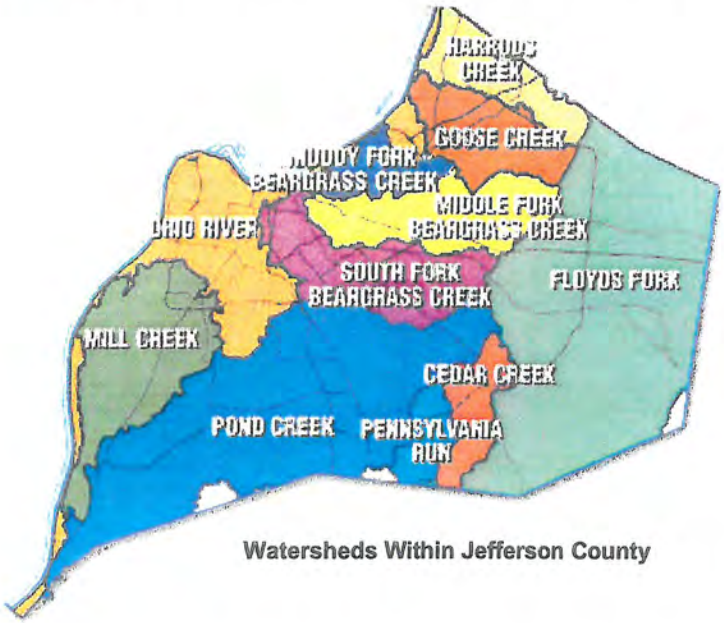
Wet Weather Team Project Meeting Materials

01.05.0228.12

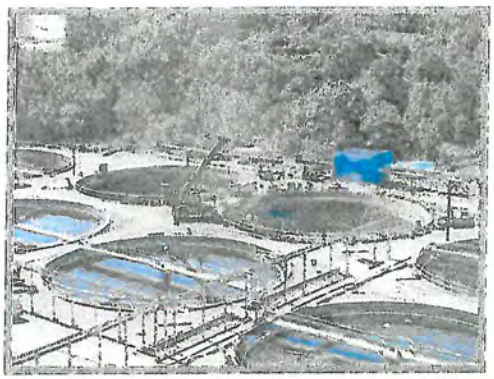
WWT Stakeholders Meeting # 28 5/8/2012

MSD

Louisville and Jefferson County
Metropolitan Sewer District



Watersheds Within Jefferson County



Agenda

Stakeholder Group Agenda
May 8, 2012
5:30 p.m. – 8 p.m.

5:30 – 5:45 Dinner (Wet Weather Team only, please)

5:45 – 6:00 Welcome, Introductions and MSD Updates – Brian Bingham, MSD Regulatory Services Director

6:00 – 6:05 Agenda Review and Stakeholder Meeting "Ground Rules", – Gary Swanson, Facilitator, CH2MHill

6:05 – 6:25 IOAP Implementation Progress Report – Steve Emly, MSD Interim Engineer Director

6:25 – 6:45 WWT Stakeholder Group Revised Draft Charter Review – Angela Akridge, Project WIN Program Manager

6:45 – 7:00 Proposed IOAP Sewer Overflow Project Modifications – Justin Gray, Sr. Technical Services Engineer

7:00 – 7:10 Proposed IOAP Modification Revision Process – Gray/Akridge

7:10 – 7:20 May 2012 IOAP Public Input Meetings – Gray/Akridge

7:20 – 7:30 Observer Comments

7:30 – 7:45 Wrap-up and Adjourn

Meeting Summary
Wet Weather Team Stakeholders Group
Tuesday, May 8, 2012

The Wet Weather Team (WWT) Stakeholders Group, met on May 8, 2012, at MSD's Main Office Building. The objectives of the meeting were to:

- Provide an update on Integrated Overflow Abatement Plan (IOAP) implementation progress
- Discuss draft of the revised Stakeholder Group Project Description that is the basis for the Stakeholder Group roles in MSD's Amended Consent Decree Response
- Present the proposed process and schedule for revising the approved IOAP in accordance with the adaptive management concepts presented in the IOAP.
- Review the schedule and planned topics for the next round of Project Review and Public Input Meetings planned for May 2012.

MSD Updates

Brian Bingham, Regulatory Services Director welcomed the group and thanked them for their continued participation. Greg Heitzman, MSD's Interim Executive Director provided brief comments on the MSD response to the State Audit, and the progress of the Mayor's Task Force on Utility Efficiency. Mr. Heitzman noted MSD will soon have seven Board members with less than a year experience, which presents a challenge to stay focused on important issues like the Consent Decree. He said MSD's response to the State Audit is well underway and will meet the required completion date of December 31, 2012. The Mayor's Task force will report to the Mayor on May 15, with an expectation that the recommendations will include some consolidation of services, with a long-term option to consider merger of MSD/LWC.

IOAP Implementation Progress Report

Steve Emly, Interim Chief Engineer, presented an overview of progress on IOAP implementation. A copy of his presentation is attached.

A Stakeholder Group member asked about site restoration of IOAP projects, noting that the Sinking Fork Interceptor site restoration was essentially grass, with no consideration of habitat creation. He asked if habitat restoration or creation was being considered in the IOAP projects, for example the Buechel Basin. He reminded MSD of the previous Stakeholder Group recommendation to use IOAP project site restoration to make the sites better than they were before, and not just do the minimum to prevent future erosion.

Steve Emly noted that full-scale site restoration and habitat creation can be very expensive, and IOAP budgets did not include elaborate habitat creation. He acknowledged that MSD's tendency has been to either spend a lot of money on comprehensive habitat restoration or not spend any at all. Current site restoration efforts are typically aimed at erosion protection, visual acceptability to the surrounding neighborhood, and low maintenance. Some middle ground could be considered that doesn't add a lot of unrelated cost but did consider habitat in addition to erosion control and visual appearance. The Sinking Fork site was originally not high-value wildlife habitat, so the final site restoration is an improvement in appearance even if it didn't create habitat. On the Buechel Basin there will be little opportunity to restore disturbed habitat, as 80% of the site north of the ditch will used for the basin, and the area south of the ditch will not be disturbed. Brian Bingham promised to get back with the group member to review Buechel Basin site plans and see if there are opportunities to incorporate some measure of habitat restoration in the site restoration, and to discuss further how low-cost features could be added to standard site restoration concepts to improve habitat for wildlife.

Draft Charter Revision Review

Angela Akridge reviewed the original two-page project description that was the basis for the Stakeholder Group Charter. She also discussed the draft changes that resulted in a 6-page draft dated May 7, 2012, that updated the project description to reflect process and progress to date and addressed the approach for incorporating the Stakeholder Group in the IOAP implementation moving forward. Stakeholder Group members were asked to read the draft revisions and provide comments. We will discuss and finalize this revised document at the next Stakeholder Group meeting, which will likely be in September/October.

Proposed IOAP Modifications

Justin Gray presented an overview of the proposed modifications to the approved IOAP, and the process and schedule we are following to get an regulatory approval for this modification. Included in the overview was a brief discussion of MSD's approach to replacing gray infrastructure with green infrastructure in the CSO 190 and CSO 130 basins.

In the CSO 130 basin the costs to control CSOs through green infrastructure are approximately half those of the costs to control CSOs with a gray storage basin. The green infrastructure practices can be installed and connected to impervious surfaces with relatively few legal agreements with property owners required. MSD has the CSO 130 green infrastructure improvements out for bid now. MSD has a cooperative agreement with EPA's Office of Research and Development and the University of Louisville to provide intense monitoring of the long-term performance of these green practices, and their response to maintenance, etc.

In the CSO 190 basin the costs for green and gray are essentially the same, but the green approach has operating cost advantages since the costs to maintain the green infrastructure is estimated to be much less than the cost to treat the wastewater captured in the gray storage basin. MSD's concern in the CSO 190 basin is the extensive number of partners and legal agreements needed with property owners to make implementation of this approach possible. MSD is still evaluating the implementability of the green infrastructure approach in the CSO 190 basin. Justin's presentation and several handouts that detail the project modifications are attached.

A stakeholder asked if MSD had intended an intensive public outreach effort for individual residents in the CSO 190 area, and if there was any way to track and display individual homeowner participation in some form of green infrastructure. Tina Ward-Pugh noted that in her council district she worked with residents to develop a web-based tracking tool to do exactly what was suggested. After discussion it was suggested that MSD work with the District 9 Green Triangle initiative to see if the tracking tool they developed could be made available to other community groups or neighborhood associations, possibly through an MSD-hosted server. MSD will follow up on that. It was also noted during this discussion that MSD's incentives program has been very well received in the community, with requests for incentive partners exceeding MSD's budgeted amounts for the incentives program. As of today it is estimated that green infrastructure constructed through demonstration or incentives are able to control approximately 100 million gallons of storm water runoff per year in the combined sewer area.

Gary Swanson noted that in 2008 the Stakeholder Group prepared a letter of support for the IOAP submittal. This formal expression of support was appreciated by the MSD Board, and carried a lot of

weight with regulatory reviewers as well. Gary noted that we will be asking for a similar expression of support for the IOAP modifications near the end of 2012.

May 2012 IOAP Public Meetings

Angela Akridge presented the date, time, location, and agenda overview for the three Project Review and Public Input meetings planned for May, 2012. A copy of Angela's presentation is attached.

One of the stakeholders noted that the project review meeting held in January was well publicized, well attended and very well run. Participants kept focused on the IOAP project issues and gave MSD valuable feedback. He also noted the letter in the Courier-Journal complementing MSD in its handling of the Hikes Lane Interceptor project.

Observer Comments

An observer asked about a statement Justin Gray made about support provided by MSD's Plumbing Modification Program relative to downspout disconnects. Follow-up occurred after the meeting.

Meeting Summary
Wet Weather Team Stakeholders Group
Tuesday, May 8, 2012

Meeting Participants

Wet Weather Team Stakeholders

Steve Barger, organized labor (retired)
Susan Barto, Mayor of Lyndon
Stuart Benson, Metro Council, District 20
Allen Ditmer, University of Louisville
Tom Herman, Zeon Chemicals
Bob Marrett, CMB Development Company
Kurt Mason, JC Soil and Water Conservation District
Jim Mims, Louisville Metro, Planning & Design Services Department
Lisa Santos, Irish Hill Neighborhood Association
Bruce Scott, Kentucky Waterways Alliance
Tina Ward-Pugh, Metro Council, District 9

MSD Wet Weather Team Members

Angela Akridge, MSD Project WIN Program Manager
Brian Bingham, MSD Regulatory Services Director
Steve Emly, MSD Interim Chief Engineer
Greg Heitzman, MSD Interim Executive Director

MSD Presenters

Justin Gray, Senior Technical

Technical Support

Gary Swanson, CH2M HILL

Meeting Observers

Julia Muller, MSD
Scott Spears, LD&D
Janet Pinkson, Environmental Quality Commission (sitting in for Arnita Gadsen)
Other observers attended but did not sign in

Meeting Materials

- May 8, 2012 Meeting Agenda
- Hard copy of all PowerPoint presentations
- Wet Weather Team Ground Rules (Updated May 9, 2008)
- WWT Project Description (June 2006)
- WWT Project Description (Revised May 7, 2012)
- 2012 Draft LTCP Project Re-Assessment (May 8, 2012)
- 2012 Draft SSDP Project Re-Assessment (May 8, 2012)
- Certification Dates for IOAP Projects (May 7, 2012)

Handouts

Louisville and Jefferson County Metropolitan Sewer District
Wet Weather Team Ground Rules
Final Version, 8/15/06 (updated 5/9/08)

A. Participants and Participation

1. Wet Weather Team (WWT) members are "participants." The Wet Weather Team consists of MSD personnel and a subgroup of stakeholders that will provide guidance to MSD. MSD personnel may participate in WWT discussions, but will not be included in decisions regarding stakeholder guidance to MSD. All participants in the stakeholder subgroup have equal representation.

2. The facilitation team is a neutral third party with no stake in the outcome of the discussions. The facilitation team, although under contract to MSD, works for the process and treats all Wet Weather Team participants as equal "clients."

3. To ensure an effective process, participants agree to make every effort to attend all meetings. If an alternate is needed, the suggested alternate will be recommended to and discussed with MSD in advance to ensure there will be appropriate balance and representation on the Wet Weather Team.

4. Observers are welcome at meetings, but are not participants in the Wet Weather Team's deliberations. A portion or portions of each meeting (not to exceed 15 minutes each) will be dedicated to receiving observer comments. Each observer's oral comments must not exceed two minutes, although written comments to the WWT and/or MSD will be welcome throughout the process.

5. MSD will consider requests from participants to invite outside experts to speak at Wet Weather Team meetings on relevant topics; however, MSD reserves the option of providing additional or alternative perspectives at meetings to ensure that the full range of perspectives and factual evidence is provided.

6. Wet Weather Team members are expected to participate through the entire process; however, any participant may withdraw from the process at any time without prejudice. In the event a participant chooses to withdraw, he or she should communicate the reasons for withdrawal and may be replaced by MSD with another representative with similar expertise and experience.

B. Meeting Discussions and Procedures

1. Each participant agrees to honest and direct communications.

2. Participants are encouraged to frame observations in terms of needs and interests, not in terms of positions; opportunities for finding solutions increase dramatically when discussion focuses on needs and interests.

3. Decisions will be made during meetings; if an alternate attends a meeting, he or she must be fully briefed on Wet Weather Team deliberations and able to participate in decision making.

4. The facilitator will manage the discussions, using more or less structure depending on the nature and tenor of the discussions.

5. Participants and/or the facilitator may request a caucus break at any time during the meeting. Individual caucus breaks are not to exceed 15 minutes.

6. A general summary of meeting discussions will be prepared; observations contained in the summary will not be individually attributed. Participants can, however, submit attributed comments directly to MSD and/or the MSD Board for consideration; all written comments will be made available publicly.

7. All meetings will start and finish on time.

C. Desired Outcomes

1. The stakeholder subgroup of the Wet Weather Team is a "consensus seeking" body. The desired outcome is one in which all stakeholder subgroup members support the products and are willing to say so publicly. Full consensus, however, is not necessary to enable the MSD Board to have a balanced and well-informed final decision process.

2. The perspectives of all WWT stakeholders—particularly in cases where consensus is lacking—will be gathered throughout the plan development process and made available to the MSD Board for consideration during their final decision making.

3. To help the process stay on track, agreed-upon, non-mainstream issues may be recorded and dealt with at a later date or referred to other, more appropriate forums.

D. Communications Outside of Wet Weather Team Meetings

1. Individual observations are not for attribution outside the meeting.

2. Participants are encouraged to refer inquiries from the press to the facilitation team or to final meeting summaries or other final Wet Weather Team materials. Individuals who choose to speak with the press agree to limit remarks to personal views and to refrain from characterizing the views of, or attributing comments to, other participants or the full Wet Weather Team.

3. Wet Weather Team participants may share information about the project's process and activities with peers outside the Team, as long as the communications make clear that the information is not an official product of the Team.

4. Wet Weather Team participants may share draft documents and communicate about the project's progress with managers and co-workers within their own organizations. Wet Weather Team participants agree to consult with the Team before sharing draft documents outside of the Team or their immediate co-workers and managers.
    - Certain types of draft materials that contain pre-decisional information that is highly sensitive (e.g., potential sites for constructed facilities) will be labeled "draft: working documents not for release."
    - Documents labeled "not for release" will not be shared during Wet Weather Team stakeholder meetings. Information from "not for release" documents may, however, be generalized or presented at a higher level of detail at WWT meetings if necessary to support WWT deliberations.
    - If Wet Weather Team participants would like to review "not for release" documents individually outside of WWT meetings, MSD will make the documents available for WWT members to review at MSD's office in MSD's presence. WWT members will be asked to sign a confidentiality agreement before reviewing "not for release" documents at MSD.

Louisville and Jefferson County Metropolitan Sewer District
Wet Weather Team Project Description
June 6, 2006

Background

In 2005, the Louisville and Jefferson County Metropolitan Sewer District (MSD) entered into a Consent Decree with the U.S. Environmental Protection Agency and the Kentucky Environmental and Public Protection Cabinet (EPPC) regarding discharges from MSD's sewer system and alleged violations of the federal Clean Water Act. Like many municipalities nationwide, Louisville has a sewer system that collects rainwater runoff along with sewage and industrial wastewater. During storms and other large wet weather events, the volume of wastewater in the system exceeds the capacity of collection pipes and wastewater treatment plants, resulting in releases of untreated wastewater diluted with stormwater—called combined sewer overflows (CSOs)—directly into nearby water bodies. In addition to CSOs, Louisville has had problems with sanitary sewer overflows (SSOs), which are unintentional discharges of raw sewage from separate sanitary sewers that transport wastewater to treatment plants. SSOs can occur as a result of severe weather events, improper connections to the sewer system, and other sewer operation and maintenance conditions. CSOs and SSOs affect the water quality of local watersheds, can threaten public health, and can cause property damage through, for example, basement back-ups.

Under the terms of the Consent Decree, MSD must develop a Long Term Control Plan for CSOs and a Sanitary Sewer Discharge Plan for SSOs by December 31, 2008. The Consent Decree, with enthusiastic support from MSD, contains a provision for stakeholders to participate in the development and implementation of these plans. This "Wet Weather Team" (WWT) will include MSD personnel as well as community representatives and local elected officials. Under the Consent Decree, the WWT "shall include all entities who have a stake in the program outcome, and should be sufficiently multidisciplinary to address the myriad of engineering, economic, environmental, and institutional issues that will be raised during the implementation of the remedial measures under this Consent Decree."

Composition and Role of the Wet Weather Team

MSD has structured the WWT to include a subgroup of individual stakeholders recognized as community "opinion leaders" associated with environmental advocacy, business and industry, elected official, local government agency, community neighborhood, recreation, public health, environmental justice, and organized labor interests. WWT stakeholders will not formally represent their specific affiliated organization (formal representation can inhibit the input and timeliness of participation), but rather seek to provide input reflective of the broad interest area in which they lead.

MSD will seek guidance from the WWT stakeholder subgroup on MSD's investment choices in the design of an integrated Wet Weather Program that will comply with all applicable regulatory requirements and will minimize the impacts of wet weather discharges on water quality, aquatic biota, and human health. MSD and the Louisville and Jefferson County community will need to invest substantial amounts of money in wet weather controls and management efforts to meet our compliance obligations under the Consent Decree and the Clean Water Act. The WWT will help to ensure that these investments are made wisely and in ways that best meet the needs of the local community. During the WWT stakeholder process, MSD will also be conducting other activities related to planning and implementation of the Clean Water Act and the Consent Decree, including developing discharge abatement plans, asset management activities, water quality monitoring, and related wet weather control efforts. MSD may ask WWT stakeholders for input regarding these activities.

The Wet Weather Team Stakeholder Process

MSD plans to use a values-based risk management process to obtain input from WWT stakeholders on MSD's investment decisions for the final Long Term Control Plan for CSOs and the final Sanitary Sewer Discharge Plan for the Louisville and Jefferson County area. This structured process will allow WWT members to systematically consider the importance of potentially competing community values and the technical and management options available to achieve compliance and address community needs. This should improve the outcomes of the Wet Weather Program, engender deeper community understanding of local wet weather management challenges, and encourage community support for the costs and benefits that will result from implementation of the program. Prior to submittal of the final plans to EPA and Kentucky EPPC on or prior to December 31, 2008, MSD will need to provide final draft plans to the MSD Board for consideration and adoption. The MSD Board consists of eight citizens appointed to represent the interests of MSD customers in Louisville and Jefferson County.

A neutral third-party facilitation team will support the WWT stakeholder process, while MSD staff and engineering contractors will provide analytic support and other technical resources for the WWT. Although the facilitation team will be under contract to MSD, its "clients" will be the individual members of the WWT and the wet weather planning process as a whole. The WWT stakeholder subgroup will be a "consensus seeking" body, although progress and ultimate MSD decision-making will not be strictly tied to consensus. The facilitation team will ensure that WWT member perspectives—particularly in cases where consensus is lacking—are gathered throughout the plan development process and made available to the MSD Board to ensure a balanced and well-informed final decision process.

Expectations for Wet Weather Team Participants

Under the Wet Weather Consent Decree, MSD faces strict deadlines for producing deliverables and significant penalties for noncompliance. The WWT stakeholder process must, as a result, move forward at a regular, steady pace for it to be successful. It is anticipated that WWT meetings will occur approximately every four to six weeks from June 2006 through May 2008. The majority of meetings will take place from 4:00 PM to 8:00 or 9:00 PM with dinner provided to WWT members.

For More Information

For more information about MSD's Wet Weather Project and the WWT stakeholder process, please contact Rob Greenwood (rob.greenwood@ross-assoc.com) or Jennifer Tice (jennifer.tice@ross-assoc.com) from the facilitation team at 206-447-1805, or Angela Akridge (AKRIDGE@msdlouky.org) at MSD at (502) 540-6136. MSD's website is http://www.msdlouky.org/.

Background Documentation of WWT Activity through Regulatory Approval of the IOAP

In 2005, the Louisville and Jefferson County Metropolitan Sewer District (MSD) entered into a Consent Decree with the U.S. Environmental Protection Agency (EPA) and the Kentucky Department for Environmental Protection (KDEP) regarding discharges from MSD's sewer system and alleged violations of the federal Clean Water Act. The Consent Decree was amended by Federal Court on April 15, 2009. Like many municipalities nationwide, Louisville has a sewer system that collects rainwater runoff along with sewage and industrial wastewater. During storms and other large wet weather events, the volume of wastewater in the system exceeds the capacity of collection pipes and wastewater treatment plants, resulting in releases of untreated wastewater diluted with stormwater—called combined sewer overflows (CSOs)—directly into nearby water bodies. In addition to CSOs, Louisville has had problems with sanitary sewer overflows (SSOs), which are unintentional discharges of raw sewage from separate sanitary sewers that transport wastewater to treatment plants. SSOs can occur as a result of severe weather events, improper connections to the sewer system, and other sewer operation and maintenance conditions. CSOs and SSOs affect the water quality of local watersheds, can threaten public health, and can cause property damage through, for example, basement back-ups.

Under the terms of the Amended Consent Decree, MSD developed and submitted the Integrated Overflow Abatement Plant (IOAP) by December 31, 2008. This integrated plan contained a Long Term Control Plan (LTCP) for CSOs and a Sanitary Sewer Discharge Plan (SSDP) for SSOs. The Amended Consent Decree, with enthusiastic support from MSD, contained a provision for Stakeholder Group to participate in the development and implementation of these plans. This "Wet Weather Team" (WWT) included MSD personnel as well as community representatives and local elected officials (Stakeholder Group). Under the Amended Consent Decree, the WWT "shall include all entities who have a stake in the program outcome, and should be sufficiently multidisciplinary to address the myriad of engineering, economic, environmental, and institutional issues that will be raised during the implementation of the remedial measures under this Amended Consent Decree." Recognizing that the IOAP would define a program representing a major community investment, MSD subsequently expanded the role of the WWT Stakeholder Group to assist in developing a framework for decision-making that included consideration of community values, priorities, and level of service in determining required community wet weather management investments.

