

Project WIN

Waterway Improvements Now



CLEAN, GREEN, GROWING COMMUNITY



Meeting Objectives

- Our sewer overflow challenges
- The path to resolving these challenges
- Little things can make a BIG Difference

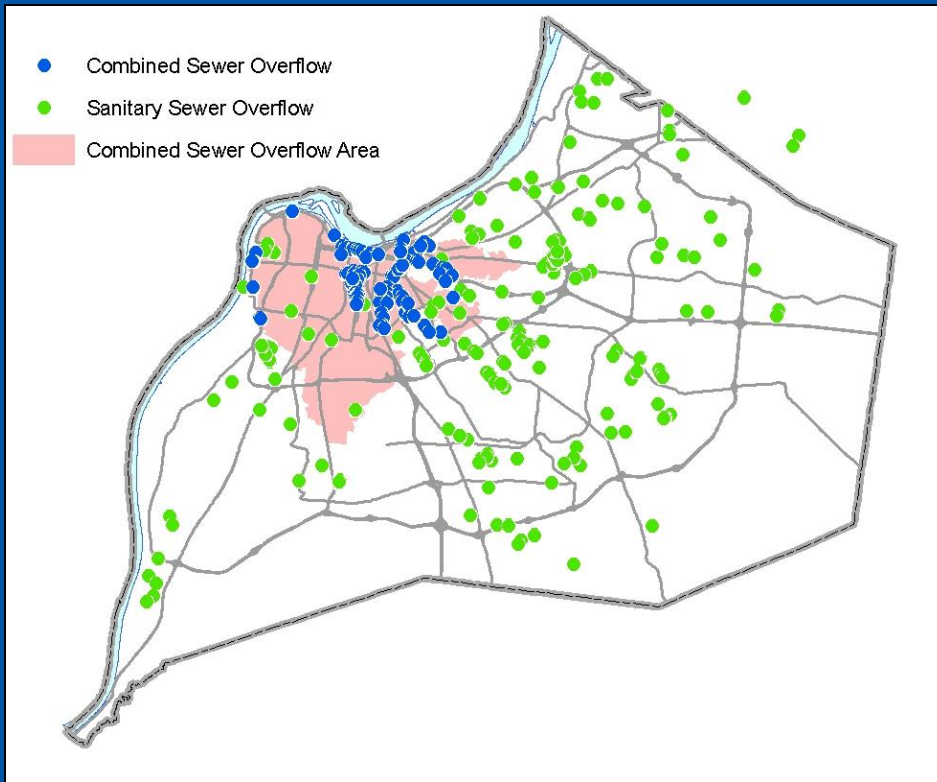


MSD's Consent Decree Based on EPA Enforcement Action

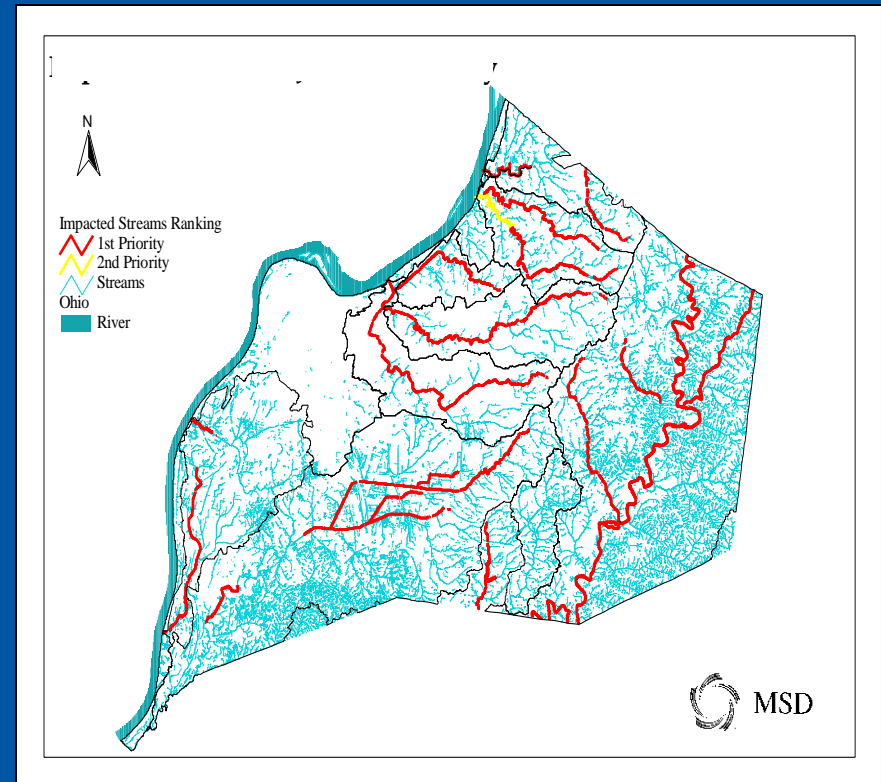
- Alleged violations of Clean Water Act
- Discharge Abatement Plans
 - Eliminate unauthorized discharges from sanitary sewer system and combined sewer system by December 31, 2024
 - Reduce and control CSOs in conformance with the CSO Policy by December 31, 2020



