Wet Weather Team Project Meeting Materials

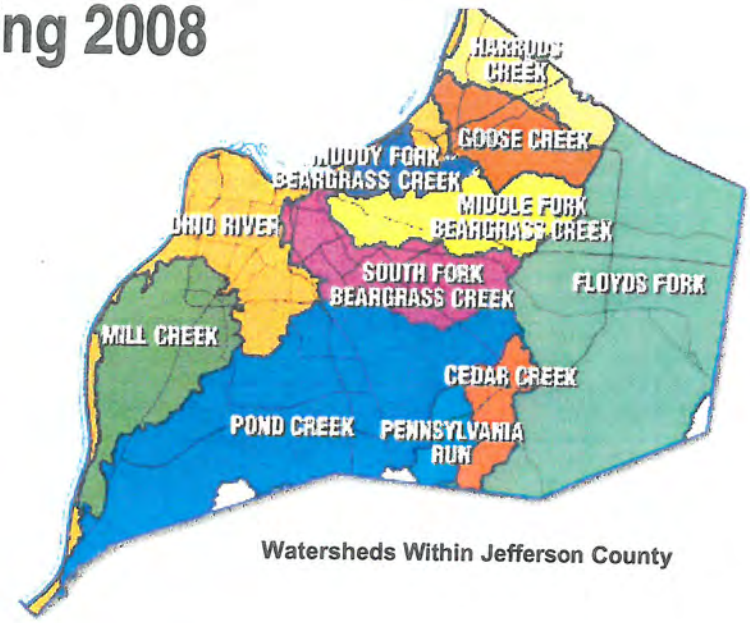
Summer 2007–Spring 2008

01.05.0227.11

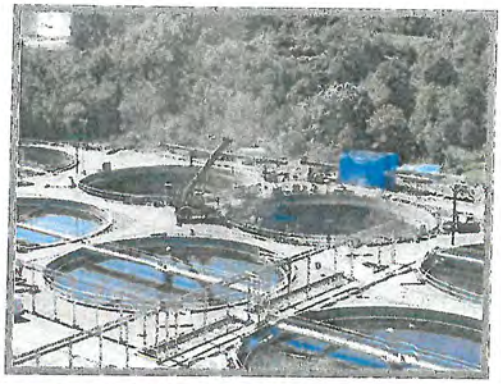
WWT Stakeholders Meeting # 27 11/29/2011

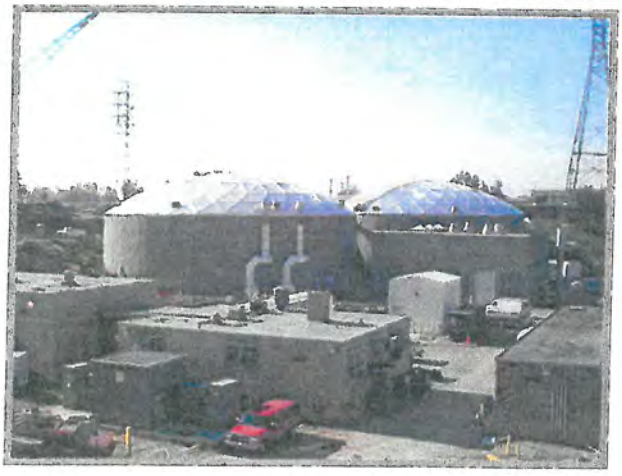
MSD

Louisville and Jefferson County
Metropolitan Sewer District



Watersheds Within Jefferson County





Agenda

Stakeholder Group Agenda
November 29, 2011
5:00 p.m. – 7:30 p.m.

5:00 – 5:15 Dinner (Wet Weather Team only, please)

5:15 – 5:25 Welcome and MSD Updates

5:25 – 5:30 Agenda Review and Stakeholder Meeting "Ground Rules"

5:30 – 5:50 Sewer Rehabilitation Program Update

5:50 – 6:50 Proposed Sewer Overflow Project Modifications

6:50 – 7:10 September 27, 2011, IOAP Public Input Mtg Overview

7:10 – 7:25 Observer Comments

7:30 Wrap-up and Adjourn

No Meeting Summary

Handouts

No Meeting Handouts

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PROJECT WIN
Waterway Improvements Now

Sanitary Sewer Rehabilitation Activities
November 29, 2011

CLEAN, GREEN, GROWING COMMUNITY

Agenda

- Area Prioritization
- Data Collection
- Data Evaluation
- Bid Document Creation
- Bidding and Construction
- Compliance Documentation

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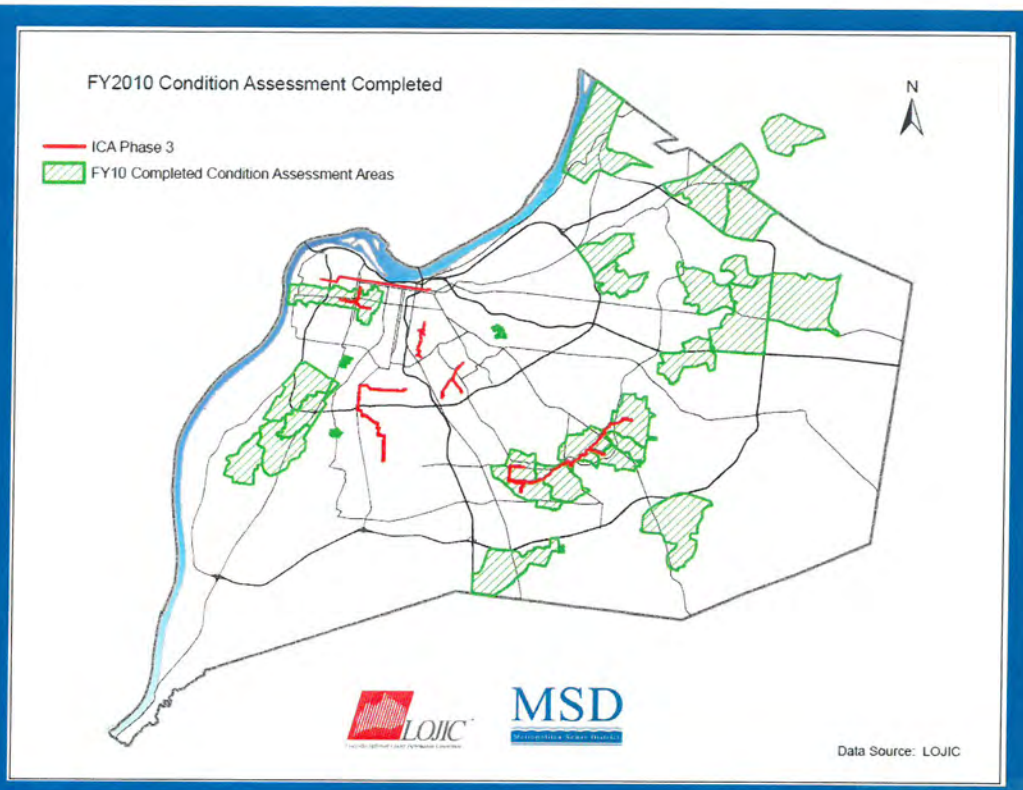

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SSES FY10-11 Summary

SSES Projects Completed: ($5.4 M)

Camp Taylor
Cherokee Park
Parkview Estates
Prospect (N & S Hunting Creek WQTC)
Starview, Berrytown and Lake Forest WQTC
Lea Ann Way PS
Lantana PS
Riding Ridge PS
Gunpowder PS
Fox Harbor PS
Kavanaugh Rd PS
Meadow Stream PS
Floydsburgh Rd PS
Eden Care PS
Edsel PS
East Rockford PS
Sonne PS
Hazelwood PS
Little Cedar Creek Interceptor

SSES Totals:

CCTV 1,170,000 LF (222 Miles)
Manhole 6,206 Ea
PPI 1,773 Ea
Smoke 1,402,947 LF (266 Miles)
Wet Weather 26 Ea

ESTIMATED REHAB COSTS:

Pipe - $20.7 M
Manholes - $1.3 M
Sump Pumps/Down Spouts - $1.8
SCAP Credits – 7.8 MGD

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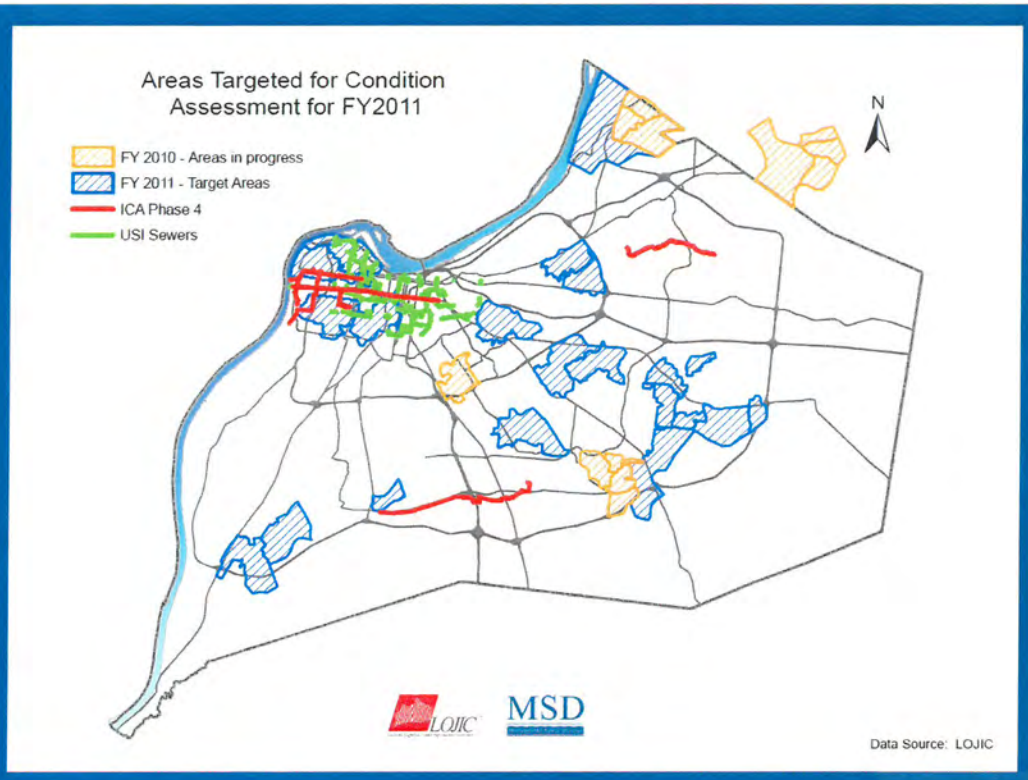

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SSES FY11-12 Summary

SSES Projects Planned:

Prospect Phase 2
Cedar Creek Phase 2
Shively
Pond Creek
Silver Heights WQTC
Yorktown WQTC
Chenoweth Hills WQTC
Chenoweth Run PS
Caven PS

SSES Totals:

CCTV 1,339,140 LF (230 Miles)
Smoke Test 1,339,140 LF (230 Miles)
5,259 Manhole Inspections
1,110 Private Property Inspections
Smoke Test 1,339,140 LF (230 Miles)
Wet Weather Inspections

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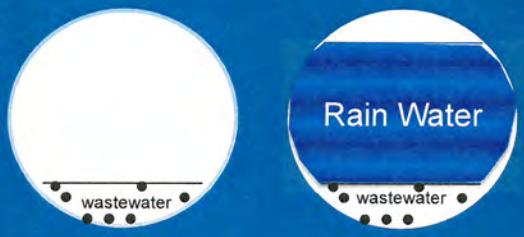
Sanitary Sewer Evaluation Studies

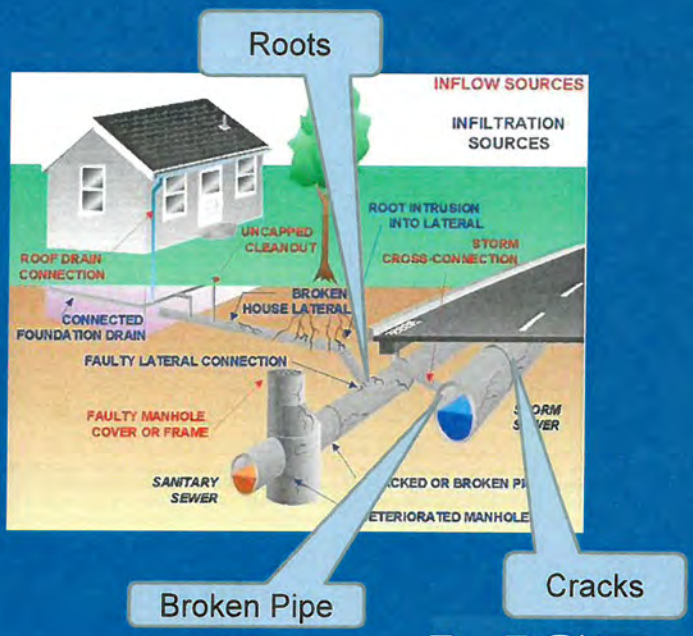
Fixing the Leaks

Groundwater entering our sewer pipes can increase the flows up to 3 to 20x the normal flow.

Pipe Capacity

Normal Flow in a Pipe Wet Weather Conditions





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MSD Sanitary Sewer Evaluation Testing

Smoke Testing

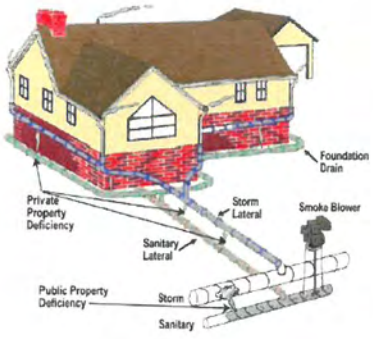
Helps identify defects and improper connections in sewers. An *odorless* and *nontoxic* smoke is blown into the sewer. Smoke leaks out where there is a defect or an improper connection.

Yard signs and weekly notices will be issued before smoke testing is conducted.

Closed Circuit Television Inspections (CCTV)

A technology used to inspect sewer pipes. The lines are lightly cleaned and a robotic device with a television camera is run through to locate and identify defects in the pipes.