MSD first chartered the WWT Stakeholder Group in July 2006. The group's charge, as explicitly described in the formal charter, was to assist with the development of the integrated overflow abatement program that complies with the Clean Water Act (CWA) requirements and addresses the community's problems with wet weather sewer overflows. The WWT Stakeholder Group Charter stated that the group would provide guidance on the development of an integrated Wet Weather Program (later referred to as the IOAP) that would comply with applicable regulatory requirements and would minimize the impacts of wet weather discharges on water quality, aquatic biota, and human health. Under the Charter, the WWT Stakeholder Group was further charged with providing input into a plan for funding MSD's Wet Weather Program, and

providing input into a program for public information, education, and involvement. Other areas of involvement for the WWT Stakeholder Group included advising MSD on overall investment, policy, and performance choices in the development and implementation of the IOAP, as well as specific components of discharge abatement plans including asset management activities, water quality monitoring, and related wet weather control efforts.

The WWT Stakeholder Group process focused on gaining explicit, consensus-based support of the IOAP program elements. A focused IOAP "vision" was developed in close consultation with the WWT Stakeholder Group members, encompassing nine pages of text and covered the following IOAP elements:

- Expected water quality benefits of the IOAP;
- Review of the values-based performance evaluation framework used to develop the IOAP;
- Control levels for combined and sanitary sewer overflows;
- A high-level description of the project alternatives selected for inclusion in the IOAP;
- A review of the public information, education, and involvement program;
- An outline of the post-construction compliance monitoring program;
- A discussion of future development considerations; and
- An overview of the IOAP funding plan.

In addition to the vision document, the Stakeholder Group indicated their explicit support for the IOAP through the development of a stakeholder transmittal memorandum. This memorandum came from the WWT stakeholder members and was addressed to the MSD Board. The memorandum described the WWT composition and charge and the results of the WWT Stakeholder Group's deliberations. In particular, the memorandum identified four "pillars" of consensus reached by the WWT Stakeholder Group:

- Support for the community values-based analytic framework that was the underpinning of the IOAP alternatives selection process;
- Support for the application of the analytic process, based on their review of example outputs, in the development of the Final IOAP;
- Support for the overall IOAP vision (covering the anticipated water quality benefits and program funding needs); and
- Support for the overall mix of IOAP wet weather-related projects.

This memorandum acted as the stakeholder support final documentation of for the IOAP and sent a clear, concise, and firm message of support to the MSD Board and the Louisville community.

The participation the WWT Stakeholder Group in developing a project selection and prioritization process was directly responsible for MSD achieving regulatory compliance with a plan that could easily have cost us considerably more, if we had followed the approach used by other communities. The process utilized has been cited by USEPA Region 4 as a model for other communities to follow.

Original Composition and Role of the WWT

MSD structured the WWT Stakeholder Group to include a subgroup of individual Stakeholder Group recognized as community "opinion leaders" associated with environmental advocacy, business and industry, elected official, local government agency, community neighborhood, recreation, public health, environmental justice, and organized labor interests. It was explicitly stated in the Group charter that members of the WWT Stakeholder Group do not formally represent their specific affiliated organization (formal representation can inhibit the input and timeliness of participation), but rather seek to provide input reflective of the broad interest area in which they lead.

MSD sought guidance from the WWT Stakeholder Group on investment choices in the design of an integrated Wet Weather Program that complies with all applicable regulatory requirements and minimizes the impacts of wet weather discharges on water quality, aquatic biota, and human health. MSD and the Louisville and Jefferson County community will be investing substantial amounts of money in wet weather controls and management efforts to meet our compliance obligations under the Amended Consent Decree and the Clean Water Act. The WWT Stakeholder Group helped to ensure that these investments will be made wisely and in ways that best meet the needs of the local community.

Original WWT Stakeholder Group Process

A values-based risk management process was utilized to obtain input from the WWT Stakeholder Group on MSD's investment decisions for the IOAP. This structured process allowed the WWT Stakeholder Group members to systematically consider the importance of potentially competing community values and the technical and management options available to achieve compliance and address community needs. The process was open and consensus seeking. However, the schedule to complete the IOAP, as required by the Amended Consent Decree, necessitated clear agreement between MSD and the WWT Stakeholder Group that decisions would be made in a timely manner with the plan completed in strict accordance with Amended Consent Decree deadlines. An important result of this agreement was MSD's establishment of the group as a "consensus seeking" body. The overall desired outcome was full Stakeholder Group support of the IOAP, but group members understood that MSD would need to move forward and make decisions even in the absence of consensus. The Charter made clear that, whenever consensus was lacking, the full range of views would be documented and made available to the MSD Board.

Under the guidance of professional facilitation, MSD and the WWT Stakeholder Group met 22 times between July 2006 and December 2008. Each meeting - which typically ran from 4:30 to 8:30 PM - had a set agenda that included presentations from MSD, the technical team, and the facilitators. The content of presentations included the most recent developments and progress on projects, rates issues, and other relevant topics. Each meeting also afforded the opportunity for the WWT Stakeholder Group to engage each other in discussion and pose questions and raise issues to MSD and the consultant team.

All meetings were open to the public, and attended at various times by MSD staff and contractors, neighborhood representatives, members of the press, and other interested parties. These guests were allowed to observe the WWT Stakeholder Group meeting, and were afforded the opportunity to provide comments at designated times. WWT Stakeholder Group meeting summaries, presentations, handouts, and documents are posted on the Project WIN website under the WWT Document Repository. Documents are named and organized consistent with the WWT meeting in which the document was provided.

WWT Stakeholder Group Expectations Moving Forward

At the last regularly scheduled WWT Stakeholder Group meeting in December 2008, it was assumed that the group's work was complete. However, there is an additional opportunity and need to continue active participation. While it was believed the WWT Stakeholder Group had served the purpose of its original charter with the successful completion of the IOAP, the language in the Amended Consent Decree requires continuation of the WWT through the entire implementation phase, thereby implying continuing some form of a WWT Stakeholder Group.

The challenges facing the community over the next few years include developing and gaining approval for a modification to the IOAP that will improve overflow abatement performance at the same estimated cost. In addition, three quarters of all the IOAP projects will move into the construction phase over the next few years. A smaller group of the original WWT Stakeholder Group will provide considerable value by serving as a sounding board to ensure the modifications to the plan and specific project designs remain true to the values, priorities and financial plan previously developed and approved by the regulators. Another critical area where the WWT Stakeholder Group will help is in guiding our continually evolving public education, outreach and input approach. In the past the WWT Stakeholder Group gave us valuable insights into how to reach the public. As the implementation phases change, continued input in this very important area will be needed.

It is in the best interest of the community to continue working with the same people to leverage the 2 ½ year education process that occurred during development of the IOAP. There simply is not time in the schedule to bring new members up to speed on all that has previously occurred to meet the schedule commitments identified in the IOAP.

Prior to submittal of the IOAP 2012 Modifications to EPA and KDEP by late 2012/early 2013, MSD will need to provide final draft plans to the MSD Board for consideration and adoption. The MSD Board consists of eight citizens appointed to represent the interests of MSD customers in Louisville and Jefferson County.

A third-party engineering contractor will support the WWT Stakeholder Group process, while MSD staff will facilitate and provide analytic support and other technical resources. This same values-based risk management decision-making process will be used to develop the IOAP 2012 Modifications. The WWT Stakeholder Group will be a "consensus seeking" body, although progress and ultimate MSD decision-making will not be strictly tied to consensus. The

facilitation team will ensure that the WWT Stakeholder Group member perspectives—particularly in cases where consensus is lacking—are gathered throughout the plan modification process and made available to the MSD Board to ensure a balanced and well-informed final decision process.

Under the Amended Consent Decree, MSD faces strict deadlines for producing deliverables and noncompliance will result in significant penalties. The WWT Stakeholder Group process must, as a result, move forward at a regular, steady pace for it to be successful. It is anticipated that the WWT meetings will occur twice per year. The majority of meetings will take place from 5:30 PM to 8:30 PM.

Wet Weather Team Stakeholder Group Membership Moving Forward

Per the Amended Consent Decree, the WWT includes "MSD personnel such as wastewater treatment plant operators and engineering personnel, local political officials, the general public, including rate payers and environmental interests. Private consulting resources are also included." Since the WWT will remain active through the year 2024, it is likely that attrition of members will occur. If any of the categories required by the Amended Consent Decree become under-represented, MSD will replace them to ensure that all requirements are met.

If replacement of the Wet Weather Team members is required, under Paragraph 23 of the Amended Consent Decree it is the responsibility of the Regulatory Services Director to select those replacements. Consistent with the original selection criteria, a replacement should be a recognized community opinion leader associated with the specific interest group needing representation. The replacement should also be free of any personal or organizational conflict of interest per the MSD Ethics Policy governing MSD staff. (Even though the Stakeholder Group members are not MSD staff, it is deemed important for the credibility of the group that no real or perceived conflicts of interest exist). In addition the replacement should not be a party to any active legal action against MSD or any other members of the WWT, or in the last 10 years have been a party to a legal action against MSD or any other member of the WWT which was lost, dismissed, or voluntarily abandoned without a settlement.

At the time of this update, the following WWT Stakeholder Group members are continuing their active involvement.

Name	Organization/Interest
Steve Barger	Labor (retired)
Susan Barto	Mayor of Lyndon
Stuart Benson	Louisville Metro Councilman, District 20
Allan Dittmer	University of Louisville Provost Office
Arnita Gadson	Kentucky Environmental Quality Commission
Mike Heitz	Louisville Metro Parks
Tom Herman	Zeon Chemicals
Rick Johnstone	Deputy Mayor, Louisville Metro Mayor's Office (Retired)
Bob Marrett	CMB Development Company, LLC
Kurt Mason	Jefferson County Soil and Water Conservation
Jim Mims	Department of Codes and Regulations
Lisa Santos	Irish Hill Neighborhood Association
Bruce Scott	Kentucky Waterways Alliance
David Tollerud	University of Louisville, School of Public Health and Environmental Sciences
Tina Ward-Pugh	Louisville Metro Councilwoman, District 9
David Wicks	Jefferson County Public Schools (retired)

For More Information

For more information about MSD's WWT Stakeholder Group process, please contact Angela Akridge (AKRIDGE@msdlouky.org) at MSD at (502) 540-6136.

Consent Decree Project
Status as of May 1, 2012

Consent Decree Projects

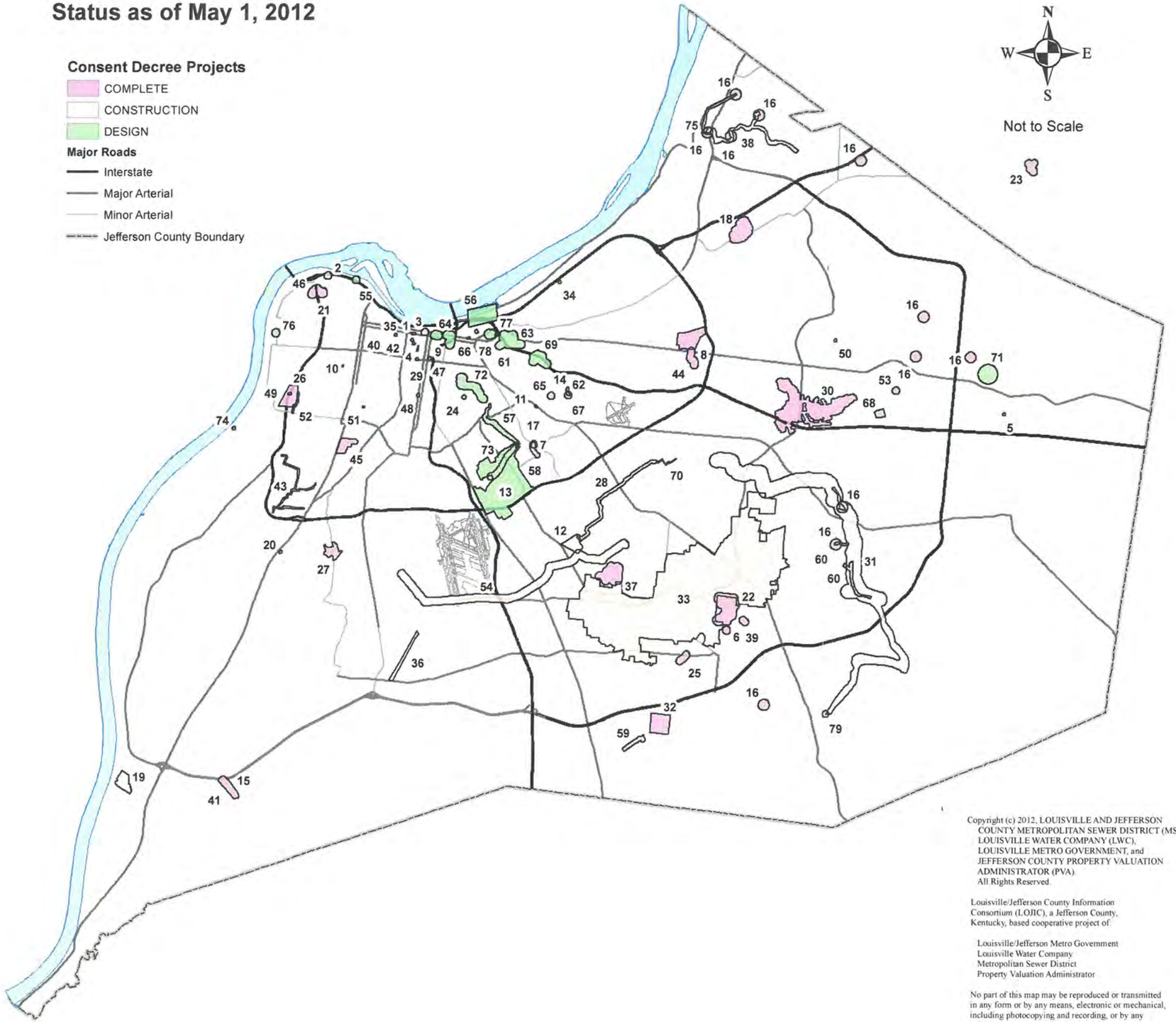
- COMPLETE
- CONSTRUCTION
- DESIGN

Major Roads

- Interstate
- Major Arterial
- Minor Arterial
- Jefferson County Boundary

N
W E
S

Not to Scale



Map Created: 02-MAY-2012

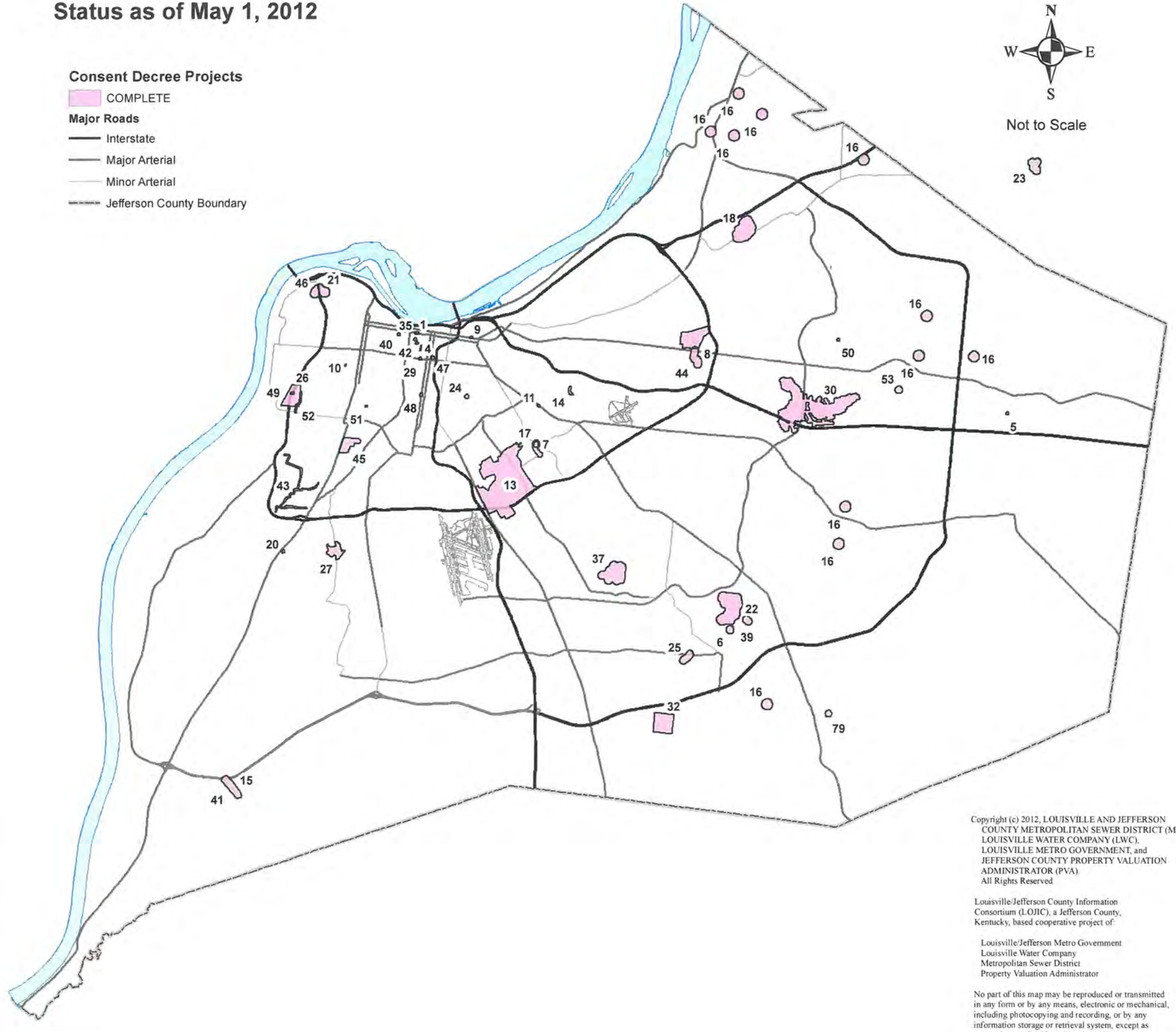
J:\gis_records\projc xds\Courier.Journal\Maps\CD Projects2012

Project_ID	Project Name
1	2300 BLOCK OF CONGRESS STREET (formerly SEVENTH AND MARKET) PERMEABLE ALLEY
2	34TH STREET FPS DWO ELIMINATION
3	4TH STREET FPS DWO ELIMINATION
4	6TH & MARTIN LUTHER KING (formerly SIXTH AND MUHAMMAD ALI) GREEN PARKING LOT
5	ASHBURTON PS IMPROVEMENTS AND DIVERSION
6	AVANTI PS ELIMINATION
7	BEARGRASS INTERCEPTOR REHABILITATION PH 2
8	BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT
9	BILLY GOAT STRUT (formerly CAMPBELL AND MAIN) PERMEABLE ALLEY
10	BRANDIES APARTMENTS RAIN GARDEN
11	BROWN FORMAN GREEN ROOF
12	BUECHEL SURGE BASIN
13	CAMP TAYLOR #1 SSES
14	CHEROKEE PARK STREAM RESTORATION
15	CLIFTON TRIANGLE AREA RAIN GARDEN
16	CPE/CCP MODIFICATIONS TO WQTC
17	CSO 108 DAM MODIFICATIONS
18	DERINGTON COURT PUMP STATION I/I INVESTIGATION
19	DRGWQTC: WET WEATHER TREATMENT FACILITY
20	EAST ROCKFORD LANE PS RELOCATION
21	EAST WASHINGTON STREET AT ADAMS STREET GREEN STREET (formerly GI I-264 ON-RAMP DRY WELL)
22	EDSEL PUMP STATION I/I INVESTIGATION
23	FLOYDSBURG RD I/I INVESTIGATION & REHABILITATION
24	GERMANTOWN RAIN GARDEN PROJECT
25	GOVERNMENT CENTER PS WEATHER STORAGE
26	GRAWEMAYER HALL PARKING LOT (formerly GI I-264 & GIBSON DRY WELL)
27	HAZELWOOD PUMP STATION I/I INVESTIGATION
28	HIKES POINT INTERCEPTOR PH II
29	HOUSING AUTHORITY GREEN ROOF (formerly SIXTH AND BROADWAY RAIN GARDEN)
30	HURSTBOURNE I/I INVESTIGATION
31	JEFFERSONTOWN WQTC EIMINATION
32	LANTANA PUMP STATION WET WEATHER STORAGE
33	LEA ANN WAY SANITARY SEWER I/I REHABILITATION
34	MELLWOOD PUMP STATION ELIMINATION
35	MSD MAIN OFFICE PARKING LOT BIOSWALE
36	NORTHERN DITCH INTERCEPTOR (NR-1A) SANITARY SEWER PROJECT
37	PARKVIEW ESTATES I&I INVESTIGATION
38	PROSPECT PHASE I - WQTC ELIMINATION
39	RUNNING FOX PS ELIMINATION
40	SCHOLAR HOUSE GREEN PARKING LOT (formerly TWELFTH AND JEFFERSON)
41	SEP - POND CREEK TRAIL STREAM RESTORATION
42	SEVENTH AND CEDAR GREEN PARKING LOT
43	SHIVELY INTERCEPTOR
44	SINKING FORK RELIEF SEWER
45	SONNE PUMP STATION I/I INVESTIGATIONS
46	SPEED ART MUSEUM INFILTRATION TRENCH (formerly GI I-264 OFF-RAMP DRY WELL)
47	SWIFT COMPANY GREEN PROJECT (formerly SECOND AND BROADWAY GREEN PARKING LOT)
48	THIRD AND ORMSBY BIOBIOFILTRATION SWALES
49	THIRD STREET AND CAMPBELL VENTURES (formerly GI JFK MONTESSORI AREA DRY WELL)
50	VANNAH AVENUE PUMP STATION ELIMINATION
51	W. GAULBERT & W. HILL (formerly SEVENTEENTH AND W. HILL) PERMEABLE ALLEY
52	WILSON CROSSINGS GREEN (formerly GI RUSSELL LEE DRIVE DRY WELL)
53	WOODLAND HILL PS DIVERSION
54	SOUTHEASTERN INTERCEPTOR RELIEF
55	27TH STREET FLOOD PUMP STATION
56	ADAMS STREET STORAGE BASIN
57	CALVARY-CREEKSIDE STORAGE BASIN
58	CAMP TAYLOR #2 REPLACE SEWERS
59	CHARLESWOOD SUBDIVISION INTERCEPTOR
60	CHENOWETH HILLS WQTC ELIMINATION
61	CSO 093 SEWER SEPARATION
62	CSO 123 DOWNSPOUT DISCONNECTION
63	CSO 140 SEWER SEPARATION
64	CSO 160 SEWER SEPARATION
65	CSO 206 SEWER SEPARATION
66	CSO 58 SEWER SEPARATION
67	DOWNSPOUT DISCONNECTION @ CSO 123
68	EDEN CARE PUMP STATION INLINE STORAGE
69	I-64 & GRINSTEAD DRIVE STORAGE BASIN
70	KLONDIKE INTERCEPTOR
71	LAKE FOREST PS SSO ELIMINATION
72	LOGAN STREET & BRECKINRIDGE STREET STORAGE BASIN
73	NIGHTINGALE PUMP STATION REPLACEMENT
74	PADDY'S RUN WW TRMT FACILITY
75	PROSPECT PHASE II - HARRODS CREEK PS
76	SHAWNEE FLOOD PUMP STATION
77	STORY AVENUE & MAIN STREET STORAGE BASIN
78	STORY AVENUE & SPRING STREET STORAGE BASIN
79	FAIRMOUNT ROAD PUMP STATION EXPANSION PROJECT