Impairment Issues County-Wide



Sewer overflows occur county-wide



Most Metro streams have some impairment



Sanitary Sewer Overflows (SSOs) Affect Us in Many Ways



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Combined Sewer Overflows (CSOs)



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Consent Decree Response

Community Challenge - MSD Obligation

- MSD is independent special district, established under State statute
- Enterprise fund not linked to Metro Government finances or revenue generating ability
- Capital and operating costs paid for entirely by fees and user charges
 - Revenue bonds used to finance major capital
 - Grants and line-item appropriations historically less than 1% of total revenues



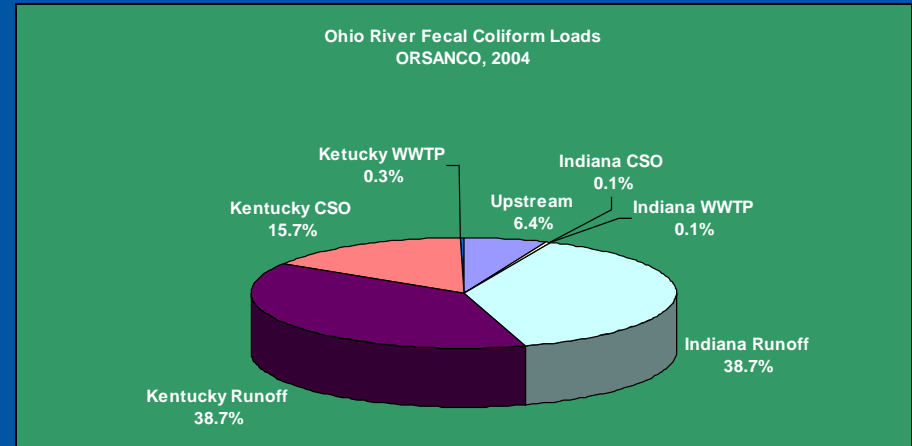
Consent Decree Compliance

Expected Water Quality Benefits

- Significant reduction in peak bacteria levels
- Reduction in duration of wet weather impairment
- Improvement greater in Beargrass Creek than Ohio River

Overflow control is essential to meeting WQ standards, but overflow control alone is not enough

“Affordability” must be viewed in context of other future WQ initiatives and other community service needs



CSOs are only 15.7% of pollutant load



Path to Consent Decree Compliance

Integrated Overflow Abatement Plan (IOAP)

- Federally enforceable action plan for overflow abatement
- Complementary to other wet weather and water quality programs managed both by MSD and by other community partners
 - Mayor's Green City Initiative
 - Partnership for a Green City
 - Community of Trees
 - Metro Louisville's Municipal Separate Storm Sewer (MS4) discharge permit
 - Many others by JCPS, private developers etc.

While these programs provide synergistic benefits, they are separate from the IOAP and do not fall under same level of federal enforcement



Integrated Overflow Abatement Plan (IOAP)

Successful Outcomes

CSOs are permitted discharges in wet weather, managed to avoid receiving stream water quality degradation

Design Strategy:

- Abatement targets in CSO Policy
- Achieve current water quality standards, or show discharges do not cause or contribute to exceedences

** Per CSO Policy, this approach may require a temporary waiver or suspension of standards during wet weather

SSOs and dry weather CSOs are unauthorized discharges and must be eliminated

Design Strategy:

- “design storm” level of protection is community decision (within reason)
- Level of protection selected for site-specific locations by benefit/cost evaluation
- 2-year storm proposed as minimum level of protection (same as Atlanta, Cincinnati, Knoxville)



Consent Decree Response Components

Since August 22, 2005

Capital Project Planning and Implementation

- Early Action Projects (all complete)
- Discharge Abatement Plans
 - ✓ Interim Long Term Control Plan (LTCP) Update
 - ✓ Updated Sanitary Sewer Overflow Plan
 - ✓ Interim Sanitary Sewer Discharge Plan
- Integrated Overflow Abatement Plan (IOAP) - December 31, 2008

