Wet Weather Team Project Meeting Materials

Summer 2006–Spring 2007

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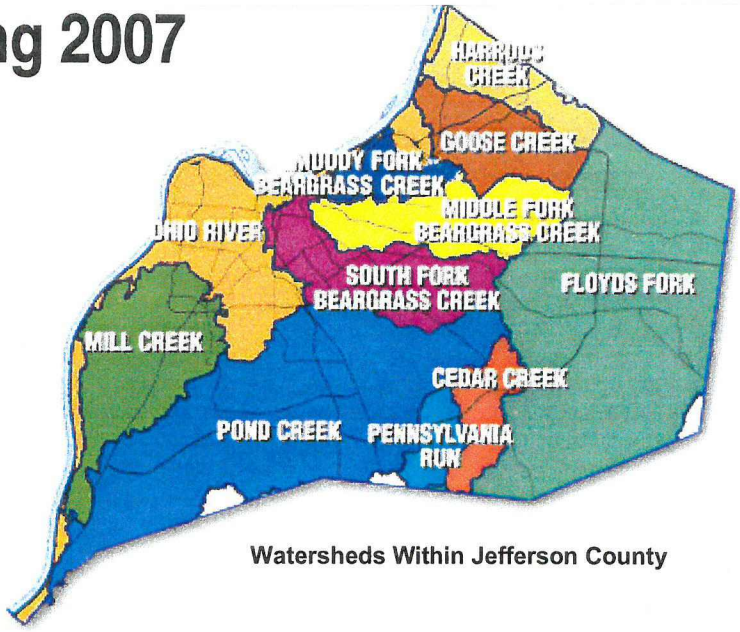
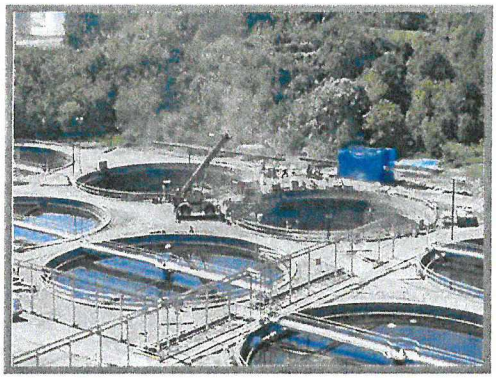
WWT Stakeholders Meeting # 1 6/20/2006

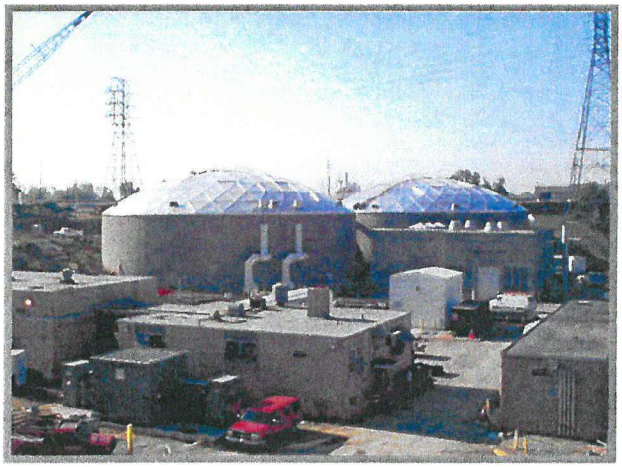
MSD

Louisville and Jefferson County
Metropolitan Sewer District



Watersheds Within Jefferson County





Agenda

Final Agenda
Louisville and Jefferson County Metropolitan Sewer District (MSD)
Wet Weather Team Meeting #1
Thursday, July 20, 2006, 5:45 – 8:00 PM, with optional pre-meeting from 4:30 to 5:30 PM
MSD Central Maintenance Facility, Training Room
A Commerce Center, 3401 Cane Run Road, Louisville, KY

Pre-meeting Presentation for People Who Did Not Attend the June 6 Meeting (Optional)

4:30-5:30 PM Consent Decree Presentation (1 hour)

Presentation by Angela Akridge, P.E., MSD Regulatory Policy Manager

- Presentation and Q&A on the requirements of MSD's Consent Decree with EPA and Kentucky regarding combined sewer overflows and sanitary sewer overflows

Wet Weather Team Meeting

Meeting Objectives:

- Review, modify, and approve the Wet Weather Team charter and ground rules.
- Learn about MSD operational systems and infrastructure improvement activities.
- Identify next steps and expectations for the next meeting of the Wet Weather Team.

5:45 PM Participants Arrive and Get Dinner

Dinner will be provided for meeting participants. Please arrive by 5:45 PM, so that we can begin the substance of the meeting promptly at 6:00 PM.