How Smoke Testing Works



Private Property Inspections

These inspections are conducted in order to identify drains, downspouts, and sum pumps at each home.

These inspections may require entry into your home, however you will be contacted in advance to schedule a time for these inspections.

The Root of the Issue

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Obstructions

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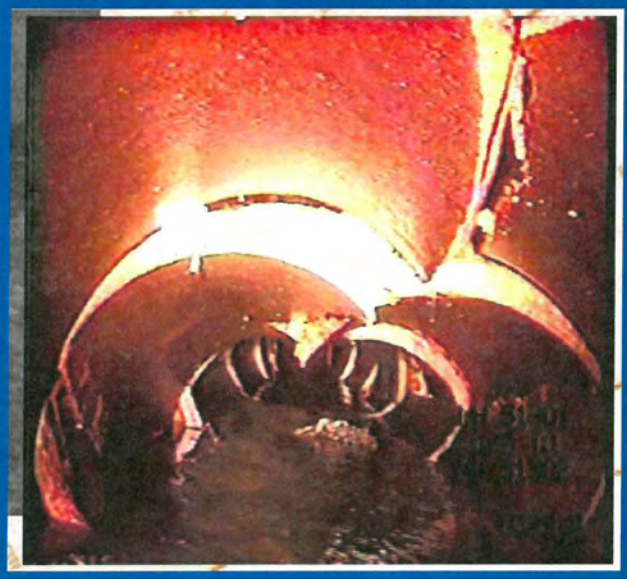
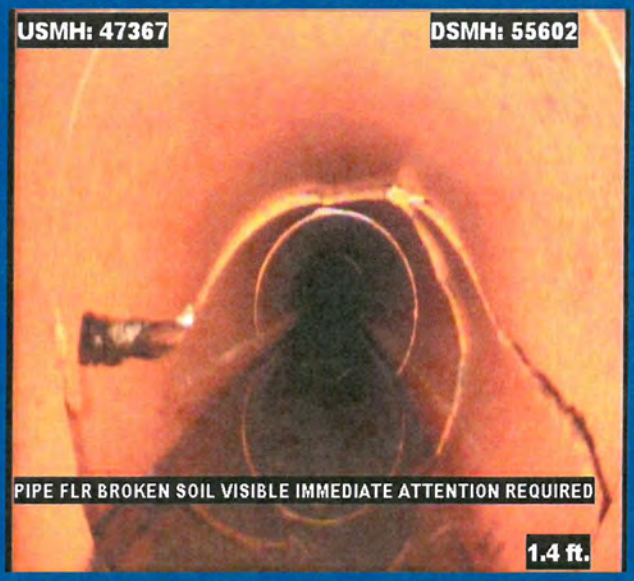
Pipe Failure





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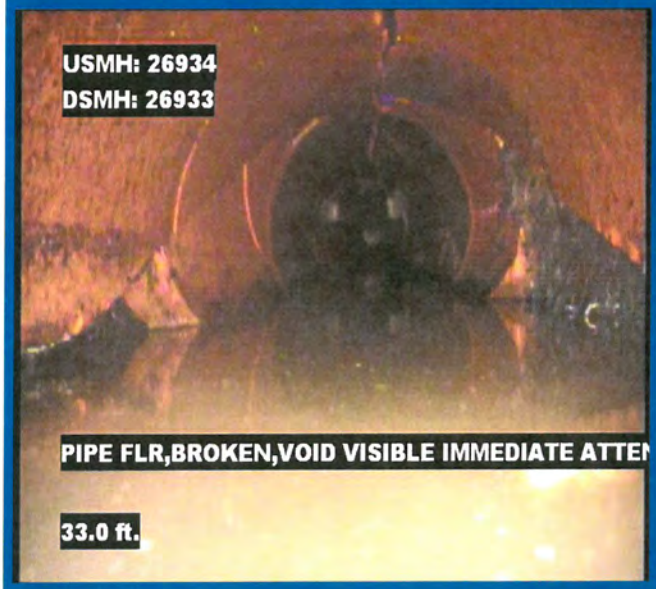
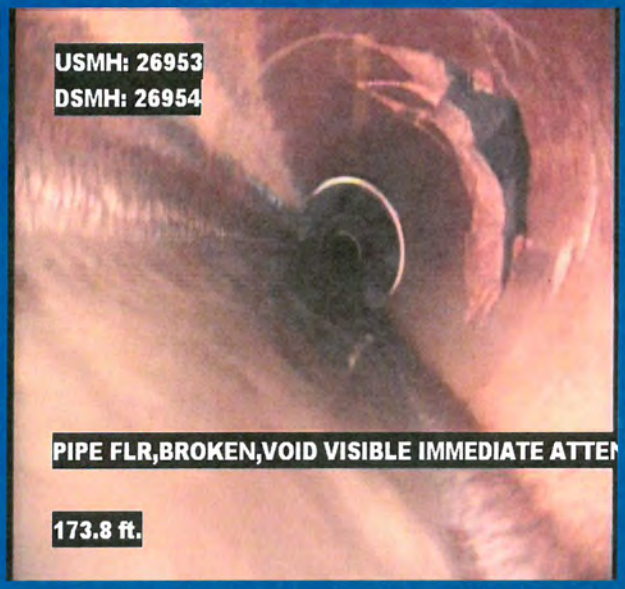
Pipe Missing Material





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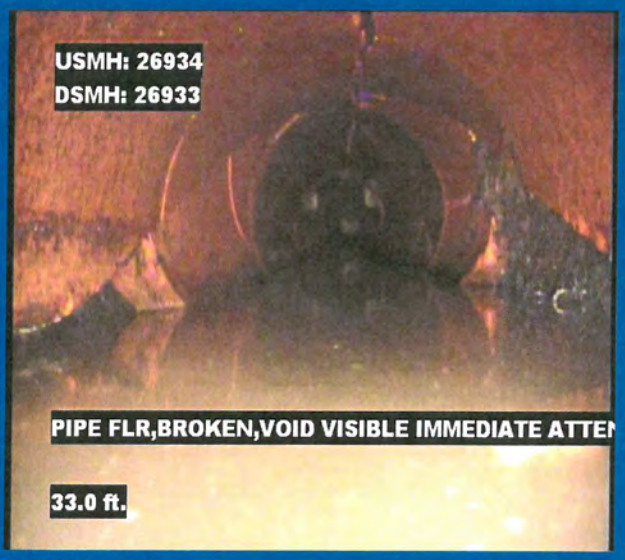
When the Bottom Falls Out



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Joints Failures

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Infiltration

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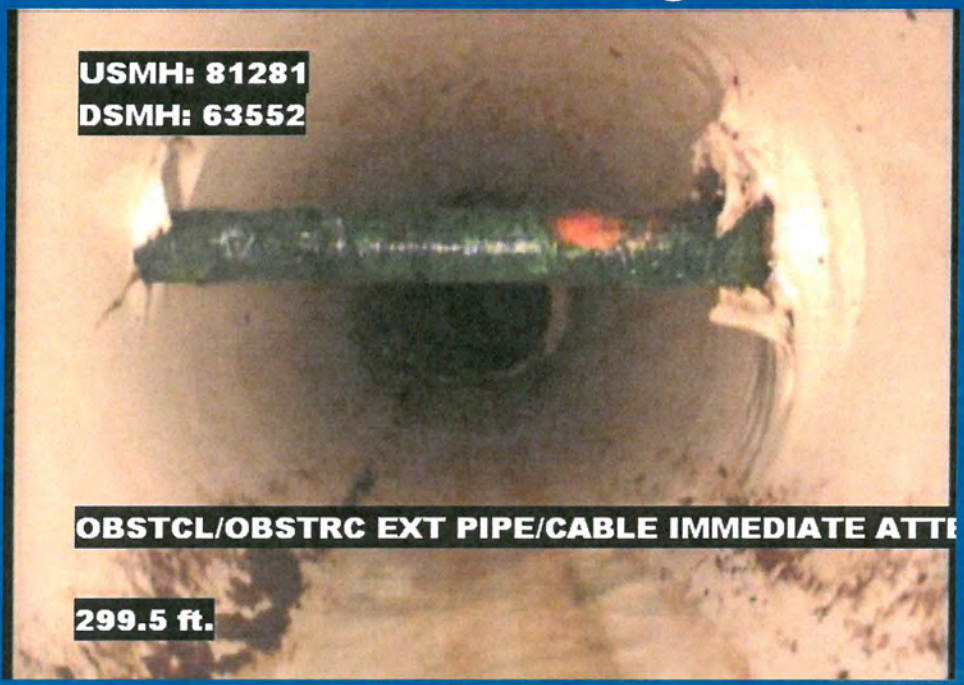
Break On Through



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Cohabitation of Space

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Put a Lid On It

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Buried Manhole

Manhole
Defect? Pipe Failure

Step one is the ability to assess our infrastructure. Inspection requires removal of the frame and manhole lid. The depth of the manhole is inhibiting the inspectors from being able to see and assess the condition of the assets. The average depth to buried manholes is 6- 24 inches.

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Exposed Pipe and Raised Manhole

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When it Rains, It Pours

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Project Seal

(Seal Every Assessed Leak)

- Project SEAL is an assessment tool to prioritize I&I rehabilitation projects in a consistent manner
- Rule based condition assessment and prioritization
- Utilizes current industry assessment standards, PACP defect coding
- Geospatial recognition of asset attributes and locations

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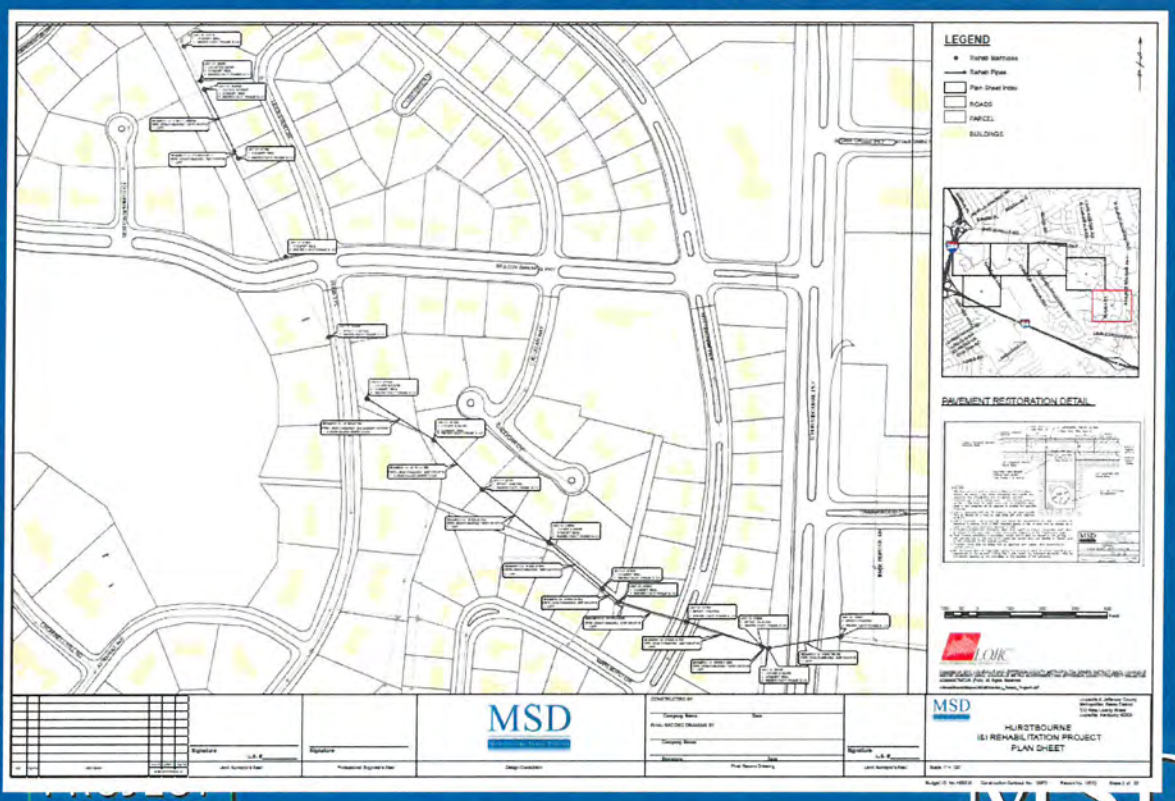

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BID PROPOSAL

Computerized Proposal for: HURSTBOURNE I&I REHABILITATION PROJECT
Contract No. 15572 **Bid Date: July 26, 2011**

Item	Description	Qty.	Unit	Unit $	Total $
	Pipe				
1	Cured-in-Place Pipe, 15-Inch Pipe	485	LF		
2	Cured-in-Place Pipe, 18-Inch Pipe	1,223	LF		
3	Cured-in-Place Pipe, 21-Inch Pipe	1,494	LF		
4	Cured-in-Place Pipe, 24-Inch Pipe	651	LF		
5	Cured-in-Place Pipe, 27-Inch Pipe	2,122	LF		
6	Open Cut Point Repair, Grass	21	LF		
7	Cleaning and Inspection	705	LF		
	Manhole				
8	Manhole Rehabilitation Epoxy Coating (approx 138 VF)	13	EA		
9	Mechanically Locking Chimney Seal	58	EA		
10	Manhole Chimney Seal Extensions	58	EA		
11	Locate & Raise to Grade, Grass	38	EA		
12	Water Tight Frame and Lid, grass	69	EA		
13	Water Tight Frame and Lid, pavement	1	EA		
14	Clean and Inspection	1	EA		
	General				
15	Preconstruction Photographs	1	LS		
16	Asbuilt Drawing Coordination	1	LS		
17	Project Sign	2	EA		
				SUBTOTAL	
18	Mobilization/Demobilization (MAX 1.0% of SUBTOTAL)	1	LS		
19	Bonds (MAX 1.5% of SUBTOTAL)	1	LS		
				BID TOTAL	

Legal Entity: Bidder _____

(Sign here) By _____

Title _____

Address _____

Address _____

Telephone No _____

Note: Bidder is responsible for verifying calculations ascertained by the electronic spreadsheet computation of all bid amounts, subtotals, totals, etc. prior to submitting their bid.

