acquired through the so-called “low-hanging fruit” there will be less of it. It is important then that the WIP model incorporate a full suite of impacts, not just nutrients and that it recognizes that all sectors are and will be held responsible. This cannot be done without establishing proper timelines and methods for quantifying results, as well as addressing the plans funding elements.

Response: Thank you for your comment.

140. [The WIP] Lacks sufficient detail and technical justification regarding the proposed afforestation practices

- a. The Plan should explain and include information about how impervious cover removal and afforestation projects, including street trees, will be measured and verified, especially with regards to collection of data sufficient to evaluate whether the projects will meet BMP performance standards.

Response: Impervious cover removal will be tracked based on drawings approved by DPW’s Plans Review section and using MDE’s approved TN / TP/ TSS loading calculations. Afforestation will be tracked using data provided by TreeBaltimore.

- b. Furthermore, the Plan states that “[TreeBaltimore-identified] priority neighborhoods will also be considered as locations for various BMPs in order complement the planting of trees” without further identifying the neighborhoods prioritized for implementation in the Plan, describing the planned forestry practices and projects, and clarifying whether the prospective complementary BMP projects are necessary for meeting the 20% impervious cover and applicable WLA restoration requirements of the Permit.

Response: DPW was a partner in developing the Urban Tree Canopy map, which is being used by TreeBaltimore to prioritize and target neighborhoods for tree planting. DPW will continue to work with TreeBaltimore to direct future priority areas in alignment with other BMP projects.

- c. Finally, the Plan merely indicates that “the plantings will also compensate for loss of tree canopy due to the Emerald Ash Borer infestation” but fails to provide any detail or insight into the extent or impact of the infestation; whether the expected loss of tree canopy will impact the City’s baseline impervious area coverage estimate; and whether the canopy loss will be sufficiently offset by planned afforestation projects.

Response: To date the impact of the Emerald Ash Borer is not known. DPW will continue to work with TreeBaltimore and the City’s Forestry Division as part of the adaptive management process.

141. Does DPW have a methodology for prioritizing and sequencing stream restorations so that the benefits of such restorations are not undermined due to a failure to undertake other appropriate BMPs in the stream’s subwatershed or a failure to consider the impact of upstream conditions and activities?

Response: DPW will be coordinating stream restoration projects with BMP opportunities within the stream’s subwatershed.

142. While the WIP indicates that prioritization of projects will consider the potential for the project to address environmental justice, specifics about how priorities will be determined were not spelled out. In an effort to protect those communities that bear a disproportionate burden from industrial use and polluted runoff, we encourage the Department to explore more stringent stormwater management requirements for

permitted construction in over-burdened areas. We encourage you to seek expertise from groups such as the Maryland Environmental Health Network who can assist you in understanding zones of the City where residents are over-burdened with pollution where reductions of polluted runoff should be emphasized. We feel that projects should be funded in our most vulnerable neighborhoods to at least the same extent – if not greater – than the rest of the City.

Response: Thank you for your comment. DPW will take this into consideration.

143. Section 4.5: Cost effectiveness of practice compared to load reduction capability should be the primary factor in determining priority and benefits of identified projects.

Response: Thank you. DPW will take this into consideration.

144. *Page 18, Section 2.4:* Section 2.4 lists a number of non-governmental organizations. However, there is no explanation as to why they are listed and what roles the City expects them to play in the implementation of the Plan and an outreach strategy. It would be helpful for the Plan to explain who the responsible parties will be for carrying out such an outreach strategy and the extent to which funding will be made available for its implementation.

Response: Thank you for the comment. DPW will take your comment into consideration.

145. *Page 18, First sentence:* Add how DPW will coordinate with orgs/agencies who are implementing projects that can be counted for credits

Response: The Department of Public Works is currently coordinating with organizations and agencies on projects that can be counted for credits, including providing pre- concept meetings, plans review, and information on what documentation DPW needs in order to count a project towards the MS4 restoration goal.

146. *Page 34, Section 4.1.:* Include details of how projects under 5000sf/100cy will be accounted for, including street tree planting and pit expansion.

Response: DPW will work with partner organizations to develop a tracking method. See section 4.3: Partnerships

147. *Page 50, STORM:* This sounds alot like what Blue Water Baltimore already provides. Has the city offered support for them, rather than reinvent the wheel?

