	Issue	Monitor Questions	MSD Response	MSD Response Reference	Regulator Feedback (Conference Call Minutes October 4, 2012)
Performance	Availability of Local Data	SI is relying on estimates of stormwater separation effectiveness that are not supported by local data.	Local data sources have included level monitoring at RTCs and interceptor; flow monitors in the LMCPR study area and throughout Mill Creek; record drawings; CAGIS data; operational interviews; Telog data; additional refinement of designs (geotechnical data wert groundwater and rock and conditions encountered during construction); site specific soil data; aerial photography; runoff catchment data; and drainage characteristics. Local data was fed into the technical analyses for refinement of the model.	(MSD Certainty Response, 9/18/12; pages 58-67; MSD Recommendation, 9/26/12; pages 36-38)	Regulators have affirmed MSD has utilized the typical method to model sewer separation. He said defining the catchment areas accurately is key in determining where flows are directed. He said this approach gives the Regulators confidence the CSO model is effectively capturing the sewer separation. Regulators agreed the way MSD modeled separation is the accepted approach.
			The model takes flow going into combined sewer system off the street and hillsides, and the CSS model continues to account for I/I. If sewer rehab is performed, then I/I values would be reduced and could potential be reflected at some point in the model. MSD is not taking credit for I/I or private connections. Not doing house-to-house separation. Strategic separation runs conveyance to remove flow easily collected from hillsides and roadways. Storm sewers are being sized for future private connections. The benefit from these are not currently accounted for in the model.		Regulators understand that that I/I flows are still in the model for the combined sewer system. The Regulators have indicated their appreciation and MSD's approach is a good way to handle the I/I component. Leaving I/I in the for CSS model is being conservative.
	Flow Monitoring	Flow monitoring of a combined sewer separation project did not occur.	MSD has 11 new sites in the LR watershed and have been monitoring for 3 weeks. Flow monitoring and modeling is an iterative process. MSD is committed to a strategic and focused flow monitoring program to provide data for decision making. Based on information available now, MSD is comfortable the information is adequate for mak'ng decisions.	(MSD Certainty Response, 9/18/12; MSD Recommendation, 9/26/12 pages 43-49	Regulator calls have dealt with the calibration and validation steps and in general the Regulators indicated that the model is accurately predicting what will happen. Regulators agree that Lick Run could use some additional monitoring to enhance the validation. Based on information available now, Regulators are comfortable that the information is adequate for making decisions. The monitoring approach and efforts MSD has taken have been sound and good. For the alternatives analysis, have a model that can be relied on to predict what will happen to a reasonable degree of accuracy.
	Performance Sensitivity Analysis & Costs	Potential CSO volume shortfall replacement costs have not been provided on a sensitivity analysis	MSD is confident with the performance analysis and costs. MSD has responded to this question multiple times.	(MSD Certainty Response, 9/18/12 pages 76-82; MSD Recommendation, 9/26/12 pages 33-36, 41-43) MSD response to Co. Monitior Questions April 17th, Items 10-15, 30 May 4th, Item 19 May 22nd, Item SI-8-9	Regulator technical calls have reviewed costs and performance. The Regulators have provided feedback indicating that the assumptions and costs appear reasonble given the assumptions provided in the documentation.

O&M	Operation & Maintenance Costs	Consensus has yet to be reached on the ownership and operation/maintenance of new storm drains to be constucted in SI projects, as well as who bears the future responsibility for new stormwater outfalls	MSD has provided life-cycle costs for the Si alternative and MSD included the O&M activities in costs	(MSD Certainty Response, 9/18/12 pages 38, 56-57; MSD Recommendation, 9/26/12 page 56-57, 70-72) MSD response to Co. Monitior Questions May 4th, Item 10 May 10th, Item 10 with backup	Regulators recognize that MSD has provided life-cycle costs for the SI alternative and MSD included the O&M activities in costs. Regulators noted that MSD made a strong effort to identify the frequency and scope for the O&M activities.
