

**City of Cincinnati's  
May 23, 2014 Comments on  
Proposed Storm Water Separation  
Policy**



Scott C. Stiles, ICMA-CM

May 23, 2014

Mr. Christian Sigman  
Hamilton County Administrator  
County Administration Building  
138 East Court Street, Room 603  
Cincinnati, Ohio 45202

Re: Draft Hamilton County Storm Water Separation Policy

Dear Christian:

The above-referenced policy has come to our attention as a County proposal for inclusion into the MSD rules and regulations. It is unfortunate that such a radical departure from past practice and legal authority has been in development among County staff since 2012 and only recently was offered to the City and MSD for review. The City of Cincinnati is the owner of significant sewer assets as well as the sole management agency for the Metropolitan Sewer District of Greater Cincinnati. This draft policy would apply widely within the City of Cincinnati, where the majority of combined sewers in the County exist.

Before this policy is approved, we expect further engagement with the City and with MSD to resolve the many concerns associated with this draft policy and to achieve the relevant goals it seems to attempt to address. Attached are several comments from relevant City departments regarding the draft policy, including the City SMU and the Building and Zoning department, which includes flood plain management. These comments are in addition to any provided by MSD. Some of the most important concerns regarding this draft policy are:

- The draft policy attempts to micro-manage a variety of project opportunities via “policy,” which intrudes on sound management of the utility and directly violates the controlling authority of the 1968 Agreement and the City’s vesting as sole and complete management agency. It attempts to vest standard-less project level discretion and determination of ownership of infrastructure assets solely in the BOCC. The 1968 Agreement can not be modified merely by County adoption of rules, but requires both parties to expressly consent and must be evidenced in a written amendment.
- The draft policy improperly commits MSD funds for stormwater activities that are outside the express limits of the 1968 Agreement, and particularly its 4<sup>th</sup> Amendment, regarding stormwater. For example, MSD cannot spend ratepayer funds voluntarily to set county-wide in-stream target concentrations of miscellaneous pollutant parameters that the County may elect to focus upon, as the draft policy contemplates.

- The draft policy is based on an incorrect legal standard, and thereby unnecessarily institutionalizes additional legal compliance burdens and costs upon MSD ratepayers where the economic burden facing those ratepayers under the existing approved WWIP and Consent Decree already is staggering. The compliance points provided for by the draft policy are higher than what is necessary for compliance with the Clean Water Act and federal and state regulations, and may not actually address underlying water quality issues. It is ill advised to add massive costs by voluntarily adopting a higher legal standard than what is required by existing and proposed stormwater regulation.
- The policy represents a unilateral change in compliance strategy by Co-Defendant Hamilton County to the detriment of ratepayers. As Consent Decree Co-Defendants, the City and County successfully pushed back against the suggestion by USEPA and Ohio EPA that Consent Decree requirements could be scheduled now for the next 25 years out into the future. A phased approach was successfully negotiated on the basis that future legal standards and financial considerations simply could not be predicted and that it was unreasonable and financially dangerous to require that length of commitment. This policy is an about face from our successful approach.
- The draft policy is unlike anything in the industry and inconsistent with the goals of the Consent Decree. It is highly complex yet lacks critical definitions and reference to industry standards, making it something that can not be implemented in its current form. It creates unneeded bureaucratic process that will lead to arbitrary decisions. These matters are too important to pass a policy to find out what is in it.
- The draft policy is vastly overbroad and potentially subjects MSD to conflicting obligations, while arrogating decisions to the County that may be made by owners of other MS4s.
- The draft policy mandates speculation regarding the nature and extent of environmental regulation 25 years into the future, which simply is an impossible task and an implausible basis for the implementation of useful public policy or public expenditures. No one 25 years ago could have usefully predicted the nature of Clean Water Act regulation we must deal with today; there is no reason to institutionalize such an exercise.