Response: A key component of the STORM Centers (now called GROW Center) is being a repository for mulch, bricks, crushed concrete, wood products, and other salvaged building materials that would be available for purchase by city residents and non-profits to use in greening projects such as installing rain gardens, creating community gardens, and building permeable paths and walkways. This will be in coordination with the Waste to Wealth effort that is currently being studied by the Office of Sustainability.

148. *Page 51, "Modify review process to facilitate restoration practices..."* Could the city offer a technical service provider service to NGOs, community groups, etc. under their on-call consultant group? Waive permit fees for restoration practices? There is little incentive for private partners to implement restoration projects currently.

Response: DPW will continue to evaluate incentive programs for non-profit and private partners to implement restoration projects.

149. *Page 54, anticipated staffing:* Public-Private-Partnerships (P3) and similar mechanisms for implementation should be included in the city's WIP. The private sector has greater resources for design and construction, and could deliver a faster turnaround.

Response: Thank you for your comment. DPW will take this under consideration.

150. *Page 56, Section 7.2:* Baltimore City’s WIP plan should strive for transparency and good governance. It states that it is striving to create equity in payment system, yet only allows single-family properties to earn credits from community-based activities or clean-ups. Many Baltimore City residents do not live in single family homes, thus carving them out of potential applicants who can receive reductions from their stormwater utility fee. Additionally, DPW should provide a list of approved BMPs that residents can receive reductions from their bill by participating in.

Response: All Baltimore City residents are eligible for participation credit regardless of their living situation. Those unable to install a stormwater BMP have the option of receiving credits by volunteering in stormwater participation events. A description of approved BMPs can be found in DPW’s Maryland Stormwater Fee Reductions Baltimore City Customer Guidance Document: Single Family Property.

151. Consider expanded opportunities for workforce development by increased contracting with local NGOs and business for education/outreach efforts, inspection and maintenance programs, development of standards and specifications, programmatic reviews, design opportunities, etc.

Response: Thank you for your comment. DPW will take this under consideration.

152. Could also provide matching funds to development projects that are interested in installing BMPs that qualify for MS4.

Response: Thank you for your comment. DPW will take this under consideration.

153. The WIP does not appear to “count” or value the impact of these micro-practices on congregational land. This seems to be a missed opportunity to engage the faith community as a collaborative partner.

Response: These practices are taken into account in Appendix C under “SW Fee Credit Program”.

154. *Chapter 2:* No analysis was performed of the capacity of the private sector to contribute to city stormwater improvements. The A/E sector will be very important for design and implementation. Pre-approved contractors are also necessary for construction and implementation. Does the city have enough capacity in the private sector to complete the initiatives outlined in the WIP? In particular, I do not think the city has pre-approval process for contractors for the installation of ESD materials and practices.

Response: This issue impacts Baltimore as well as the other MS4 jurisdictions. DPW believes that the local A/E sector will be able to meet the demand and will track this as part of its contracting process.

Section 4.6: PUBLIC OUTREACH

155. Plan lacks a cohesive strategy to reach, educate, and motivate the public to encourage good behavior and community buy-in. Non-specific outreach activities are set forth in various places in the Plan, yet there is no detailed campaign strategy that is so essential to the success of the Plan.

Response: The City will create a separate Education and Outreach Plan that thoroughly details a campaign strategy. Please be sure to submit your comments for the Education and Outreach Plan.

156. *Page 34, Section 4.1:* Include details about how projects list will grow with outreach and identification of projects by partners.

Response: Appendix D of the WIP is a list of contingency projects. These projects are those that have been identified as potential for implementation, but still need additional evaluation. Any projects that are recommended by communities and partners that are not currently listed in Appendix A will be added to the contingency list.

157. Section 4.6: What new outreach programs are being proposed by DPW?

Response: An initial list of outreach programs are listed in Section 4.6.3. DPW will also be working with the Stormwater Advisory Committee to identify other potential outreach programs and activities.