Water Quality	MS4 Compliance Issues	A methodology for complying with existing MS4 permits and newly created sotrmwater discharges to streams has yet to be demonstrated.	MSD has incorporated phase 2 stormwater minimum control measures into the recommended CSO reduction design of SI solutions to address public education and outreach, post construction water quality, good housekeeping and illicit connections.	(MSD Certainty Response, 9/18/12 pages 42-49, 88, 105-107; MSD Recommendation, 9/26/12 pages 13-17) MSD response to Co. Monitior Questions April 17th, Items 24 & 27 April 26th Workshop	Regulators have indicated that based on their review of information MSD provided, MSD has looked at sustainable alternative with an eye towards both CSO and MS4 perspective. The Regulators indicated that future numeric standards for MS4s is not something that they are considering.
	Water Quality	April 2006 CSO LTCP indicated once CSOs are addressed, existing dry weather and stormwater pollution will become the focus in the Mill Creek for meeting WQS. Implementing a stormr sewer separation approach for the approach for the LMCPR that involves adding 2.9 BG of addiotional stormwter to the Mill Creek in order to reduce CSOs by 2 BG will increase the costs for stromwater pollutaion abatement. The magnitude of this cost is unknown at this time.	MSD has also completed a comprehensive water quality evaluation for the Mill Creek Watershed with the Midwest Biodiversity Institute. Based on the results and the analysis, BMI has stated that	(MSD Certainty Response, 9/18/12 pages 105-106; MSD Recommendation, 9/26/12 pages 72-73) MSD response to Co. Monitior Questions April 17th, Items 23-28 April 26th Workshop May 4th, Item 21 May 22nd, Item WQ-7	Regulators basic framework of the MS4 program is BMP-based and Regulators appreciate MSD's approach to incorporate BMPs to be integrated into the SI alternatives.
	Future Stormwater Regulatory Issues	Future stormwater regulations are a risk to the SI approach.	MSD has developed the sustainable alternative with an eye towards both CSO and MS4 quality needs.	(MSD Certainty Response, 9/18/12; page 107) MSD response to Co. Monitior Questions May 4th, Item 22	Regulators have indicated that based on thier review of information MSD provided, MSD has looked at sustainable alternative with an eye towards both CSO and MS4 perspective. The Regulators indicated that future numeric standards for MS4s is not something that they are considering.

Flooding	Flooding	Analysis is required related to the potential for new flooding routes and areas affected in heavy storms after the SI alternative is contructed. The effects that the peak flows from the proposed storm sewers in the SI alternaive will have on the Mill Creek and its tributaries have not been evaluated.	Flooding evaluations and analysis for this watershed were conducted in November 2009 and summarized in the Preliminary Engineering Analysis Report and incorporated into the planning and design of all proposed storm water improvements. Sizing and locations of new pipes and drainageways are designed to reduce CSOs with long term, sustainable techniques by implementing stormwater mitigation projects that improve existing conditions and reduce the risk of potential flooding. The design of the Sustainable Alternative utilized current and applicable stormwater design standards and best management practices so as to conform with relevant criteria; the valley conveyance system (VCS) was specifically designed for the 100 year storm condition.	(MSD Certainty Response, 9/18/12 pages 101-103; MSD Recommendation, 9/26/12 pages 80-81, 85-87) MSD response to Co. Monitior Questions April 17th, Item 17 May 4th, Item 10	Regulator's overall reaction seems the Sustainable Alternative provides a reduced risk with localized flooding.
Cost	Surface Features to for maintenance, public safety, protection and acceptance of CSO reduction	The LR SI project includes significant surface features and related costs that extend beyond CSO abatemetn and are still in flux. A number of the aesthetic items shown in SI alternative drawings are not currently included in the cost estimates, or the sources of altnerative funding.		(MSD Certainty Response, 9/18/12 pages 42-50; MSD Recommendation, 9/26/12 pages 13-17, 79-80)	Regulators noted that MSD is following USEPA's integrated framework for communities. Historically, EPA tackled those separately, under integrated framework – tackle those together. Regulators understand the need for separate sewer quality and to include BMPs to make sure stormwater is managed properly and Regulators consider these reasonable and necessary. Regulators suggested this is a good example of the concept of integrated planning.