6:00 PM Welcome, Introductions, and Agenda Review (15 minutes)

6:15 PM Wet Weather Team Charter and Ground Rules (45 minutes)

- Discuss and refine the draft Wet Weather Team charter and ground rules

7:00 PM MSD Operational Overview Presentation (40 minutes)

- Presentation and Q&A session on:
  - MSD systems operational overview
  - MSD past infrastructure upgrade and improvement activities

7:40 PM Opportunity for Observer Comments (10 minutes)

7:50 PM Wrap Up and Next Steps (10 minutes)

8:00 PM Adjourn

Final Draft Meeting Summary
Wet Weather Team Meeting #1
Thursday, July 20, 2006, Louisville, KY

The Louisville and Jefferson County Metropolitan Sewer District (MSD) formally convened the Wet Weather Team (WWT) at a meeting on July 20, 2006. The community stakeholders in the WWT will assist MSD in the development of a Wet Weather Program to address the community's problems with combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs). The objectives of the meeting were to:

- Learn about MSD's Wet Weather Consent Decree regarding CSOs and SSOs (covered in a special pre-meeting);
- Review, discuss, and modify the Wet Weather Team charter and ground rules;
- Learn about MSD operational systems and infrastructure improvement activities; and
- Identify next steps and expectations for the next meeting of the Wet Weather Team.

At the start of the meeting, Bud Schardein, MSD's Executive Director, welcomed participants and thanked Wet Weather Team members for making the commitment to participate in the WWT process. Individual participants introduced themselves and briefly described their backgrounds.

MSD Consent Decree Overview

At a special pre-meeting for WWT members who missed the June 6th WWT project informational meeting, Angela Akridge, MSD Regulatory Policy Manager, gave a presentation on MSD's Wet Weather Consent Decree. The presentation covered the context, scope, and implications of MSD's Consent Decree with EPA and the State of Kentucky. The Consent Decree requires MSD to implement an early action plan to address immediate problems, and to develop a Long Term Control Plan for CSOs and a Sanitary Sewer Discharge Plan for SSOs by December 31, 2008. The Consent Decree also specifies that MSD will engage stakeholders in the development of these plans through a Wet Weather Team. Key messages from the presentation included:

- Noncompliance with the Clean Water Act and the Consent Decree is not an option.
- Although compliance is the endpoint, there are a variety of investment choices that MSD can make in that context.
- The Consent Decree contains strict deadlines that must be met.
- A large amount of money will be required to improve water quality and address other problems from CSOs and SSOs.
- In implementing the requirements of the Consent Decree, MSD will need to make important decisions that will have significant long-term consequences for the quality of life in the community.

Wet Weather Team Draft Charter and Ground Rules

Rob Greenwood of Ross & Associates Environmental Consulting, Ltd. introduced himself and explained that as a member of the facilitation team for the Wet Weather Team Project, he will work for the process and will treat each Wet Weather Team member as an equal client. He then reviewed and solicited

comments on the draft ground rules and the draft charter for the Wet Weather Team. The ground rules covered the following topics:

- Participants and participation;
- Meeting discussions and procedures;
- Desired outcomes; and
- Communications outside of Wet Weather Team meetings.

In response to questions and suggestions about public communications, MSD described current plans for public outreach during the WWT process; which include the following components:

1. Developing a website where all WWT meeting summaries and materials would be posted;
2. Conducting public information meetings about the project at various points during the process; and
3. Providing opportunities for observers to comment during the working meetings of the Wet Weather Team.

Rob Greenwood stressed that WWT meetings will designed as working sessions focused on dialog among WWT members, with a particular emphasis on the community stakeholders. WWT meetings will not be designed to serve as public education and comment forums, although observers will be welcome and provided an opportunity to provide comments at the end of each meeting. Public education and input will be handled through the planned public information meetings, and through web-based provision of WWT materials.

Wet Weather Team members were generally supportive of the contents of the charter and ground rules, and provided the following additional comments and suggestions.

- A participant requested that MSD and the facilitation team compile any written comments MSD receives about the project and any press coverage and forward this information to the WWT.
- WWT members suggested identifying a single point of contact for the project for answering questions from the public.
- A participant suggested that MSD develop a paragraph describing the WWT project with contact information for the Metro 311 call center to use when answering questions about the project.

Wet Weather Team members were given until July 28th to provide final review and comment on the Charter and Ground Rules with the intent to provide final documents at the August 15 meeting.

MSD Operations Overview

Brian Bingham, MSD Regulatory Management Services Director, provided an overview of MSD's operations, including MSD's mission and responsibilities, service area, wastewater treatment plants and other facilities, and organization and staffing. He noted that the Morris Forman Wastewater Treatment Plant is the largest wastewater treatment plant in Kentucky, and it can handle up to 350 million gallons per day (MGD) of peak wet weather flow (its permitted dry weather flow is 120 MGD).