The draft policy raises fundamental issues regarding not just MSD, but other government entities, their current and future infrastructure and their regulatory compliance. We expect to discuss such substantial issues thoroughly as the County and City work through them for the benefit of our citizens and ratepayers.

Please contact me at your earliest convenience to discuss further.

Sincerely,



Scott C. Stiles  
Interim City Manager

**City of Cincinnati Initial Comments to  
Draft Hamilton County Storm Water Separation Policy**

**May 2014**

**General Comments**

- If this policy had been in place in 2012 it is impossible to see how ratepayers would not be paying for a \$500 million+ Lower Mill Creek tunnel right now. Instead, MSD's alternative approach using storm water separation under applicable legal and industry standards will save MSD ratepayers more than \$200 million in project costs versus the tunnel, while improving water quality in the Mill Creek. Why is this draft policy trying to strangle this money-saving approach?
- The operative legal standard for compliance with MS4 permits is to institute best management practices to the "Maximum Extent Practicable" or "MEP". This draft policy is premised incorrectly on a higher 'no cause or contribute' standard that will impose on MSD ratepayers magnified costs of projects. The financial obligations to meet the existing WWIP already consume MSD ratepayers' ability to pay for any foreseeable future. It is ill-advised to add massive cost by voluntarily adopting a higher legal standard.
- This complex document is highly theoretical and lacks critical definitions and reference to industry standards. It can only be considered aspirational and is not something that can be implemented in its current state. It is too expansive and too expensive to resort to passing policy to see what is in there.
- There are many policy requirements regarding guessing at compliance with future regulations. Yet no one can know what those will be, just as 25 years ago it would have been impossible and imprudent to base decisions on guesses about the state of regulations in 2014. MSD is proactive in anticipating future regulations and the Consent Decree and WWIP have protections for accommodating regulatory change that this draft policy would throw away. Institutionalizing the divination of environmental regulation 25 years into the future is absurd.

**Legal Comments**

1. Hamilton County's Stormwater Separation Policy far exceeds the requirements of the Clean Water Act.

The draft Hamilton County Stormwater Separation Policy rejects the reasonable standard for municipal stormwater dischargers established under the Clean Water Act and essential to affordable compliance. The draft policy instead implements a stringent, hard-lined approach that would prohibit any stormwater separation project that causes or contributes to in stream water quality exceedances. This is a drastic and expansive standard that is not consistent with existing law.

The draft policy does not accurately state the existing law. Section 402 of the Clean Water Act provides that:

"Permits for discharges from municipal storm sewers -

(i) may be issued on a system- or jurisdiction-wide basis;

(ii) shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and

(iii) shall require controls to reduce the discharge of pollutants to the *maximum extent practicable*, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.”

33 USC 1342(p)(3)(B)(iii) (emphasis added). This MEP standard is the state of the law with respect to the level of control that must be applied to reduce pollutant discharges from municipal storm sewers. Nowhere in the draft policy is the MEP standard even mentioned.

MEP is the affirmative legal standard in the Clean Water Act, and this interpretation has been upheld by the courts. In *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1161 (9<sup>th</sup> Cir. 1999), the petitioners challenged USEPA’s decision to issue MS4 permits that did not contain numeric effluent limitations to municipalities. The court held that the Clean Water Act was unambiguous: *Congress did not require municipal storm-sewer discharges to comply strictly with state water quality standards*, under 33 USC §1311(b)(1)(C). *Id.* at 1164 (emphasis added). The court pointed to Section 402(p)(3)(B)(iii), which requires MEP, as the basis for this conclusion. The court then contrasted the municipal discharge MEP standard to the more stringent Clean Water Act requirements for industrial stormwater dischargers, which specifically require compliance with 33 USC §1311, state water quality standards. See 33 USC 1342(p)(3)(A). *Id.* at 1164-65. The court determined that this exemption for municipal dischargers from strict compliance with water quality standards was the intentional will of Congress. *Defenders of Wildlife*, 191 F.3d at 1166. And for good reason: unlike industrial dischargers, who are required to comply with more stringent standards, municipalities have no control over the content of their stormwater discharges.