158. Resources for communities are barely addressed. Throughout the planning workshops, DPW representatives assured community members revenues for grant funding, tool banks, and technical expertise for communities to complete rain gardens, storm drain stenciling, installing rain barrels, yet when Clean Water Action suggested those resources in August 2014, when DPW was searching for community input on revenue allocations through stakeholder meetings, Clean Water Action was told that they would not be appropriate sources for MS4 revenues, yet the draft permit clearly indicates this program in section 4.3.2 *Voluntary Practices & Stormwater Management Credit Fee Program*

Response: DPW did not assure community members that there would be revenues for these purposes during the MS4 public meetings. Further, while Clean Water Action provided a list of potential projects for inclusion in the WIP, most of the projects were located on private land, while others were for community gardens or trash clean up. Clean Water Action was told that these were not appropriate for stormwater fee revenue.

159. *Page 40, Section 4.2.3:* City could include plan to launch a public info campaign followed by enforcement to get people to connect gray water discharge to sanitary system, and educate consumers to buy biodegradable soap for car and sidewalk washing.

Response: DPW will consider the environmental benefits provided by biodegradable soap, and if appropriate, include this suggestion in the outreach and education program. However, gray water discharge is already connected to the MS4, as mandated by Baltimore City Code, Article 25, Section 2-3, which generally prohibits the discharge of grey water into the sanitary sewer:

(a) Prohibited discharges. No person shall discharge or cause to be discharged any stormwater, ground water, roof run-off, subsurface drainage, uncontaminated cooling water, or unpolluted water in any sanitary sewer.

(b) Exceptions.

(1) Stormwater runoff from limited areas which is likely to be polluted at times may be admitted to the system by a permit from the Director of Public Works.

(2) Where storm sewers or drains are not or cannot be made available, limited quantities of approved water from installations such as swimming pools may be admitted to the sanitary sewers by a permit from the Director of Public Works.

160. A full communication strategy should be developed that includes regular updates on opportunities for public engagement, outreach efforts, updates on project deliverables and outcomes, and opportunities to celebrate success.

Response: Thank you for your comment. DPW will be working with Stormwater Advisory Committee to identify other potential outreach programs and activities.

161. *Section 4.2.5:* In order to expand and improve outreach, consider expanded collaboration with existing city NGOs. Many of these NGOs have well established community contacts and have proven very effective at resident education and stewardship.

Response: Thank you for your comments. As outreach for the public meetings during the summer of 2014, as well as for the public comment period, DPW provided information to many of our NGO partners and asked that they assist in spreading the word through their established channels. DPW will continue to work with our partners, and the newly formed Stormwater Advisory Committee, to expand and improve our outreach efforts.

Section 5: MILESTONE SCHEDULE

162. A new column tracking IA treated could be very helpful.

Response: A column tracking IA treating is included in the Appendices for the Projects, Programs, and Partnerships.

163. It would be helpful to know if the City still plans to report to MDE on its progress on the previous 2-year milestones.

Response: As required by MDE, Baltimore City will report the progress on its Two-Year Milestones (2014-2015), as well as develop our expected Two-Year Milestone Plan for 2016-2017.

164. It would be very helpful to those following the City's progress on stormwater management for the Plan to clarify explicitly how it is intended to relate to the Phase II WIP submitted to MDE by the City in July, 2012, as well as the 2014-2015 Milestones submitted pursuant to the Phase II WIP. Does it supersede the earlier Phase II WIP and Milestones? Are the two completely independent? Or, are they somehow to be read together?

Response: All of the Two-Year Milestones are now incorporated into the WIP Milestones.

165. Specifics are lacking within the *Milestone Schedules* section of the WIP. For example, FY15 is noted that DPW will begin working in four neighborhoods on stormwater planning, yet does not specify which four. Similarly, the plan outlines tree plantings but does not specify locations, as well as locations for ESD practices. This lack of specificity is inherently lacking throughout the rest of the FY Milestone Schedule and much of the plan.

Response: The intentional lack of specificity is due to our "plan to adapt". Sound implementation strategies require ongoing assessment and effective adaptation to respond to changing conditions, new technologies and lessons learned. Adaptive management requires monitoring of a variety of measures that can be used to determine whether progress is being made towards meeting the MS4 and TMDL water quality objectives. Please review Section 6: Adaptive Management of the WIP on page 55.

166. In the program milestones, please insert a milestone for the study to quantify the nutrient and sediment removal efficiencies of forest patch conservation and enhancement from Section 4.2.6.