On-going Operational Modifications

- Expanded Sewer Overflow Response Protocol (SORP)
- Capacity Management Operations and Maintenance Program (CMOM)
- Continued Improvement to “Nine Minimum Controls” (NMC) Activities



IOAP “Tool Kit”

- Source Control
 - Infiltration and inflow (I&I) reduction
 - Combined sewer separation
 - Green infrastructure
- Storage
- Conveyance/Transport
- Treatment

Application of specific approaches driven by values analysis and site-specific considerations in structured decision process



Structured Decision Process

Protecting Community Values

Broad-based group of community stakeholders
identified and prioritized values

Public Health Enhancement	Environmental Justice/Equity
Regulatory Performance	Economic Vitality
Environmental Enhancement	Financial Stewardship
Asset Protection	Financial Equity
Eco-friendly Solutions	Customer Satisfaction
Education	



Series of open meetings provided related input from the general public



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Structured Decision Process

Values-Based Benefit/Cost Analysis

- Overflow abatement control options developed and evaluated based on managing risks to these values
- “Benefits” determine how well the proposed solution manages the risks to these values
- Benefit/cost analysis utilization
 - site-specific abatement approaches (ie, technology)
 - site-specific levels of protection, within established boundary conditions
 - priority of implementation



Overflow Abatement Strategy

Guiding Principles

- Maximize use of existing facilities
- Front-end consideration of source control and green infrastructure
- Gray infrastructure sized after considering:
 - Anticipated green infrastructure benefit
 - Anticipated effectiveness of other source control approaches, including private-side infiltration & inflow reduction
- Adaptive management implementation approach based on monitoring and evaluation efforts



Adaptive Management Process Performance Monitoring Requirements

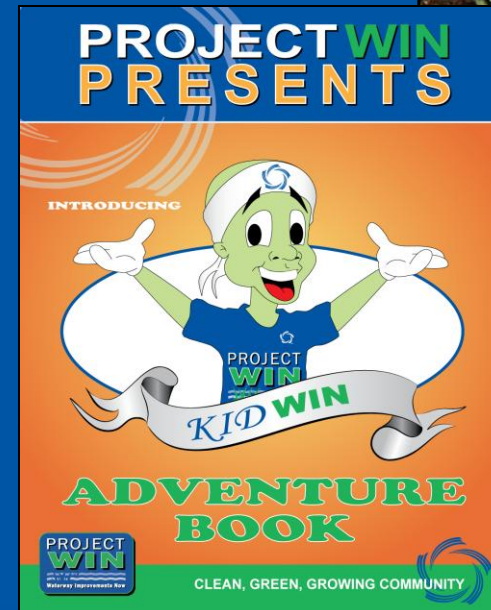
- Sewer flow monitoring and overflow events analysis
- Major role in adaptive management relative to both CSO management and SSO elimination
 - Measure source control effectiveness
 - Re-calibrate models as necessary
 - Right-size gray solutions
- Performance monitoring includes measuring the effectiveness of behavior-change programs



Role of Public Education

Provide Sustainability

- Education has critical roles in program success
 - Promote voluntary participation in private-side I&I control
 - Increase and sustain participation in Green Infrastructure programs
 - Encourage support for other agency programs or legislation that supports overflow abatement efforts
- Education can help generate a sense of personal ownership and responsibility required for sustainability of critical voluntary programs
- Education can help to support financial investment required to achieve Consent Decree and CWA compliance



Consent Decree Response Funding

The Money Comes From All of Us

Funding

- Rates and fees must pay operating costs, debt service, and adequately maintain MSD bond rating
- Community ability to pay must consider follow-on programs
- Preliminary program estimates appear to be within community ability to pay
- Rates and fees must allow for continued economic development



Consent Decree Response Must Consider Economic Vitality

- Strong local economy sustains affordability of solution
- Solutions consider future development based on land use plan
- Continued development requires MSD to implement wet weather flow reduction
 - 3:1 offset of wet weather flows proposed
 - Approach based on Knoxville's Capacity Assurance Program
 - Fee structure under consideration by MSD Board
 - MSD will track flow reduction "credits" to ensure appropriate geographic location of flow offsets



In Summary

Consent Decree Response Principles

- Approach shaped by community values and direct engagement
- Community partnerships essential to program success
 - Green infrastructure
 - Private Property I&I Control
- Wide range of approaches considered, evaluated through benefit/cost approach
- Adaptive management allows right-sizing as program successes are identified
- Program costs must be affordable to community, and allow continued economic growth



Values Check

What Does This Apply to My Family?