2. USEPA will not expand existing stormwater rules in the foreseeable future.

The draft policy attempts to address a need that does not exist. The preamble to the draft policy on page 1 states that “[t]he regulation of storm water quantity and quality is increasing.” However, since issuance of the proposed draft policy, USEPA has made clear that it does not intend to increase regulation in this area.

For the last five years, USEPA has been gathering information and conducting early stakeholder outreach to prepare for the issuance of a proposed national stormwater rulemaking. The purpose of this rulemaking was to strengthen the stormwater program, especially with respect to reducing stormwater from newly developed and redeveloped sites. In March 2014, however, USEPA announced its decision in to defer its plans for a national stormwater rulemaking and to instead embrace a stormwater strategy that assists communities through the use of existing requirements. USEPA’s website bears the announcement:

EPA is updating its stormwater strategy to focus now on pursuing a suite of immediate actions to help support communities in addressing their stormwater challenges and **deferring action on rulemaking** to reduce stormwater discharges from newly developed and redeveloped sites **or other regulatory changes to its stormwater program**. EPA will provide incentives, technical assistance, and tools to communities to *encourage* them to implement strong stormwater programs; leverage *existing requirements* to strengthen municipal stormwater permits; and continue to promote green infrastructure as an integral part of stormwater management. EPA believes this approach will achieve

significant, measurable, and timely results in reducing stormwater pollution and provide significant climate resiliency benefits to communities.

See, <http://cfpub.epa.gov/npdes/stormwater/rulemaking.cfm>. (Emphasis added). This decision to abandon rulemaking signals the agency's willingness to take a collaborative approach, as the City and County as Co-Defendants experienced during discussions regarding the Lower Mill Creek Partial Remedy, rather than a top-down, heavy-handed regulatory approach. It is confounding, then, why Hamilton County would voluntarily undertake a strict, costly regulatory regime instead of taking its cue from USEPA.

USEPA's current and future foreseeable stormwater regulation sets forth the affirmative MEP requirement and informs small MS4 permittees that "[y]our NPDES MS4 permit will require at a minimum that you develop, implement, and enforce a storm water management program designed to reduce the discharge of pollutants from you MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act ... *Implementation of best management practices consistent with the provisions of the storm water management program required pursuant to this section and the provisions of the permit required pursuant to §122.33 constitutes compliance with the standard of reducing pollutants to the "maximum extent practicable."* 40 C.F.R. 122.34(a) (emphasis added).

3. The draft policy prohibits stormwater separation projects unless they meet a "cause or contribute" standard that exceeds what is required by law.

The draft policy would prohibit stormwater separation projects where the stormwater discharge is determined to cause or contribute to exceedances of in-stream water quality standard or voluntarily created in-stream target concentration. This "cause or contribute" standard governing the draft policy far exceeds the requirements under the law.

The 'cause or contribute' concept was addressed in a November 12, 2010 USEPA memo. Even that memo, however, acknowledges that MEP is the affirmative legal requirement: "the CWA provides that stormwater permits for MS4 discharges shall contain controls to reduce the discharge of pollutants to the 'maximum extent practicable' and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." EPA Memo, 2 citing CWA §402(p)(3)(B)(iii). The affirmative legal obligation is MEP.

USEPA's memo then states that the "and such other provisions" portion of the statute gives *the NPDES permitting authority the discretion* to include requirements for reducing pollutants in stormwater discharges as necessary for compliance with water quality standards. USEPA concludes that "where the *NPDES authority* determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard excursion, EPA *recommends* that, *where feasible*, the NPDES permitting authority exercise its *discretion* to include numeric effluent limitations as necessary to meet water quality standards. EPA Memo, 2 (emphasis added). Needless to say, USEPA's memo is only a recommendation couched amid a great deal of flexibility. The draft policy would create a regulatory scheme that contains no flexibility, no discretion and no consideration of feasibility.