Response: While DPW cannot commit to such a study at this time, it will look into pursuing this with the state.

167. Also, no mention of Swimmable, Fishable Harbor goals. This is a major initiative with milestones that should be part of the WIP.

Response: While the Department of Public Works is a partner in the Healthy Harbor Initiative, the Milestones listed in the WIP are specific to meeting the requirements of the MS4 permit.

Section 5.1: TRACKING PROGRESS

168. *Page 53, Section 5.1:* Include info on how the City will track and report on MS4 WIP progress to partner organizations and the public.

Response: Thank you for your comment. DPW will make available the MS4 Annual Reports on cleanwaterbaltimore.org. DPW will also work with the Stormwater Advisory Committee to review the reports and to assist in outreach to the public.

169. [The WIP] does not include a strategy for tracking and evaluating progress or for undertaking adaptive management. The restoration plans should be revised to explain how tracking and evaluation and adaptive management are going to be accomplished, and should include the basic tools needed to track and evaluate progress. At a minimum this would include detailed schedules and monitoring plan, including quality assurance/quality control procedures, for tracking progress toward meeting WLAs. It should also provide a clear picture of how the City would modify its plan to get back on track, if tracking and evaluation demonstrate that progress is not being made as expected.

Response: See sections 5.1: Tracking Mechanisms and Section 6.0: Adaptive Management in the Final WIP.

170. The Plan provides insufficient explanation and detail about how the City will track and verify project and program crediting.
- a. The Plan should present cohesively and describe fully the City’s field verification, monitoring, quality assurance/quality control, and data management program and procedures for crediting of projects, programs, and partnerships. Furthermore, this presentation should also include justification for and explanation of procedures to modify the City’s baseline and crediting system over the course of the permit period. For example, the Plan states that NPDES permittees located in the City jurisdiction that are “not able to treat their 20% restoration on-site and require off-site mitigation are added to the City’s baseline.” Plan at 25. However, the Plan does not further describe how the City will adapt to both track and undertake additional required mitigation and restoration implementation, which raises significant questions about the capacity of the City’s MS4 compliance program
 - b. To this end, the Plan should indicate and explain fully whether the City will rely upon the contingency projects presented in the Plan in order to meet current-known and perspective-unknown required mitigation treatment.

Response: Contingency projects are included in case identified projects are to be found unfeasible or not treating the amount projected, and will be considered as part of the adaptive management process.

171. As stated in the plan, it is important to note that there will be BMPs installed by organizations and agencies outside of the purview of Baltimore City government. In these cases, it will be essential to develop a process to both measure and report measured benefits so that applicable projects are credited for the pollution reduction measures they deliver. To be in compliance with reporting requirements, a mechanism should also be developed to address the “As Built Gap” that currently exists.

Response: DPW appreciates the work that NGOs are doing to identify and implement stormwater practices. It is important to understand that those projects that go through the proper review are reported; those that do not go through this process are not reported. Many projects by NGO partners are not captured because they do not go through the proper process and DPW does not have documentation on these projects. Those projects that go through the proper review process are tracked by the Plans Review Section. DPW is looking at the documentation needed for small restoration projects (under 5,000 SF), as well as the “As Built Gap”.

172. The plan stipulates meeting regulatory reporting requirements such as EPA’s milestone schedule and permit-related annual reporting deadlines. We would strongly suggest the addition of a real time and publicly accessible “dashboard” of project/program gains related to initiatives developed through this plan. Beyond measured environmental benefits, this “dashboard” should also include metrics related to returns on investment. This should include all data related to the TMDLs and permit requirements as well as relevant data associated with supporting initiatives (tree plantings, non-traditional BMPs, etc.) in order to provide a comprehensive view of the overall efforts to improve our city water systems. Outcome measures are a key part of long term efficiency and success.

Response: Thank you for your comment. DPW will take this under consideration as it develops best methods for communicating our progress.

173. Page 51, Table 8: Graph of where we are now, where we need to be, and specifics of how we will get there (which projects will be implemented each year with reduction assoc). Indicate how much reduction, if any, each milestone will contribute to. Also list estimated portion of the budget to be allocated toward that activity, and any anticipated match from partner groups. Which TMDL will each milestone meet?