MSD
Metropolitan Sewer District

LOJIC
Louisville/Jefferson County Information Consortium

Consent Decree Project
Status as of May 1, 2012



Project_ID	Project Name
1	2300 BLOCK OF CONGRESS STREET (formerly SEVENTH AND MARKET) PERMEABLE ALLEY
4	6TH & MARTIN LUTHER KING (formerly SIXTH AND MUHAMMAD ALI) GREEN PARKING LOT
5	ASHBURTON PS IMPROVEMENTS AND DIVERSION
6	AVANTI PS ELIMINATION
7	BEARGRASS INTERCEPTOR REHABILITATION PH 2
8	BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT
9	BILLY GOAT STRUT (formerly CAMPBELL AND MAIN) PERMEABLE ALLEY
10	BRANDIES APARTMENTS RAIN GARDEN
11	BROWN FORMAN GREEN ROOF
13	CAMP TAYLOR #1 SSES
14	CHEROKEE PARK STREAM RESTORATION
15	CLIFTON TRIANGLE AREA RAIN GARDEN
16	CPE/CCP MODIFICATIONS TO WQTC
17	CSO 108 DAM MODIFICATIONS
18	DERINGTON COURT PUMP STATION I/I INVESTIGATION
20	EAST ROCKFORD LANE PS RELOCATION
21	EAST WASHINGTON STREET AT ADAMS STREET GREEN STREET (formerly GI I-264 ON-RAMP DRY WELL)
22	EDSEL PUMP STATION I/I INVESTIGATION
23	FLOYDSBURG RD I/I INVESTIGATION & REHABILITATION
24	GERMANTOWN RAIN GARDEN PROJECT
25	GOVERNMENT CENTER PS WEATHER STORAGE
26	GRAWEMAYER HALL PARKING LOT (formerly GI I-264 & GIBSON DRY WELL)
27	HAZELWOOD PUMP STATION I/I INVESTIGATION
29	HOUSING AUTHORITY GREEN ROOF (formerly SIXTH AND BROADWAY RAIN GARDEN)
30	HURSTBOURNE I/I INVESTIGATION
32	LANTANA PUMP STATION WET WEATHER STORAGE
35	MSD MAIN OFFICE PARKING LOT BIOSWALE
37	PARKVIEW ESTATES I&I INVESTIGATION
39	RUNNING FOX PS ELIMINATION
40	SCHOLAR HOUSE GREEN PARKING LOT (formerly TWELFTH AND JEFFERSON)
41	SEP - POND CREEK TRAIL STREAM RESTORATION
42	SEVENTH AND CEDAR GREEN PARKING LOT
43	SHIVELY INTERCEPTOR
44	SINKING FORK RELIEF SEWER
45	SONNE PUMP STATION I/I INVESTIGATIONS
46	SPEED ART MUSEUM INFILTRATION TRENCH (formerly GI I-264 OFF-RAMP DRY WELL)
47	SWIFT COMPANY GREEN PROJECT (formerly SECOND AND BROADWAY GREEN PARKING LOT)
48	THIRD AND ORMSBY BIOBIOFILTRATION SWALES
49	THIRD STREET AND CAMPBELL VENTURES (formerly GI JFK MONTESSORI AREA DRY WELL)
50	VANNAH AVENUE PUMP STATION ELIMINATION
51	W. GAULBERT & W. HILL (formerly SEVENTEENTH AND W. HILL) PERMEABLE ALLEY
52	WILSON CROSSINGS GREEN (formerly GI RUSSELL LEE DRIVE DRY WELL)
53	WOODLAND HILL PS DIVERSION
79	FAIRMOUNT ROAD PUMP STATION EXPANSION PROJECT

Map Created: 02-MAY-2012

J:\gis_records\proje ...ds\Courier.Journal\Maps\CD Projects2012

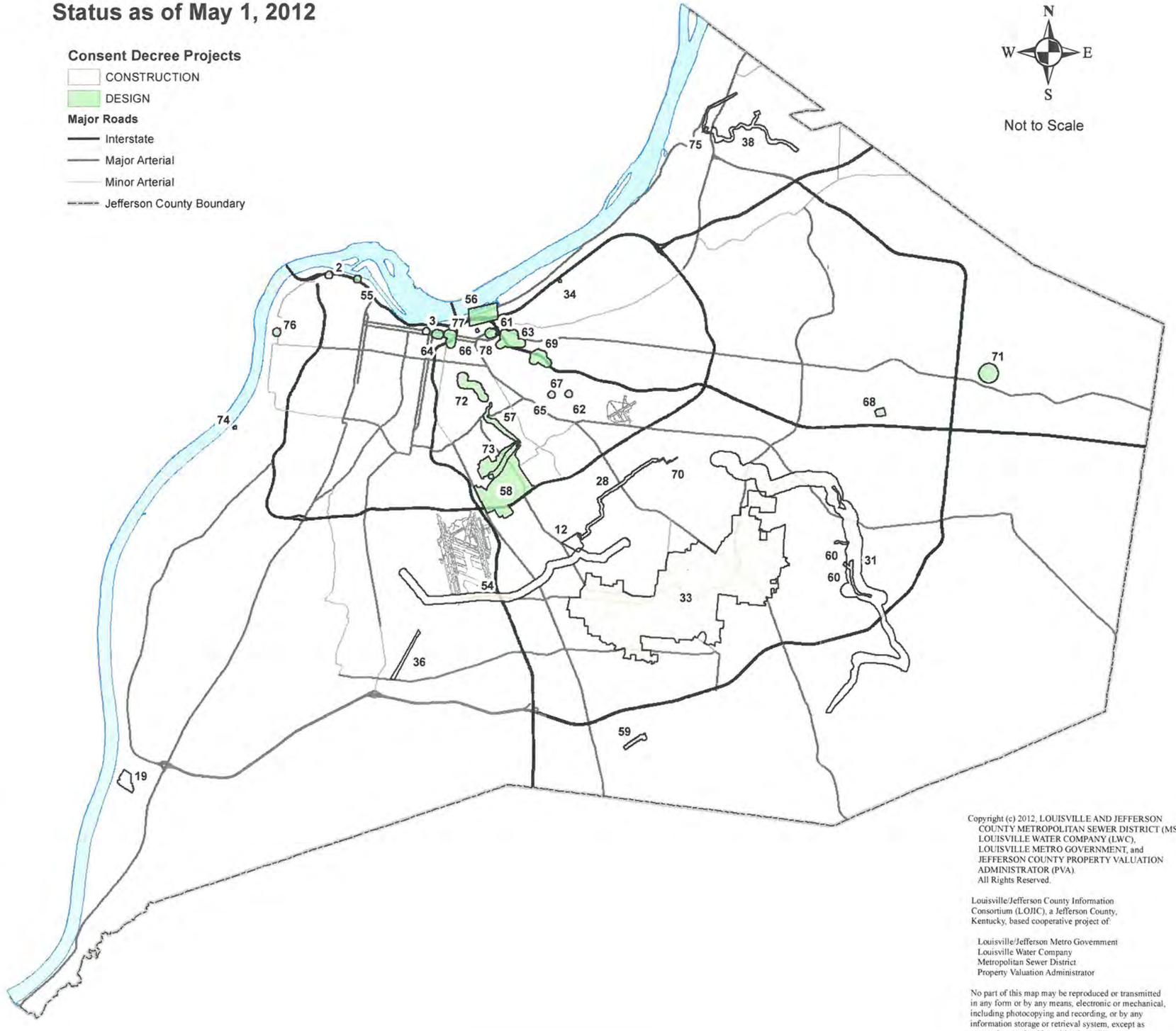
Consent Decree Project
Status as of May 1, 2012

Consent Decree Projects

- CONSTRUCTION
- DESIGN

Major Roads

- Interstate
- Major Arterial
- Minor Arterial
- Jefferson County Boundary



Map Created: 02-MAY-2012

J:\gis_records\proje :ds\CourierJournalMaps\CD Projects2012

DESIGN

Project_ID	Project Name
55	27TH STREET FLOOD PUMP STATION
56	ADAMS STREET STORAGE BASIN
57	CALVARY-CREEKSIDE STORAGE BASIN
58	CAMP TAYLOR #2 REPLACE SEWERS
59	CHARLESWOOD SUBDIVISION INTERCEPTOR
60	CHENOWETH HILLS WQTC ELIMINATION
61	CSO 093 SEWER SEPARATION
62	CSO 123 DOWNSPOUT DISCONNECTION
63	CSO 140 SEWER SEPARATION
64	CSO 160 SEWER SEPARATION
65	CSO 206 SEWER SEPARATION
66	CSO 58 SEWER SEPARATION
67	DOWNSPOUT DISCONNECTION @ CSO 123
68	EDEN CARE PUMP STATION INLINE STORAGE
69	I-64 & GRINSTEAD DRIVE STORAGE BASIN
70	KLONDIKE INTERCEPTOR
71	LAKE FOREST PS SSO ELIMINATION
72	LOGAN STREET & BRECKINRIDGE STREET STORAGE BASIN
73	NIGHTINGALE PUMP STATION REPLACEMENT
74	PADDY'S RUN WW TRMT FACILITY
75	PROSPECT PHASE II -HARRODS CREEK PS
76	SHAWNEE FLOOD PUMP STATION
77	STORY AVENUE & MAIN STREET STORAGE BASIN
78	STORY AVENUE & SPRING STREET STORAGE BASIN

CONSTRUCTION

Project_ID	Project Name
2	34TH STREET FPS DWO ELIMINATION
3	4TH STREET FPS DWO ELIMINATION
12	BUECHEL SURGE BASIN
19	DRGWQTC: WET WEATHER TREATMENT FACILITY
28	HIKES POINT INTERCEPTOR PH II
31	JEFFERSONTOWN WQTC ELIMINATION
33	LEA ANN WAY SANITARY SEWER I/I REHABILITATION
34	MELLWOOD PUMP STATION ELIMINATION
36	NORTHERN DITCH INTERCEPTOR (NR-1A) SANITARY SEWER PROJECT
38	PROSPECT PHASE I - WQTC ELIMINATION
54	SOUTHEASTERN INTERCEPTOR RELIEF

MSD Metropolitan Sewer District

LOJIC Louisville/Jefferson County Information Consortium

2012 Draft LTCP Project Re-Assessment

2012 Level of Control

** Level of Control Changed from 2009 to 2012 Analysis

Project Name	Receiving Stream	CSO Controlled	2009 LTCP LOC (Overflows per Year)	2009 LTCP Size (MG)	2009 LTCP Cost	0 Overflows/YR		2 Overflows/YR		4 Overflows/YR		8 Overflows/YR		2012 Re-assessment Size (MG)	2012 LTCP/Re-assessment Cost	Cost Difference: Re-assessment Cost vs. LTCP Cost	Completion Date	Proposed Completion Date	Explanation for Proposed Schedule Revisions
						Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost						
I-64 and Grinstead Drive Storage Basin**	Middle Fork	CSO125, CSO126, CSO127, CSO166	8	2.74	$12, 950,000	22.45	18.39	17.46	17.71	15.13	19.9	12.46	19.44	15.13	$48,970,000	$36,020,000	12/31/2014	12/31/2020	Public comments received requested serious consideration for green infrastructure utilization in the basin drainage area along with intensive public involvement. Due to the size of the drainage area and the increased size and cost of the basin, additional time is needed to address this project appropriately.
Story Avenue and Main Street Storage Basin	Ohio River	CSO020	8	0.13	$1,580,000	16.58	12.28	9.79	14.74	7.12	19.4	5.42	21.6	5.42	$12,580,000	$11,000,000	12/31/2013	12/31/2020	Story and Main & 13th and Rowan basins are linked together functionally. Story & Main grew substantially in size due to more conservative operational assumptions for Sturkey PS. MSD proposes to split out and accelerate the schedule of CRD/CSO 22/CSO 23/CSO054 projects using green infrastructure and localized storage. Additional time is requested to right size the Story/Main and 13th/Rowan basins once the impacts of green infrastructure and upstream storage are realized and monitored.
13th Street and Rowan Street Storage Basin**	Ohio River	CSO050, CSO051, CSO052, CSO053, CSO054, CSO055, CSO056, CSO150,CSO155	4	14.44	$49,680,000	35.15	25.7	11.14	39.46	8.48	46	5	48.26	5	$19,870,000	($29,810,000)	12/31/2020	12/31/2020	MSD proposes to split CRD/CSO 22/CSO 23 projects into separate projects and move them up in schedule. The storage basin is proposed to remain on the same schedule.
CRD CSO Green Infrastructure & Localized Storage**	Ohio River	Central Relief Drain CSOs (8 total with an AAOV)	4											1.07 MG (combined)	$5,216,250	$5,216,250		Staggered deadlines from 2014 to 2020 - TBD	New project. MSD proposes to split CRD/CSO 22/CSO 23/CSO054 projects into separate projects and move them up in schedule. The storage basin is proposed to remain on the same schedule.
CSO022, CSO023 & CSO054 Green Infrastructure & Localized Storage **	Ohio River	CSO022, CSO023, CSO054	4											1.20 MG	$3,774,000	$3,774,000		2017	New project. MSD proposes to split CRD/CSO 22/CSO 23/CSO054 projects into separate projects and move them up in schedule. The storage basin is proposed to remain on the same schedule.
Lexington Road and Payne Street Storage Basin**	South Fork	CSO084, CSO118, CSO119, CSO120, CSO121, CSO141, CSO153, CSO082	8	7.31	$25,200,000	8.18	75.16	6.73	65.1	5.95	70.2	4.03	73.09	8.18	$25,900,000	$700,000	12/31/2020	12/31/2020	No changes are proposed for this project schedule.
Portland Wharf Storage Basin	Ohio River	CSO019	8	6.37	$20,000,000	2.98	29.55	2.01	30.04	1.41	33.5	0.97	27.42	1.14	$10,330,000	($9,670,000)	12/31/2019	12/31/2019	No changes are proposed for this project schedule.

2012 Draft LTCP Project Re-Assessment

2012 Level of Control

** Level of Control Changed from 2009 to 2012 Analysis

Project Name	Receiving Stream	CSO Controlled	2009 LTCP LOC (Overflows per Year)	2009 LTCP Size (MG)	2009 LTCP Cost	0 Overflows/YR		2 Overflows/YR		4 Overflows/YR		8 Overflows/YR		2012 Re-assessment Size (MG)	2012 LTCP/Re-assessment Cost	Cost Difference	Completion Date	Proposed Completion Date	Explanation for Proposed Schedule Revisions
						Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost			Re-assessment Cost vs. LTCP Cost			
Logan Street and Breckinridge Street – Calvary Cemetery Storage Basin	South Fork	CSO137, CSO106, CSO097, CSO110, CSO148, CSO111, CSO151, CSO113, CSO152, CSO091, CSO146, CSO149, CSO117	8	Logan – 11.83	Logan - $30,320,000	34.2	50.29	26.71	53.25	20.96	60.5	16.6	61.19	16.6	$48,240,000	$4,200,000	12/31/2017	12/31/2017	A review of project approach and benefit/cost results eliminated the Calvary Creekside basin, consolidating storage to the Logan Street basin location. No changes to schedule are proposed.
				Calvary – 3.46	Calvary - $13,720,000														Basin volume now addressed through Logan Street. Project is proposed to be eliminated.
				Combined – 15.29	Combined - $44,040,000														
Nightingale Pump Station Replacement & Storage**	South Fork	CSO018	NA	60 MGD/0 MG	$15,710,000	33 MGD/0.2 6 MG	14.8	33 MGD/0.1 1 MG	10.4	33 MGD/0.0 1 MG	11	33 MGD/NA	NA	33 MGD/0.26 MG	$9,563,000	($6,147,000)	12/31/2016	12/31/2015	MSD proposed to move this project up in schedule due to operational advantages that would be realized.
Algonquin Parkway Storage Basin/In-line Storage	Ohio River	CSO016, CSO210, CSO211	8	4.84	$17,300,000	12.66	52.93	7.82	56.07	0.81	78.6	0	116.37	0 (In-line storage only)	$0	($17,300,000)	12/31/2018	Eliminated	Offline storage eliminated. Optimized operating rules between Paddy's Run HRT and Morris Forman's Main Diversion Structure demonstrated that only inline storage was needed at Southern Outfall Relief 1 and Southern Outfall Relief 2. MSD proposes to move the first of these two pieces up in schedule, the second piece back in schedule one year and eliminate the Algonquin storage basin portion of the project.
SOR1	Ohio River	CSO016/210	8	NA	NA	-	-	-	-	-	-	-	-	0 (In-line storage only)	$3,544,000	$3,544,000	12/31/2016	2015	New stand-alone project. Optimized operating rules between Paddy's Run HRT and Morris Forman's Main Diversion Structure demonstrated that only inline storage was needed at Southern Outfall Relief 1 and Southern Outfall Relief 2. MSD proposes to move the first of these two pieces up in schedule, the second piece back in schedule one year and eliminate the Algonquin storage basin portion of the project.
SOR2	Ohio River	CSO211	8	NA	NA	-	-	-	-	-	-	-	-	0 (In-line storage only)	$3,544,000	$3,544,000	12/31/2018	2018	New stand-alone project. Optimized operating rules between Paddy's Run HRT and Morris Forman's Main Diversion Structure demonstrated that only inline storage was needed at Southern Outfall Relief 1 and Southern Outfall Relief 2. MSD proposes to move the first of these two pieces up in schedule, the second piece back in schedule one year and eliminate the Algonquin storage basin portion of the project.

2012 Draft LTCP Project Re-Assessment

2012 Level of Control

** Level of Control Changed from 2009 to 2012 Analysis

Project Name	Receiving Stream	CSO Controlled	2009 LTCP LOC (Overflows per Year)	2009 LTCP Size (MG)	2009 LTCP Cost	0 Overflows/YR		2 Overflows/YR		4 Overflows/YR		8 Overflows/YR		2012 Re-assessment Size (MG)	2012 LTCP/Re-assessment Cost	Cost Difference: Re-assessment Cost vs. LTCP Cost	Completion Date	Proposed Completion Date	Explanation for Proposed Schedule Revisions
						Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost	Size (MG) or Rate (mgd)	Present Worth Benefit-Cost						
Paddy's Run RTB	Ohio River	CSO015, CSO191	8	50 MGD	$24,940,000	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	50 MGD/ 18 MG Storage	TBD	TBD	12/31/2014	12/31/2017	Optimization w flow through Morris Forman's Main Diversion Structure and MSD's Real Time Control strategy added storage volume requirements. Additional time for construction is being requested due to size increase, moving the site, offline storage and integration of Southwestern Pump Station.
Story Avenue and Spring Street Storage Basin	South Fork	CSO130	8	0.01	$1,077,000	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD	NA (Green Projects)	NA	$0	12/31/2016	12/31/2014	A project modification request to use a suite of green infrastructure projects in lieu of the storage basin is anticipated in early 2012. No schedule change for overflow reduction is anticipated.
Southwestern Parkway Storage Basin	Ohio River	CSO104, CSO105, CSO189	0	5.08	$17,620,000	11.07	24.06	8.39	22.54	6.99	22.6	5.08	19.41	11.07	$30,940,000	$13,320,000	12/31/2018	12/31/2018	No changes are proposed for this project schedule.
Clifton Heights Storage Basin	Muddy Fork	CSO132, CSO154, CSO167	8	6.55	$13,870,000	6.68	55.38	6.23	46.76	4.63	54.2	3.28	61.26	3.28	$8,025,000	($5,845,000)	12/31/2018	12/31/2018	No changes are proposed for this project schedule.
18th and Northwestern Pkwy Storage Basin	Ohio River	CSO190	8	1.31	$4,514,000	2.06	53.14	1.88	47.22	1.76	49.1	1.24	55.57	1.24	$4,377,000	($137,000)	12/31/2017	12/31/2017	No changes are proposed for this project schedule.
Adams Street Storage Basin (Revised to Sewer Separation)**	Ohio River	CSO172	8	0.12	$983,000	-	-	-	-	-	-	-	-	0	$73,700	($909,300)	12/31/2012	12/31/2012	Project modification request to revise this project to a sewer separation has been submitted and accepted. Upon inspection of the sewer system, all but two catch basins were found to have been separated already during recent redevelopment.
CSO108 Dam Modification	South Fork	CSO108	NA	-	$150,000	-	-	-	-	-	-	-	-	NA	$150,000	$0	12/31/2010	12/31/2010	Completed
CSO123 Downspout Disconnection	Middle Fork	CSO123	NA	-	$315,000	-	-	-	-	-	-	-	-	NA	$315,000	$0	12/31/2012	12/31/2012	Considering the use of green infrastructure and localzed storage for this area.
CSO206 Sewer Separation	Middle Fork	CSO206	NA	-	$3,842,000	-	-	-	-	-	-	-	-	NA	$3,842,000	$0	12/31/2013	12/31/2013	No Change
CSO058 Sewer Separation	Ohio River	CSO058	NA	-	$1,361,000	-	-	-	-	-	-	-	-	NA	$1,361,000	$0	12/31/2014	12/31/2014	Considering the use of green infrastructure and localzed storage for this area.
CSO140 Sewer Separation	Middle Fork	CSO140	NA	-	$3,150,000	-	-	-	-	-	-	-	-	NA	$3,150,000	$0	12/31/2015	12/31/2015	Considering the use of green infrastructure and localzed storage for this area.
CSO093 Sewer Separation	South Fork	CSO093	NA	-	$952,000	-	-	-	-	-	-	-	-	NA	$952,000	$0	12/31/2015	12/31/2015	Considering the use of green infrastructure and localzed storage for this area.
CSO160 Sewer Separation	Ohio River	CSO160	NA	-	$237,000	-	-	-	-	-	-	-	-	NA	$237,000	$0	12/31/2015	12/31/2015	Considering the use of green infrastructure and localzed storage for this area.
															$241,111,950	$11,499,950			