Cost Estimates
Hurstbourne I/I

Hurstbourne I/I Rehabilitation Cost Estimates

Date:	Jul-11	
IOAP Drainage Basin:	Middle Fork	
Line Analized:	744	LF
Manholes Analized:	70	MH

Manhole Rehabilitation	Quantity	Unit Cost	Unit	Price
locate & raise, yard	38	$400.00	EA	$15,200.00
chimney seal	58	$400.00	EA	$23,200.00
chimney seal extensions	58	$200.00	EA	$11,600.00
cleaning and inspection	1	$250.00	EA	$250.00
lining	13	$400.00	EA	$5,200.00
water-tight frame & lid, asphalt	1	$1,200.00	EA	$1,200.00
water-tight frame & lid, yard	69	$800.00	EA	$55,200.00

Pipe Rehabilitation	Quantity	Unit Cost	Unit	Price
cipp, 15 in.	485	$50.00	LF	$24,237.50
cipp, 18 in.	1,223	$50.00	LF	$61,155.50
cipp, 21 in.	1,493	$50.00	LF	$74,668.50
cipp, 24 in.	651	$400.00	LF	$260,500.00
cipp, 27 in.	2,122	$400.00	LF	$848,880.02
cleaning and inspection	705	$2.20	LF	$1,550.69
point repair, yard	21	$1,000.00	LF	$21,000.00

Subtotal	**$1,403,842.21**
Contingency* (25%)	$350,960.55
TOTAL	$1,754,802.77
SCAP Credits**	
Cost/Credit Ratio	

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Rehabilitation Projects

FY2011- Present

Design/Under Construction

Beargrass Interceptor
Camp Taylor
Lea Ann Way
Lantana PS
Derington PS
Eden Care PS
Hurstbourne Interceptor
Middletown Int
Saint Matthews Interceptor
Upper Middle Fork Interceptor

Complete

Beargrass Int Phase 2
Edsel Lane PS
Floydsburg PS
Hazelwood
Shadow Wood
Sonne Avenue
Parkview Estates

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Rehabilitation Projects

Completed I&I Rehabilitation Projects from FY11- Present

Activity	Total	Units
CIPP, Pipe	38,675	LF
CIPP Tophats	645	EA
Point Repairs	332	LF
Clean and Inspect	3,321	LF
Manhole Chimney Seals	159	EA
Manhole Epoxy Coating	112	EA
Manhole Frame and Lid	19	EA
Manhole Water Tight Frame and Lid	89	EA
Manhole Realign Frame and Lid	12	EA
Manhole Locate and Raise	68	EA
Manhole Clean and Inspect	6	EA

Total Rehab Costs	**$ 5,497,087.58**
SCAP Credits	**1,412,650**
Cost Benefit Ratio	**3.89**

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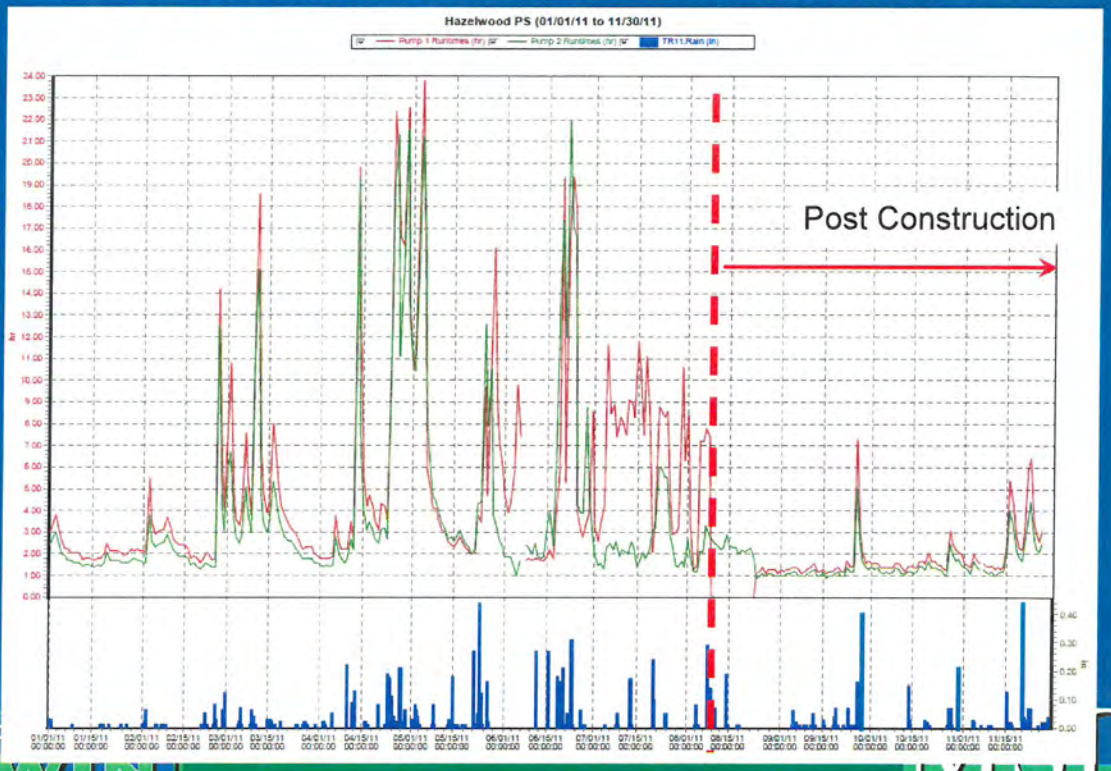
Post Construction - Hazelwood PS



Pump Run Times

Rain Events/ Time
(Jan 2011 to Nov2011)

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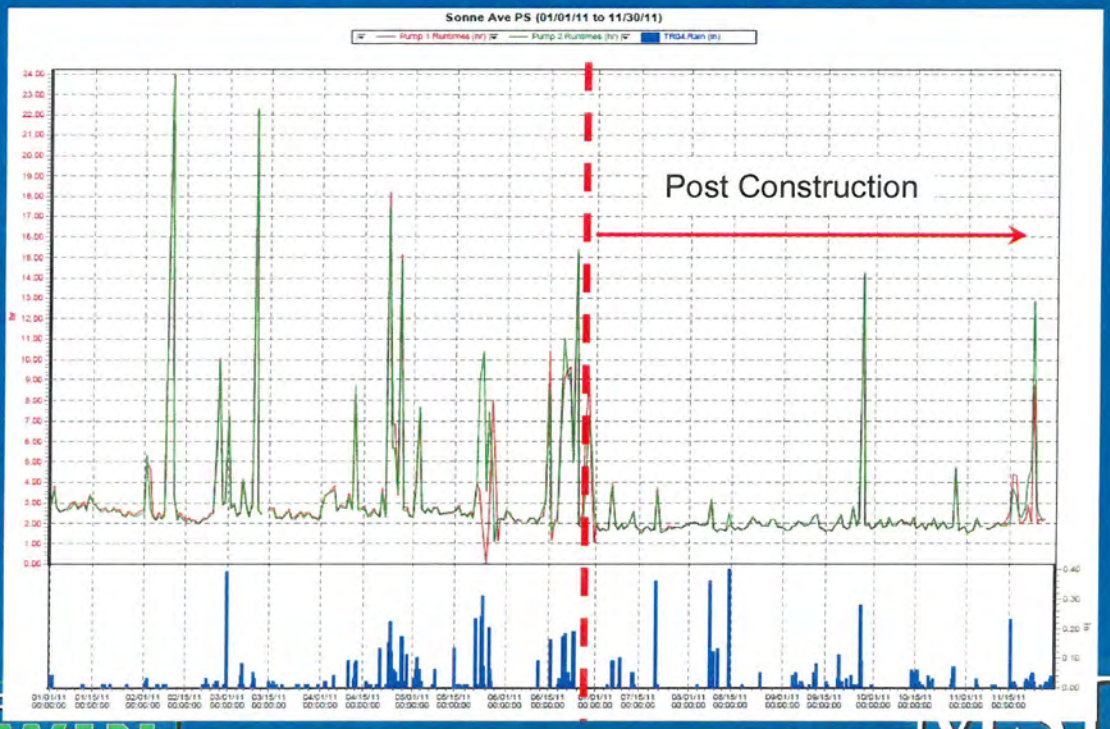
Post Construction – Sonne PS



Pump Run Times

Rain Events/ Time
(Jan 2011 to Nov2011)

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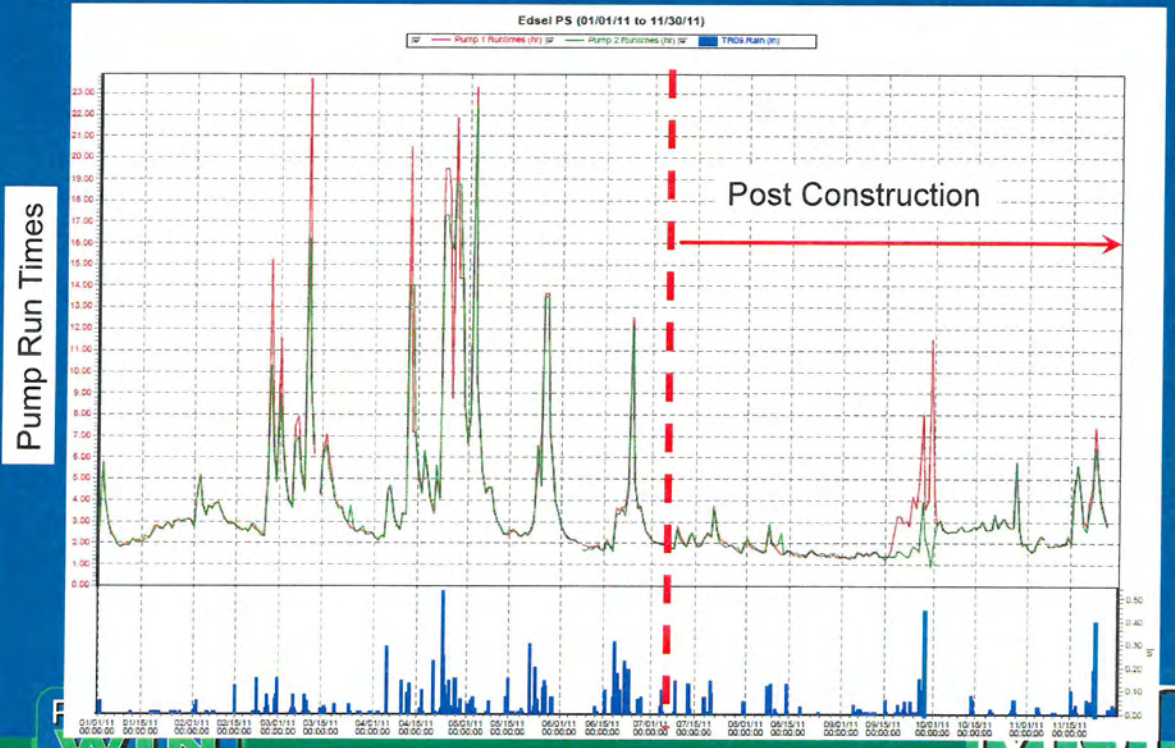
Post Construction Results- Edsel PS



Rain Events/ Time
(Jan 2011 to Nov2011)

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Questions?

- John Loechle, PE
- loechle@msdlouky.org

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IOAP Proposed Project Modifications

November 29, 2011

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Agenda

- Approved 2008 Vs. Proposed 2012 Program Synopsis
- Compliance Planning & Monitoring
- Sewer Modeling Process & Calibration
- Project Impacts & Schedule Revisions
- Next Steps

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Approved 2008 Vs. Proposed 2012 Program Synopsis

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Synopsis of Calibration Impact