MSD will explore the possibility of setting up a tour of MSD facilities for Wet Weather Team members to learn more about MSD's systems. Participants thought this would be helpful and suggested that this tour include prototypical examples of CSOs and SSOs.

MSD Infrastructure Upgrade Activities

Derek Guthrie, MSD Director of Engineering/Operations & Chief Engineer, reviewed MSD's recent infrastructure upgrade activities, including topics such as MSD capital spending trends, capital project accomplishments, project examples, and MSD rates. Overall, MSD has invested $1.4 billion to improve its wastewater and stormwater systems; however, MSD's rates are still lower than the national average. In general, most of the area with CSOs in Jefferson County has already been developed; however SSOs are an issue for both new and existing developments. MSD staff also noted that nonpoint sources are one of the main causes of water quality problems in the nation.

Participants asked a number of clarifying questions about MSD's facilities, improvement activities, and the types of future investments MSD would be making to address wet weather CSO and SSO problems. In response to a question, MSD noted that based on modeling data, the total volume of CSO and SSO overflows in Jefferson County is likely to be about 3-4 billion gallons per year, although this could vary considerably between dry and wet years. MSD is working on recalibrating the model and plans to install additional flow monitors to get a better understanding of actual flows.

Other observations and discussion topics included the following.

- One participant asked whether there are security risks to MSD's wastewater treatment and management systems, and in particular, whether MSD should be concerned about deliberate human attacks on MSD's systems. MSD indicated that security is and needs to be a high priority for MSD, including attentiveness to such concerns as the use of the conveyance system for community disruption.
- Participants requested a map and additional information about MSD's capital projects related to CSO and SSO problems. MSD indicated that it could provide the requested information.
- A participant observed that most of the examples of infrastructure investments dealt with improvements to existing systems, rather than the installation of new facilities, and asked whether the WWT would explore options that would involve relocating communities. MSD responded that it does not anticipate that there will be much work to build new facilities in areas that are already fully developed. Rather than relocation, the primary impact of new infrastructure investments will likely be on the rates for MSD services.
- Another participant noted that there could be concerns with potential exposure of community members to chemicals when chemicals are stored or transported by rail. Rob Greenwood of the facilitation team responded by saying that this comment represented an example of a community value—protection of public health during wastewater treatment chemical management—that WWT stakeholders will consider in providing guidance on MSD's Wet Weather Program.

MSD thanked WWT members for their thoughtful comments and questions about MSD's facilities and infrastructure improvements, and noted that one of the reasons the community stakeholders are on the Wet Weather Team is to raise these types of issues related to quality of life and economic impacts.

Observer Comments

An observer at the meeting commented that the discussion of nonpoint source issues did not include anything about the responsibility of developers to control stormwater runoff (e.g., from a parking lot). MSD mentioned in response that it has stormwater permits, but there are few regulatory requirements for private property owners and businesses to control nonpoint sources of water pollution.

Next Steps

- Comments on the draft WWT charter and ground rules are due to Ross & Associates by Friday, July 28, 2006. Ross & Associates will then revise the documents and send them out for final review and approval at the next WWT meeting.
- MSD will set up a website for posting information and meeting materials for the WWT Project.
- The next WWT meeting will be on Tuesday, August 15, 2006 (at the Morris Forman Wastewater Treatment Plant), from 5:45 to 8:00 PM. MSD will provide an optional facility tour for WWT participants from 4:00 to 5:30 PM. Dinner will be provided starting at 5:45 PM. Meeting topics will likely include:
    - Background information on relevant laws and regulations;
    - Presentation on MSD's finances and rate structure;
    - Wet Weather Team process overview; and
    - Preview of the community values discussion at the September meeting.

Meeting Participants

Wet Weather Team Stakeholders

Susan Barto, Mayor of Lyndon
Stuart Benson, Metro Council, District 20
Charles Cash, City of Louisville, Planning and Design Services Department
Allan Dittmer, University of Louisville
Laura Douglas, E.ON U.S.
Faye Ellerkamp, City of Windy Hills, City Council
Jeff Frank, Vanguard Sales
Arnita Gadson, West Jefferson County Community Task Force
Mike Heitz, City of Louisville, Metro Parks
Rick Johnstone, Deputy Mayor, Mayor's Office
Kurt Mason, Jefferson County Soil and Water Conservation District
Lisa Santos, Irish Hill Neighborhood Association
David Tollerud, University of Louisville, School of Public Health & Information Sciences
Tina Ward-Pugh, Metro Council, District 9
David Wicks, Jefferson County Public Schools