Response: The Milestone Schedule is a list of supporting actions for improving project implementation, programs, and partnerships. The activities in the Milestone Schedule cannot be quantified regarding the MS4 restoration or TMDL reductions.

174. Plan takes credit for restoration practices that are currently not functional. The Plan indicates that

baseline restoration credits have been claimed for several extant physical practices and programs. Regardless, the Plan should provide sufficient detail and analysis to determine whether the Gwynns Run project and other similarly-situated practices (e.g. Brooklyn Park “volume control” facility, Lower Stony Run stream restoration, etc.) have been recently monitored and evaluated to determine whether the practices are meeting current performance standards for BMP crediting. Id. at 24.

Response: DPW disagrees with the broad statement that it takes baseline restoration credits for practices that are currently not functional. DPW does recognize that the Lower Stony Run stream restoration project is in need of repair and is developing a contract for this.

175. [The WIP] relies significantly upon stream restoration practices without providing sufficient detail and technical justification. The City plans to rely heavily on stream restoration projects to meet the 20% restoration with phosphorus and sediment reductions presented in the Plan.

- a. Plan makes no mention of what the goals of these stream restoration projects will be
- b. Plan fails to state or describe the indicators and metrics for measuring success of the stream restoration projects

Response: DPW believes that: 1) item a. is addressed in the WIP, and 2) DPW does not understand item b.

176. The Plan references a “community planning process” for ESD project programming, but fails to provide any detail or insight into the objectives and approach for this project, including anticipated outcomes and project outputs.

Response: The community planning process is still in development.

Section 7: FINANCIAL STRATEGY

177. *Page 42, Development requirements:* No estimate to IA treated are reported. Typically, a fee in lieu has been the norm for developers. What type of revenue is generated by the fee in lieu and how has this been spent? Will there be a greater incentive for developers to do stormwater management in the future?

Response: Baltimore City only allows a fee in lieu for stormwater management after all other options have been exhausted. For the 2014 fiscal year, only 10% of the approved projects were approved for a fee in lieu.

178. *Page 53, Section 5.2:* How much revenue is generated by inspection fines? Explain if this will be utilized to fund staff.

Response: In addition to the stormwater fees, plans review fees and penalty fines provide about \$300,000 annual revenue to the Stormwater Utility fund. Inspection fines revenue is not specifically earmarked for funding inspectors. See section 7.1: Stormwater Utility in the Final WIP.

179. *Page 56, Section 7:* Needs considerable elaboration and clarification, so that there is a better understanding of the total costs and available funding under the Plan. It is particularly important that the City provide its best current estimate of the amount of revenue that will be generated annually by the Stormwater Utility and how that revenue will be expended: what proportion does the City expect will be spent on staffing and management responsibilities, how much spent directly on projects and programs, and how much will be used to service bonds? The City should also try to supply its best current estimates on how much funding will likely be generated by the other sources of revenue identified in this section.

Response: The MS4 WIP is a planning document with a short financial section. A more thorough Financial Review document will be released at a later time.

180. *Page 57, Section 7.3.1:* Could provide matching funds for maintenance, as-built recording, and implementation beyond initial grant scope.

Response: See Comment 181.d.

181. [The WIP] lacks detailed costs estimates for individual project and program implementation. The Permit requires that the Plan “provide detailed costs estimates for individual projects, programs, controls and plan implementation [.]” Permit, §IV.E.2.b.ii.

- a. However, the Plan only provides total cost estimates for individual projects and programs and plan implementation. We strongly recommend that additional detail be provided for individual components of the Plan, including, for example, individual cost estimates for both the design and implementation phases of the projects.

Response: DPW is not at liberty to provide the detailed cost per project because it feels that it would compromise the competitive bidding of projects.

- b. Furthermore, the Plan should include detailed cost estimates for project and program maintenance costs, as well as detailed financial assurance that the costs of project and program maintenance are securely funded.

Response: Detailed financial assurance cannot be provided until the Baltimore City legislative determines DPW’s annual budget. For more information, please see the updated Business Plan (www.cleanwaterbaltimore.org, Stormwater tab).

- c. As a related concern, the Plan should present sufficient financial and technical detail and assurances to indicate that Partnership, public-private, and interagency projects, relied upon by the City to meet the 20% restoration requirement and applicable WLAs, can and will be implemented within the five-year permit period. Plan, Appendix C.