Even according to USEPA the permitting authority has the discretion to determine the "such other provisions" that are appropriate for the control of pollutants and even then *it may only do so where feasible*. OEPA, the NPDES permitting authority in Ohio, has never exercised its discretion to require

anything except the development of a Stormwater Management Plan (“SWMP”) that applies Best Management Practices (“BMPs”) to the six minimum controls and does so to the MEP. Ironically, the draft policy would *create* the exact scenario the County claims it is in response to by itself unnecessarily increasing regulation of stormwater quantity and quality.

4. OEPA’s renewal MS4 permit maintains the MEP standard.

Even at the state level, OEPA is not signaling any significant changes to its stormwater rules or Small MS4 permit. OEPA currently implements the MEP standard in its Small MS4 permit. While it is impossible to predict legal standards twenty-five years into the future, looking to what is known about the future of OEPA MS4 permitting over the next five years demonstrates that MEP will remain in the standard.

The draft renewal Small MS4 permit, which was issued by OEPA in January 2014 and will be effective for the next five years, does not depart from the MEP standard. It requires cities to implement a SWMP that must identify what BMPs have been selected to meet the six minimum controls of: 1) public education and outreach; 2) public participation and involvement; 3) illicit discharge detection and elimination; 4) construction site runoff and control; 5) post-construction runoff control; and 6) pollution prevent/good housekeeping for municipal operations. It requires that cities shall “develop, implement, and enforce an SWMP designed to reduce the discharge of pollutants from your small MS4 *to the maximum extent practicable (MEP)*, to protect water quality, and to satisfy the appropriate water quality requirements of Ohio Revised Code 6111 and the Clean Water Act.” Part III, A (emphasis added).

The MS4 permit does state that it does not authorize discharges that would cause or contribute to in-stream exceedances of water quality standards, but this must not be confused with the affirmative legal obligation in the permit, which is MEP. OEPA’s permit explains that if an MS4 is determined to cause an in-stream exceedance of water quality standards, OEPA may require additional actions or an application for an individual permit or alternative general permit. It is important, though, that what the permit does not authorize is not confused with or substituted for its affirmative legal obligations. As it stands, the draft policy renders the MEP standard meaningless.

5. The draft policy unreasonably requires decision-making based on predictions of legal trends 25 years into the future.

The draft policy requires that water quality impacts be evaluated to meet future legal standards and requires that those standards be predicted 25 years out into the future. It is unreasonable to mandate decision-making for stormwater separation projects based on such undeterminable factors. MSD projects are already designed to be adaptable to changing circumstances, technology, and regulations. It would be a useless and costly exercise to design these projects to a regulatory standard that does not, and may never, exist. Ratepayer dollars are better spent on projects that can adapt to changing conditions rather than those that attempt to predict a future that may never occur.

If the Regulators were suggesting compliance with such an outlandish regulatory regime (which they are not), the County and City would have a duty to MSD ratepayers to push back. Indeed, as Consent Decree Co-Defendants, the City and County successfully pushed back against the USEPA and OEPA’s suggestion that Consent Decree requirements could be scheduled now for the next 25 years. A

phased approach was successfully negotiated on the basis that future legal standards and financial considerations simply could not be predicted and that it was unreasonable and financially dangerous to require that length of commitment. But that rational approach is being given away. The draft policy aims to ossify the program today based on current day guesses of the legal landscape 25 years from now.

6. The draft policy will compromise Consent Decree compliance.

Throughout the various flow charts attached to the draft policy, projects are required to be placed “on hold” for various reasons, including the requirement in Attachment A that projects be placed on hold *for 1 year* until representative local water quality data is obtained. These hold requirements place projects at risk of missing WWIP milestones, which comes at the cost of stipulated penalties of *at least* \$1500 per day, per project.