- 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

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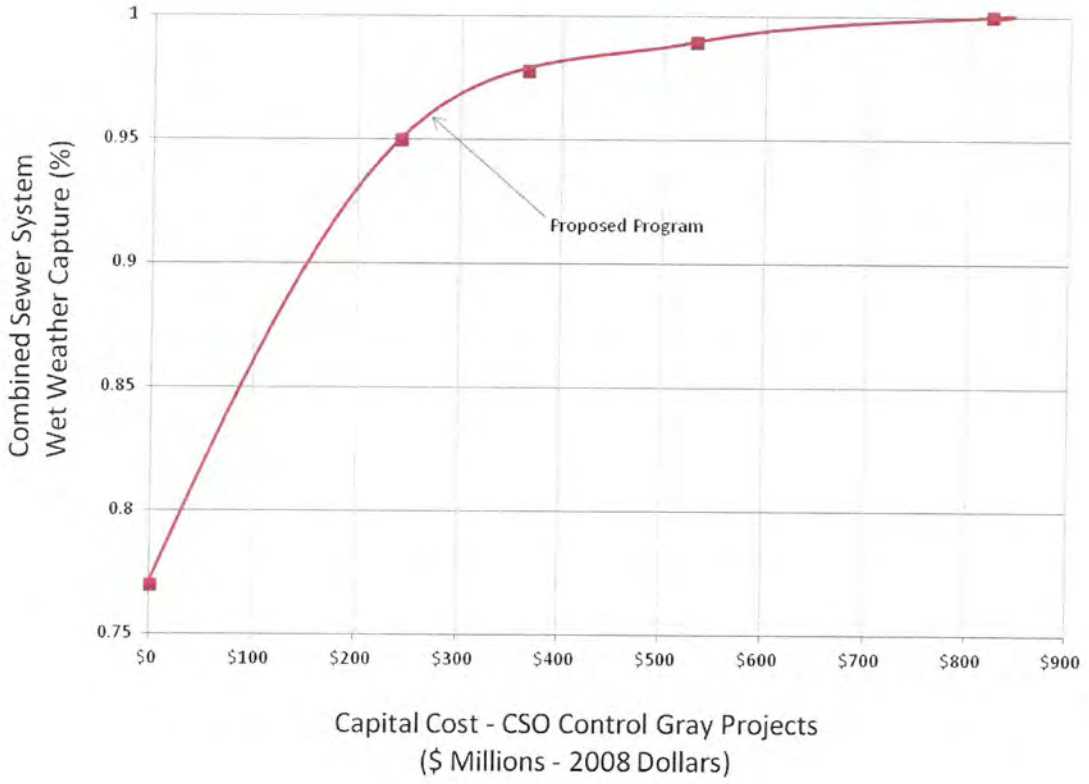
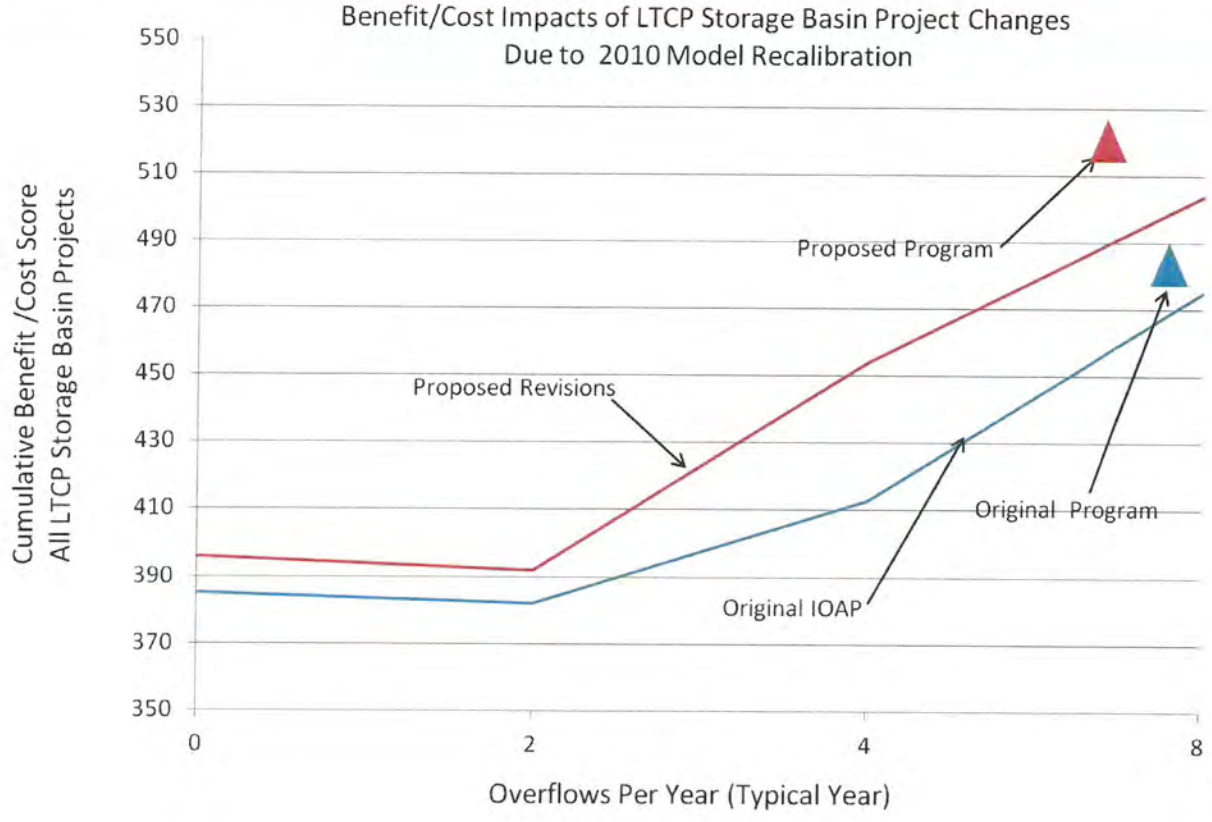

Combined Sewer System
Wet Weather Capture (%)
1
0.95
0.9
0.85
0.8
0.75
Proposed Program
$0
$100
$200
$300
$400
$500
$600
$700
$800
$900
Capital Cost - CSO Control Gray Projects
($ Millions - 2008 Dollars)


Benefit/Cost Impacts of LTCP Storage Basin Project Changes
Due to 2010 Model Recalibration
Cumulative Benefit /Cost Score
All LTCP Storage Basin Projects
550
530
510
490
470
450
430
410
390
370
350
Proposed Program
Proposed Revisions
Original Program
Original IOAP
0
2
4
8
Overflows Per Year (Typical Year)

Compliance Planning & Monitoring

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Measure Twice, Cut Once

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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.**

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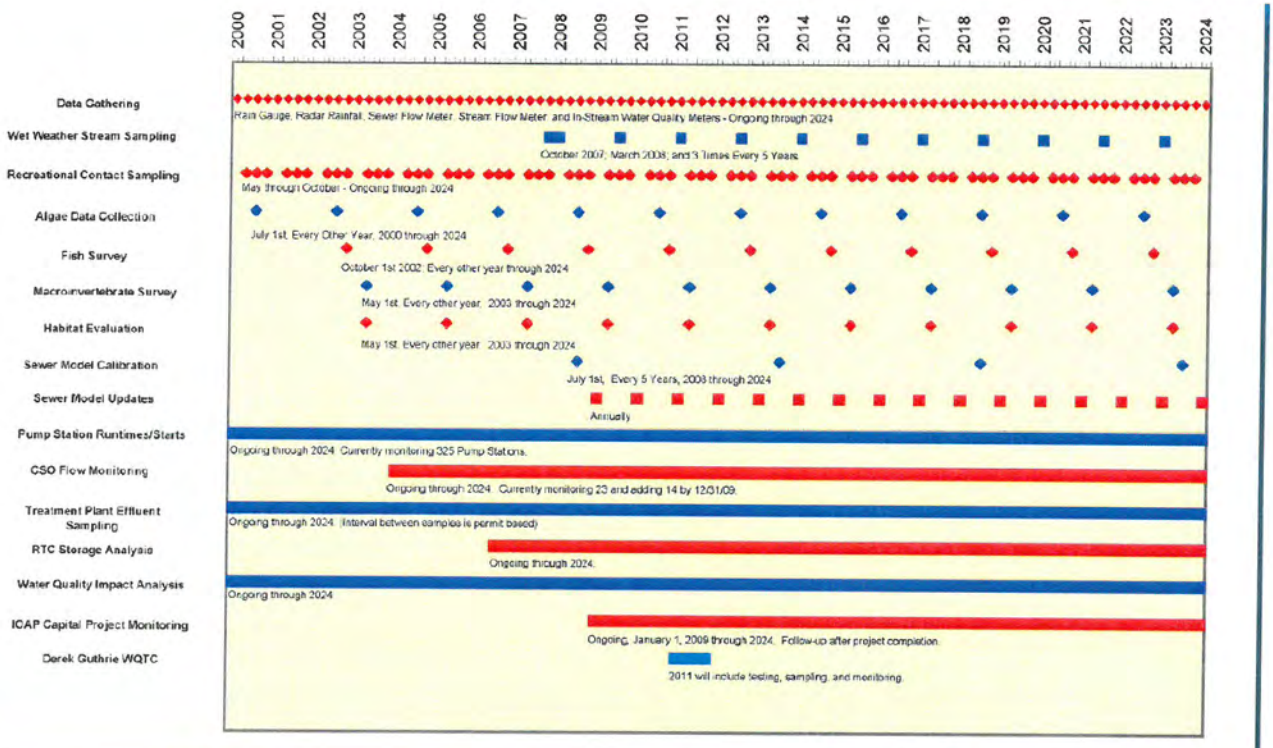

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Sewer Modeling Process & Calibration

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What does a model do?

- Mimics ground and sewer conditions before it rains
- Imitates Rainfall
- Predicts Surface Runoff Reaction
- Predicts Sewer Reaction & Overflows
- Enables Analysis of Interaction for Multiples System Changes (e.g. storage basins)

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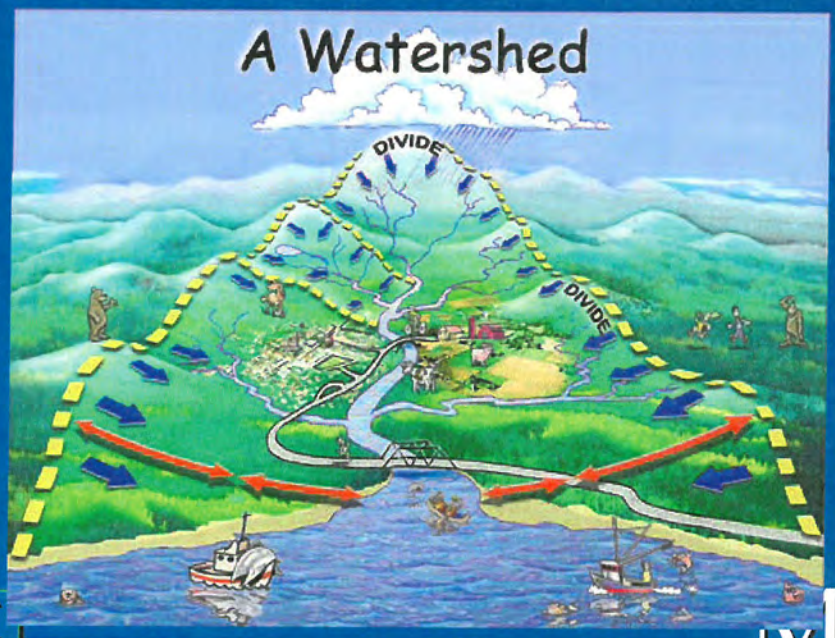
Sewer Model Components