Response: See section 7.0 Financial in the Final WIP.

182. [The WIP] should include more detailed financial analysis and assurance of program funding:

- a. The financial strategy provided in the Plan states that the stormwater utility fund will be used to build a reserve to leverage bonds. Plan at 56. However, the Plan should provide far greater detail about how the fee revenue will be expended on stormwater remediation projects and programs and clarify what proportion of the overall fee revenue will be utilized for a utility fund to leverage bonds and/or to directly fund the design, implementation and maintenance of stormwater remediation projects and programs. The Plan should clarify and explain the purpose and anticipated outcomes of the prospective bonds, including, in detail, how much bond funding will be allocated for specified stormwater remediation projects and programs, as is the intent of the Maryland HB 987 legislation requiring Baltimore City to collect the stormwater utility fee. Finally, the Plan should provide a breakdown of current and estimated costs, by project and program category, and the corresponding sources of funding, including, for example, figures for expected funding from bond revenue and related debt-servicing expenses, stormwater utility fee revenue, the City's general fund, and state and federal grant sources.

Response: Please refer to the Business Plan for more information.

- b. As the Plan indicates significant increases in City staffing, it should be specified how those positions and related administrative costs directly relate to water quality improvements. Additionally, any funds used for administration and overhead for management of the stormwater utility fee program should also be disclosed.

Response: Administrative and overhead is identified in the state required biennial report for the stormwater remediation fee and protected fund. DPW believes that all positions listed in the WIP relate to water quality improvements.

- c. The Plan only provides the estimated revenue collected through the assessment of the stormwater utility fee during the first year of its implementation. Plan at 56. The Plan should provide greater detail on current and projected stormwater fee revenue, including, for example, the total amount billed during the first year and fee billing and revenue collection estimates for subsequent years throughout the end of the permit period. Finally, we strongly recommend that this detailed and updated analysis of stormwater fee revenue and expenditures also be provided on the City DPW website at least biannually to assure the public that progress is being made.

Response: Section 7.0: Financial Strategy states: "The fee was established at a specific rate through Fiscal Year 17 to allow estimated revenue of \$24.6 M / year. Any changes to the stormwater rate after FY 2017 would require approval by the Board of Estimates." Additionally, DPW's Stormwater Advisory Committee created a Financial sub-committee which will be reviewing this material.

- d. Moreover, the Plan makes no reference to establishing a grant program as is stated in HB987. Many non-profit and community partners are supporting direct restoration outcomes that are claimed by the City's impervious cover restoration and pollutant reduction estimates. Plan, Appendix C. as the City is well aware, delivering those restoration projects requires significant resources and also helps to leverage other federal and state funds. We strongly recommend that a grant program be established with a qualified third party to manage implementation grant-making.

Response: The language referred to in HB987, codified at §4-202.1(h)(4)(vi) of the Maryland Annotated Code, Environment Article is permissive, not mandatory. DPW will be working to include a grant program as soon as it is financially feasible to do so alongside all other demands on the stormwater utility.

- e. Finally, a detailed financial analysis must be provided to evaluate whether the City's MS4 compliance program is being adequately funded in subsequent years of the permit period. Such analysis should include a detailed accounting of the sources of the funding and demonstration that

the sources are secure in order to provide assurance that the City, from the beginning of the permit period, will meet the “adequate program funding” requirement of Permit Section IV.G.2.

Response: DPW believes that it has addressed this for the purposes of the WIP.

183. *Appendix:* According to our calculations, the total cost for the projects listed in Appendix A is \$77.7 million. Cost estimates are not supplied for the programs listed in Appendix B or for the City’s expenditures in support of the partnerships listed in Appendix C. These estimates would be informative, if the City can make reasonable current projections. At this point, it is impossible to discern how the estimated cost for implementing this plan compares with the preliminary cost estimate in the 2012 Phase II WIP of \$250 million for fiscal years 2013 through 2017. If the City has revised that estimate, it should so note. The critical question is whether current estimates of projected revenues will be sufficient to fully implement the requirements of the MS4 permit and the City’s Phase II WIP.

Response: DPW believes that the estimates of projected revenues will be sufficient to implement the requirements of the WIP.