In sum, the draft policy does not take into account costs to establish water quality standards and future in-stream limits, to conduct extensive sampling and modeling, or to implement yet unknown measures that could include end-of-pipe treatment in order to meet a stringent cause or contribute standard. Nor does it require any consideration of whether those costs are feasible, what the impact will be on ratepayers, or whether separation projects are already mandated by the Consent Decree. Further, there is no consideration of background conditions and other sources of pollution, or whether MSD’s compliance with the “cause or contribute” standard will have any impact on the overall health of the stream.

#### **City Planning Department Comments**

- MSD reviews the stormwater component of subdivision regulations. The Policy would substantially increase review time for subdivision regulation because these new regulations require extensive analysis for every single separation project.
- The increased analysis required by the Policy also threatens to increase the cost of subdivision regulation reviews.
- The Policy does not place any responsibility on developers and other stakeholders, and instead imposes a very broad range of tasks, risks, and responsibilities on MSD alone.

#### **City Building Department Comments**

- SBU remediation will still require plumbing permits. However, there is no clear delineation of inspection duties in this document.
- The Cincinnati Municipal Code contains rules and regulations that require separate plumbing permits for work performed on private property that is not encumbered by a dedicated utility easement where the ownership and maintenance of the equipment is the responsibility of the utility (MSD).
  - In the City of Cincinnati, sanitary sewers, combined sewers, stormwater sewers, laterals and detention systems, that do not fit the statement above, that are outside of the public right-of-way will require permits from the Department of Planning and Buildings, Plumbing Division.

- The new Rules and Regulations give the BOCC policy making decisions regarding separation of any project. They define projects as any “projects that plan, design or construct (i) green infrastructure, (ii) separate storm sewers, or (iii) the repurposing of existing sanitary sewers or combined sewers to separate storm sewers [...]” This could circumvent processes established by the City of Cincinnati regarding stormwater mitigation techniques, including SBU remediation projects, which MSD would be involved with, and gives the final say to the BOCC. The Policy adds confusion to this process and will likely lengthen and complicate the approval process, and thereby stall development of green infrastructure and other separation projects.

### **Department of Transportation and Engineering**

Any changes to the regulations that govern stormwater flow within the combined sewer system will increase costs for our projects. Additional requirements would also add cost and time to the design of our projects. DOTE also works closely with developers within the City where infrastructure improvements are needed. It can be challenging for developers to build within the tight urban framework that we have, and upgrades to water lines and consideration of sewer availability and other utilities is always a concern. Additional regulations relative to separation of sewers will present yet another hurdle for development within the City.

### **Technical Comments**

The following technical comments from City departments reflect the need for a collaborative approach between the City and County.

### **Page 2, “(c)” in the table**

- “...further reasonable progress towards achieving attainment of water quality standards in the receiving stream”

#### COMMENTS:

MSD is not responsible for the streams meeting existing water quality standards; its obligations are much more circumscribed by law.

MSD has shown that even if Mill Creek had no CSOs the WQ standards would still not be met due to receiving streams being in non-compliance when they enter Hamilton County. The Policy does not take into account or provide a solution to all the non-point sources within Hamilton County over which MSD has no control.

The full or partial channelization of many creeks in Hamilton County engineered by the US Army Corps results in circumstances completely outside the control of MSD that render those receiving streams incapable of ever meeting current WQ standards. Will the Corps consider re-engineering those channels to a more natural state? If so, is the Policy proposing that MSD take on the added risk of more flooding?

Using Mill Creek as an example, how can MSD determine what progress it should make in achieving WQ standards that is cost-effective and consistent with identified industry-recognized standard?

- *“This policy clarifies that the BOCCs will make policy decisions regarding:...(c) which governmental entity (e.g., County or local government) will own the ‘new pipe’ and which governmental entity will maintain the ‘new pipe’...”*

COMMENTS:

This overstates BOCC authority to decide whether SMU, Green Township, Colerain Township, etc. will take over a new pipe. The Policy suggests that the BOCC will simply dictate to other governmental entities their responsibility for ownership and maintenance of newly separated sewers.