2012 Draft SSDP Project Re-Assessment

2012 Proposed New Project
2012 Proposed Project for Elimination

Project Characteristics								2007 Calibration			2012 Calibration			Cost Difference		Notes
Watershed	Project Name	Project ID	Revisions Needed	Project Type	Design Level	Receiving Stream	Overflow Points Addressed	Description	Capital Cost	Present Worth	Description	Capital Cost	Present Worth	Capital Cost	Present Worth	
Cedar Creek	IDLEWOOD INLINE STORAGE	S_CC_CC_70158_M_09A_C	No	Inline Storage	2	Cedar Creek	28998, 28984, 63094, 63095, 70158	This alternative includes in-line storage with 995 LF of (84" to 120") pipe to store wet weather peak flows. Also included are pipe upgrades for 1,747 LF of open cut (8" to 15") sewer to increase hydraulic capacity during wet weather peak flows.	$ 2,317,000	$ 1,836,000	No change	$ 2,317,000	$ 1,836,000	$ -	$ -	
Cedar Creek	FAIRMOUNT RD PS IMPROVEMENTS	S_FF_CC_81316_M_03_C	No	PS Upgrades	10	Big Run	81316, 97362	Install (3) 130 HP, 1750 gpm pumps to increase capacity	$ 874,000	$ 874,000	No change	$ 874,000	$ 874,000	$ -	$ -	
Cedar Creek	LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS	S_CC_CC_67997_M_01_C	Yes	Pipe Upgrades	2	Little Cedar Creek	67997, 67999 86423, 89195 89197, MOP 89190	This alternative includes upsizing 3,701 LF of open cut sewer and 215 LF of 21"tunneling interceptor pipe in the area to increase hydraulic capacity during wet weather peak flows.	$ 1,875,000	$ 1,512,000	Raise MH 89190 1.5 ft, increase pipe size to 48 inches for segment 67998, 67997, and 26130. Invert elevations lowered for segments.	$ 2,006,000		$ 131,000		Upstream development has caused the need for a revision in the project approach.
Cedar Creek	BARDSTOWN RD PS IMPROVEMENTS	S_CC_CC_MSD1025_S_03_B	No	PS Upgrades	5	Big Run	88545	This alternative includes increasing the capacity of the pump station with an additional 70% of hydraulic capacity to 0.53 MGD so that overflows do not occur upstream.	$ 281,000	$ 420,000	No change	$ 281,000	$ 420,000	$ -	$ -	
Cedar Creek	RUNNING FOX PS ELIMINATION	S_CC_CC_MSD1080_S_01_C	No	Diversion	2	Little Cedar Creek	MSD1080	Construct 375 LF of 8" gravity sewer to eliminate Running Fox PS. Existing PS and force main will remain functional, but dormant, to allow for monitoring downstream impacts of the new diversion. If no impacts are noted, station will be eliminated and force main taken out of service. If downstream impacts arise, the PS will be reconfigured to supplement the capacity of the new diversion line.	$ 96,000	$ 84,000	No change	$ 96,000	$ 84,000	$ -	N/A	
Hite Creek	MEADOWSTREAM PUMP STATION AND FORCE MAIN UPGRADE	S_HC_HC_MSD1082_S_09A_C	No	Inline Storage	2	Floyds Fork / South Fork Harrods Creek	91087, MSD1082-PS	This alternative includes underground in-line storage with the current influent line to the PS, consisting of two, 120" diameter storage pipes each 238 LF.	$ 974,000	$ 766,000	Upgrade to Meadowstream Pump Station and force main to allow for expansion in the Crestwood area. New solution accomodates design storm for 2 year cloudburst with buildout conditions; currently can support 5YR w/ no overflow including some buildout	$ 974,000	$ 766,000	$ -	$ -	Alternate solution is being proposed. Pump station upgrade and new parallel force main in lieu of inline storage.
Hite Creek	FLOYDSBURG RD I/I INVESTIGATION & REHABILITATION	S_HC_HC_MSD1086_M_07_C	No	I/I Reduction	2	Floyds Fork	90776, 108956, 108957, 108958, MSD1086-PS	This location will be targeted for I/I source control (I/I rehab and private property program). A full SSES will be performed upstream of this PS. If I/I reduction is deemed unsuccessful in eliminating the SSO, the next best alternative will be implemented, which is Pump Station & Force Main upgrades.	$ 57,000	$ 57,000	No change	$ 57,000	$ 57,000	$ -	N/A	
Hite Creek	KAVANAUGH RD PS IMPROVEMENTS	S_HC_HC_MSD1085_S_03_A	No	PS Upgrades	10	Hite Creek	MSD1085-PS	This alternative includes upgrading the Kavanaugh Road pump station to handle peak flows of 0.84 MGD and upsize 2,458 LF of force main to 8".	$ 1,110,000	$ 1,322,000	No change	$ 1,110,000	$ 1,322,000	$ -	N/A	
Floyds Fork	WOODLAND HILLS FLOW DIVERSION	S_FF_FF_NB01_S_01_C_A	No	Pipe Upgrades	2	Pope Lick	33003, 65531	This alternative consists of replacing the existing overflow and automated gate (to the Woodland Hills PS) with a double barrel overflow that consists of 30 LF for two 12" diameter pipes. The upstream invert of these pipes needs to be 2 inches above the upstream invert of the existing gravity pipe in MH 82058. This new invert elevation will allow dry weather flow to gravity drain down the interceptor, but anything greater than DWF will be diverted to the PS via the overflow pipes thus reducing the surcharge further down the gravity line. 15 LF of open cut sewer required.	$ 20,000	$ 101,000	No change	$ 20,000	$ 101,000	$ -	N/A	
Floyds Fork	EDEN CARE PS SSO INVESTIGATION	S_FF_FF_NB02_S_13_C		Monitor	--	Floyds Fork	MSD1105-PS	Monitor the Eden Care PS during rain events for the next three years according to SORP protocols	$ -		No change	$ -	--	$ -	N/A	
Floyds Fork	ASHBURTON PS IMPROVEMENTS AND DIVERSION	S_FF_FF_NB03_M_01_C_A	No	Upgrade Force Main & Pumps	2	Floyds Fork	MSD0165-PS (Olde Copper Ct), MSD0166-PS (Ashburton)	This alternative includes diverting flow from Ashburton PS by upgrading 370 LF of force main ((from 2" to 8") and adding 115 LF of 8" gravity sewer. Also eliminates the overflow at Olde Copper PS	$ 118,000	$ 112,000	No change	$ 118,000	$ 112,000	$ -	N/A	
Floyds Fork	FAIRMOUNT ROAD PS OFFLINE STORAGE	N/A	Yes	Off Line Storage	2	Floyds Fork	Fairmount Road Pump Station	New Project	N/A	N/A	This alternative involves construction of 3.4 MG offline storage basin near the Fairmount Road Pump Station	$	$ 13,438,000	$ 13,438,000	TBD	Due to treatment capacity limitations at Cedar Creek and the significant peak wet weather flows in the collection system being diverted from Jeffersontown WQTC, this storage is needed to mitigate peak flows.
Jeffersontown	JEFFERSONTOWN WQTC ELIMINATION	S_JT_JT_NB01_01_C_A	No	Replace/Diversion	2	Chenoweth Run	ISO28, 28390, 28395A, 31733, 64505 (WWTP and 26392 are documented not modelled)	Replace from Grassland to the WWTP. Storage at the plant and pump station with capacity of 10 MGD. Force Main installed to the Hikes Lane Interceptor.	$ 53,770,512	$ 50,704,925	No change	$ 53,770,512	N/A	$ -	N/A	
Jeffersontown	CHENOWETH HILLS WQTC ELIMINATION & PS IMPROVEMENTS	S_JT_JT_NB01A_03_C	No	Pump Upgrades	2	Chenoweth Run	64096, 86052, MSD0263, 92061	Upgrade Pumps at MSD0196 (Chenoweth Run) to pump 2.65 MGD and Upsize entire force main for Chenoweth Run to a 12".	$ 5,054,667	$ 5,664,597	No change	$ 5,054,667	N/A	$ -	N/A	
Jeffersontown	DELL RD & CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	S_JT_JT_NB02_01_C	No	Conveyance	2	Chenoweth Run	28336, 28340, 28415, 28416, (28249, 28250, 28413, 28414, 28417, 104289 documented not modelled. Within 2 manholes of others listed)	Conveyance option for Network Branch 2. Involves upsizing pipe d/s of Charlane (28336) and Dell (28415) to 36" diameter. Tunneling required under railroad for segment (28395, 28393)	$ 2,175,437	$ 1,735,364	No change	$ 2,175,437	N/A	$ -	N/A	
Jeffersontown	RAINTREE & MARIAN CT PH1 - PS ELIMINATION	S_JT_JT_NB03_01_C	No	Diversion	2	Chenoweth Run	MSD0148, MSD0149, 28719, 28711	Divert flow from Marion Ct PS and Raintree PS with installation of 8" gravity sewer to SLD. Upsize portion for overflow 25676 in SLD	$ 1,551,097	$ 1,261,108	No change	$ 1,551,097	N/A	$ -	N/A	

2012 Draft SSDP Project Re-Assessment

2012 Proposed New Project
2012 Proposed Project for Elimination

Project Characteristics								2007 Calibration			2012 Calibration			Cost Difference		Notes
Watershed	Project Name	Project ID	Revisions Needed	Project Type	Design Level	Receiving Stream	Overflow Points Addressed	Description	Capital Cost	Present Worth	Description	Capital Cost	Present Worth	Capital Cost	Present Worth	
Mill Creek	SHIVELY INTERCEPTOR	S_MC_WC_NB01_M_01_A	No	Pipe Upgrades	10	Mill Creek / Heatherfield Ditch	04498, 04542, 81814-W, MSD0047-PS, MSD0050-PS	Construct 18,830 LF of new gravity sewers (10" - 27") to eliminate pump stations. This is the Shively Interceptor capital improvement project.	$ 16,419,000	$ 12,982,000	No change	$ 16,419,000	N/A	$ -	N/A	
Mill Creek	EAST ROCKFORD LANE PUMP STATION UPGRADE	S_MC_WC_NB02_S_03_C	No	Pump Station Replacement & Relocation	2	Mill Creek	04699-W	Relocate and replace East Rockford PS at 300 GPM. 150 LF of 4" force main will be replaced. Additional 150 LF of 10" gravity improvements required to relocate PS.	$ 1,044,000	$ 1,100,000	No change	$ 1,044,000	N/A	$ -	N/A	
Berrytown (Small WQTC)	LUCAS LN PS INLINE STORAGE	S_FF_BT_NB01_S_09A_C_A	No	Inline Storage	2	Goose Creek	MSD0199-LS	This alternative includes installing two 90 LF long 54" wide parallel storage pipes that branch off the gravity main prior to the Lucas Lane PS. The invert must be lowered and upgraded to a 36" pipe.	$ 183,000	$ 145,000	No change	$ 183,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	RIDING RIDGE PS IMPROVEMENTS	S_HC_HN_NB01_S_03_C_A	No	PS Upgrades	2	Harrods Creek	MSD1060-LS	This alternative includes upgrading pumps at Riding Ridge PS from 17 GPM to 26 GPM. This will give the PS a peak pumping rate capacity of 0.075 MGD.	$ 27,000	$ 27,000	No change	$ 27,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	GUNPOWDER PS INLINE STORAGE	S_HC_HN_NB02_S_09A_C_B	No	Inline Storage	2	Harrods Creek	MSD1055-LS	This alternative includes replacing 120 LF of 8" with 60" in line storage pipe. In addition, 28 LF of pipe upgrades will be needed.	$ 176,000	$ 138,000	No change	$ 176,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	FOX HARBOR INLINE STORAGE	S_HC_HN_NB03_M_09A_C_A	No	Inline Storage	10	Harrods Creek	62769	This alternative includes replacing two 8" (total 333 LF) pipes upstream and east of the Fox Harbor #2 LS with 24" and 60" pipes respectively. For Fox Harbor #1, install (194 LF of 24" to 54") parallel storage pipes upstream of the lift station and lower the upstream invert of that pipe (which will require a new drop manhole).	$ 328,000	$ 259,000	No change	$ 328,000	N/A	$ -	N/A	
Hunting Creek South (Small WQTC)	FAIRWAY VIEW PS IMPROVEMENTS	S_HC_HS_NB01_S_03_C_A	No	PS Upgrades	2	Harrods Creek	MSD1065-PS	This alternative includes upgrading pumps at Fairway View PS to discharge 100, 300, and 320 GPM (previously 88 GPM each)	$ 87,000	$ 220,000	No change	$ 87,000	N/A	$ -	N/A	
Lake Forest (Small WQTC)	LAKE FOREST PS SSO INVESTIGATION	S_FF_LF_NB01_S_13_C_A	No	Monitor	-	Floyds Fork	MSD1169-LS	Monitor the Lake Forest PS during rain events for the next three years according to SORT protocol.	$ -	$ -	No change	$ -	N/A	$ -	N/A	
Chenoweth Hills (Small WQTC)	ST. RENE RD PS INLINE STORAGE	S_FF_CH_NB01_S_09A_C_A	No	Inline Storage	2	Chenoweth Run	94187	This alternative includes replacing 42 LF of 8" with 48" pipe just upstream of the PS.	$ 30,000	$ 23,000	No change	$ 30,000	N/A	$ -	N/A	

2012 Draft SSDP Project Re-Assessment

2012 Proposed New Project
2012 Proposed Project for Elimination

Project Characteristics								2007 Calibration			2012 Calibration			Cost Difference		Notes
Watershed	Project Name	Project ID	Revisions Needed	Project Type	Design Level	Receiving Stream	Overflow Points Addressed	Description	Capital Cost	Present Worth	Description	Capital Cost	Present Worth	Capital Cost	Present Worth	
Cedar Creek	IDLEWOOD INLINE STORAGE	S_CC_CC_70158_M_09A_C	No	Inline Storage	2	Cedar Creek	28398, 28584, 63094, 63095, 70158	This alternative includes in-line storage with 995 LF of (84" to 120") pipe to store wet weather peak flows. Also included are pipe upgrades for 1,747 LF of open cut (8" to 15") sewer to increase hydraulic capacity during wet weather peak flows.	$ 2,317,000	$ 1,836,000	No change	$ 2,317,000	$ 1,836,000	$ -	$ -	
Cedar Creek	FAIRMOUNT RD PS IMPROVEMENTS	S_FF_CC_81316_M_03_C	No	PS Upgrades	10	Big Run	81316, 97382	Install (3) 130 HP, 1750 gpm pumps to increase capacity	$ 874,000	$ 874,000	No change	$ 874,000	$ 874,000	$ -	$ -	
Cedar Creek	LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS	S_CC_CC_67997_M_01_C	Yes	Pipe Upgrades	2	Little Cedar Creek	67997, 67999 88423, 89195 89197, MOP 89190	This alternative includes upsizing 3,701 LF of open cut sewer and 215 LF of 21" tunneling interceptor pipe in the area to increase hydraulic capacity during wet weather peak flows.	$ 1,875,000	$ 1,512,000	Raise MH 889190 1.5 ft, increase pipe size to 48 inches for segment 67998, 67997, and 26130. Invert elevations lowered for segments.	$ 2,006,000		$ 131,000		Upstream development has caused the need for a revision in the project approach.
Cedar Creek	BARDSTOWN RD PS IMPROVEMENTS	S_CC_CC_MSD1025_S_03_B	No	PS Upgrades	5	Big Run	88545	This alternative includes increasing the capacity of the pump station with an additional 70% of hydraulic capacity to 0.53 MGD so that overflows do not occur upstream.	$ 281,000	$ 420,000	No change	$ 281,000	$ 420,000	$ -	$ -	
Cedar Creek	RUNNING FOX PS ELIMINATION	S_CC_CC_MSD1080_S_01_C	No	Diversion	7	Little Cedar Creek	MSD1080	Construct 375 LF of 8" gravity sewer to eliminate Running Fox PS. Existing PS and force main will remain functional, but dormant, to allow for monitoring downstream impacts of the new diversion. If no impacts are noted, station will be eliminated and force main taken out of service. If downstream impacts arise, the PS will be reconfigured to supplement the capacity of the new diversion line.	$ 96,000	$ 84,000	No change	$ 96,000	$ 84,000	$ -	N/A	
Hite Creek	MEADOWSTREAM PUMP STATION AND FORCE MAIN UPGRADE	S_HC_HC_MSD1082_S_09A_C	No	Inline Storage	2	Floyds Fork / South Fork Harrods Creek	91087, MSD1082-PS	This alternative includes underground in-line storage with the current influent line to the PS, consisting of two, 120" diameter storage pipes each 238 LF.	$ 974,000	$ 766,000	Upgrade to Meadowstream Pump Station and force main to allow for expansion in the Crestwood area. New solution accomodates design storm for 2 year cloudburst with buildout conditions; currently can support 5YR w/ no overflow including some buildout	$ 974,000	$ 766,000	$ -	$ -	Alternate solution is being proposed. Pump station upgrade and new parallel force main in lieu of inline storage.
Hite Creek	FLOYDSBURG RD I/I INVESTIGATION & REHABILITATION	S_HC_HC_MSD1086_M_07_C	No	I/I Reduction	2	Floyds Fork	90776, 108956, 108957, 108958, MSD1086-PS	This location will be targeted for I/I source control (I/I rehab and private property program). A full SSES will be performed upstream of this PS. If I/I reduction is deemed unsuccessful in eliminating the SSO, the next best alternative will be implemented, which is Pump Station & Force Main Upgrades.	$ 57,000	$ 57,000	No change	$ 57,000	$ 57,000	$ -	N/A	
Hite Creek	KAVANAUGH RD PS IMPROVEMENTS	S_HC_HC_MSD1085_S_03_A	No	PS Upgrades	10	Hite Creek	MSD1085-PS	This alternative includes upgrading the Kavanaugh Road pump station to handle PSSK flows of 0.84 MGD and upsize 2,458 LF of force main to 8".	$ 1,110,000	$ 1,322,000	No change	$ 1,110,000	$ 1,322,000	$ -	N/A	
Floyds Fork	WOODLAND HILLS FLOW DIVERSION	S_FF_FF_NB01_S_01_C_A	No	Pipe Upgrades	2	Pope Lick	33003, 65531	This alternative consists of placing the existing overflow and automated gate (to the Woodland Hills PS) with a double-barrel overflow that consists of 80 LF for two 12" diameter pipes. The upstream invert of these pipes needs to be 2 inches above the upstream invert of the existing gravity pipe to MH 82058. The new invert elevation will allow dry weather flow to gravity drain down the interceptor, but any flow greater than DWF will be diverted to the PS via the overflow pipes, thus reducing the surcharge further down the gravity line. 15 LF of open cut sewer required.	$ 20,000	$ 101,000	No change	$ 20,000	$ 101,000	$ -	N/A	
Floyds Fork	EDEN CARE PS SSO INVESTIGATION	S_FF_FF_NB02_S_13_C		Monitor	--	Floyds Fork	MSD1105-PS	Monitor the Eden Care PS during rain events for the next three (3) years according to SORP protocols.	$ -		No change	$ -	-	$ -	N/A	
Floyds Fork	ASHBURTON PS IMPROVEMENTS AND DIVERSION	S_FF_FF_NB03_M_01_C_A	No	Upgrade Force Main & Pumps	2	Floyds Fork	MSD0165-PS (Olde Copper Ct), MSD0166-PS (Ashburton)	This alternative includes diverting flow from Ashburton PS by upgrading 370 LF of force main from 2" to 6", and adding 315 LF of 8" gravity sewer. Also eliminates the overflow at Olde Copper PS.	$ 118,000	$ 112,000	No change	$ 118,000	$ 112,000	$ -	N/A	
Floyds Fork	FAIRMOUNT ROAD PS OFFLINE STORAGE	N/A	Yes	Off Line Storage	2	Floyds Fork	Fairmount Road Pump Station	New Project	N/A	N/A	This alternative involves construction of 3.4 MG offline storage basin near the Fairmount Road Pump Station	$	$ 13,438,000	$ 13,438,000	TBD	Due to treatment capacity limitations at Cedar Creek and the significant peak wet weather flows in the collection system being diverted from Jeffersontown WWTP, this storage is needed to mitigate peak flows.
Jeffersontown	JEFFERSONTOWN WQTC ELIMINATION	S_JT_JT_NB01_01_C_A	No	Replace/Diversion	2	Chenoweth Run	15028, 28390, 28395A, 31733, 84505 (WWTP and 28392 are documented not modelled)	Replace from Grassland to the WWTP. Storage at the plant and pump station with capacity of 10 MGD. Force Main installed to the Hikes Lane Interceptor.	$ 53,770,512	$ 50,704,925	No change	$ 53,770,512	N/A	$ -	N/A	
Jeffersontown	CHENOWETH HILLS WQTC ELIMINATION & PS IMPROVEMENTS	S_JT_JT_NB01A_03_C	No	Pump Upgrades	2	Chenoweth Run	64096, 86052, MSD0263, 92061	Upgrade Pumps at MSD0196 (Chenoweth Run) to pump 2.65 MGD and Upsize entire force main for Chenoweth Run to a 12".	$ 5,054,667	$ 5,664,592	No change	$ 5,054,667	N/A	$ -	N/A	
Jeffersontown	DELL RD & CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	S_JT_JT_NB02_01_C	No	Conveyance	2	Chenoweth Run	28336, 28340, 28415, 28416, (28249, 28250, 28413, 28414, 28417, 104289 documented not modelled. Within 2 manholes of others listed)	Conveyance option for Network Branch 2. Involves upsizing pipe d/s of Charlane (28336) and Dell (28415) road overflow. Tunneling required under railroad for segment (28396 Y 28393)	$ 2,175,437	$ 1,735,364	No change	$ 2,175,437	N/A	$ -	N/A	
Jeffersontown	RAINTREE & MARIAN CT PH1 - PS ELIMINATION	S_JT_JT_NB03_01_C	No	Diversion	2	Chenoweth Run	MSD0148, MSD0149, 28719, 28711	Divert flow from Marion Ct. PS and Raintree PS with installation of 8" gravity sewer to SE0. Upsize solution for overflow 25876 in SE0	$ 1,551,097	$ 1,267,108	No change	$ 1,551,097	N/A	$ -	N/A	