184. Clean Water Action does not believe that achievement and reliance on WWTP upgrades will promote and depend upon nutrient load reduction credit trading. Offset trading should not be included as an option here or in any other respect of the plan.

Response: For clarification, the Baltimore City MS4 Restoration and TMDL WIP does not include offset trading as an option. However, in Section 7.3.4 the WIP does consider the development of a stormwater offset and banking system as a source of funding.

185. *Page 57, Section 7.3.4:* Section 7.3.4 states DPW is exploring the creation of a stormwater bank and a process for providing off-site mitigation sites to private developers, businesses and industries. It is recommended that additional information about banking, particularly for those unfamiliar with the concept, be included in the plan. It is also highly desirable for the Plan to provide as much description as possible regarding how DPW currently envisions such a program would be structured, implemented, as well as when it might become operational. Also, is banking included in Financial Strategy – Other Sources of Funds because of the potential for vacant city-owned lots to be employed?

Response: Thank you for your comment. DPW will incorporate more detail regarding the stormwater banking and off-site mitigation program into Section 7.3.4 and in the Financial Strategy Section.

186. Establish who should pay for offsets for new growth and their resulting discharges. For example, if new and present discharges are really perpetual discharges (new house and homes creating pollution for years), how do we create a “perpetual offset?” i.e., how can we actually set up a payment or program by anyone, government, developer or otherwise to support this? In some cases the developer should pay for it, and the best way of achieving this would be by enforcing, restoring and eventually expanding the Stormwater Management Act of 2007 and its regulations. However, DPW should include whatever’s needed to plug the gaps, including possibly new laws and regulations.

Response: DPW believes that this recommendation is more appropriate to the State and will forward it to MDE.

MS4 WIP Public Comment Period

187. The WIP indicates that 200 community leaders and/or organizations were notified of the pending release of the WIP. This seems to grossly under-represent Baltimore’s multitude of residents and community leaders. And, was this contact initiated via electronic mail, in-person contact, or regular mail? The WIP does not clarify how these 200 representatives were contacted. In our experience with many different faith groups, the method of communication is extremely important because certain methods are more effective with some groups than others. And certain groups are altogether unreachable electronically. To truly engage your audience, you must understand your audience and how they communicate. In our opinion, attendance by only 74 people at the community meetings last summer indicates that the

outreach was insufficient. The WIP indicates that it relied on the SWAC members to help disseminate the WIP; however, as outlined above, given the timing of the release of the WIP, it was inappropriate to rely entirely on a small organization like IPC to assume responsibility for conducting the City's outreach to the faith community over the Christmas holiday season. Furthermore, the first meeting of SWAC was convened in November, whereas the City has had many months to prepare for the dissemination of the WIP.

Response: Thank you for your comments. DPW has made every effort to solicit input, comments, and other feedback from the communities it serves. During the summer public meetings, as well as during the public comment period, DPW provided notifications to its 200+ stakeholder list, the City's community association list, partner organizations, and Council members via e-mail, social media, the Clean Water Baltimore website, and the Mayor's weekly newsletter. Finally, DPW extended the public comment period to January 30, 2015, an extension of twelve (12) days beyond the amount required in the MS4 Permit. .

188. We affirm the WIP's formation of a stormwater advisory committee (SWAC) and are pleased to do our part by serving as a member of that committee. The first meeting of that committee was in November 2014 and it was indicated at that meeting that the final WIP would be available for review and comment by the end of November. It was not until December 22nd that the WIP was released for public consideration. In light of the demanding responsibilities on Christian faith leaders at Christmas, a most holy time in their religious calendar, the timing of the release essentially rendered it impossible to solicit meaningful feedback from a large portion of the religious community. While the comment period was extended to January 30th, please understand that most Christian religious leaders take badly-needed vacation time immediately after the Christmas holiday since their holiday is spent ministering to their hundreds of congregants and is not a vacation for them. If the City was truly committed to engaging the faith community in the WIP review process, the timing of this release would have been reconsidered, or the amount of time allowed for comments would have been extended.

Response: Thank you for your comment. DPW understands the difficulty in timing of the release of the WIP for public comment. In consideration of the number of interested parties, DPW extended the public comment period to January 30, 2015. DPW will take your recommendations under consideration for future communications and public outreach.