### **Attachment A**

- The requirement to evaluate water quantity/flooding is unnecessary given that typically there would not be an increase in water volume and peak flow after separation to the receiving stream. Meaning that where a separation project is undertaken to address an existing CSO, the same amount of flow will simply be redirected out of the combined sewer system and sent through a separate storm sewer to the same water body. The result will be that the same amount of flow will end up in the water body, it will simply be cleaner.
- First box in the flow chart, center column.  
There is not a “No” response. What if injection wells, porous pavement, etc. are installed? Those will not flow directly into a waterway most of the time. This water will infiltrate down into the groundwater.
- Fifth box, center column (“Is Water Quality Model...”).  
The Policy does not indicate what is meant by “industry standard.”
- First box, right column (“WQ Data based upon...”).  
This comment applies to other locations in this document, as well. The document does not refer to a specific water quality model, of which there are potentially several (e.g., urban stormwater runoff, pollutant loading, pollutant fate and transport, stream flow, water quality predictive, biological/ecological/chemical). Further, WQ models are in their infancy. They are unproven and not reliable. It is not wise to make major decisions based on these models. They should only be used as a guide when evaluating planning options.

### **Attachment B**

- There is no requirement to identify water quality impacts outside of the context of MSD. How will other contributors be put on the hook to do something to improve water quality? It is difficult to justify this Policy yielding the lowest cost if MSD is paying for something that other stakeholders should be doing.
- There is no specific parameter by which MSD is to determine whether WQS are being met. Does this mean biological, chemical, physical, TMDL, CWA, etc.?

### **Attachment C**

- *“1. Collect and/or use local representative sampling data...”*  
The phrase “local representative sampling data” is undefined and unclear. Does this imply at another location in the County?

Further, the time of year can impact the results. Collecting samples after a long dry period in the summer may yield samples that are more contaminated than samples collected in the spring after a stretch of multiple rain events.

- *"1. .... Monitoring and Sampling Plan shall be based on industry standards to be developed by MSD and approved by the County Administration."*  
There is no indication of the industry standard MSD is to use for the development of this plan.
- *"2. Water Quality.... County Administration."*  
There is no indication of the industry standard MSD is to use for the development of the models.
- *"3(a)... The in-stream WQS or in-stream target concentrations shall be determined or developed by MSD for each water body and approved by the County."*  
MSD does not have the legal authority to determine and develop these items. Does the County intend to supersede OEPA to create new targets for new pollutants and create additional obligations with which MSD must comply?

#### **Attachment D**

- Projects should be designed for retrofit *if* regulations change rather than investing additional dollars now for a mere possibility.
- *"1. Collect and/or use local representative sampling data..."*  
The phrase "local representative sampling data" is unclear and undefined. See earlier comment on this subject.
- *"1. .... Monitoring and Sampling Plan shall be based on industry standards."*  
The Policy does not indicate the industry standard to be used by MSD.
- *"2. Water Quality.... County Administration."*  
The Policy does not indicate the industry standard to be used by MSD.
- *"3(b) Using knowledge... specifically controlled for treatment or control to a reasonable level...standards."*  
The phrase "reasonable level" is vague.
- *"3(b)... The applicable in-stream WQS or in-stream target pollutant concentration... Administration."*  
MSD does not have the legal authority or obligation to determine and develop these items. Does the County intend to supersede OEPA to voluntarily create new targets for new pollutants and create additional obligations with which MSD must comply?
- *"3(c) BMP pollutant removal...capacity."*  
Pilots have their place in MSD's work but the use of that data can bring about mixed results since every area is unique. Use of pilots necessitates caution in the way data from them is utilized.  
Connecting (c) to (d) – What if the pilot results are inconsistent with the model? The Policy does not indicate the steps to be taken in that scenario.
- 3(c) See earlier comment about the use of WQ models.