MSD Personnel

Angela Akridge, MSD Regulatory Policy Manager
Brian Bingham, MSD Regulatory Management Services Director
Derek Guthrie, MSD Director of Engineering/Operations & Chief Engineer
Bud Schardein, MSD Executive Director

Facilitation and Technical Support

Rob Greenwood, Ross & Associates Environmental Consulting
Reggie Rowe, CH2M HILL
Gary Swanson, CH2M HILL
Jennifer Tice, Ross & Associates Environmental Consulting

Meeting Observers

Henry Cubero, The Cubero Group
Marion Gee, MSD
Diane Secor, MSD
David Spenard, Office of the Attorney General

Meeting Materials

- Agenda
- 2006 WWT Meeting Schedule
- MSD Consent Decree Presentation
- Draft WWT Charter
- Draft WWT Ground Rules
- MSD Operations Overview Presentation
- MSD Infrastructure Upgrades Overview Presentation
- Wet Weather Team Project Background Materials Binders

Additional Materials Included in the Binders:

- WWT Membership and Contact List
- WWT Project Description
- WWT Project Overview Presentation
- WWT Project Acronym List
- Background information and EPA policy guidance related to CSOs and SSOs
- MSD's Wet Weather Consent Decree and associated documents

Wet Weather Team Meeting Schedule
(as of September 2008)

Meeting Number	Date	Location
2006 Wet Weather Team Meetings		
1	Thursday, July 20, 2006	MSD Central Maintenance Facility
2	Tuesday, August 15, 2006	Morris Forman Wastewater Treatment Plant
3	Tuesday, September 12, 2006	MSD Central Maintenance Facility
4	Tuesday, December 5, 2006	MSD Central Maintenance Facility
2007 Wet Weather Team Meetings		
5	Thursday, January 18, 2007	MSD Central Maintenance Facility
6	Tuesday, February 13, 2007	MSD Main Office, Downtown Louisville
7	Thursday, March 15, 2007	MSD Main Office, Downtown Louisville
8	Thursday, April 19, 2007	MSD Main Office, Downtown Louisville
9	Tuesday, May 22, 2007	Floyds Fork Wastewater Treatment Plant
10	Thursday, June 21, 2007	MSD Main Office, Downtown Louisville
11	Thursday, August 2, 2007	MSD Main Office, Downtown Louisville
12	Thursday, September 20, 2007	MSD Main Office, Downtown Louisville
13	Thursday, October 18, 2007	MSD Main Office, Downtown Louisville
14	Thursday, December 6, 2007	MSD Main Office, Downtown Louisville
2008 Wet Weather Team Meetings		
15	Tuesday, January 15, 2008	MSD Main Office, Downtown Louisville
16	Tuesday, February 26, 2008	MSD Main Office, Downtown Louisville
17	Thursday, April 3, 2008	MSD Main Office, Downtown Louisville
18	Thursday, May 15, 2008	MSD Main Office, Downtown Louisville
19	Thursday, June 19, 2008	MSD Main Office, Downtown Louisville
20	Tuesday, July 15, 2008	MSD Main Office, Downtown Louisville
21	Tuesday, September 23, 2008 & Wednesday, September 24, 2008	MSD Main Office, Downtown Louisville
~~22~~	~~Thursday, November 20, 2008~~ **(Meeting Rescheduled)**	~~MSD Main Office, Downtown Louisville~~
22	Thursday, December 4, 2008 **(New Meeting Date)**	MSD Main Office, Downtown Louisville

DRAFT
Louisville and Jefferson County Metropolitan Sewer District
Wet Weather Team Charter

Summary

The Louisville and Jefferson County Metropolitan Sewer District (MSD) has chartered a Wet Weather Team (WWT) to assist with the development of an integrated Wet Weather Program that complies with Clean Water Act requirements and addresses the community's problems with combined sewer overflows and sanitary sewer overflows that occur during wet weather conditions. The Wet Weather Team consists of community representatives, elected officials, and MSD personnel. Stakeholders in the WWT will advise MSD on its investment, policy, and performance choices in the design of the Wet Weather Program, so that these choices can be made wisely and in ways that best meet the needs of the local community.