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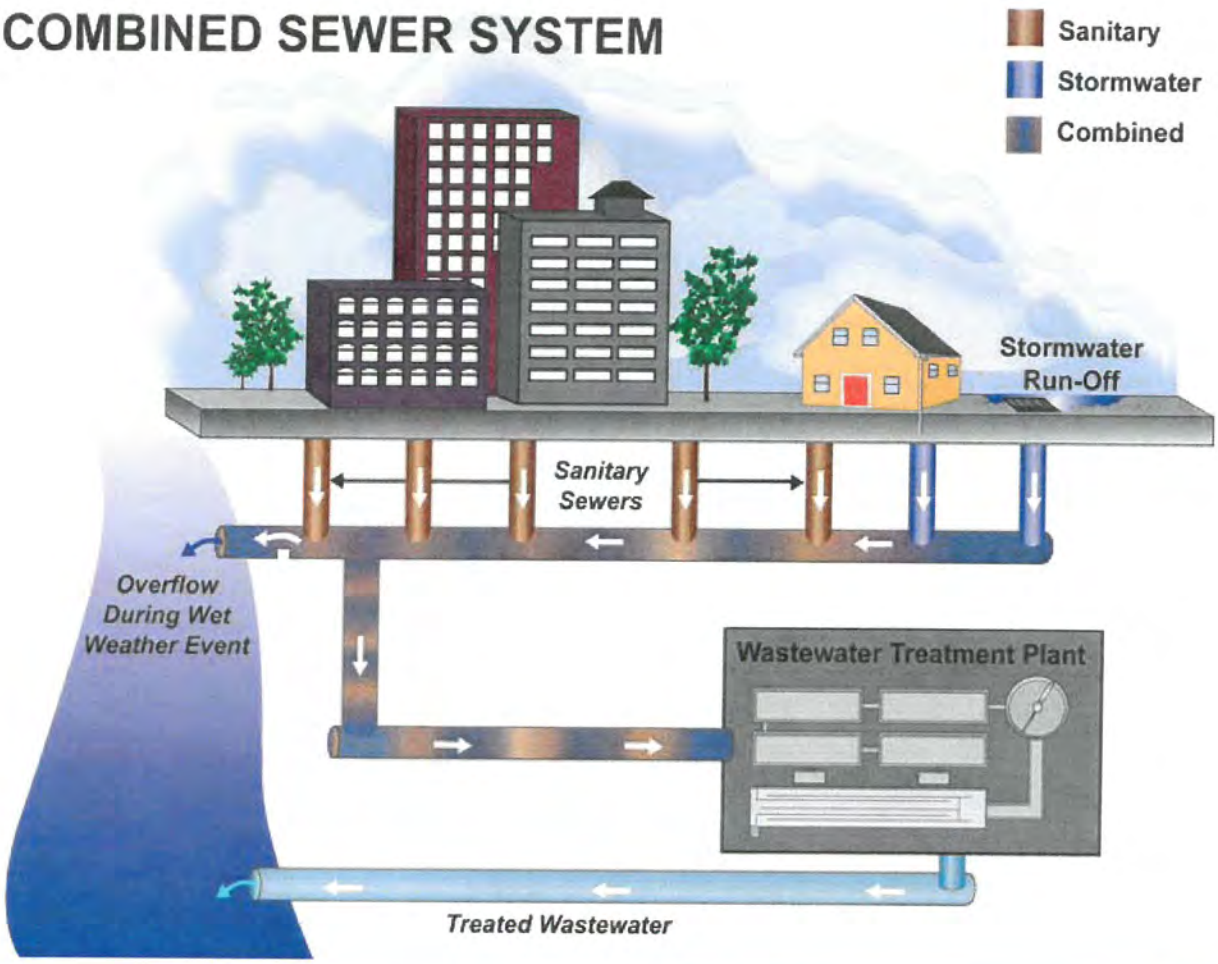
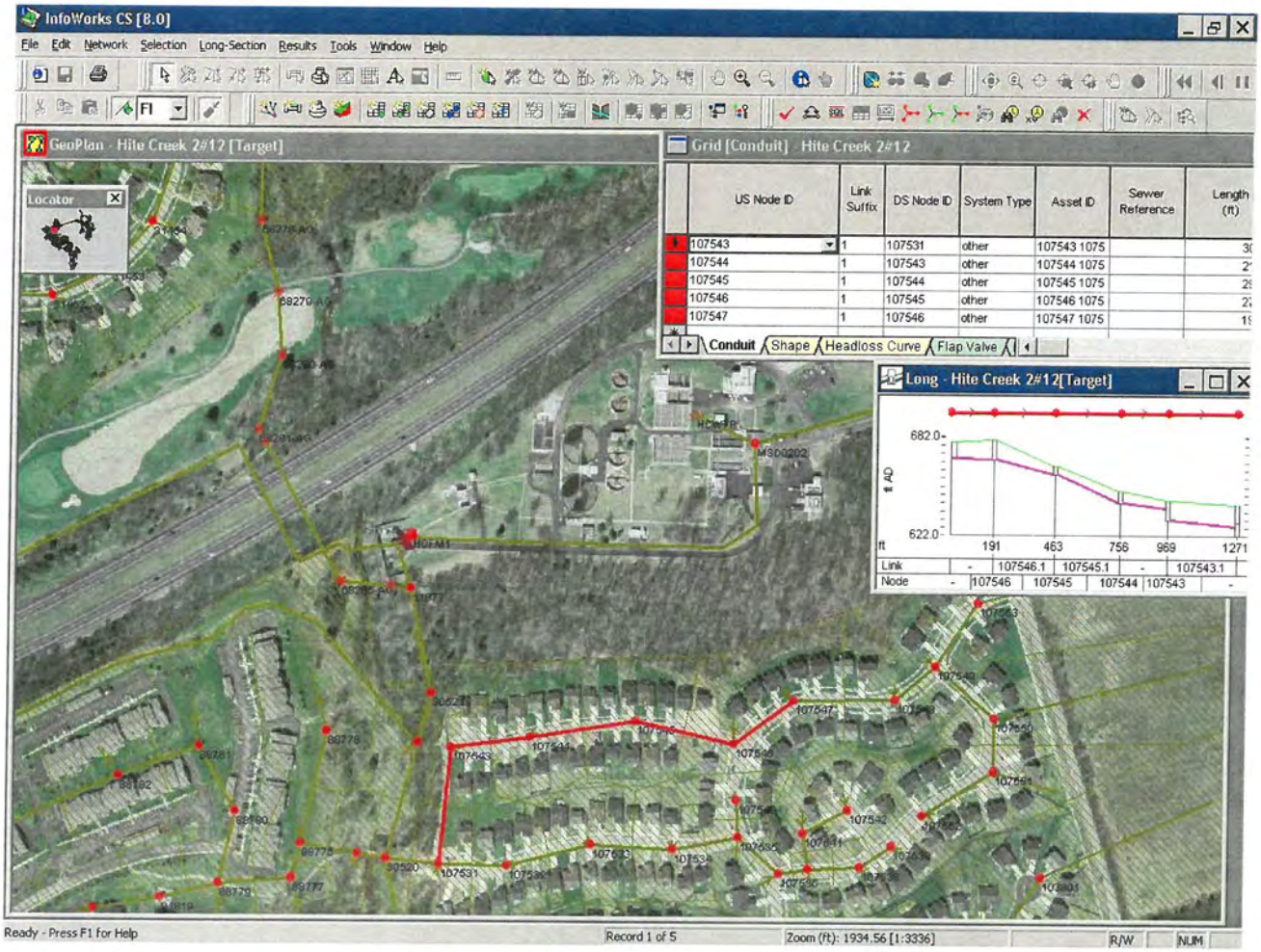
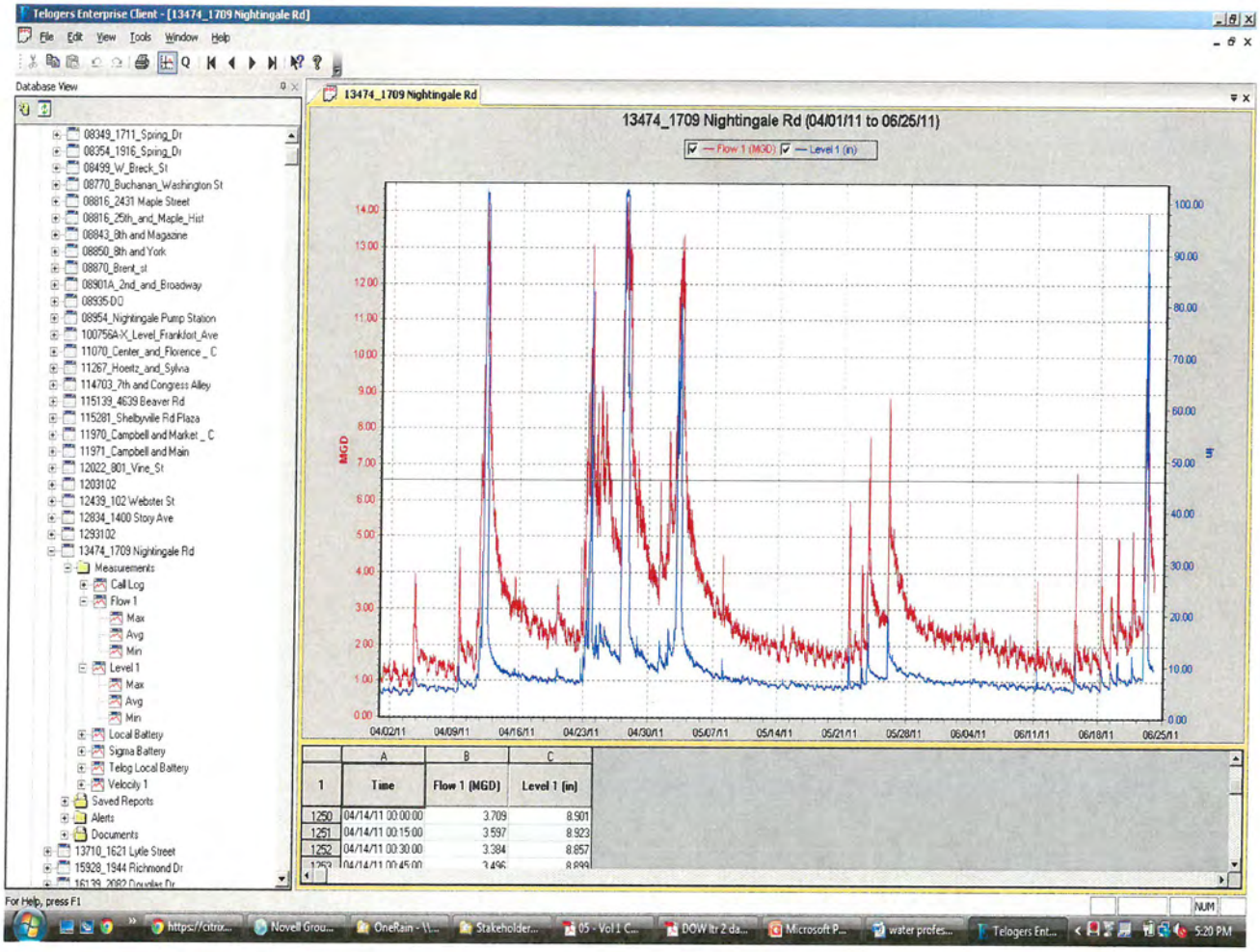
COMBINED SEWER SYSTEM







Project Impacts & Schedule Revisions

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Project Name	LTCP Size (MG)	Re-Assessment Size (MG)
I-64 and Grinstead Drive Storage Basin (w/rock)	2.74	15.13
Story Avenue and Main Street Storage Basin	0.13	5.42
13th Street and Rowan Street Storage Basin	14.44	5
Lexington Road and Payne Street Storage Basin	7.31	8.18
Portland Wharf Storage Basin	6.37	1.14
Logan Street and Breckinridge Street – Calvary Cemetery Storage Basin	Logan – 11.83 Calvary – 3.46 Combined – 15.29	16.6
Nightingale Pump Station Replacement & Storage	60 MGD/0 MG	33 MGD/0.26 MG
Algonquin Parkway Storage Basin/In-line Storage	4.84	0
SOR1	NA	0 (In-line storage only)
SOR2	NA	0 (In-line storage only)
Paddy's Run RTB	50 MGD/9.7 MG	50 MGD/19 MG Storage
Story Avenue and Spring Street Storage Basin	0.01	0.01
Southwestern Parkway Storage Basin	5.08	11.07
Clifton Heights Storage Basin	6.55	3.28
18th and Northwestern Pkwy Storage Basin	1.31	1.24
Adams Street Storage Basin (Revised to Sewer Separation)	0.12	0
Fairmount Road Pump Station (SSO)	0	3.4
Outer Loop Phase II - Wet Weather Storage (SSO)	1.42	0

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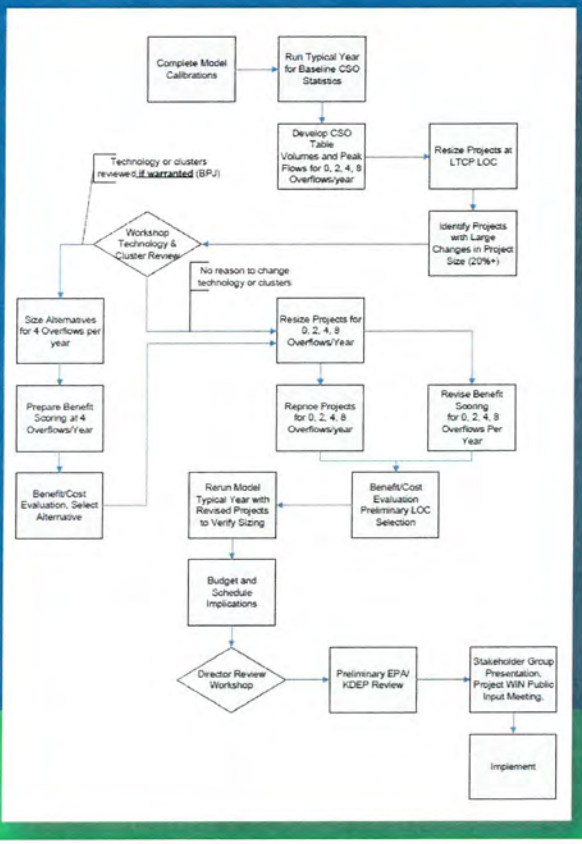
Level of Control Analysis



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I-64 & Grinstead Basin

- Size Increase due to Additional Monitoring
- Significant Customer Input
  - Use of Green along with Gray
  - Enhanced Customer Involvement through Design
- Review of Siting on River Metals Property
- Higher Level of Control
- Significant Cost Increase
- Proposed Schedule Shift to Dec, 2020

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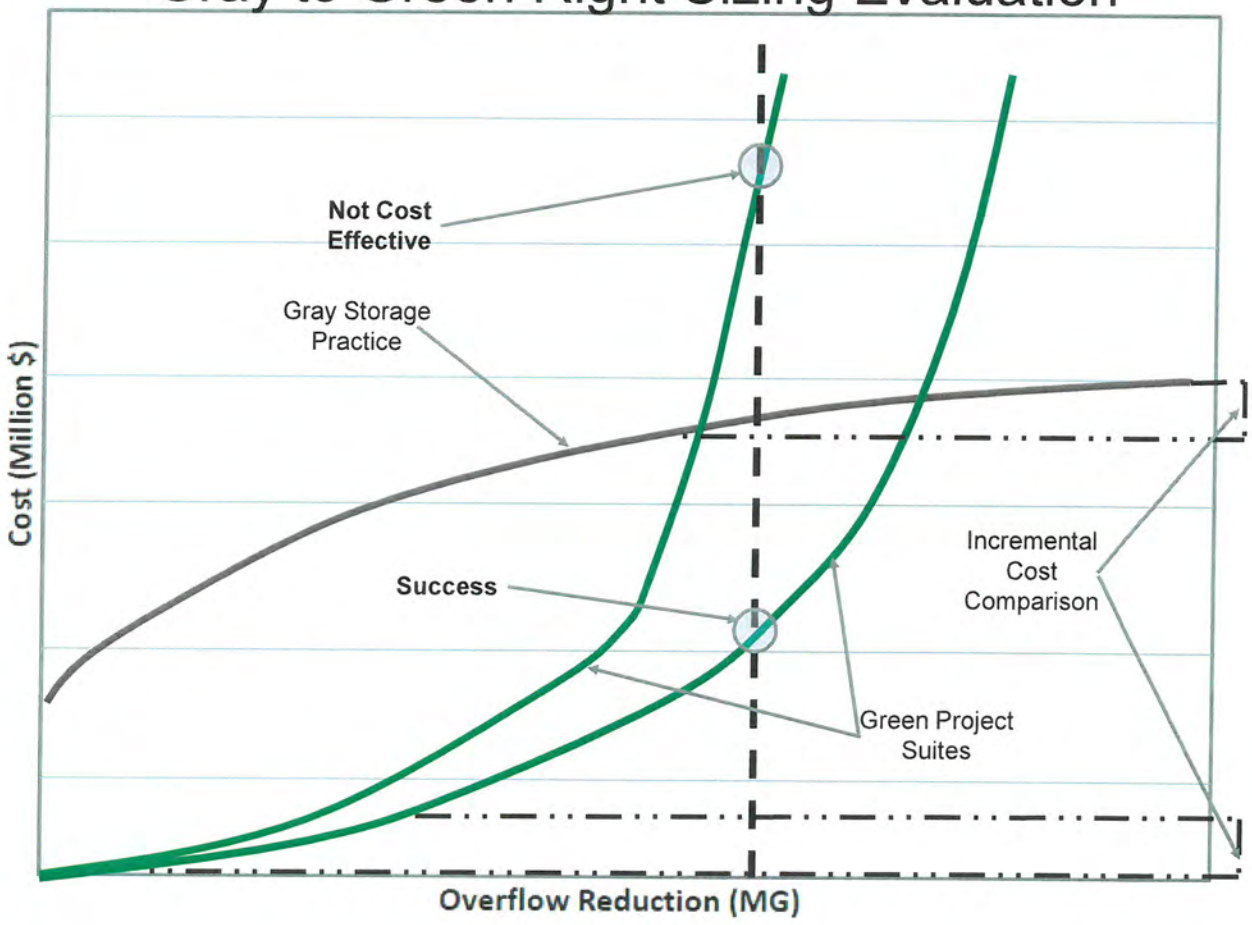
Gray to Green Right Sizing Evaluation



Story Ave & Main St Basin

- Size Increase due to more conservative operational approach for Starkey PS
- Interconnection between this basin and 13th & Rowan Basin
- Cost Increased Significantly
- Proposed Schedule Shift to Dec, 2020