2012 Draft SSDP Project Re-Assessment

2012 Proposed New Project
2012 Proposed Project for Elimination

Project Characteristics								2007 Calibration			2012 Calibration			Cost Difference		Notes
Watershed	Project Name	Project ID	Revisions Needed	Project Type	Design Level	Receiving Stream	Overflow Points Addressed	Description	Capital Cost	Present Worth	Description	Capital Cost	Present Worth	Capital Cost	Present Worth	
Jeffersontown	MONTICELLO PS ELIMINATION	S_JT_JT_NB04_01_A	No	Diversion	10	Fern Creek	27959	MSD0151 could be diverted to West County with ~ approximately 625 LF of 8" sewer.	$ 380,458	$ 306,751	No change	$ 380,458	N/A	$ -	N/A	
Middle Fork	UMF #2-PS DIVERSION & STORAGE	S_MIS_MF_NB01_M_01_C_A1	Yes	Conveyance/Storage	2	Middle Fork	[5021, 08934SM], 47583, 02937, 02932, 02933, 02935, 47593, 47596, 47603, 47604, 45385, 27005,23211, 23212. 51160, 51161. 51221	Construct 30" Force Main Diversion to Hikes Lane Interceptor from Ex UMFPS. Construct Middle Fork Relief Interceptor between Oxmoor area and Middle Fork at Breckinridge. Construct 1.5 MG covered basin at Car Wash Site and 17 MG open basin at Buechel Site. Upsize Pipe D/S of MH 15138 to 18".	$ 52,814,000	$ 47,644,000	Same improvements as in 2007 only the portion of the Middle Fork Interceptor Relief that was 24" in 2007 needs to be upsized to 30".	$ 53,362,000	$ 48,071,000	$ 548,000	$ 427,000	Resizing due to model calibration
Middle Fork	GOOSE CREEK PS PH1 - DEVONDALE PS WW STORAGE & GOOSE CRK PS PH2 - PS & FORCE MAIN UPGRADES	S_MI_MF_NB04_M_03_B_A	Yes	Force Main Upgrades, Storage	5	Goose Creek	21628-W, 46893, 91629, 91630, 105936, 43472	Construct 0.5 MG storage basin near Devondale Pump Station. Replace 16" portion of GCPS with 20" FM. Upgrade GCPS to 7.2 MGD. Replace Saurel Rd 4" FM with 6" FM	$ 4,952,000	$ 4,854,000	Same improvements as in 2007 only the GCPS needs to be upgraded to 7.55 MGD instead of 7.2 MGD.	$ 5,477,000	$ 5,271,000	$ 525,000	$ 417,000	
Middle Fork	ANCHOR ESTATES- ANCHOR ESTS PS 1 & 2 PS ELIMINATIONS / VANNAH PS ELIMINATION	S_MI_MF_NB06_M_01_B_C	No	Pipe Storage at Pump Station, Elimination of Pump Station	5	Middle Fork	01106, 00746, MSD0057	Eliminate Anchor # 1 Pump Station, Pipe Storage (72") at Anchor #2 Pump Station, Eliminate Vannah Way Pump Station and remove bypass pipe	$ 2,037,000	$ 1,642,000	No change	$ 2,037,000	N/A	$ -	N/A	
Southeast Diversion	PARKVIEW ESTATES I/I INVESTIGATION & REHABILITATION	S_SD_MF_NB03_01_C	No	Conveyance	5	Pond Creek	47250	Construct 2,400 LF of 30" relief sewer from 47250 parallel to Rustic Way to existing 24" interceptor.	$ 945,000	$ 763,000	No change	$ 945,000	N/A	$ -	N/A	
Southeast Diversion	KLONDIKE INTERCEPTOR	S_SD_MF_NB04_01_B_A	No	Conveyance	5	South Fork	25676	Construct 2,830 LF of 30" relief interceptor from 25676 to the Hikes Lane interceptor. This conveyance project was originally a 12" interceptor but then combined with the J-Town 24" Force Main diversion resulting in a 30" gravity.	$ 1,611,000	$ 1,098,000	No change	$ 1,611,000	N/A	$ -	N/A	
Southeast Diversion	SUTHERLAND INTERCEPTOR	S_SD_MF_NB05_01_B	No	Conveyance	10	South Fork	16649	Construct 670 LF of 18" and 1760 LF of 15" interceptor in place of existing 10" from manhole 16649 to BGI.	$ 586,000	$ 477,000	No change	$ 586,000	N/A	$ -	N/A	
Pond Creek	CHARLESWOOD INTERCEPTOR EXTENSION	S_PO_WC_PC03_M_01_C	No	Pipe Upgrades	2	Fishpool Creek	25477, 25476, 25480, MSD0130-PS	This alternative includes upsizing 1,646 LF of open cut sewer, (mostly in rock) downstream. This estimate does not include the Cooper Chapel PS elimination but the Charleswood Subdivision Interceptor will eliminate Cooper Chapel PS and require capacity increases downstream.	$ 603,000	$ 450,000	No change	$ 603,000	N/A	$ -	N/A	
Pond Creek	CINDERELLA PS ELIMINATION	S_PO_WC_PC04_M_01_C	No	Diversion	2	Fishpool Creek	35309, 60679, MSD1013-PS	Eliminate Cinderella PS by constructing 2,250 LF of 10" pipe., 208 LF of tunneling under I-265.	$ 2,205,000	$ 1,742,000	No change	$ 2,205,000	N/A	$ -	N/A	
Pond Creek	LANTANA PS I/I INVESTIGATION & REHABILITATION	S_PO_WC_PC05_M_07_C	No	I/I Reduction	2	Pennsylvania Run	25484, 93719, MSD0101-PS	This location will be targeted for I/I source control (I/I rehab and private property program). Cost is for 4000 LF of SSES upstream of PS.	$ 20,000	$ 20,000	No change	$ 20,000	N/A	$ -	N/A	
Pond Creek	GOVERNMENT CENTER PS ELIMINATION	S_PO_WC_PC06_M_01_C	Yes	Diversion	2	Pennsylvania Run	MSD0180-PS	Eliminate Government Center PS by constructing 1324 LF of 10" pipe. 50 LF of tunneling required.	$ 1,225,000	$ 971,000	Eliminate Government Center PS by constructing 1740 LF of 12" pipe. 50 LF of tunneling required.	$ 1,412,000	$ 1,121,000	$ 187,000	$ 150,000	
Pond Creek	AVANTI PS ELIMINATION	S_PO_WC_PC07_M_01_A	No	Diversion	10	Little Cedar Creek	21229-W	Eliminate Avanti PS by constructing 150 LF of 8" pipe.	$ 31,000	$ 29,000	N/A	$ 31,000	N/A	$ -	N/A	
Pond Creek	LEA ANN WAY SYSTEM IMPROVEMENTS	S_PO_WC_PC08_M_01_C	?	Pipe Upgrades	2	Fern Creek / Northern Ditch	19360, 19369, 29933, 29943, 29948, 31033, 31084, 29076, MSD1010-PS	This alternative includes using the restored Lea Ann Way PS with 3,255 LF of open cut sewer (12" to 18") upstream improvements to prevent the overflows.	$ 827,000	$ 679,000	Substantial SSES projects have been completed for the upstream collection system. Sewer rehabilitation is beginning in the area. Impacts of overflows from this work along with the pipe upgrades will be monitored for performance. Additional work will be performed as needed.	$ 827,000	$ 679,000	$ -	?	Project cost may change as full proposed revisions to IOAP are developed.
Pond Creek	OUTER LOOP & CAVEN AREA PIPE UPGRADES	S_PO_WC_PC09_M_098_C	No	Pipe Upgrades	2	Pond Creek / Mud Creek	17724, 27116, 70212, Caven Ave PS (MSD0133-PS)	This alternative includes 1,536 LF of pipe upsized to 18" downstream of MH 70717.	$ 731,000	$ 585,000	No change	$ 731,000	N/A	$ -	N/A	
Pond Creek	OUTER LOOP WW STORAGE	S_PO_WC_PC09_M_098_C	Yes	Off-Line Storage	2	Pond Creek / Mud Creek	17724, 27116, 70212, Caven Ave PS (MSD0133-PS)	This alternative includes an off line pumped storage basin (closed 1.42 MG) behind the Mazda on Preston Highway	$ 4,980,000	$ 4,439,000	2010 calibrated model improvements indicates the storage basin is no longer needed to relieve surcharging in the system.	$ -	$ -	$ (4,980,000)	########	Proposed for elimination due to a more highly calibrated separate system model in this area.
Pond Creek	CAVEN AVENUE WW STORAGE	S_PO_WC_PC09_M_098_C	No	Off-Line Storage	2	Pond Creek / Mud Creek	17724, 27116, 70212, Caven Ave PS (MSD0133-PS)	This alternative includes an off line gravity storage (covered 0.21 MG) at Caven Avenue PS	$ 1,073,000	$ 1,070,000	No change	$ 1,073,000	N/A	$ -	N/A	
Pond Creek	LEVEN PS ELIMINATION	S_PO_WC_PC10_M_01_C	No	Diversion	2	Pennsylvania Run	36419, MSD1019-PS	Eliminate Leven PS by constructing 890 LF of 10" pipe.	$ 376,000	$ 305,000	No change	$ 376,000	N/A	$ -	N/A	
Pond Creek	EDSEL PS I/I INVESTIGATION & REHABILITATION	S_PO_WC_PC11_M_07_C	No	I/I Reduction	2	Fern Creek	92098, MSD1048-PS	This location will be targeted for I/I source control (I/I rehab and private property program).	$ 367,000	$ 367,000	No change	$ 367,000	N/A	$ -	N/A	
ORFM	MELLWOOD SYS 1 - MELLWOOD PS & FORCE MAIN & MELLWOOD SYS 2 - WHITON & MOCKINGBIRD PS ELIM & PIPE UPGRADES	S_OR_MF_NB01_01_B	No	Diversion	5	ORFM	MSD0010, MSD0007, 26752, 41416, MSD0023, 24472, MSD0024, 41374, 24152-W	Construct Diversion Gravity Sewer for MSD0010, MSD0007. Increased Conveyance at MSD0023. Upsize portion of I/I gravity sewer for MSD0007	$ 4,945,922	$ 4,144,929	No change	$ 4,945,922	N/A	$ -	N/A	
ORFM	LELAND RD SSO INVESTIGATION	S_OR_MF_NB02_01_B	No	Relief Sewer	5	ORFM	96020	Approximately 325 LF of 8" relief sewer from 96018 to 19916.	$ 91,050	$ 75,875	No change	$ 91,050	N/A	$ -	N/A	
ORFM	DERRINGTON CT PS I/I INVESTIGATION & REHABILITATION	S_OR_MF_NB03_09_B_A	No	Inline Storage	5	ORFM	MSD0095-PS (Derrington Ct. PS)	Inline Pipe Storage (285 LF ~ 78" RCP) upstream of MSD0095.	$ 670,950	$ 524,620	No change	$ 670,950	N/A	$ -	N/A	
ORFM	PROSPECT #1 - WYATC ELIMINATIONS, PROSPECT #2 - HARRODS CREEK PS & PROSPECT #3 - ORFM SYSTEM IMPROVEMENTS	S_OR_MF_NB04_03_B_B	No	Pump Upgrades/Prospect Diversion	5	ORFM	MSD0123, 22436, 40870, 40871, 40872, 42680, 65633, 65635, MSD0192, MSD0183, MSD0193 and MSD1044	Conveyance Alternative for the ORFM: Upsize of interceptor upstream of Muddy Fork PS. Upgrade pumps at Muddy Fork (MSD0186-PS), Winding Fall/Phoenix Hill (MSD1044-PS) and New Market (MSD0193-PS). Upsize force main from Muddy Fork PS to the connection with the ORFM from 14" to a 24". Prospect Flows and additional assessments would all be included in this analysis. Prospect Diversion to Hite Creek	$ 27,235,000	N/A	No change	$ 27,235,000	N/A	$ -	N/A	

2012 Draft SSDP Project Re-Assessment

2012 Proposed New Project
2012 Proposed Project for Elimination

Project Characteristics								2007 Calibration			2012 Calibration			Cost Difference		Notes
Watershed	Project Name	Project ID	Revisions Needed	Project Type	Design Level	Receiving Stream	Overflow Points Addressed	Description	Capital Cost	Present Worth	Description	Capital Cost	Present Worth	Capital Cost	Present Worth	
Mill Creek	SHIVELY INTERCEPTOR	S_MC_WC_NB01_M_01_A	No	Pipe Upgrades	10	Mill Creek / Heatherfield Ditch	04498, 04542, 81814-W, MSD0047-PS, MSD0050-PS	Construct 18,830 LF of new gravity sewers (10" – 27") to eliminate pump stations. This is the Shively Interceptor capital improvement project.	$ 16,419,000	$ 17,982,000	No change	$ 16,419,000	N/A	$ -	N/A	
Mill Creek	EAST ROCKFORD LANE PUMP STATION UPGRADE	S_MC_WC_NB02_S_03_C	No	Pump Station Replacement & Relocation	2	Mill Creek	04699-W	Relocate and replace East Rockford PS at 300 GPM. 150 LF of 4" force main will be replaced. Additional 150 LF of 10" gravity improvements required to relocate PS.	$ 1,044,000	$ 1,100,000	No change	$ 1,044,000	N/A	$ -	N/A	
Berrytown (Small WQTC)	LUCAS LN PS INLINE STORAGE	S_FF_BT_NB01_S_09A_C_A	No	Inline Storage	2	Goose Creek	MSD0199-LS	This alternative includes installing two 90 LF long 54" wide parallel storage pipes that branch off the gravity main prior to the Lucas Lane PS. The invert must be lowered and upgraded to a 36" pipe.	$ 183,000	$ 145,000	No change	$ 183,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	RIDING RIDGE PS IMPROVEMENTS	S_HC_HN_NB01_S_03_C_A	No	PS Upgrades	2	Harrods Creek	MSD1060-LS	This alternative includes upgrading pumps at Riding Ridge PS from 17 GPM to 26 GPM. This will give the PS a peak pumping rate capacity of 0.075 MGD.	$ 27,000	$ 27,000	No change	$ 27,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	GUNPOWDER PS INLINE STORAGE	S_HC_HN_NB02_S_09A_C_B	No	Inline Storage	2	Harrods Creek	MSD1055-LS	This alternative includes replacing 120 LF of 8" with 60" in-line storage pipe. In addition, 28 LF of pipe upgrades will be needed.	$ 176,000	$ 138,000	No change	$ 176,000	N/A	$ -	N/A	
Hunting Creek North (Small WQTC)	FOX HARBOR INLINE STORAGE	S_HC_HN_NB03_M_09A_C_A	No	Inline Storage	10	Harrods Creek	62769	This alternative includes replacing two 8" (total 133 LF) pipes upstream and east of the Fox Harbor #2 LS with 24" and 60" pipes respectively. For Fox Harbor #1: Install (194 LF of 24" to 54") parallel storage pipes upstream of the lift station and lower the upstream invert of that pipe (which will require a new drop manhole).	$ 328,000	$ 259,000	No change	$ 328,000	N/A	$ -	N/A	
Hunting Creek South (Small WQTC)	FAIRWAY VIEW PS IMPROVEMENTS	S_HC_HS_NB01_S_03_C_A	No	PS Upgrades	2	Harrods Creek	MSD1065-PS	This alternative includes upgrading pumps at Fairway View PS to discharge: 100, 100, and 120 GPM (previously 88 GPM each)	$ 87,000	$ 220,000	No change	$ 87,000	N/A	$ -	N/A	
Lake Forest (Small WQTC)	LAKE FOREST PS SSO INVESTIGATION	S_FF_LF_NB01_S_13_C_A	No	Monitor	–	Floyds Fork	MSD1169-LS	Monitor the Lake Forest PS during rain events for the next three years according to SORP protocols.	$ -	$ -	No change	$ -	N/A	$ -	N/A	
Chenoweth Hills (Small WQTC)	ST. RENE RD PS INLINE STORAGE	S_FF_CH_NB01_S_09A_C_A	No	Inline Storage	2	Chenoweth Run	94187	This alternative includes replacing 42 LF of 8" with 48" pipe just upstream of the PS.	$ 30,000	$ 23,000	No change	$ 30,000	N/A	$ -	N/A	

APPENDIX A

CERTIFICATION DATES FOR IOAP PROJECTS
(Sorted By Date Completed)

Budget ID	ACD Project Number	Project Name	Complete	Date Completed	ACD Date
A09090	S_PO_WC_PC07_M_01_A	AVANTI PS ELIMINATION	Yes	28-Jul-09	28-Jul-09
H06357	SINKING FORK RELIEF SEWER	SINKING FORK RELIEF SEWER	Yes	23-Dec-09	23-Dec-09
A09092	S_FF_FF_NB03_M_01_C_A	ASHBURTON PS IMPROVEMENTS AND DIVERSION	Yes	22-Jan-10	31-Dec-21
H09169	S_FF_FF_NB01_S_01_C_A	WOODLAND HILL PS DIVERSION	Yes	1-Apr-10	30-Jun-11
H09178	S_CC_CC_MSD1080_S_01_C	RUNNING FOX PS ELIMINATION	Yes	5-Apr-10	31-Dec-10
E08054	BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT	BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT	Yes	29-Sep-10	27-Apr-11
H09432	L_SO_MF_121_S_12_A	BILLY GOAT STRUT (formerly CAMPBELL AND MAIN) PERMEABLE ALLEY	Yes	8-Oct-10	31-Dec-10
H09430	L_OR_MF_015_S_12_A	W. GAULBERT & W. HILL (formerly SEVENTEENTH AND W. HILL) PERMEABLE ALLEY	Yes	15-Oct-10	31-Dec-10
H09431	L_OR_MF_053_S_12_A_C	2300 BLOCK OF CONGRESS STREET (formerly SEVENTH AND MARKET) PERMEABLE ALLEY	Yes	11-Nov-10	31-Dec-10
H10141	ADDITIONAL RAIN GARDEN PROJECT	CLIFTON TRIANGLE AREA RAIN GARDEN	Yes	11-Nov-10	31-Dec-10
H10039	ADDITIONAL RAIN GARDEN PROJECT	BRANDIES APARTMENTS RAIN GARDEN	Yes	15-Nov-10	31-Dec-10
H09424	L_OR_MF_053_S_12_A_A	MSD MAIN OFFICE PARKING LOT BIOSWALE	Yes	3-Dec-10	31-Dec-10
H10140	SEP PROJECT	CHEROKEE PARK STREAM RESTORATION	Yes	3-Dec-10	23-Mar-11
H09427	L_OR_MF_198_S_12_A	THIRD AND ORMSBY BIOBIOFILTRATION SWALES	Yes	12-Dec-10	31-Dec-10
H09239	S_SD_MF_NB06_S_13_C	BEARGRASS INTERCEPTOR REHABILITATION PH 2	Yes	14-Dec-10	31-Dec-10
H09172	S_HC_HC_MSD1086_M_07_C_A	FLOYDSBURG RD I/I INVESTIGATION & REHABILITATION	Yes	17-Dec-10	31-Dec-10
H09428	L_OR_MF_022_S_12_A	6TH & MARTIN LUTHER KING (formerly SIXTH AND MUHAMMAD ALI) GREEN PARKING LOT	Yes	28-Dec-10	31-Dec-10
H09128	L_SO_MF_108_S_09A_B_A_4	CSO 108 DAM MODIFICATIONS	Yes	30-Dec-10	31-Dec-10
H09429	L_OR_MF_028_S_12_A	HOUSING AUTHORITY GREEN ROOF (formerly SIXTH AND BROADWAY RAIN GARDEN)	Yes	30-Dec-10	31-Dec-10
H09433	L_OR_MF_208_S_12_A	SCHOLAR HOUSE GREEN PARKING LOT (formerly TWELFTH AND JEFFERSON)	Yes	30-Dec-10	31-Dec-10
H09425	L_OR_MF_053_S_12_A_B	SEVENTH AND CEDAR GREEN PARKING LOT	Yes	30-Dec-10	31-Dec-10
H09426	L_OR_MF_181_S_12_A	SWIFT COMPANY GREEN PROJECT (formerly SECOND AND BROADWAY GREEN PARKING LOT)	Yes	30-Dec-10	31-Dec-10
C85017	NORTHERN DITCH DIVERSION INTERCEPTOR	NORTHERN DITCH DIVERSION INTERCEPTOR	Yes	16-Feb-11	31-Jul-11
H10141	SEP PROJECT	POND CREEK TRAIL SEP	Yes	19-Feb-11	23-Mar-11
H09194	S_PO_WC_PC06_M_01_C	GOVERNMENT CENTER PS ELIMINATION	Yes	1-Apr-11	31-Dec-24
H09198	S_SD_MF_NB03_S_07_C	PARKVIEW ESTATES I/I INVESTIGATION & REHABILITATION	Yes	28-Jun-11	30-Jun-11
H09181	S_MC_MF_55665_S_07_C	HAZELWOOD PS I&I INVESTIGATION & REHABILITATION	Yes	30-Jun-11	30-Jun-11
H09187	S_OR_MF_42007_S_07_C	SONNE PUMP STATION I&I INVESTIGATION & REHABILITATION	Yes	30-Jun-11	30-Jun-11
H09201	S_SF_MF_30917_M_09_A	CAMP TAYLOR #1 - SSES	Yes	8-Jul-11	31-Dec-11
H09197	S_PO_WC_PC11_M_07_C	EDSEL PS I/I INVESTIGATION & REHABILITATION	Yes	27-Sep-11	30-Sep-11
H09184	S_MI_MF_NB06_M_01_A_A-2	ANCHOR ESTATES- VANNAH PS ELIMINATION	Yes	15-Oct-11	31-Dec-13
H09221	CPE/CCP MODIFICATIONS TO WQTC	CPE/CCP MODIFICATIONS TO WQTC	Yes	19-Dec-11	31-Dec-11
H09443	L_OR_MF_019_S_12_A	EAST WASHINGTON @ ADAMS STREET GREEN DEMOSTRATION PROJECT (formerly I-264 ON-RAMP DRY WELL)	Yes	19-Dec-11	31-Dec-11
H09444	L_OR_MF_191_S_12_A_A	GRAWENMAYER HALL PARKING LOT (formerly the I-264 AND GIBSON DRY WELL)	Yes	20-Dec-11	31-Dec-11
H09442	L_OR_MF_189_S_12_A	SPEED ART MUSEUM INFILTRATION TRENCH (formerly the I-264 OFF-RAMP DRY WELL)	Yes	20-Dec-11	31-Dec-11
H09446	L_OR_MF_191_S_12_A_B	3RD STREET AND CAMPBELL VENTURES GREEN PROJECT (formerly JFK MONTESSORI AREA DRY WELL)	Yes	20-Dec-11	31-Dec-11
H11460	ADDITIONAL RAIN GARDEN PROJECT	GERMAN/PARISTOWN GREEN STREET RAIN GARDEN	Yes	20-Dec-11	31-Dec-11
H09219	S_MI_MF_NB07_S_07_C	HURSTBOURNE I&I INVESTIGATION & REHABILITATION	Yes	27-Dec-11	31-Dec-11

APPENDIX A

CERTIFICATION DATES FOR IOAP PROJECTS
(Sorted By Date Completed)