189. City has not complied with public participation requirements. We understand that the City submitted its Plan on December 22, 2014, within the Permit's deadline, to the MDE for review and approval, which is well before the end of the public comment period. This backwards approach to public participation is inconsistent with the MS4 Permit's requirement to "provide..[a] minimum 30 day comment period before finalizing watershed assessments and stormwater watershed restoration plans." Permit, § IV.E.3.c. The City should make it a priority to enhance meaningful public participation in a way that recognizes the expertise of external partners and the interest of citizen ratepayers to meaningfully participate. To that end, we urge the City to take the time to carefully consider and respond to these comments and all others submitted by the public, to revise the Plan to address the deficiencies identified here and in other comments, and to invite the public comment on the revised plan before a final version is submitted to the MDE.

Response: Thank you for your comment. DPW allotted a comment period longer than 30-days, reviewed all comments, and incorporated many of them. DPW also held two meetings with external partners during the public review period. DPW revised the WIP based on comments, but will not be conducting a second public review period.

MISCELLANEOUS COMMENTS

190. We support any and all measures necessary to improve Baltimore-area water quality.

Response: Thank you for your support.

191. I recently wrote a commentary on industrial watershed management for World Water magazine that outlines how municipalities can better work with their industrial customers to improve rain/stormwater management: <http://pages.cdn.pagesuite.com/d/e/de99e592-1938-43c7-94e8-15eccf9cee07/page.pdf>

Response: Thank you for your comment; DPW will take this into consideration.

192. What can be done regarding people who pile trash up in mountains in front of vacant properties? The trash pickup does not pick the trash up and someone has to call to get a truck to come out and pick it up. Namely this area is the 1500 block Cole Street, the corner of Gilmor and Cole Sts. It has been an ongoing ungodly sight for a few years and want to know how we can stop it. Can cameras be put in area to see who is dumping this trash? It seems like anywhere there are vacant and empty properties dumping sites occur. Since I have a community garden in the 1500 block of Cole St I do not appreciate going around the corner to walk through and smell trash in the summer months. I want to also thank you for all that you do for the City of Baltimore and what is planned. There is just so much going on.

Response: Thank you for your comment. DPW will make sure to pass this information along to the appropriate parties.

193. Increasing mechanical sweeping is not the solution. Code enforcement and more trash cans I see as a better solution. Placing the huge trash cans where people commonly drop off their trash so rats can get into and the city takes it time to remove is a better solution.

Response: Thank you for your comment; DPW will take this under consideration as it develops its Trash TMDL WIP.

194. For septic systems the program to update current systems with nitrogen removal systems, is not aggressively enforced, it is a voluntary program and not mandatory unless the system fails, and is in the critical area. In addition, in new development zones counties must be required to hookup to Wastewater Treatment Plans. We suggest that policies be pursued to require that all new septic systems have BAT mandatory state-wide, whether in a critical area or not. While the state plan also list detail a program and timeline for the 930 failing septic systems to be hooked up to Wastewater Treatment Plants.

Response: For clarification, Baltimore City has 133 septic systems, instead of the “930 failing septic systems” mentioned above. Regarding the addition of nitrogen removal systems, Baltimore City received numerous grants in 2012 that allowed for enhanced nutrient removal upgrades to two major wastewater treatment plants. After the upgrades, the Back River Wastewater Treatment Plant reduced its nitrogen discharge by 67%, and the Pataspco Wastewater Treatment Plant reduced their nitrogen discharge by 83%. Requiring the installation of Backflow Assembly Testers is a good recommendation that DPW will forward to the Maryland Department of Environment. More information may be found here: <http://www.mde.state.md.us/programs/PressRoom/Pages/062012bpwgrantssepticwastewaterupgrades.aspx>

195. *Page 34-35, Identifying and Prioritizing Project Locations:* The MS4 should clarify the legal basis (if any) for preventing stormwater that has been collected in the public ROW from being returned to private property. We recommend this be permitted and a protocol created based (such as requiring an easement) on stormwater techniques currently in use in Baltimore City.

Response: Projects within the right of way are treated the same as any other development project. These projects are required to keep the drainage on the property or get approval from the neighboring property in accordance with Is this covered in Article 7, Div. II, Subtitle 22.9.