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13th St & Rowan St Basin

- Overall size decrease due to calibration & interconnectivity with Story & Main
- Propose to split deepest CSOs into individual projects (CRD & CSOs 22/23) and move up in schedule – use green & storage
- Basin & Conveyance become shallower and cost is decreased
- Maintain Schedule at Dec, 2020

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Lexington Rd & Payne St Basin

- No significant change in size, cost or schedule
- Reviewing the combination of this basin with I-64 & Grinstead
- Level of Control went from 8 to 0 overflows
- Does not look financially viable at this time

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Portland Wharf Basin

- Significant reduction in size due to calibration
- Same schedule

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Logan St Basin Calvary Basin

- Technology review showed that combining the basins was most cost effective
- Additional conveyance of Calvary CSOs to Logan basin site (already MSD property)
- Same schedule

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Nightingale PS & Storage

- Significant reduction in pump station upgrade size due to downstream constraints
- Additional storage at pump station
- Level of Control at 0 overflows in a typical year
- Move up in schedule to 2015

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Algonquin Pkwy Basin

- Basin eliminated due to optimization of flow into Morris Forman and interconnection with Paddy's Run HRT and SWPS
- SOR1 and SOR2 inline storage still needed
- Move SOR1 and SOR2 up in schedule to 2015 and 2019 respectively

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Paddy's Run HRT Center

- Optimization w/ Algonquin Basin & RTC strategy increased storage size
- Revision of project location maintained costs close to original
- Move back in schedule to 2017

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Story Ave & Spring St Basin

- Storage size increased somewhat
- First basin to go through 'right-sizing' analysis
- Green project suite likely to be recommended in lieu of storage basin
- Same schedule

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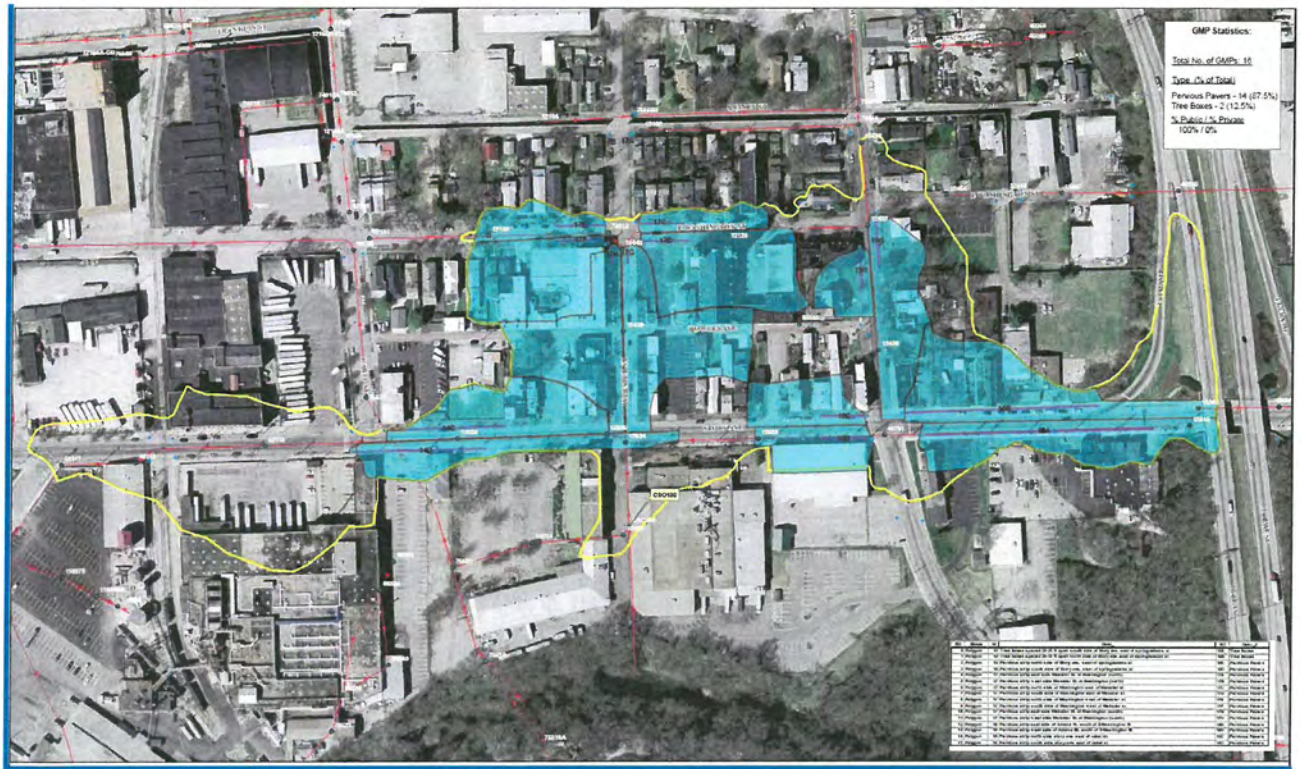

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Southwestern Parkway Basin

- Storage size doubled due to calibration
- Same schedule

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Clifton Heights Basin

- Storage size cut in half due to calibration
- Same schedule

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18th & Northwestern Pkwy Basin

- Storage size about the same
- 'Right sizing' analysis is currently underway
- Same schedule

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Adams St Basin

- Basin project has been revised to sewer separation project following CCTV inspection
- System was 95% separated during the River Road and Waterfront Park development

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Fairmount Road PS Storage

- New project as part of the Jeffersontown WQTC elimination
- Needed to moderate flows into Cedar Creek WQTC & handle peak flows from Seatonville Road PS
- Additional WLA at Cedar unlikely in the near future

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Outer Loop Storage Phase II

- Basin to be eliminated due to tighter calibration in the Pond Creek sewer model

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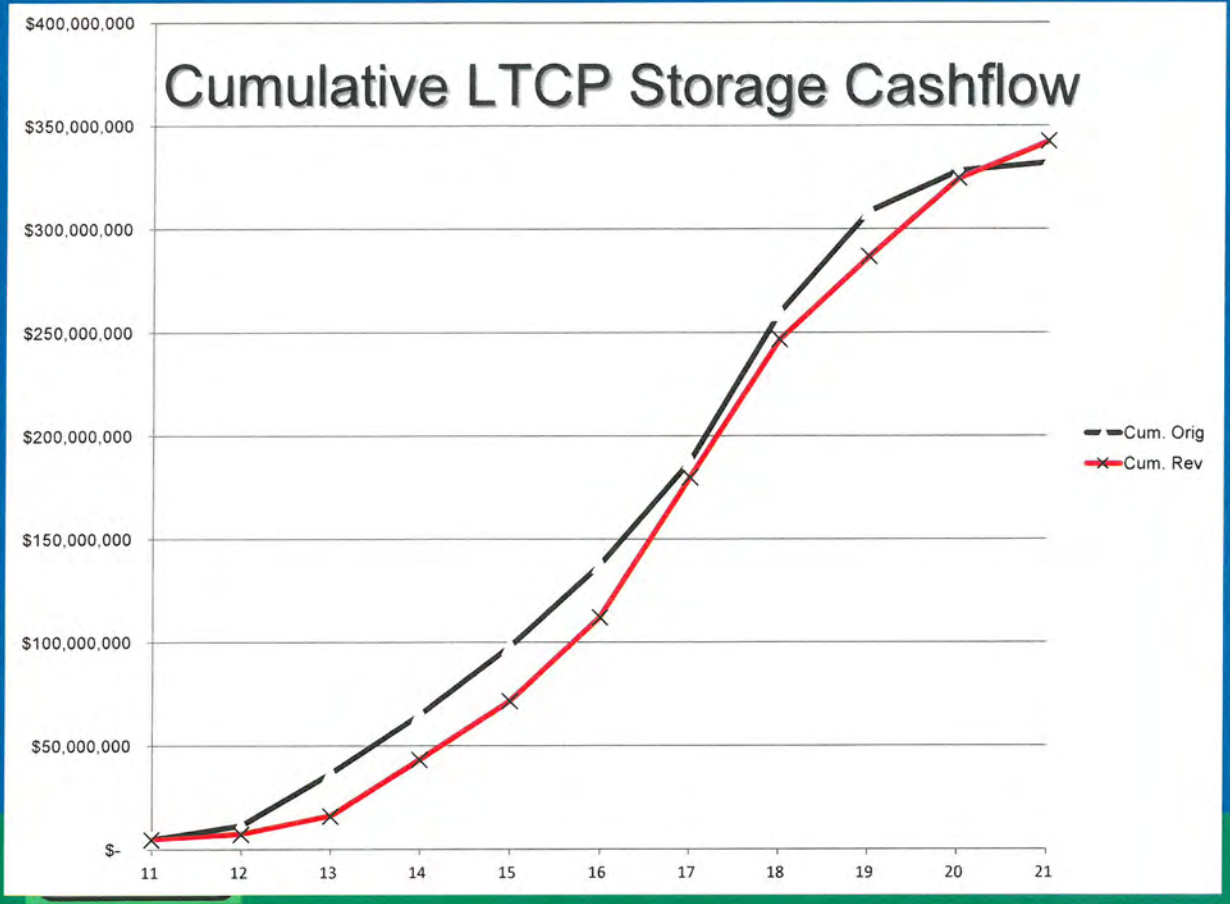

Next Steps

- Specific Proposed Project & Schedule Revisions to Stakeholders Group
  - Driven by Model Calibration & LOC Analysis
  - Incorporation of Public Comments from September 27 Public Meeting
  - Cashflow & Rate Increase Considerations
- Discuss Proposed Revisions with EPA and KDEP on Dec. 14
- Outline Formal Proposal and Submittal Timeline for IOAP Revision
- 1st Presentation to Public – January 24, 2012

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IOAP Proposed Project Modifications

November 29, 2011

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Objectives

- How Initial Plan Was Developed
- Why Recalibrate & How Did We Do It
- Results – Size, Cost & Schedule
- Green Program Opportunity

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Synopsis of Calibration Impact

- 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

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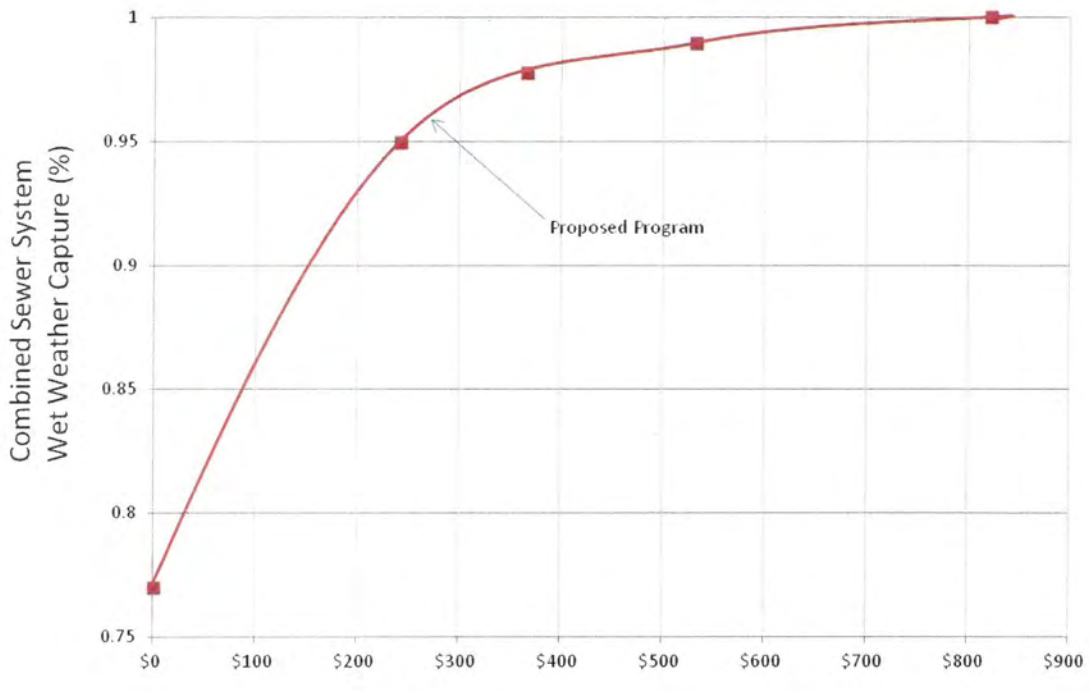