Background and Problem Statement

Like many municipalities nationwide, a portion of the Louisville sewer system is designed and permitted to collect wet weather runoff along with residential, commercial, and industrial wastewater. During some wet weather events, the volume of wastewater in the system exceeds the capacity of collection pipes and wastewater treatment plants, resulting in releases (discharges) of untreated wastewater diluted with stormwater—called combined sewer overflows (CSOs). Louisville also has had wet weather problems with sanitary sewer overflows (SSOs), which are unintentional discharges of diluted sewage from separate sanitary sewers. SSOs can occur as a result of groundwater or surface water entering the sanitary sewer system through improper connections to the sewer system, or damaged or deteriorated infrastructure. SSOs can also occur as a result of various other sewer operation and maintenance conditions. CSOs and SSOs can cause or contribute to water quality problems in receiving streams and watersheds. CSOs and SSOs can threaten public health and can cause property damage through, for example, basement back-ups.

In 2005, 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 Clean Water Act. Under 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 requires that MSD engage stakeholders in the development of public participation and funding plans, through a "Wet Weather Team." In addition to these areas, MSD has decided that it would also be valuable to involve stakeholders in discussions about the overall development and implementation of a new Wet Weather Program.

MSD, on behalf of 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 Wet Weather Team will guide MSD in making wise investment decisions for a Wet Weather Program that will improve water quality, protect public health, prevent sewer back-ups, comply with applicable regulatory requirements, and address the community's needs for wastewater and stormwater management.

Wet Weather Team Objectives

MSD charters the stakeholder subgroup of the WWT to provide guidance on the development of an integrated Wet Weather Program that will comply with applicable regulatory requirements and will minimize the impacts of wet weather discharges on water quality, aquatic biota, and human health. Through the Consent Decree, the WWT is charged with two primary tasks: (1) preparing a plan for funding MSD's Wet Weather Program and (2) developing a program for public information, education, and involvement.

In addition to these tasks, the WWT will advise MSD on its overall investment, policy, and performance choices in the development and implementation of the Wet Weather Program. These choices may include increasing system storage or conveyance and treatment capacity, modifying the frequency of specific operations or maintenance activities, developing design parameters and standards such as design storms, and additional compliance inspection and enforcement activities.

Strategies to address sewer overflow issues will likely employ a combination of specific technologies and operational practices. For example, to increase the storage and treatment capacity of its systems, MSD could add parallel or relief sewers, increase the size of existing assets and facilities, separate combined sewers, use remote or side-stream treatment, take actions to prevent excess inflow and infiltration, and/or use diversions during certain wet weather events. Different approaches may be appropriate for different parts of MSD's systems, depending on the specific threats to those systems, the likelihood that disruptions could occur, and the type and severity of the impacts disruptions would have on the community's values.

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. In addition, it is possible that shifts in regulatory requirements may occur over the project duration that could affect the framework of the WWT process. If this occurs, MSD will inform the WWT about the regulatory changes and their relevance to the project, and the WWT will discuss appropriate changes to the framework of the WWT process.

Expectations for Wet Weather Team Members and Process

Stakeholders on the Wet Weather Team include individuals recognized as community opinion leaders associated with environmental advocacy, business and industry, elected official, local government, community neighborhood, recreation, public health, environmental justice, and organized labor interests. WWT stakeholders do not formally represent their specific affiliated organization, but rather seek to provide input reflective of the broad interest area in which they lead. In addition to stakeholders, the WWT will include MSD personnel, as specified in the Consent Decree. MSD personnel on the WWT will participate in discussions with WWT stakeholders; however, decisions regarding stakeholder guidance to MSD will be based only on the input from the stakeholder subgroup of the WWT.

WWT members who are not able to attend a particular meeting may send an alternate, provided that the suggested alternate is discussed with MSD and the WWT member can assure that the alternate will be well briefed on past and current WWT discussions and decisions. WWT members are expected to participate for the entire process; however, participants may withdraw at any time without prejudice and may be replaced by MSD with a representative with similar expertise and experience. Observers are welcome at meetings, but are not participants in WWT deliberations. A segment at the end of each meeting (approximately 15 minutes) will be dedicated to receiving observer comments. Each observer's

oral comments must not exceed two minutes in duration, although written comments to the WWT and/or MSD will be welcome throughout the process.

MSD will use a values-based risk management process, supported by a third-party facilitation team, to obtain input from WWT stakeholders on MSD's investment decisions and priorities regarding wet weather controls and management efforts to achieve compliance and provide a level of service that meets community needs. This structured process will allow WWT stakeholders to systematically consider the importance of potentially competing values and the technical and management options available to address community needs. Prior to submittal of the final plans to EPA and Kentucky EPPC by December 31, 2008, MSD will need to provide final draft plans to the MSD Board for consideration and adoption.