Children should be able to play safely in our waterways

Public Health Enhancement	Environmental Justice/Equity
Regulatory Performance	Economic Vitality
Environmental Enhancement	Financial Stewardship
Asset Protection	Financial Equity
Eco-friendly Solutions	Customer Satisfaction
Education	



Values Check

What Does This Apply to My Family?



Recreational activities such as fishing and boating should be available

Public Health Enhancement	Environmental Justice/Equity
Regulatory Performance	Economic Vitality
Environmental Enhancement	Financial Stewardship
Asset Protection	Financial Equity
Eco-friendly Solutions	Customer Satisfaction
Education	



Values Check

What Does This Apply to My Family?

Sewer service should be affordable to all customers

Public Health Enhancement	Environmental Justice/Equity
Regulatory Performance	Economic Vitality
Environmental Enhancement	Financial Stewardship
Asset Protection	Financial Equity
Eco-friendly Solutions	Customer Satisfaction
Education	



What You Can Do To Help

Dispose of grease properly

➔ Do not dump it down the drain!!!!

Grease accumulates in pipes

Pickup brochure

Put grease in metal container



What You Can Do To Help!!

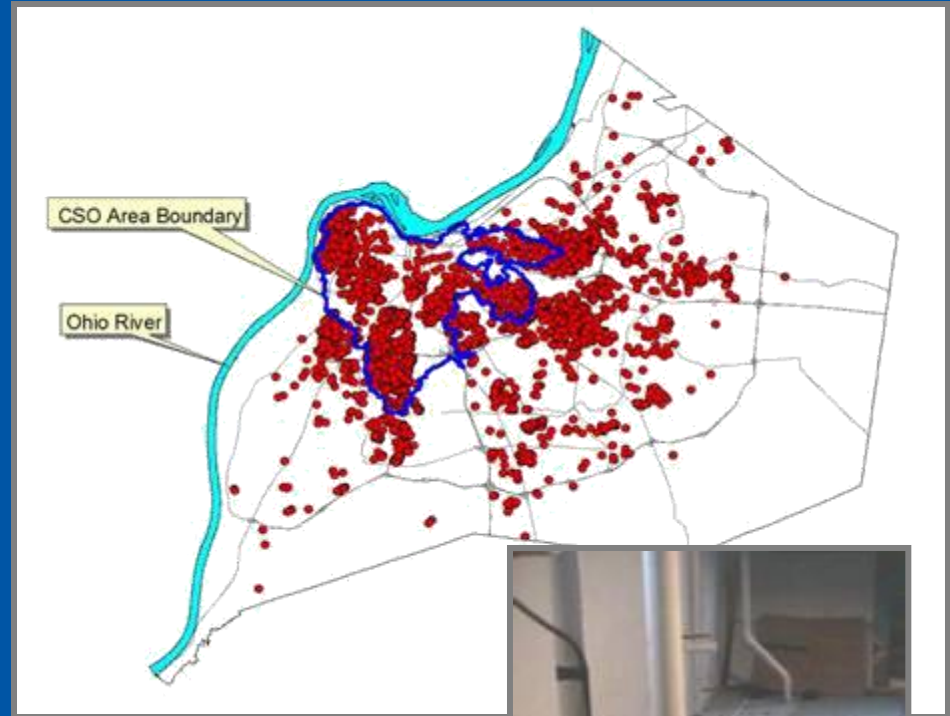
Fix private sewer laterals that connect buildings to the main sewer

“leaky laterals”



What You Can Do To Help

Disconnect sump pumps and downspouts from the sewer system



Plumbing Modification Program

587-0603



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What You Can Do To Help

- Capture rain to use for watering your gardens and landscaping
 - Rain barrels
 - Rain gardens
- Plant trees and native vegetation



What You Can Do To Help

- Participate in “Clean Sweeps” and litter control programs
- Put trash in designated receptacles
- Dispose of yard wastes properly
- Use fertilizers and herbicides as directed



What You Can Do To Help!!

Conserve water during and after rain storms

- Only use dishwashers and washing machines if absolutely necessary during these times to put less water in the sewers
- Only run full loads

Reduce flow to drainage system

- Wash automobiles on grassy areas instead of the pavement OR take to a car wash facility
- Don't water the lawn or garden prior to rain events



What You Can Do To Help!!

- Learn about Project WIN
- Provide input into program development
- Support the community-wide program over the coming years

Find more information
on our website at

www.msdlouky.org/projectwin/



Click on this
symbol



Path Forward

- Review of overflows and opportunities for this part of the community
- Present full plan to the community later this Fall
- Submit the full plan to the EPA and State by December 31, 2008