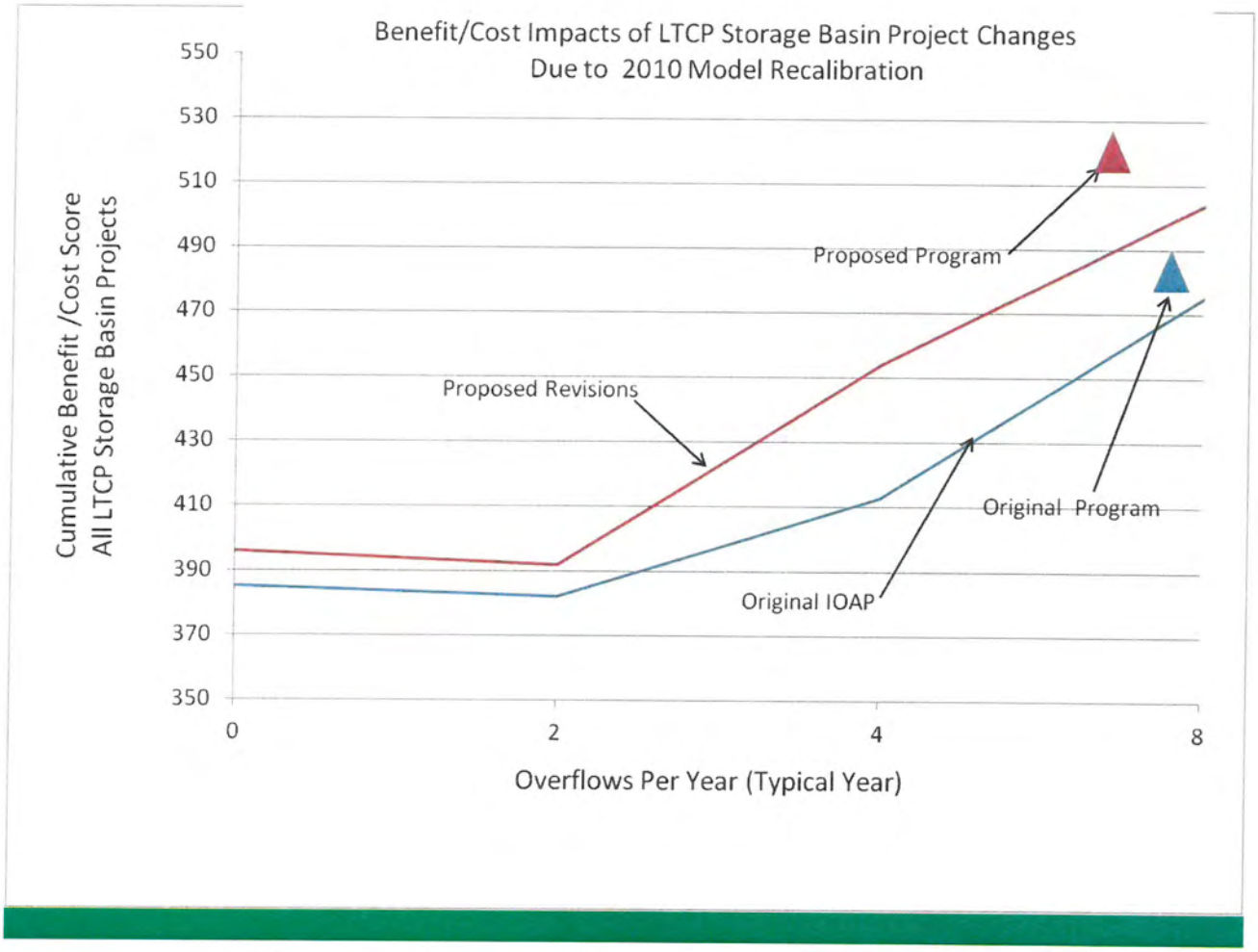
Benefit/Cost Impacts of LTCP Storage Basin Project Changes
Due to 2010 Model Recalibration
Cumulative Benefit /Cost Score
All LTCP Storage Basin Projects
550
530
510
490
470
450
430
410
390
370
350
0
2
4
8
Overflows Per Year (Typical Year)
Proposed Program
Proposed Revisions
Original Program
Original IOAP


Measure Twice, Cut Once
25 FT
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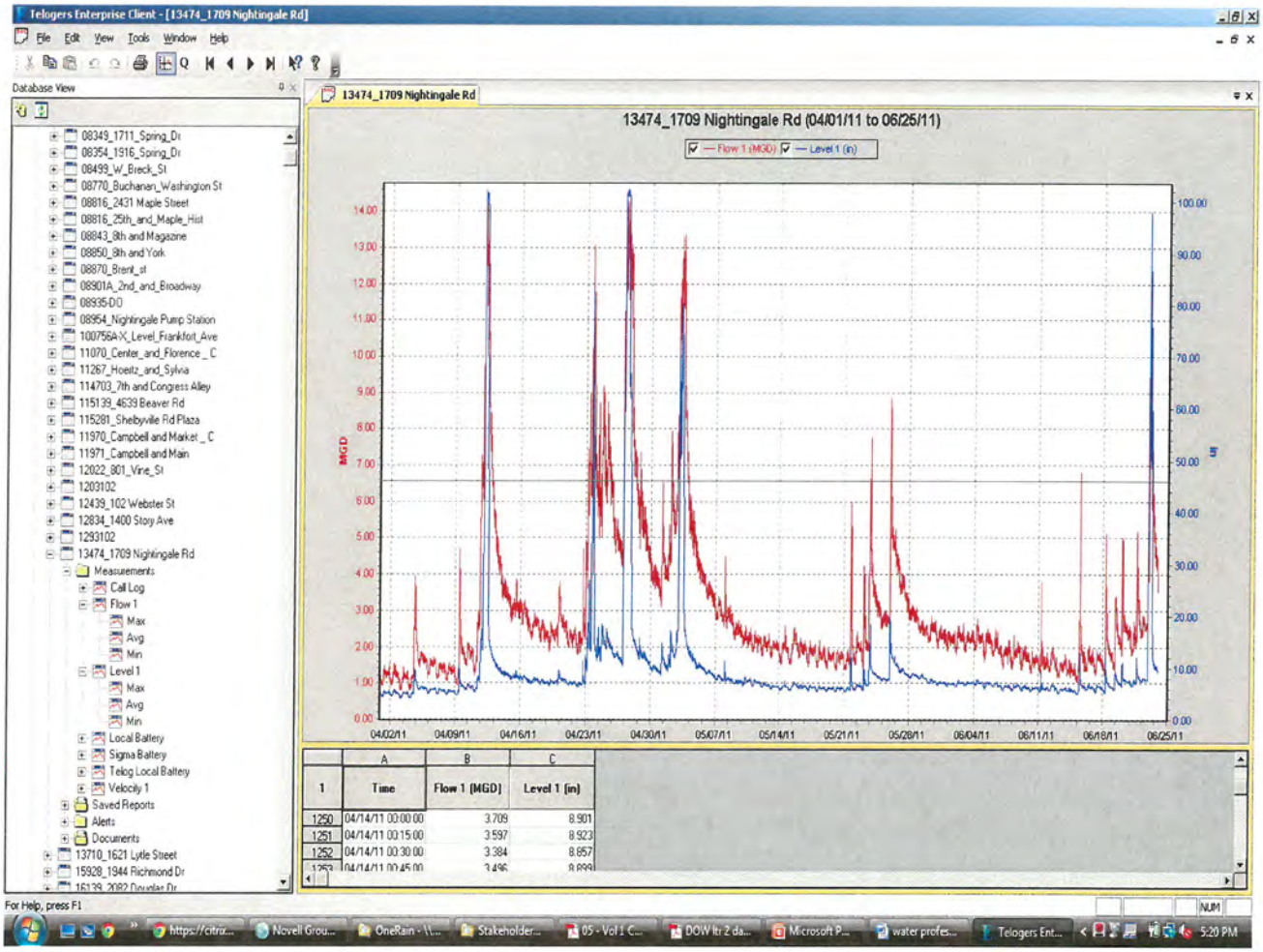

IOAP Volume 1, Chapter 6.5.3.6
Adaptive Management

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.**

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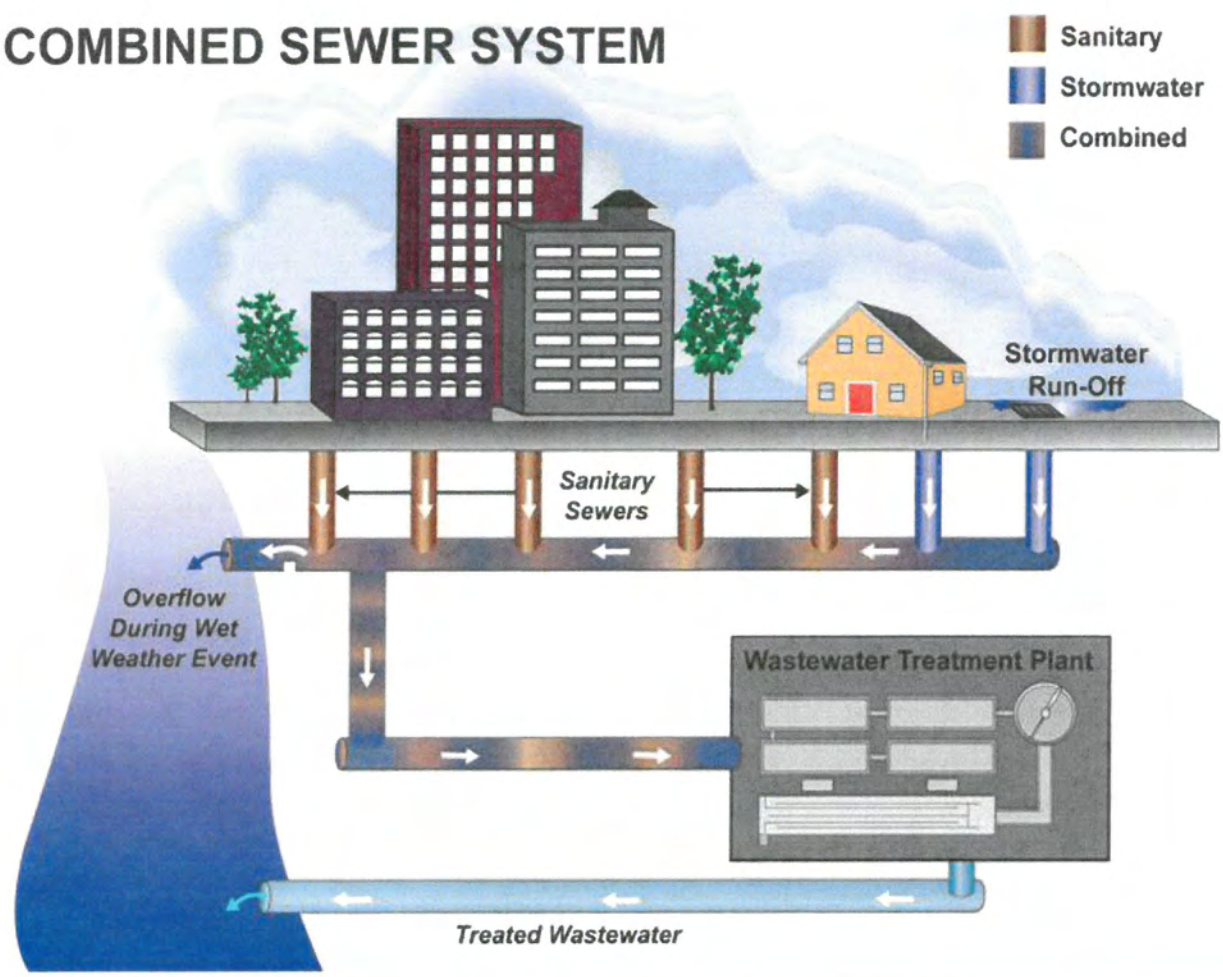

Insert New Gary Graph

& Use CSO130/190 Stats

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Project Impacts & Schedule Revisions

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Projects Bigger
Projects Smaller
Those with Significant Schedule Changes
Handout: Full Project Table

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Project Name	LTCP Size (MG)	Re-Assessment Size (MG)
I-64 and Grinstead Drive Storage Basin (w/rock)	2.74	15.13
Story Avenue and Main Street Storage Basin	0.13	5.42
13th Street and Rowan Street Storage Basin	14.44	5
Lexington Road and Payne Street Storage Basin	7.31	8.18
Portland Wharf Storage Basin	6.37	1.14
Logan Street and Breckinridge Street – Calvary Cemetery Storage Basin	Logan – 11.83 Calvary – 3.46 Combined – 15.29	16.6
Nightingale Pump Station Replacement & Storage	60 MGD/0 MG	33 MGD/0.26 MG
Algonquin Parkway Storage Basin/In-line Storage	4.84	0
SOR1	NA	0 (In-line storage only)
SOR2	NA	0 (In-line storage only)
Paddy's Run RTB	50 MGD/9.7 MG	50 MGD/19 MG Storage
Story Avenue and Spring Street Storage Basin	0.01	0.01
Southwestern Parkway Storage Basin	5.08	11.07
Clifton Heights Storage Basin	6.55	3.28
18th and Northwestern Pkwy Storage Basin	1.31	1.24
Adams Street Storage Basin (Revised to Sewer Separation)	0.12	0
Fairmount Road Pump Station (SSO)	0	3.4
Outer Loop Phase II - Wet Weather Storage (SSO)	1.42	0