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 stakeholder subgroup of the WWT 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 perspectives of WWT stakeholders—particularly in cases where consensus is lacking—are gathered throughout the plan development process and made available to MSD to ensure a balanced and well-informed final decision process. If the WWT stakeholder subgroup does not reach consensus on a particular item, the range of views will be recorded for consideration by the MSD Board. Differences of opinion reflected in WWT and MSD documents will not be attributed to particular individuals or interests; however, WWT stakeholders can submit attributed comments directly to MSD and/or the MSD Board for their consideration. All written comments received by MSD, consistent with public disclosure requirements, will be made available publicly.

Recognizing that the way in which WWT deliberations are publicly characterized will affect the group's ability to reach consensus, WWT members are encouraged to refrain from characterizing the views of other WWT members or of the full WWT to the press. MSD will consider requests from WWT members for outside experts to speak at meetings, but MSD reserves the right to include additional or alternative speakers to ensure that a full range of perspectives is provided.

The WWT stakeholder process is the backbone of MSD's efforts to develop an integrated Wet Weather Program for addressing improvements needed to MSD's stormwater, combined sewer, and sanitary sewer systems. All WWT stakeholders are expected to:

- Participate fully and honestly in meetings, act in good faith, and strive for consensus;
- Reach out to constituencies whose interests they reflect and, as appropriate, to other stakeholders to communicate about the project status and gather input and ideas for the project; and
- Participate in the identification, review, and analysis of options.

Expectations for Wet Weather Team members are further defined in the Wet Weather Team ground rules.

Schedule

Under the 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. WWT meetings will occur approximately every four to six weeks as needed from June 2006 through May 2008.

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Louisville and Jefferson County Metropolitan Sewer District
Wet Weather Team Ground Rules

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 segment at the end of each meeting (approximately 15 minutes) 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 inquires 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.

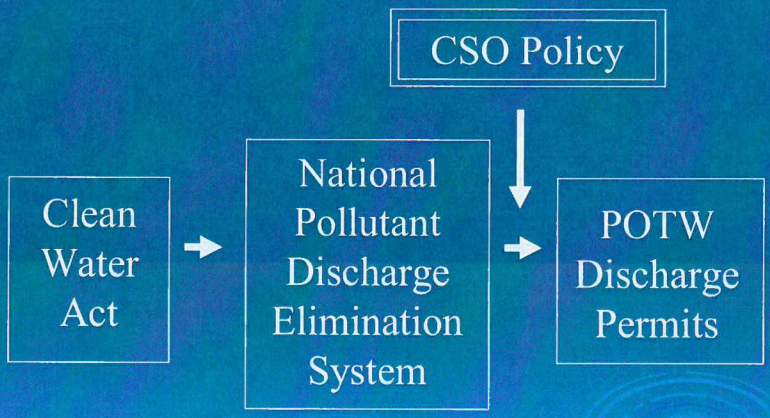
MSD's Wet Weather Consent Decree

Everything You Ever Wanted to Know
(and more!)

Objectives

- Identify objective and goals of the Clean Water Act (CWA)
- Identify framework of the National Pollutant Discharge Elimination System (NPDES) Permit program
- Highlight elements of the Consent Decree
- Plan to achieve Consent Decree Compliance
- Define impact of Consent Decree for MSD and stakeholders

Regulatory Framework



Law → Regulations → Permits

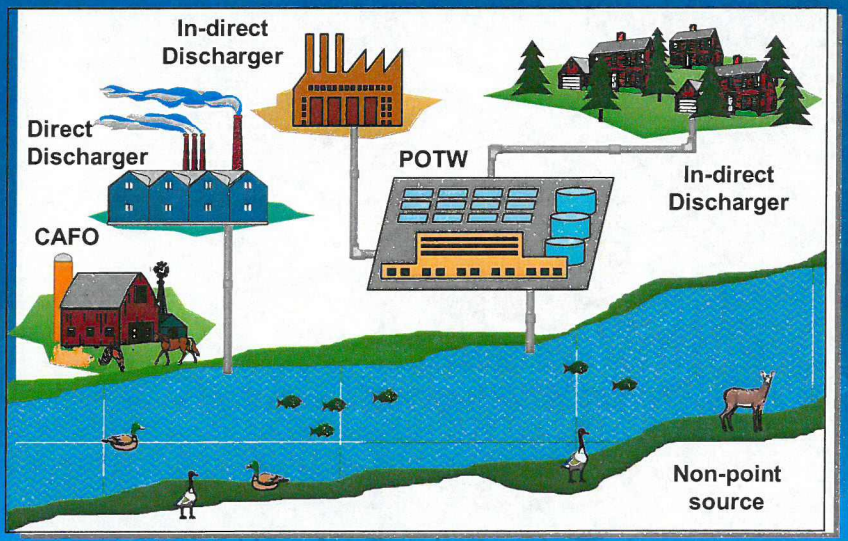
CWA Roles and Responsibilities

- **Congress**
  - Enact legislation to protect water
- **EPA**
  - Issue regulations and policies to support and clarify legislation
  - Administer grants program
  - Provide technical, legal and training support
  - Enforce per Sections 308 and 309
- **KY Division of Water (DOW)**
  - Issue permits
  - Monitor for compliance
  - Enforce permit provisions
- **MSD**
  - Protect and enhance water quality
  - Comply with permit conditions of all permits
  - Administer required regulatory programs