- *First sentence.*  
Why does this sentence refer only to 3(d)? While pilot data should be used cautiously, should it also be considered here?
- The phrase “significant increase in cost” is vague. This can mean something different to each person. Projecting costs to meet possible “legal standards” 25 years from now is impossible to predict.

### **Attachment F**

- When water quantity/flooding issues in a receiving stream are implicated, the Corps must be involved. Please revise the attachment to indicate Corps’ necessary role in these processes, including where its approval authority is required.
- FEMA maintains and updates flood plains and the maps associated with them. The Policy does not provide any guidance as to whether FEMA and/or FEMA data should be used in this process, or whether/how FEMA should be involved in the process.
- 3<sup>rd</sup> column, “Is In-Stream Flow Model...”. Is this different than the WQ model?
- 3<sup>rd</sup> column, “Is In-Stream Flooding...”. The term “excessive” is used in this box, but is undefined and the Policy provides no guidance on this issue.

### **Attachment G**

- Paragraph 1(b)  
There is no indication of how this Policy would impact separation projects undertaken by independent jurisdictions, such as the separation projects undertaken by St. Bernard. The Policy seems to place the entire burden for improving water quality on MSD, without taking into account the responsibility of other stakeholders.
- Paragraphs 3 and 5(a) instruct MSD to follow two sets of standards. That is rarely a realistic thing to do. The County Monitor has stated on multiple occasions that it believes the MSD’s Modeling Standards are acceptable. Any reference to WaPUG should be deleted to avoid confusion.
- Paragraph 5(b)  
The Policy does not indicate the industry standard to be used by MSD.

Developing and maintaining an in-stream flow models is a significant undertaking. Is the BOCC prepared to fund this, and if so under what schedule and industry standards? Does the Corps recognize any models as suitable? Does the Corps use/require any particular models? Or will MSD be expected to create its own?

### **Attachment H**

- Paragraph 2(a): How do you determine the “*cost per gallon of CSO reduced*”?
- Paragraph 2(b): How do you determine the “*Water Quality benefit provided*”? See earlier comments and concerns about pilots and WQ models.

## Attachment I

- Pages 1 and 2 of 8. See earlier comments regarding collecting “local representative data”.
- 3, Page 2 of 8. The development of an “in-stream WQ model” will be costly. Will this be funded, and if so at what cost and under what timeframes and industry standards?
- Area 2: Water Quantity/Flooding. Outcome:, Page 4 of 8.  
1 – 2. This rationale is illogical and difficult to follow. If stormwater is removed from an “undersized” combined sewer that may overflow along its path, and a storm sewer is built to capture and convey flow to X level, how would that make overland flooding worse when subjected to the same storm? How would SBUs increase after the separation occurs? This subject was addressed during the Lick Run analysis. It is concerning that it is being re-embedded in this proposed policy.

3. *“Identify impacts to in-stream flooding and hyromodification from the project.”* Based on what? A model? FEMA data? What level of storm will be under consideration?

- Area 2: Water Quantity/Flooding. Steps to Follow to Implement the Policy:, Page 4 of 8. Were MSD’s Rules & Regs reviewed in relation to this section? Were the WWIP requirements considered?

It appears the phrase “Level of Service” is being used interchangeably with a design standard. They are two different things.

Paragraph 2(b) presents concerns regarding the authority of the BOCC. What authority does the BOCC have over a local jurisdiction?

- Area 2: Water Quantity/Flooding. Steps to Follow to Implement the Policy:, Page 5 of 8. MSD has developed design storms based on Hamilton County radar and rainfall data. Is it not better to use data that are more representative of local conditions than the ultra-conservative SCS Type II storms? Using the Cincinnati storms would require a change to MSD and SMU Rules & Regs.  
What about using continuous simulation instead of a design storm?  
These questions demonstrate that much more technical engagement is necessary to achieve a workable policy.