Budget ID	ACD Project Number	Project Name	Complete	Date Completed	ACD Date
H09193	S_PO_WC_PC05_M_07_C	LANTANA PS I/I INVESTIGATION & REHABILITATION	Yes	29-Dec-11	31-Dec-11
H09445	L_OR_MF_191_S_12_A_C	WILSON CROSSINGS GREEN PARKING LOT (formerly THE RUSSELL LEE DRIVE DRY WELL)	Yes	30-Dec-11	31-Dec-11
H11044	ADDITIONAL RAIN GARDEN PROJECT	BROWN-FORMAN GREEN ROOF PROJECT (formerly BARDSTOWN RD PRESBYTERIAN CHURCH GREEN PARKING LOT)	Yes	30-Dec-11	31-Dec-11
H09190	S_OR_MF_NB03_S_07_C	DERINGTON CT PS I/I INVESTIGATION & REHABILITATION	Yes	30-Dec-11	31-Dec-11
A09091	S_MC_WC_NB02_S_03_C	EAST ROCKFORD LANE PS RELOCATION	Yes	30-Mar-12	31-Mar-12
B06208	S_MC_WC_NB01_M_01_A	SHIVELY INTERCEPTOR	Yes	30-Mar-12	31-Dec-21
H00303	S_FF_CC_81316_M_03_C_A	FAIRMOUNT RD PS IMPROVEMENTS	Yes	13-Apr-12	31-Dec-14
H08358	SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	SOUTHEAST DIVERSION STRUCTURE & INTERCEPTOR	Yes	24-Apr-12	31-Dec-23
H11026	HIKES LANE INTERCEPTOR /HIGHGATE SPRINGS PS	HIKE LANE INTERCEPTOR & HIGHGATE SPRINGS PS	Yes	19-Apr-21	12-May-12
H08478	L_OR_MF_019_S_03_A_B	34TH STREET FLOOD PUMP STATION	No		27-Nov-12
H08477	L_OR_MF_022_M_03_A_A	4TH STREET FLOOD PUMP STATION	No		31-Dec-12
H09135	L_OR_MF_172_S_09B_B_A_0	ADAMS STREET STORAGE BASIN	No		31-Dec-12
I04247	L_MI_MF_123_S_08_A_A_0	CSO 123 DOWNSPOUT DISCONNECTION	No		31-Dec-12
H09170	S_FF_FF_NB02_S_13_C	EDEN CARE PS SSO INVESTIGATION	No		31-Dec-12
H09173	S_FF_LF_NB01_S_13_C_A	LAKE FOREST PS SSO INVESTIGATION	No		31-Dec-12
H09189	S_OR_MF_NB02_S_13_C	LELAND RD SSO INVESTIGATION	No		31-Dec-12
A09556	S_OR_MF_NB01_M_01_B	MELLWOOD SYS 1 - MELLWOOD PS & FORCE MAIN	No		31-Dec-12
H09126	L_OR_MF_019_S_03_A_A	27TH STREET FLOOD PUMP STATION	No		31-Dec-12
H09136	L_OR_MF_189_M_03_A_A	SHAWNEE FLOOD PUMP STATION	No		30-Jun-13
H09131	L_MI_MF_206_S_08_A_A_0	CSO 206 SEWER SEPARATION	No		30-Jun-13
H09220	S_SF_MF_30917_M_09_A	CAMP TAYLOR #2- REPLACE SEWERS	No		30-Dec-13
H09127	L_OR_MF_020_S_09B_B_A_S	STORY AVENUE AND MAIN STREET STORAGE BASIN	No		31-Dec-13
H07288	S_MISF_MF_NB01_M_01_C_A1	UMF #1 - BUECHEL BASIN	No		31-Dec-13
H09138	L_OR_MF_190_S_03_A_A	17TH STREET FLOOD PUMP STATION	No		31-Dec-13
H09130	L_OR_MF_058_S_08_A_A_0	CSO 058 SEWER SEPARATION	No		31-Dec-14
H09177	S_HC_HS_NB01_S_03_C_A	FAIRWAY VIEW PS IMPROVEMENTS	No		31-Dec-14
H09121	L_MI_MF_127_M_09B_B_A_8	I-64 AND GRINSTEAD DRIVE STORAGE BASIN	No		31-Dec-14
H09124	L_OR_MF_015_M_13_B_B_8	PADDY'S RUN WET WEATHER TREATMENT FACILITY	No		31-Dec-14
H09175	S_HC_HN_NB01_S_03_C_A	RIDING RIDGE PS IMPROVEMENTS	No		31-Dec-14
H09238	S_JT_JT_NB01A_M_03_C	CHENOWETH HILLS WQTC ELIMINATION & PS IMPROVEMENTS	No		31-Dec-14
H09143	L_SO_MF_093_S_08_A_A_0	CSO 093 SEWER SEPARATION	No		31-Dec-15
H09122	L_MI_MF_140_S_08_A_A_0	CSO 140 SEWER SEPARATION	No		31-Dec-15
H09134	L_OR_MF_160_S_08_A_A_0	CSO 160 SEWER SEPARATION	No		31-Dec-15
H07293	S_JT_JT_NB01_M_01_C_A	JEFFERSONTOWN WQTC ELIMINATION	No		31-Dec-15
H09199	S_SD_MF_NB04_S_01_B_A	KLONDKE INTERCEPTOR	No		31-Dec-15
C08433	S_PO_WC_PC08_M_01_C	LEA ANN WAY SYSTEM IMPROVEMENTS	No		31-Dec-15
D94206	S_OR_MF_NB04_M_03_B_B	PROSPECT #1 - WQTC ELIMINATIONS	No		31-Dec-15
D94206	S_OR_MF_NB04_M_03_B_B	PROSPECT #2 - HARRODS CREEK PS	No		31-Dec-15

APPENDIX A

CERTIFICATION DATES FOR IOAP PROJECTS
(Sorted By Date Completed)

Budget ID	ACD Project Number	Project Name	Complete	Date Completed	ACD Date
H10045	S_MI_MF_NB06_M_01_A_A-1	ANCHOR ESTATES- ANCHOR ESTS PS 1 & 2 PS ELIMINATIONS	No		31-Dec-16
H09174	S_HC_HC_MSD1082_S_09A_C	MEADOW STREAM PS INLINE STORAGE	No		31-Dec-16
H09140	L_SO_MF_018_S_03_A_A	NIGHTINGALE PUMP STATION REPLACEMENT	No		31-Dec-16
H09195	S_PO_WC_PC09_M_09B_C	OUTER LOOP & CAVEN AREA PIPE UPGRADES	No		31-Dec-16
	S_OR_MF_NB04_M_03_B_B	PROSPECT #3 - ORFM SYSTEM IMPROVEMENTS	No		31-Dec-16
H09145	L_SO_MF_130_S_09B_B_A_8	STORY AVENUE AND SPRING STREET STORAGE BASIN	No		31-Dec-16
H09137	L_OR_MF_190_S_09B_B_A_8	18TH AND NORTHWESTERN PKY STORAGE BASIN	No		31-Dec-16
H09146	L_SO_MF_097_M_13_A_A_8	BEARGRASS CREEK PARALLEL INTERCEPTOR	No		31-Dec-17
H09218	S_SF_MF_30917_M_09_A	CAMP TAYLOR #3- REPLACE SEWER & REHABILITATION	No		31-Dec-17
H09144	L_SO_MF_097_M_09B_B_D_8	CAVALRY - CREEKSIDE STORAGE BASIN	No		31-Dec-17
H09142	L_SO_MF_092_M_09B_B_D_8	LOGAN STREET AND BRECKENRIDGE ST STORAGE BASIN	No		31-Dec-17
H09139	L_OR_MF_211_M_13_B_A_8	ALGONQUIN PARKWAY STORAGE BASIN	No		31-Dec-17
H09123	L_MU_MF_154_M_09B_B_A_8	CLIFTON HEIGHTS STORAGE BASIN	No		31-Dec-18
H09132	L_OR_MF_105_M_13_B_A_0	SOUTHWESTERN PARKWAY STORAGE BASIN	No		31-Dec-18
H09125	L_OR_MF_019_S_13_B_A_8	PORTLAND WHARF STORAGE BASIN	No		31-Dec-18
H09133	L_OR_MF_155_M_09B_B_B_4	13TH STREET AND ROWAN STREET STORAGE BASIN	No		31-Dec-19
MULTIPLE		GREEN INFRASTRUCTURE PROGRAM	No		31-Dec-20
H09141	L_SO_MF_083_M_09B_B_A_8	LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN	No		31-Dec-20
H09165	S_CC_CC_MSD1025_S_03_B	BARDSTOWN RD PS IMPROVEMENTS	No		31-Dec-20
H09176	S_HC_HN_NB03_S_09A_A_A	FOX HARBOR INLINE STORAGE	No		31-Dec-21
H09242	S_HC_HN_NB02_S_09A_C_B	GUNPOWDER PS INLINE STORAGE	No		31-Dec-21
H09166	S_FF_BT_NB01_S_09A_C_A	LUCAS LN PS INLINE STORAGE	No		31-Dec-21
H09180	S_JT_JT_NB03_M_01_C	RAINTREE & MARIAN CT PH1 - PS ELIMINATION	No		31-Dec-21
H10043	S_JT_JT_NB03_M_01_C	RAINTREE & MARIAN CT PS PH2 PIPE UPGRADE	No		31-Dec-21
H09168	S_FF_CH_NB01_S_09A_C_A	ST. RENE RD PS INLINE STORAGE	No		31-Dec-21
C94103	S_PO_WC_PC03_M_01_C	CHARLESWOOD INTERCEPTOR EXTENSION	No		31-Dec-22
H09179	S_JT_JT_NB02_M_01_C	DELL RD & CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	No		31-Dec-22
H09196	S_PO_WC_PC10_M_01_C	LEVEN PS ELIMINATION	No		31-Dec-22
H09182	S_JT_JT_NB04_M_01_A	MONTICELLO PS ELIMINATION	No		31-Dec-22
H10048	S_SF_MF_30917_M_09_A	CAMP TAYLOR #4-REHAB & OFF LINE STORAGE	No		31-Dec-23
H09192	S_PO_WC_PC04_M_01_C	CINDERELLA PS ELIMINATION	No		31-Dec-23
H09164	S_CC_CC_70158_M_09A_C	IDLEWOOD INLINE STORAGE	No		31-Dec-23
H09200	S_SD_MF_NB05_M_01_A	SUTHERLAND INTERCEPTOR	No		31-Dec-23
H09186	S_MISF_MF_NB01_M_01_C_A1	UMF #2-PS DIVERSION & STORAGE	No		31-Dec-23
MULTIPLE		I/I REDUCTION PROGRAM	No		30-Dec-24
H10047	S_PO_WC_PC09_M_09B_C	CAVEN AVENUE WW STORAGE	No		31-Dec-24
H09183	S_MI_MF_NB04_M_03_B	GOOSE CREEK PS PH1 - DEVONDALE PS WW STORAGE	No		31-Dec-24
H10044	S_MI_MF_NB04_M_03_B	GOOSE CRK PS PH2 - PS & FORCE MAIN UPGRADES	No		31-Dec-24

APPENDIX A

CERTIFICATION DATES FOR IOAP PROJECTS
(Sorted By Date Completed)

Budget ID	ACD Project Number	Project Name	Complete	Date Completed	ACD Date
H09171	S_HC_HC_MSD1085_S_03_A	KAVANAUGH RD PS IMPROVEMENTS	No		31-Dec-24
H09163	S_CC_CC_67997_M_01_C	LITTLE CEDAR CREEK INTRECEPTOR IMPROVEMENTS	No		31-Dec-24
H09188	S_OR_MF_NB01_M_01_B	MELLWOOD SYS 2 - WINTON & MOCKINGBIRD PS ELIM & PIPE UPGRADES	No		31-Dec-24
H10046	S_PO_WC_PC09_M_09B_C	OUTER LOOP WW STORAGE	No		31-Dec-24

Objectives

- Welcome
- Agenda Review & Ground Rules
- Progress Report
- Draft Charter for WWT Stakeholder Group
- IOAP Modification Review
- IOAP Revision Process & Schedule
- Public Involvement Meetings

IOAP IMPLEMENTATION PROGRESS

PROJECT WIN

MSD

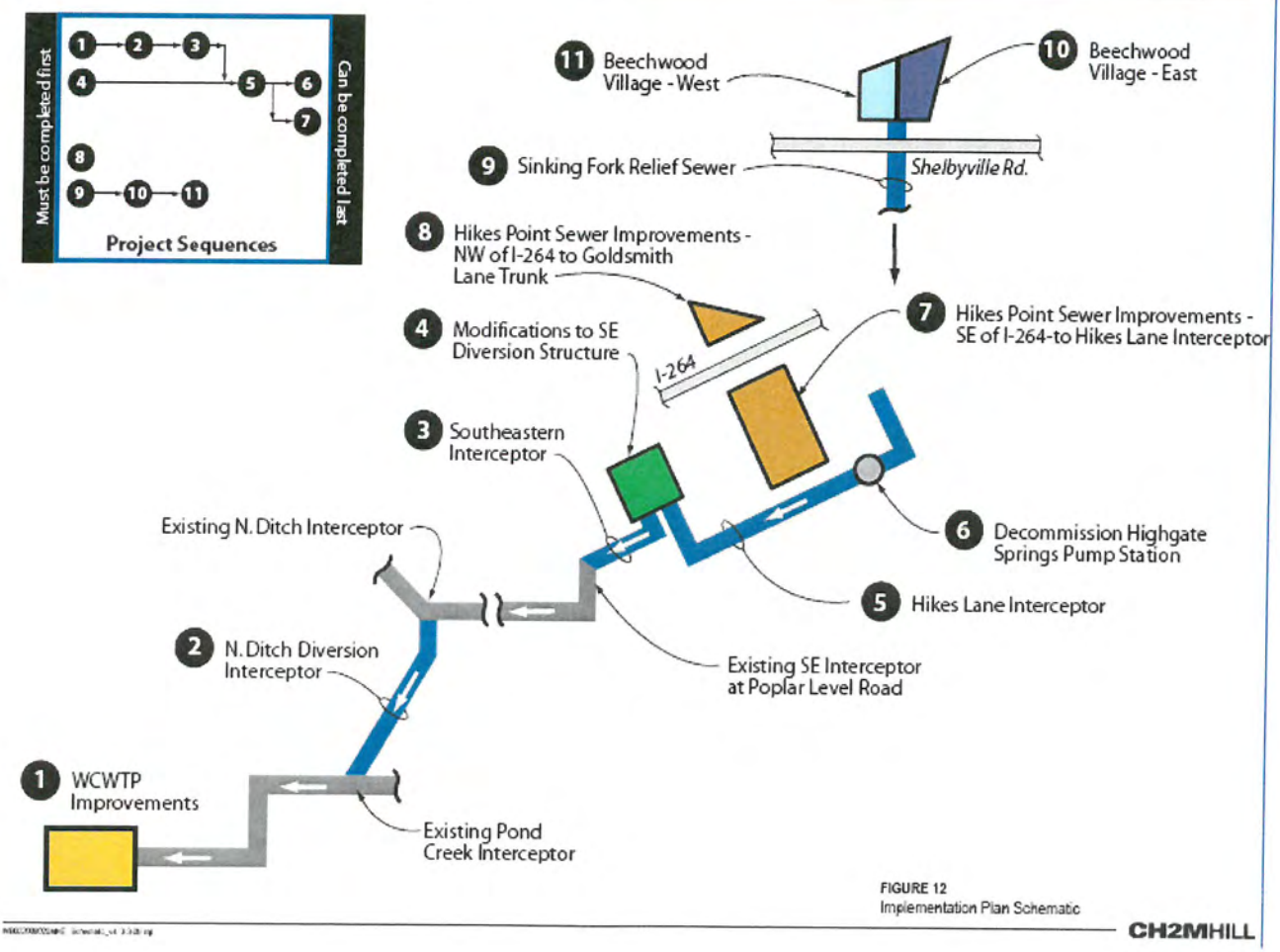
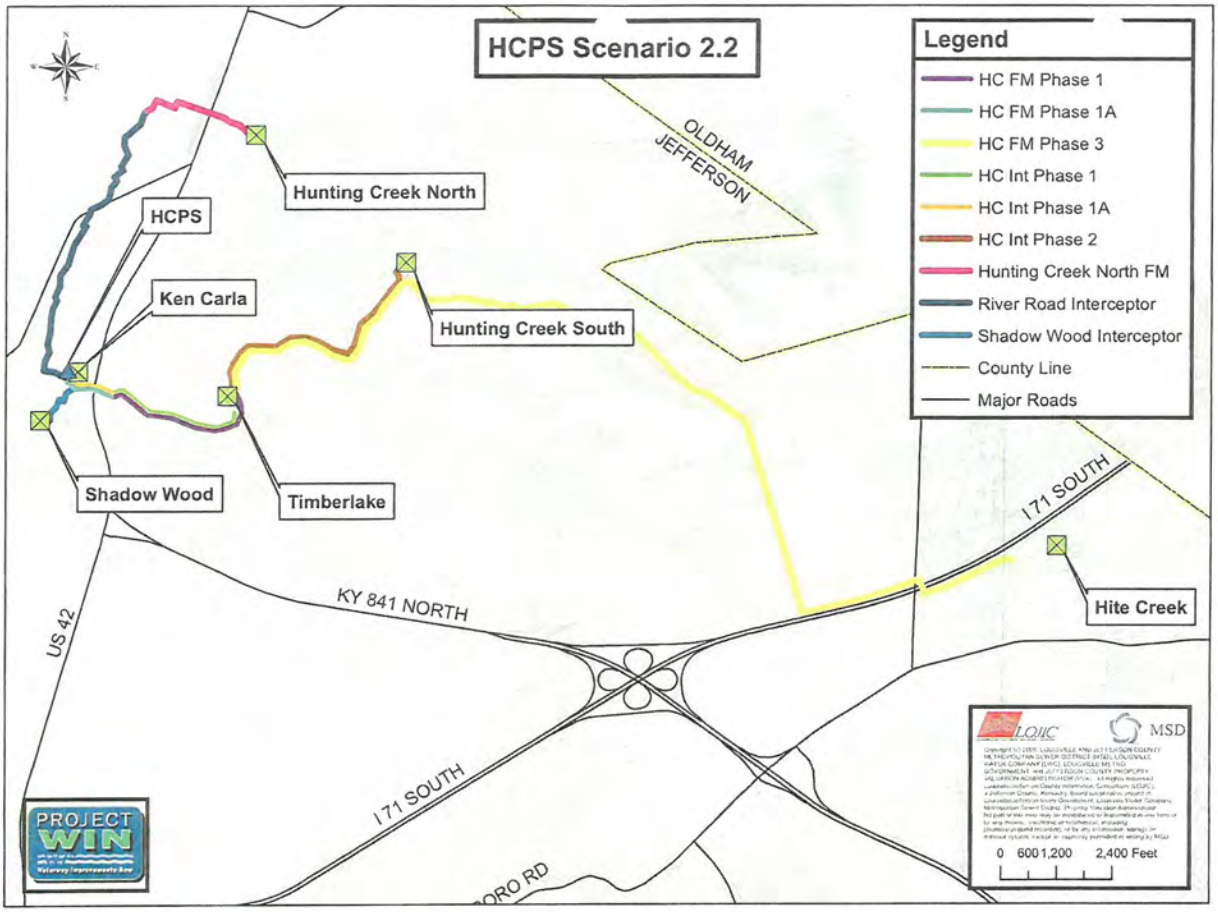
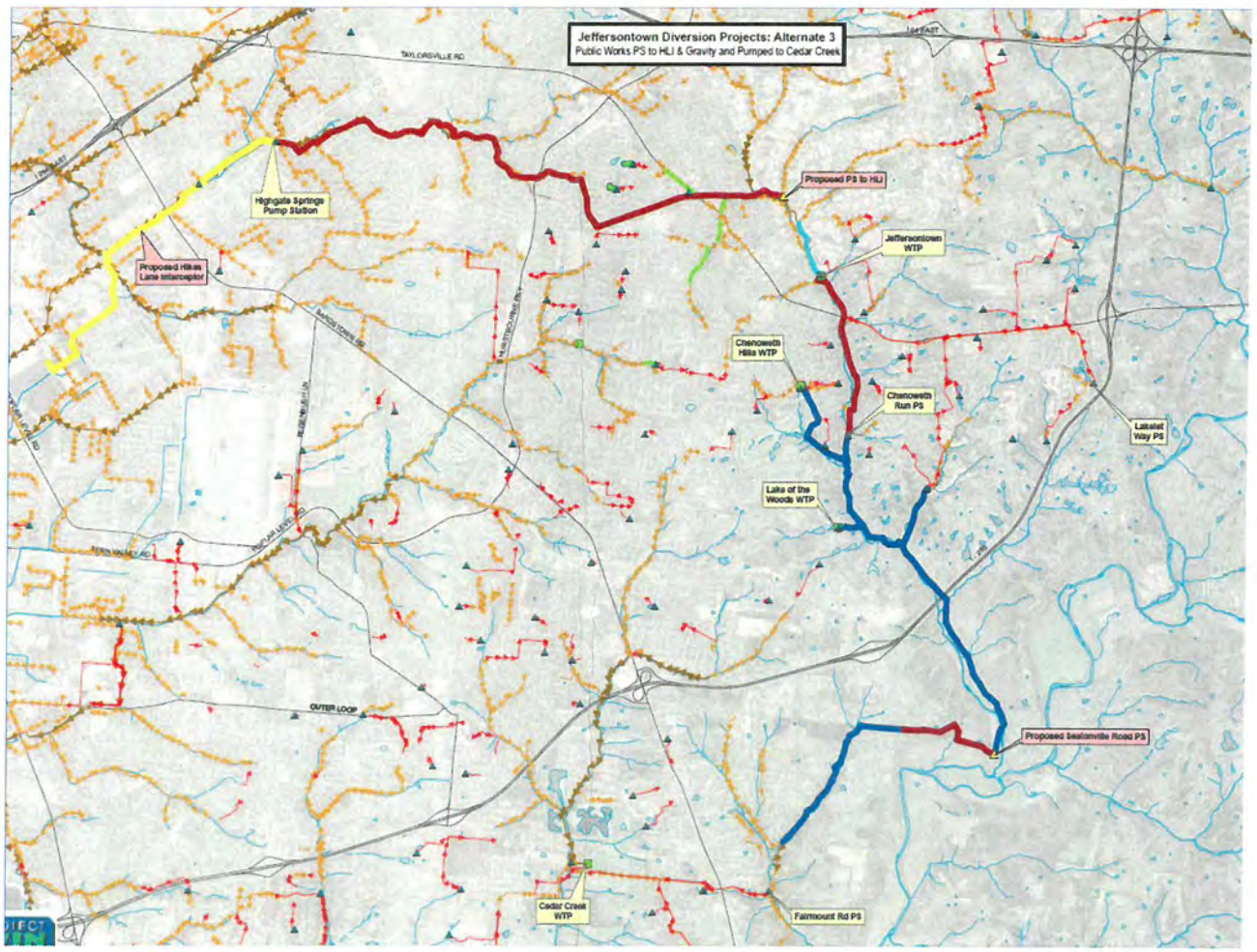