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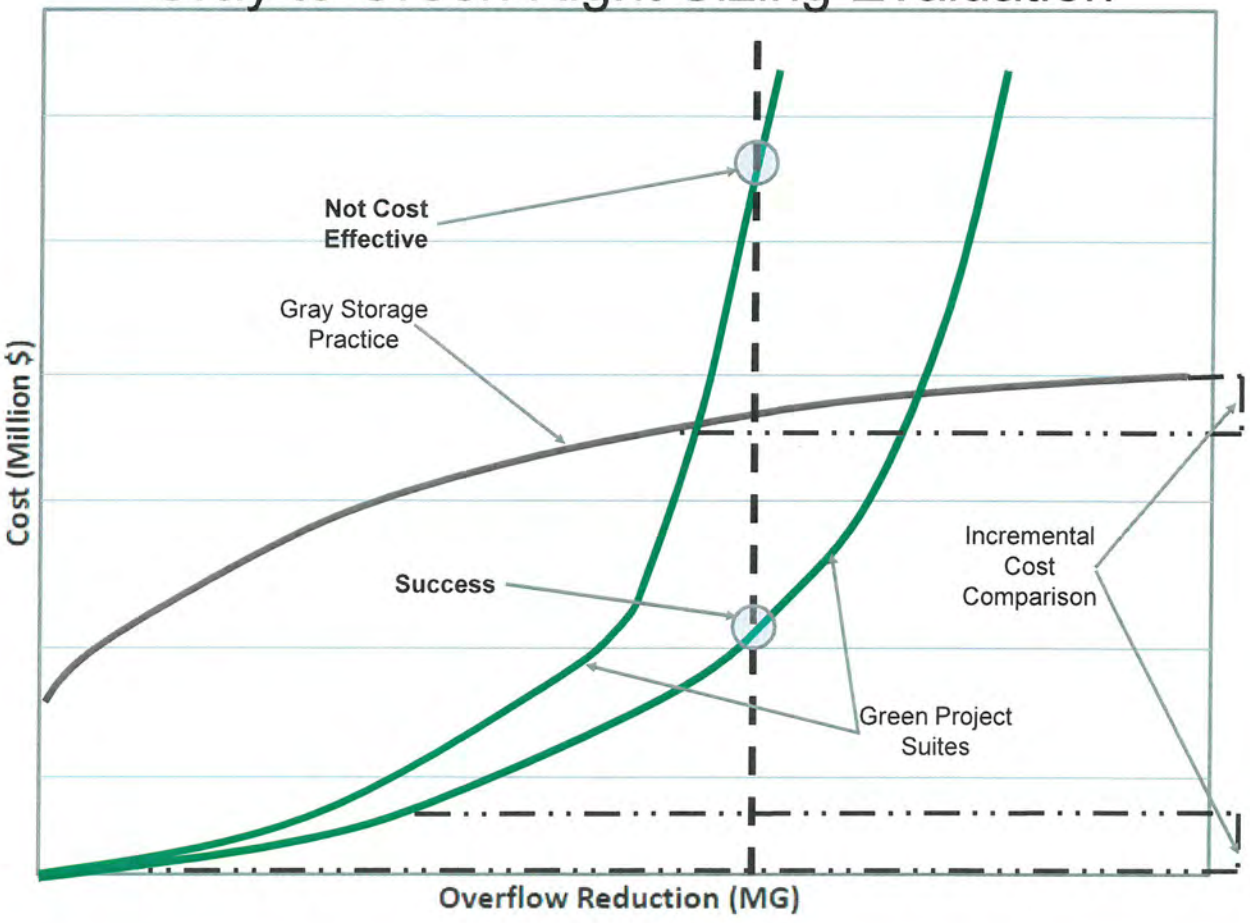
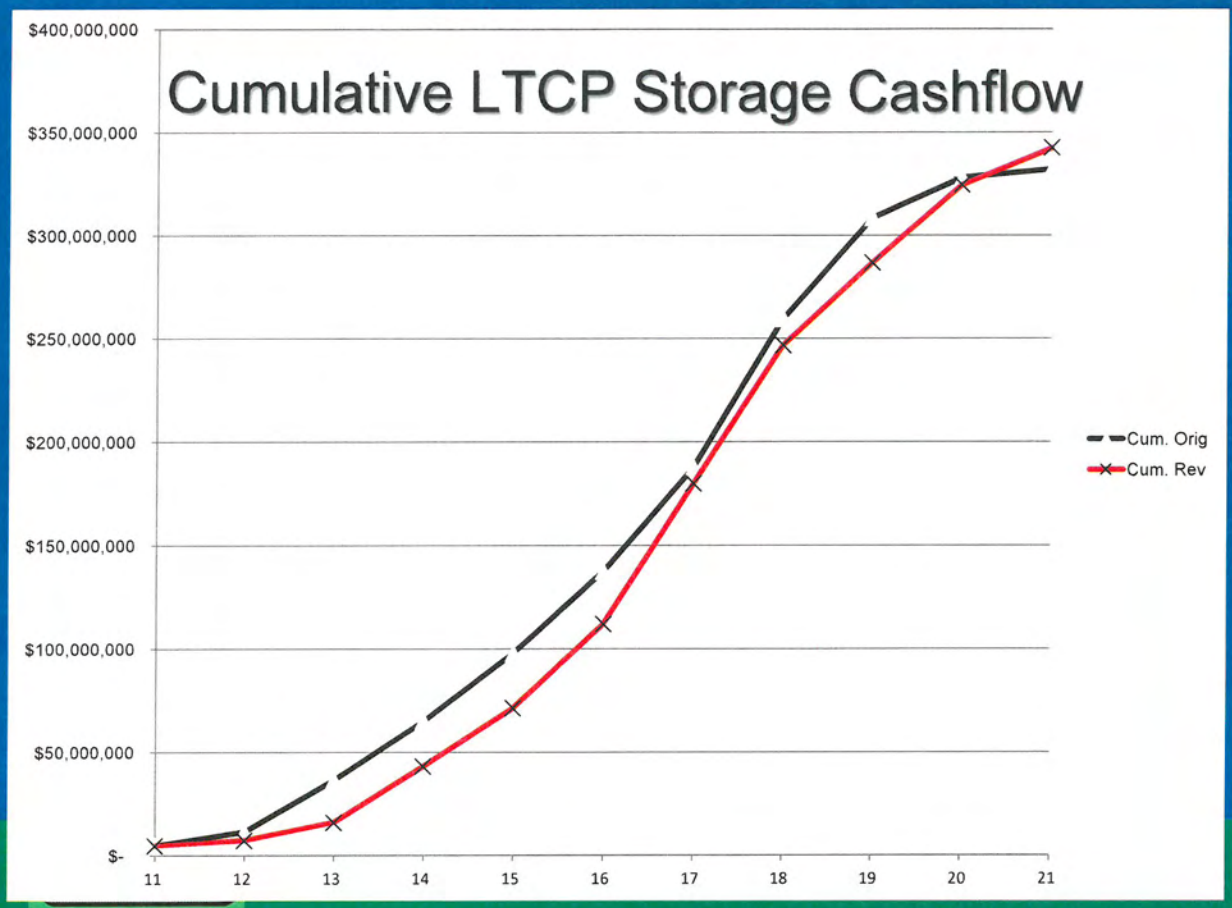
Gray to Green Right Sizing Evaluation





Projected Rates

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Next Steps

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Wet Weather Team Meeting
Public Input Meeting Update
November 29, 2011

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First IOAP Project Public Input Meeting
September 27, 2011

- Meeting Objectives
- Attendance & format overview
- Overview of comments & input received
- Response to comments & input received
- Next IOAP Project Input Meeting
- Project WIN Website information

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First IOAP Project Public Input Meeting

Meeting Objectives

IOAP (Integrated Overflow Abatement Plan)

1. Opportunity to inform the community on IOAP Program and Projects progress
2. Forum for interested public to provide input on IOAP Program and Projects

Primary mechanism for public input into the program as designed by the Stakeholder Group

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First IOAP Project Public Input Meeting

Attendance & Format Overview

- Attendance overview
- Concurrent presentations and open house "topic" rooms layout
- Video taping by Metro TV staff
  - Insight Cable Metro TV channel
  - MSD Project WIN website streaming

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First IOAP Project Public Input Meeting

Comments/Input Received

Opportunities for comments/input

- Email
- Mailed letter
- Comment form at the meeting
- Comments taped at the meeting

Type of comments/input received

- Property & Individual issues
- IOAP Project concerns
- IOAP Program concerns
- General MSD concerns

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First IOAP Project Public Input Meeting

Sample Comments/Input Received

Property & Individual issues

- Localized drainage concerns
- Localized property flooding concerns
- Request to use a company's product
- Mapping request

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First IOAP Project Public Input Meeting

Sample Comments/Input Received

IOAP Project concerns

- **Beechwood Village SSO abatement (complete)**
  - Scope change concerns
  - Project community relations concerns
  - Sump pump usage and discharge pipe day-lighting concerns
  - Ground restoration concerns
  - Groundwater and surface drainage concerns
- **I-64 and Grinstead storage basin (early design)**
  - Basin size and location concerns
  - Wooded area preservation
  - Green infrastructure utilization

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First IOAP Project Public Input Meeting

Sample Comments/Input Received

IOAP Program concerns

- Request for better understanding of the Consent Decree program
- Request for the meeting to be recorded and made available for viewing
- Requests to make the meetings more accessible to the community
- Concern that MSD is not completing EPA approved projects on an expeditious timeline

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First IOAP Project Public Input Meeting

Sample Comments/Input Received

General MSD Issues

- Request for EPA TMDL study to be completed prior to sewering southeast Jefferson County
- Concern expressed regarding planning and zoning issues of existing developments around the county
- Concern with specific MSD staff members
- Concern with specific MSD Board policies
- Concern with recapture agreements

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First IOAP Project Public Input Meeting

Response to Comments/Input

- New Public Comment Response Procedure
- Proposed response protocols
  - Individual property concern (letter)
  - Project/Program/MSD concern (letter and website posting)
- Review of "draft-not for release" responses by Stakeholder Group via email
- Suggestions on level of review/comment appropriate by Stakeholder Group

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First IOAP Project Public Input Meeting

Next IOAP Project Input Meeting

- **Tuesday, January 24, 2012**
  - Kentuckiana Girl Scouts Headquarters
  - 6:30 to 7:30 Presentations
  - 7:30 to 8:30 Individual Discussions

- **Agenda**
  - Proposed IOAP Project Modifications
  - I64 & Grinstead Storage Basin Project Review/Input

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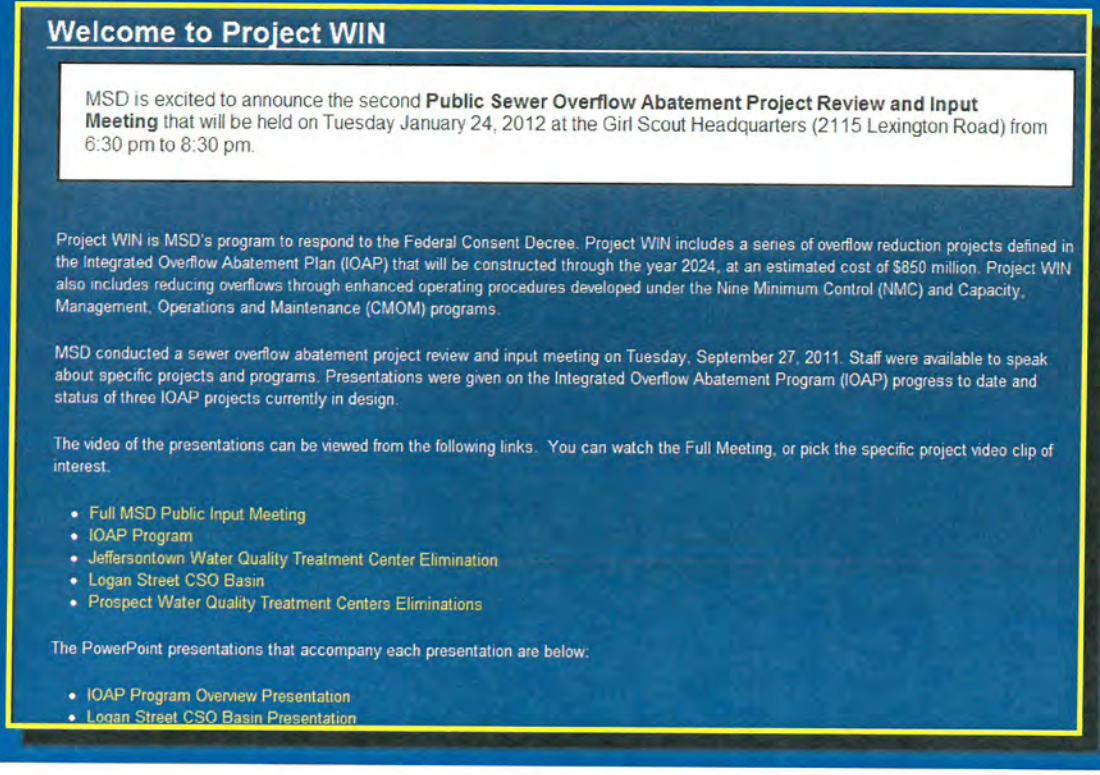
First IOAP Project Public Input Meeting

Project WIN Website



Welcome to Project WIN

MSD is excited to announce the second **Public Sewer Overflow Abatement Project Review and Input Meeting** that will be held on Tuesday January 24, 2012 at the Girl Scout Headquarters (2115 Lexington Road) from 6:30 pm to 8:30 pm.

Project WIN is MSD's program to respond to the Federal Consent Decree. Project WIN includes a series of overflow reduction projects defined in the Integrated Overflow Abatement Plan (IOAP) that will be constructed through the year 2024, at an estimated cost of $850 million. Project WIN also includes reducing overflows through enhanced operating procedures developed under the Nine Minimum Control (NMC) and Capacity, Management, Operations and Maintenance (CMOM) programs.

MSD conducted a sewer overflow abatement project review and input meeting on Tuesday, September 27, 2011. Staff were available to speak about specific projects and programs. Presentations were given on the Integrated Overflow Abatement Program (IOAP) progress to date and status of three IOAP projects currently in design.

The video of the presentations can be viewed from the following links. You can watch the Full Meeting, or pick the specific project video clip of interest.

- Full MSD Public Input Meeting
- IOAP Program
- Jeffersontown Water Quality Treatment Center Elimination
- Logan Street CSO Basin
- Prospect Water Quality Treatment Centers Eliminations

The PowerPoint presentations that accompany each presentation are below:

- IOAP Program Overview Presentation
- Logan Street CSO Basin Presentation

Next Actions

Email "draft-not for release" responses to Stakeholder Group for review and comment

- Email out by November 30
- Response requested by December 7
- Letters postmarked by December 9
- Project/Program/MSD response letters posted to Project WIN website by December 16

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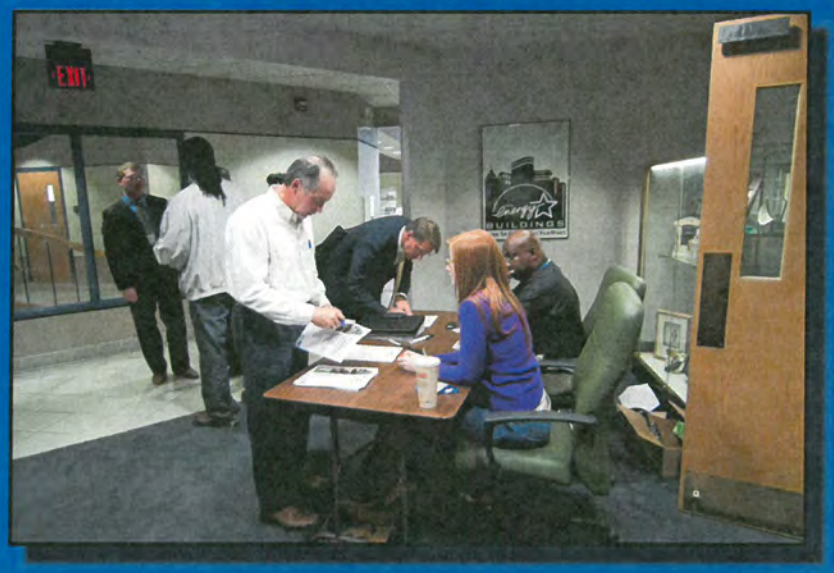
QUESTIONS?



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