MSD Has Broad Responsibilities for Diverse Community Challenges

- Wastewater
  - Wastewater collection, from property boundary
  - Conveyance to WTP
  - Treatment per KPDES permit
  - Operations, maintenance, capital renewal, and service extensions
- Stormwater
  - Drainage O&M
  - Project DRI to improve drainage performance
  - Flood Protection – aging system from USACE
- Consent Decree compliance is an addition to an already full plate!

NPDES Permit Program



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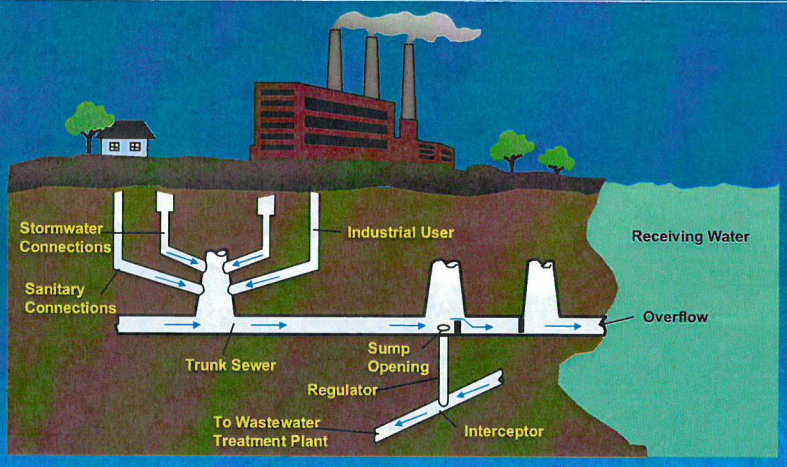
How It All Fits Together

Treatment Plant Permits

… Properly Operate and Maintain…

1. Meet effluent requirements at the plant
2. No discharges from the pipes or pump stations

Typical Combined Sewer System Configuration



What's a CSO?

A constructed release point on a pipe that carries both stormwater & wastewater

CSO Policy Objectives

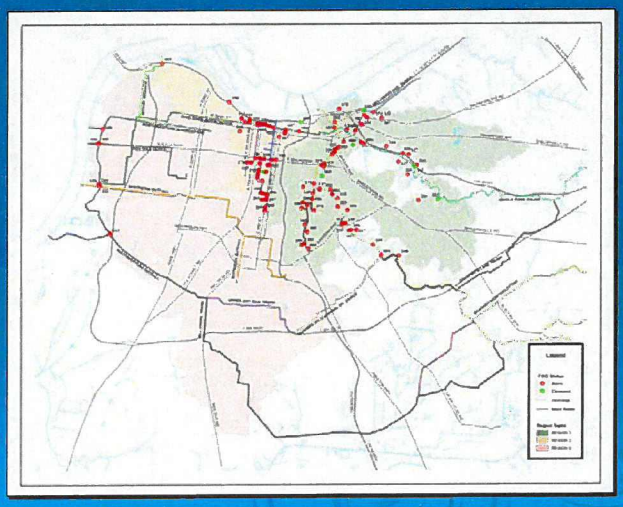
- CSOs occur only during wet weather
- Comply with technology and water quality-based requirements
- Minimize impacts on water quality, aquatic biota, human health

➢ **CSO Policy Requirements**

- Nine Minimum Controls compliance
- Long Term Control Plan development and implementation (LTCP)
- End-point of implementation must be compliance with receiving water quality standards

Our Combined Sewer System

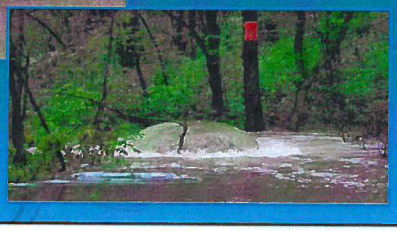
CSO Locations



- 114 Active CSOs
- 7 CSOs Eliminated

What About SSO's?

Illegal and Un-permitted Discharges



"What has MSD Been Doing About These Issues?"