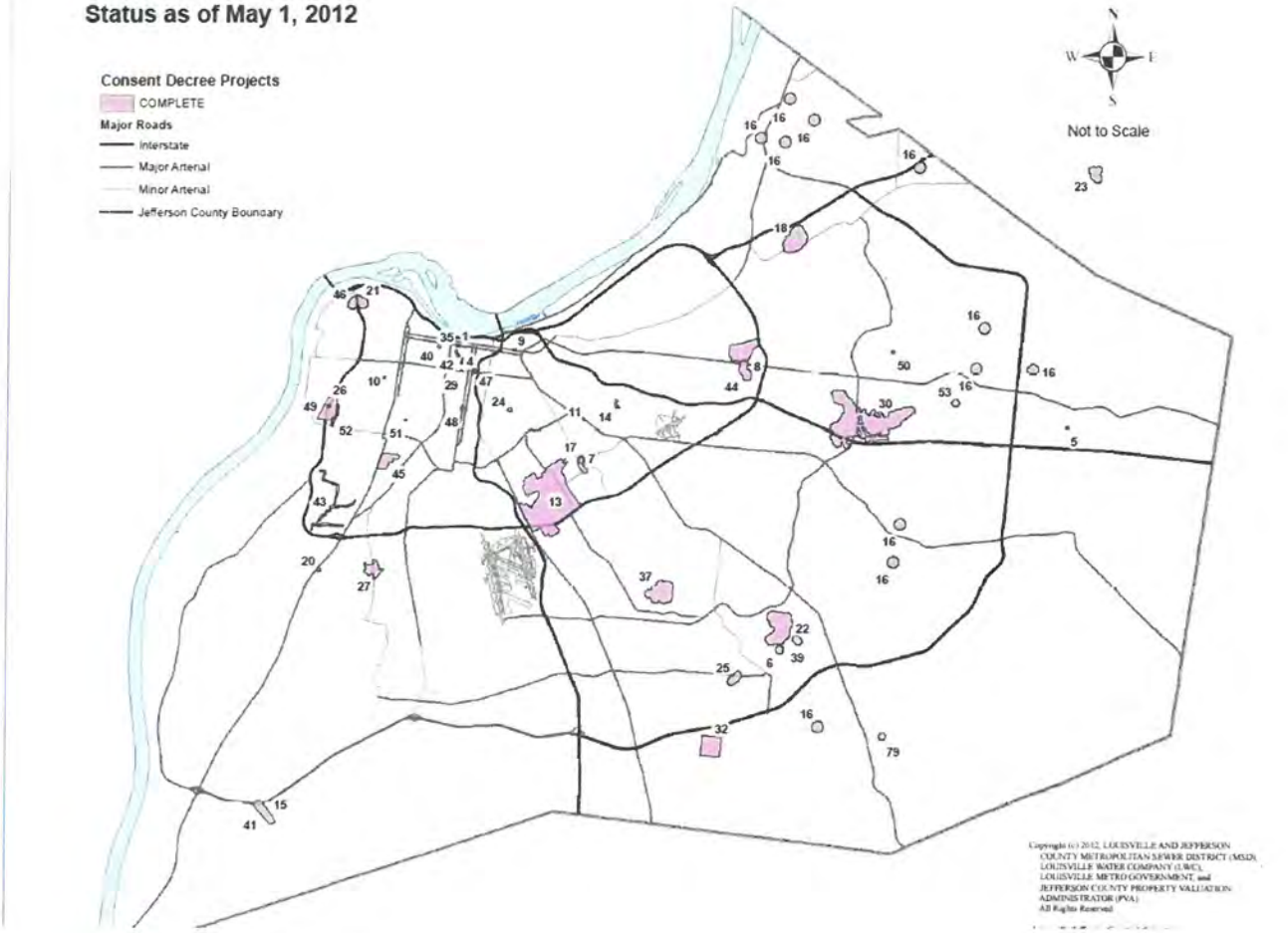
FIGURE 12
Implementation Plan Schematic

CH2MHILL

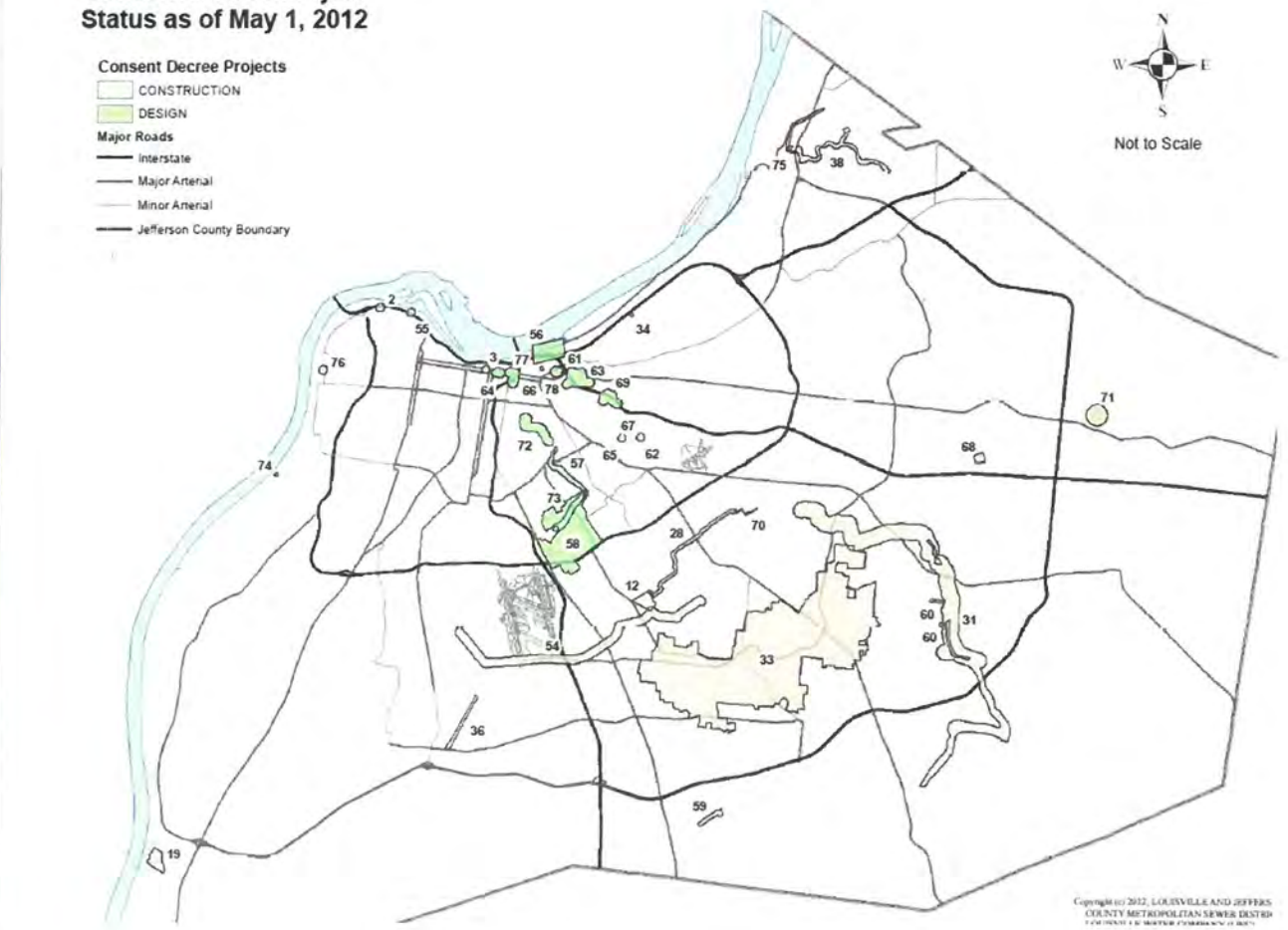

HCPS Scenario 2.2
Legend
HC FM Phase 1
HC FM Phase 1A
HC FM Phase 3
HC Int Phase 1
HC Int Phase 1A
HC Int Phase 2
Hunting Creek North FM
River Road Interceptor
Shadow Wood Interceptor
County Line
Major Roads
Hunting Creek North
HCPS
Ken Carla
Hunting Creek South
Shadow Wood
Timberlake
Hite Creek
OLDHAM
JEFFERSON
I 71 SOUTH
KY 841 NORTH
US 42
I 71 SOUTH
PROJECT WIN
LOJIC
MSD
0 600 1,200 2,400 Feet


Jeffersontown Diversion Projects: Alternate 3
Public Works PS to HLI & Gravity and Pumped to Cedar Creek
Highgate Springs Pump Station
Proposed Hikes Lane Interceptor
Proposed PS to HLI
Jeffersontown WTP
Chenoweth Hills WTP
Chenoweth Run PS
Lakelet Way PS
Lake of the Woods WTP
Proposed Seatonville Road PS
Cedar Creek WTP
Fairmount Rd PS
OUTER LOOP

Consent Decree Project Status as of May 1, 2012



Consent Decree Project Status as of May 1, 2012



Implementation Progress*

- 25 Projects in Design
- 12 Under Construction
- 46 of 119 Certified Complete (incl. green demonstration)
- Big Four Projects – approx 0.5% under budget
- IOAP – approx. 30% under budget

* Budget statistics are assuming uniform internal force account, then comparing current capital budget for completed projects to 2009 IOAP budget projections

PROJECT WIN

MSD

DRAFT STAKEHOLDER CHARTER

PROJECT WIN

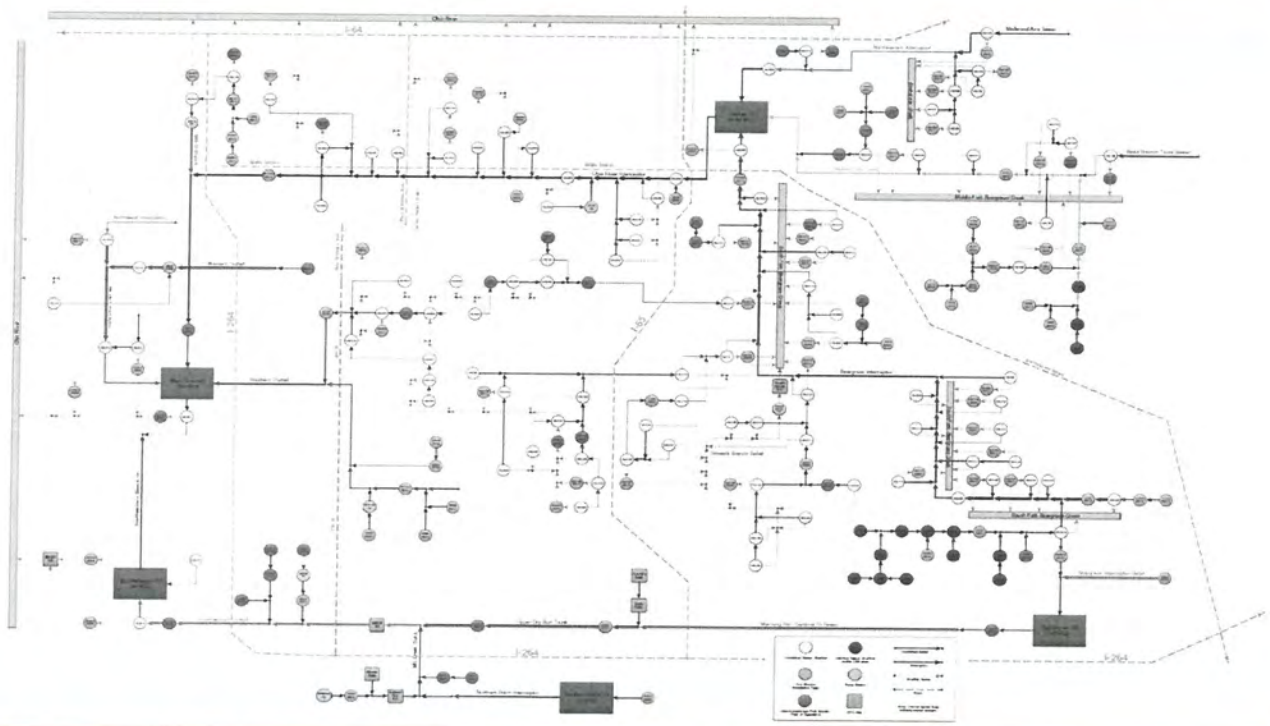
MSD

Draft Revised Charter
WWT Stakeholder Group

- Background Section - updated to detail activity through IOAP submittal and regulatory approval
- Stakeholder Process - updated to detail activity performed
- Stakeholder Expectations - updated to detail process for development and submittal of the IOAP 2012 Modification
- Stakeholder Membership - added to detail process for fulfilling obligations of the Amended Consent Decree

PROJECT WIN

MSD



IOAP MODIFICATION REVIEW

PROJECT WIN

MSD

2009 CSO Long Term Control Plan

- **19 Gray Infrastructure Projects**
  - 4 Sewer Separations
  - 13 Storage basins
  - Replacement and expansion of Nightingale Pump Station
  - 1 High-Rate Wet Weather Treatment Facility
- **Green Infrastructure Projects – 17% of Gray Program**
  - Demonstration projects
    - Bioswale/biofiltration
    - Rain garden
    - Pervious alleys
    - Infiltration dry wells and sink holes
- **9 Flood Pump Station Projects for DWO's**
- **Green to Gray 'Right Sizing' Allowable**

2009 Sanitary Sewer Discharge Plan

- Gray infrastructure
  - 16 conveyance capacity
  - 19 storage
  - 10 pump station upgrades or expansions
  - 1 wastewater treatment expansion
- Source control program – 15% of Gray

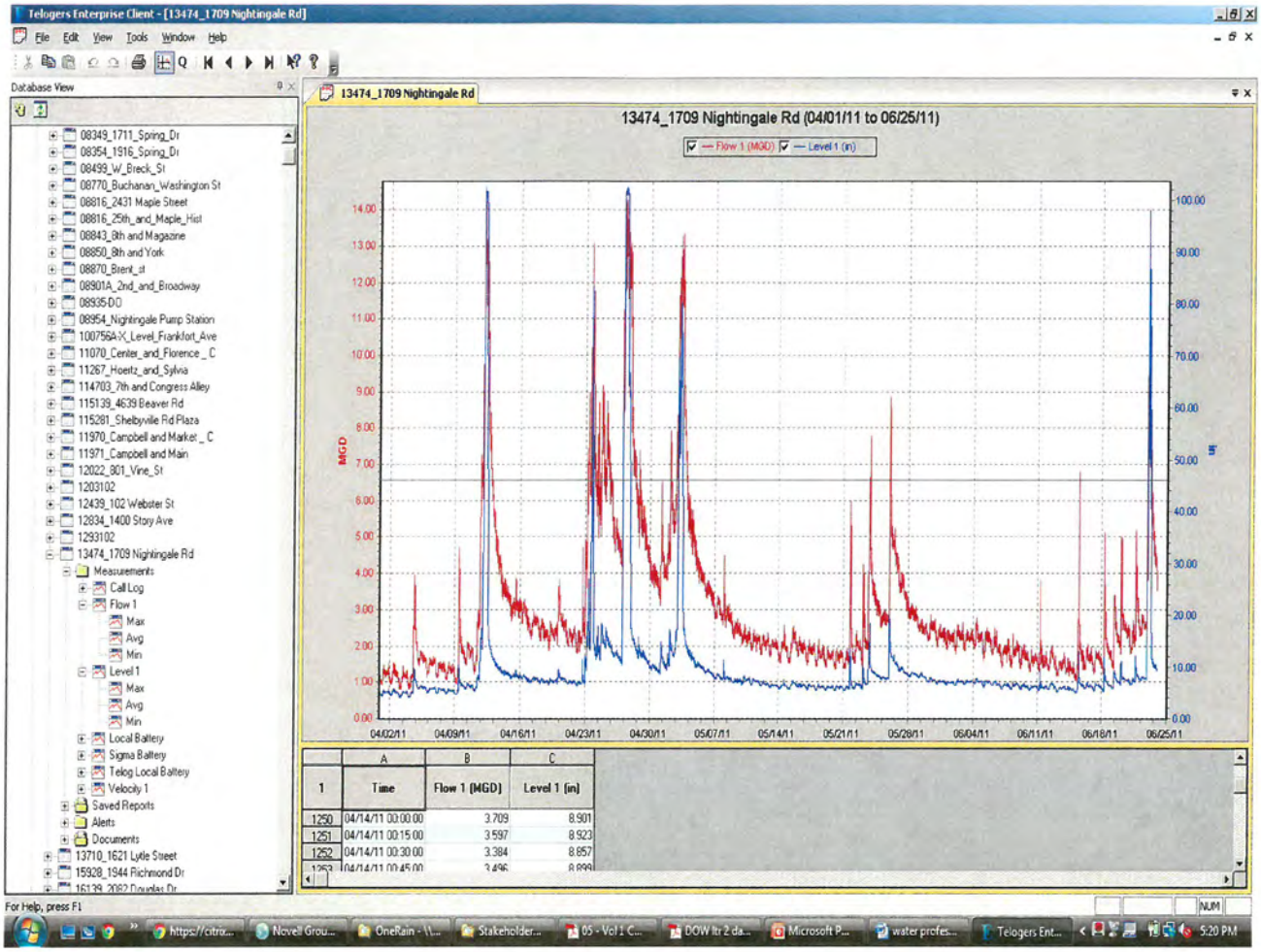
IOAP Volume 1, Chapter 6.5.3.6
Adaptive Management

Adaptive management makes use of project performance **measurements, such as sewer flow monitoring, observations of overflow events** at known trouble spots, and KPDES permit reporting **to compare the actual effectiveness of the overflow abatement measures to the assumed performance that served as the basis for design and planning**. Observed results will be **used to "right-size" subsequent projects to ensure overall IOAP objectives are achieved.**

Preliminary Discussions w/ regulators underway

PROJECT WIN

MSD



2012 Project Calibration

- Program Costs Still at $850 Million
- Several projects grew significantly in size and cost or are new
- Others shrank or disappeared
- Overall program benefits increased
- Schedule revisions are to be proposed

Project Revision Summary

(see project handout for more details)

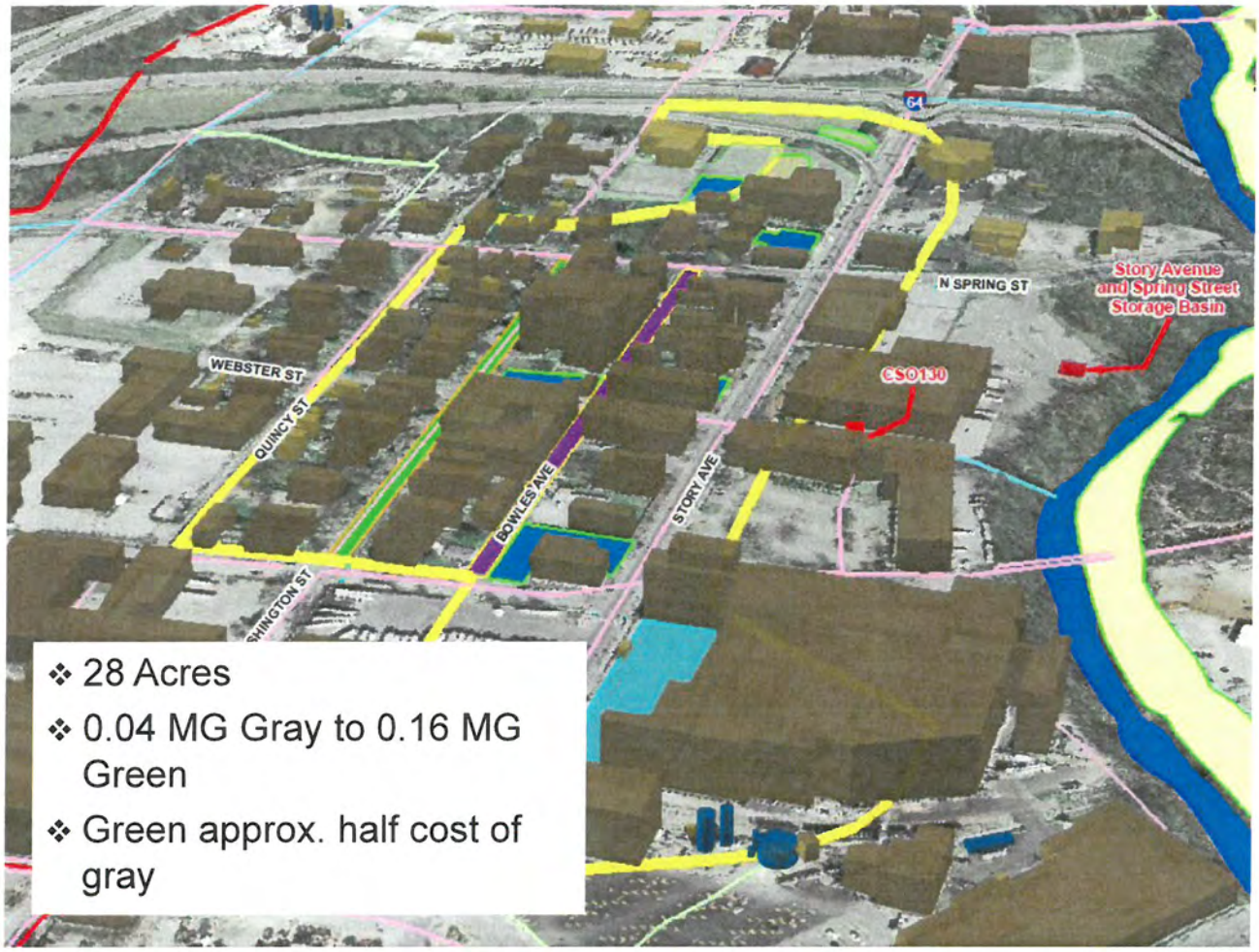
- 7 projects got larger
- 3 projects have higher overflow reduction targets, 1 lower
- 7 projects got smaller
- 12 projects forward – some split from other projects
- 4 projects backward – green & size
- $850 million capital cost

PROJECT WIN

MSD

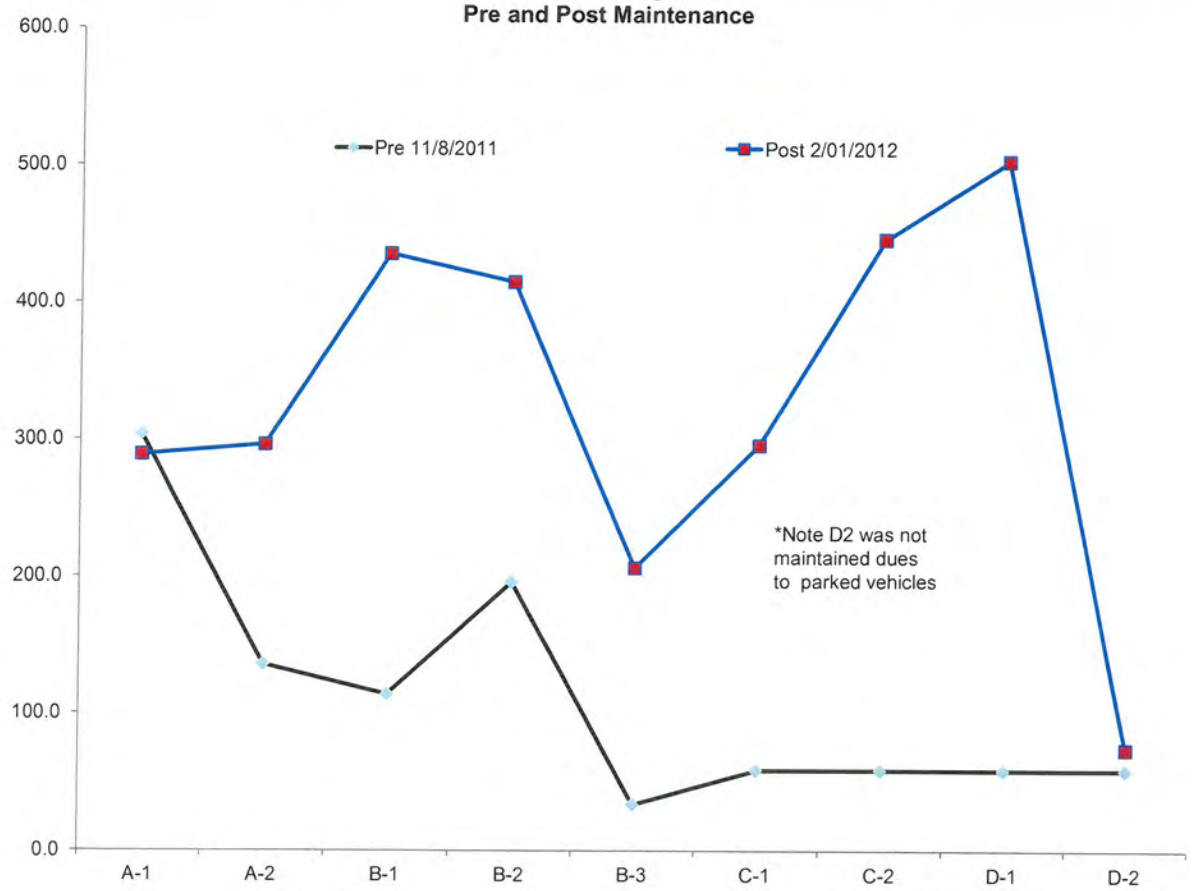
Mod Highlights

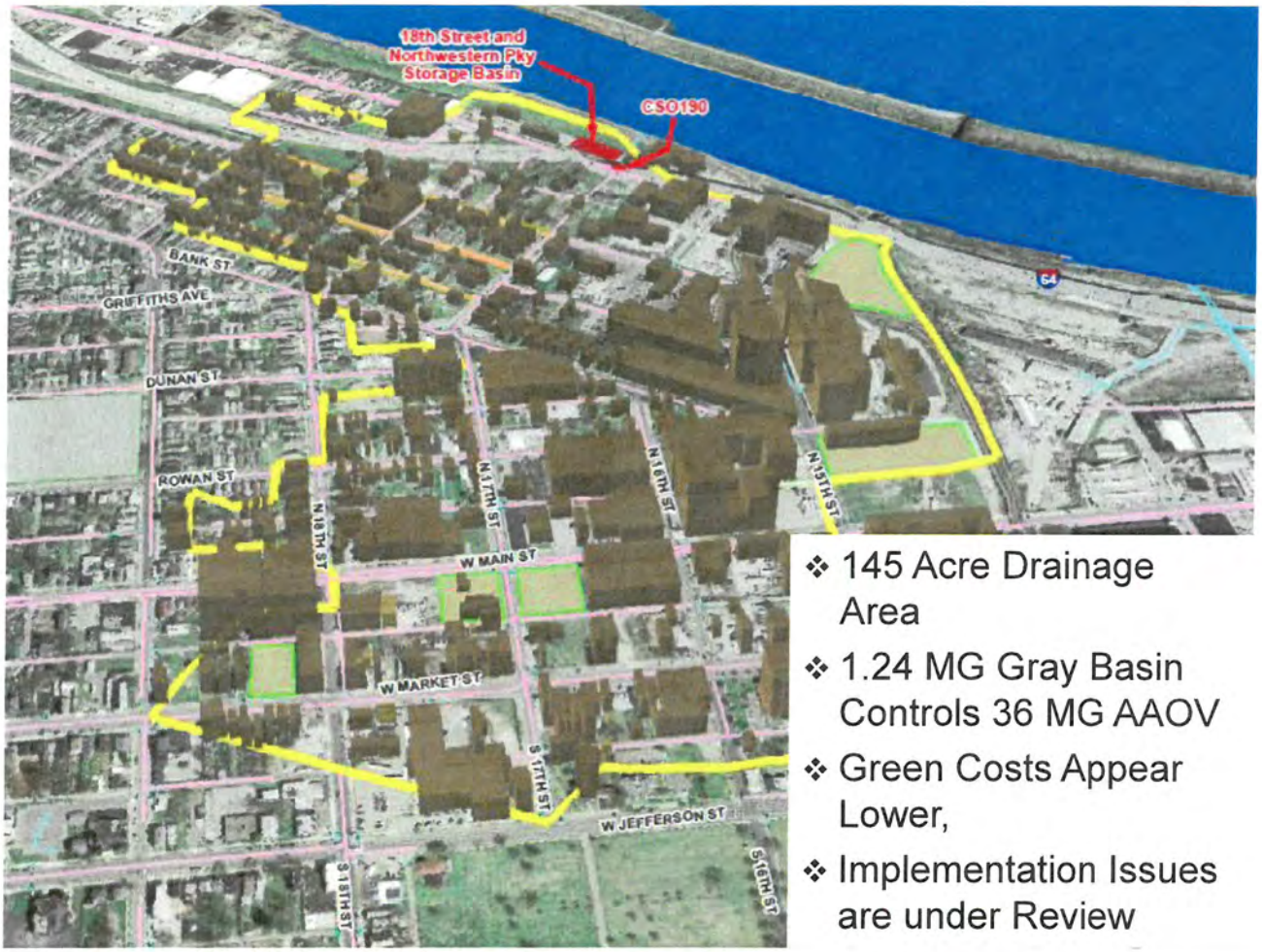
- I-64 & Grinstead; Fairmount Storage
- Story & Main; Algonquin Storage
- CSO130 Green to Gray Mod
- CSO190 Consideration of Green



- 28 Acres
- 0.04 MG Gray to 0.16 MG Green
- Green approx. half cost of gray

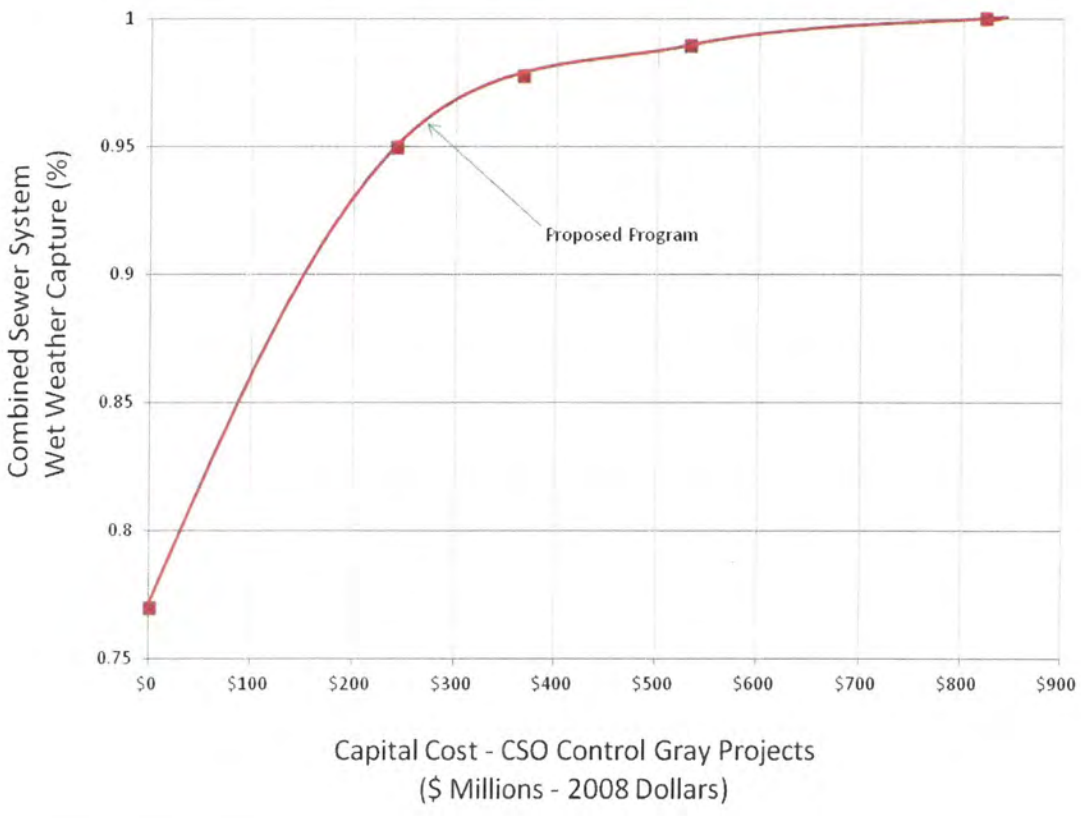
Infiltration Testing Results
Pre and Post Maintenance

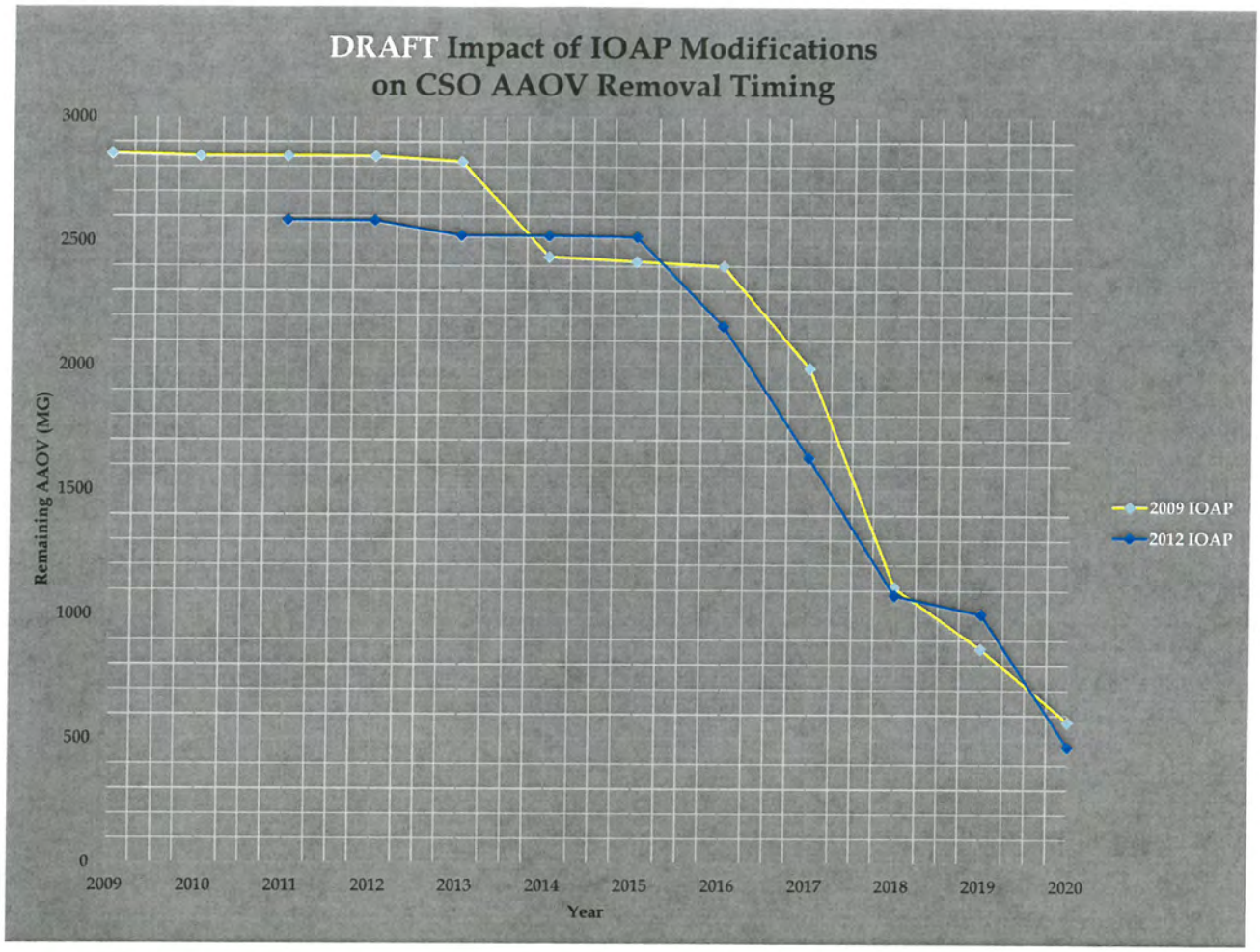


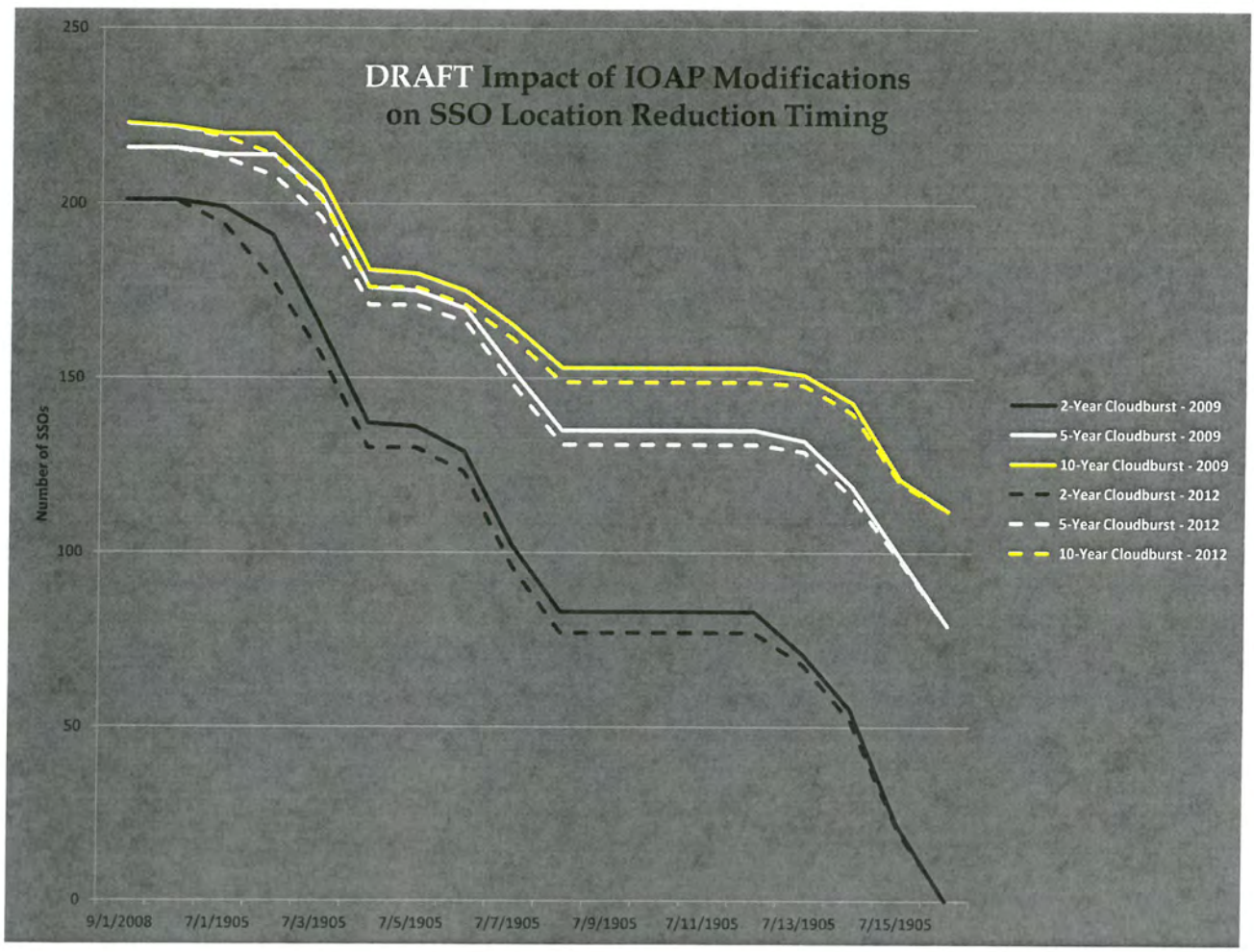


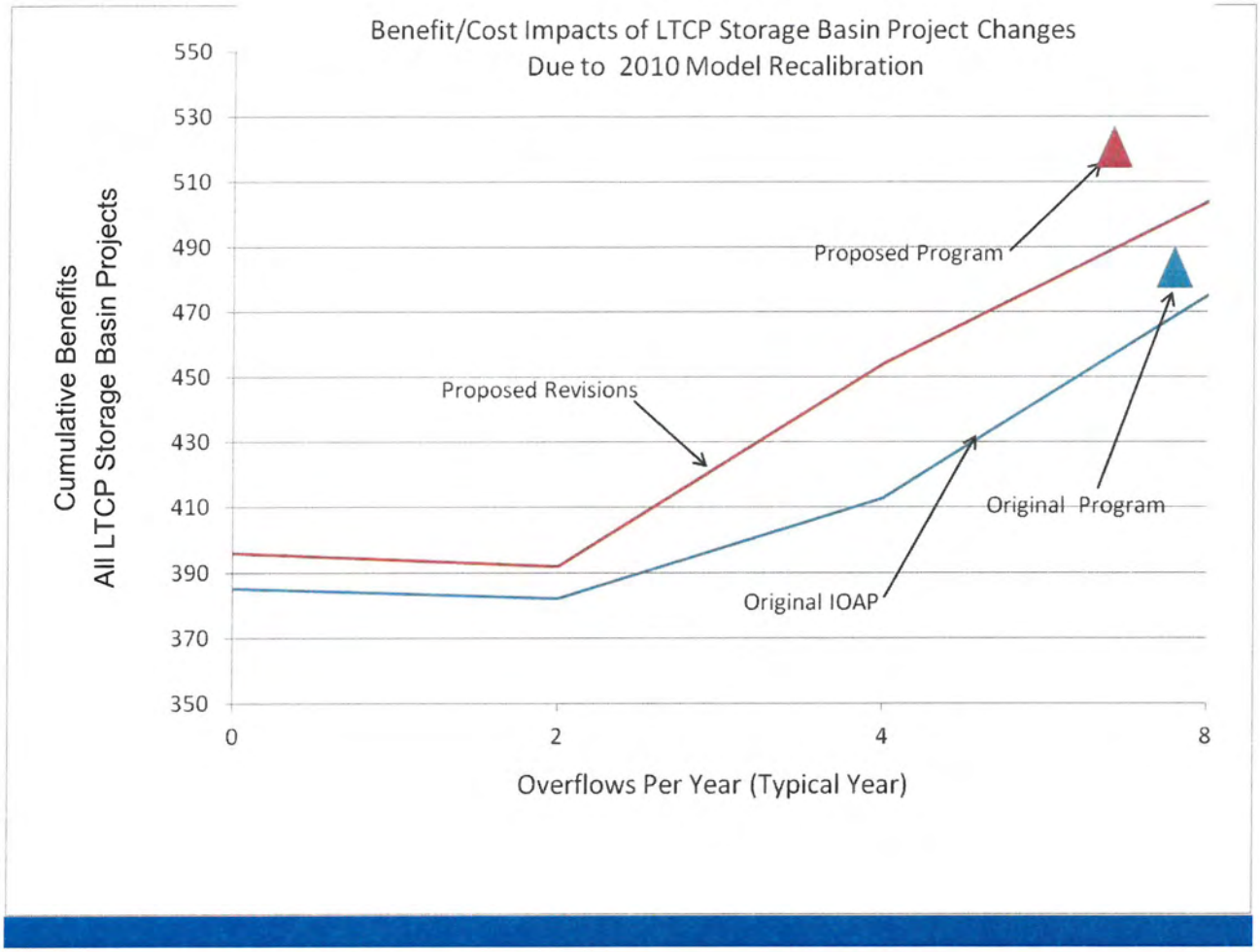
- 145 Acre Drainage Area
- 1.24 MG Gray Basin Controls 36 MG AAOV
- Green Costs Appear Lower,
- Implementation Issues are under Review

CSO Reduction Point of Diminishing Return




DRAFT Impact of IOAP Modifications
on CSO AAOV Removal Timing
Remaining AAOV (MG)
3000
2500
2000
1500
1000
500
0
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
Year
2009 IOAP
2012 IOAP


DRAFT Impact of IOAP Modifications
on SSO Location Reduction Timing
Number of SSOs
250
200
150
100
50
0
9/1/2008
7/1/1905
7/3/1905
7/5/1905
7/7/1905
7/9/1905
7/11/1905
7/13/1905
7/15/1905
2-Year Cloudburst - 2009
5-Year Cloudburst - 2009
10-Year Cloudburst - 2009
2-Year Cloudburst - 2012
5-Year Cloudburst - 2012
10-Year Cloudburst - 2012



IOAP REVISION SCHEDULE

PROJECT WIN

MSD

Schedule	Timeframe	Complete
IOAP Vol. 1, 2 & 3 Markup for Potential Revision	Feb-2012	x
EPA, KDEP & MSD Meeting (Atlanta)	Feb-2012	x
Overflow Report Submittal - prelim email for discussion	Mar-2012	x
Overflow Report Submittal - certified package	Mar-2012	x
WWT Stakeholder Group Proposal - prelim email for discussion	Apr-2012	x
IOAP Project Schedule Justification Package EPA/KDEP Submittal	May-2012	
WWT Stakeholder Group Meeting	May-2012	
First Round Public Input Meetings	May-2012	
IOAP Revisions for EPA/KDEP Submittal - First Draft	Jun-2012	
Submittal to EPA/KDEP - First Draft	Jun-2012	
EPA, KDEP & MSD Meeting	Jul-2012	
IOAP Revisions for Public Input	Aug-2012	
Second Round Public Input Meetings & Web posting	Sep-2012	
IOAP Revisions for Public Comment and Submittal	Sep-2012	
Production for Submittal (Web posting and DVD at libraries)	Sep-2012	
Submit Notice of 30-day Public Comment Period	Oct-2012	
Public Hearing (14 days after notice)	Oct-2012	
Compile Responsiveness Document	Nov-2012	
Board Approval	Nov-2012	
Final IOAP Submittal to EPA/KDEP	Nov-2012	

PROJECT WIN

MSD

PUBLIC INVOLVEMENT MEETINGS

PROJECT WIN

MSD

NIA Center – May 10, 6:30-8:30 p.m.
2900 W. Broadway

Focus On:

- Program Mod Overview
- CSO190 Green Project Suite
- Paddy's Run High Rate Treatment Center
- Southern Outfall Relief Inline Storage 1 & 2

Jeffersontown Community Center
May 15, 6:30-8:30 p.m.
10671 Taylorsville Road

Focus On:

- Program Mod Overview
- Jeffersontown Treatment Center Elimination

Jeffersontown Community Center
May 15, 6:30-8:30 p.m.
10671 Taylorsville Road

Focus On:

- Program Mod Overview
- Jeffersontown Treatment Center Elimination

Harrods Creek Fire Department
May 17, 6:30-8:30 p.m.
8905 U.S. Hwy 42 in Prospect

Focus On:

- Program Mod Overview
- Prospect Treatment Center Eliminations