- Expended more than $1.4 B in capital expansion and upgrades
- What have we accomplished?
  - 300 SSOs and CSOs eliminated
  - Solids and floatable control on 14 CSOs
  - 66,000 lf sewer separation
  - Implemented "Real Time Control" of sewer system for in-line storage
  - Constructed off-line storage basins
  - (cont)

What Has MSD accomplished with these expenditures? (cont)

- 40,000 septic tanks eliminated
- 275 small plants and pump stations eliminated
- Expanded Southwestern Pump Station, expanded, upgraded numerous other PS, constructed new Starkey PS
- Expanded MFWTP and 3 regional WTPs, constructed one new WTP (FFWTP)

but… CSOs and SSOs persist

Our Consent Decree

- The Process
  - EPA requests for information – May 2003
  - KDOW Enforcement Action – February 2004
    - SSO and other unauthorized discharges
  - Negotiations with KDOW, EPA Region IV, EPA Headquarters, DOJ
  - Consent Decree signed – August 2005
    - SSO
    - CSO
    - Overall Wet Weather Management

Our Consent Decree

- The Result
  - Fair Agreement – model for others to follow
    - Hundreds of other communities in similar situation
  - Holistic solutions – watershed management
  - Good for the community and the environment
  - Lots of work for MSD
  - Deadline and Results Oriented

Our Consent Decree
Penalties and SEPs

- Civil Penalties
  - $1,000,000 to State
- Supplemental Environmental Projects
  - $2,250,000
- Stipulated Penalties
  - Unauthorized Discharges $500 - $5,000
  - Planning Milestones $1,000 - $3,000 + $100/day
  - Construction Deadlines $1,000 - $5,000/day

Failure is Not an Option!

Our Consent Decree
Responsibility Parties

- Binding to all engaged by MSD on Wet Weather Team
  - Employees
  - Consultants
  - Contractors
  - ….includes everyone….no exceptions
- Wet Weather Team – Stakeholder Group
  - Subset of Wet Weather Team
  - Includes representative cross section of entities with stake in program outcome
  - Likely 20 to 25 people
  - Guidance for compliance plan development
  - Plan for public outreach
  - Plan for funding

Our Consent Decree
Early Action Plan

- Asset Management
  - CMOM Self Assessment
  - Nine Minimum Controls (NMC) Compliance
- Capital Improvements Project List
- Reporting
  - Sewer Overflow Response Protocol (SORP)
  - Documentation, Documentation, Documentation
- Early Action Plan submittals have created additional obligations for MSD to perform

Our Consent Decree
Discharge Abatement Plans

- CSO Long Term Control Plan (LTCP)
  - Interim LTCP (6/3/06)
  - Final LTCP (12/31/08)
- Sanitary Sewer Discharge Plan (SSDP)
  - SSOP Update (2/11/06)
  - Interim SSDP (9/30/07)
  - Final SSDP (12/31/08)
- Discharge Abatement Plans will be WWT focus

Our Consent Decree
Potential Capital Improvements

- Backup power
- Pump station modifications
- Treatment plant modifications
- Combined sewer separations
- Sewer overflow storage basins
- Solids and floatable control facilities
- Wet weather treatment facilities
- Real Time Control facilities

Long Term Control Plan (LTCP)

Sanitary Sewer Discharge Plan (SSDP)

Our Consent Decree
Miscellaneous Provisions

- Package deal – can't pick and chose parts that we like
- Consent Decree is not a permit
- Not contingent on funding
- End-point is CWA compliance
- CWA compliance is required, but pathway is flexible

Consent Decree Compliance

- Activities Completed Since CD Signed
  - January 31, 2006 – 1st Quarterly Report
  - February 11, 2006 – Programmatic Deliverables
    - CMOM Self-Assessment
    - NMC Compliance Status
    - SSOP Update
    - Interim LTCP Update
  - April 29, 2006 2nd Quarterly Report
  - May 12, 2006 – Response to EPA/DOW Comments
    - CMOM Resubmittal,
    - SORP Resubmittal
  - June 3, 2006 – Response to EPA/DOW Comments
    - NMC Resubmittal,
    - Interim LTCP Resubmittal

Consent Decree Compliance

- Next Steps
  - September 30, 2006 – NMC Compliance
  - September 30, 2007 – Plan for "Big 4" SSOs
  - December 31, 2008 – Plan for CSOs and SSOs
- Long Term
  - December 31, 2020 - Combined System
  - December 31, 2024 - Separate System
  - ….or whenever we comply with CWA

What This Means to Us (MSD and Our Community)

- MSD has responsibility for this community challenge
  - Huge investment will be required
  - Affects quality of life for entire community
- Choices need to be made to determine compliance approach
- Deadlines must be met – no matter what
- Stakeholder guidance required – the whole community must be heard

QUESTIONS

Wastewater Permits
Standard Conditions

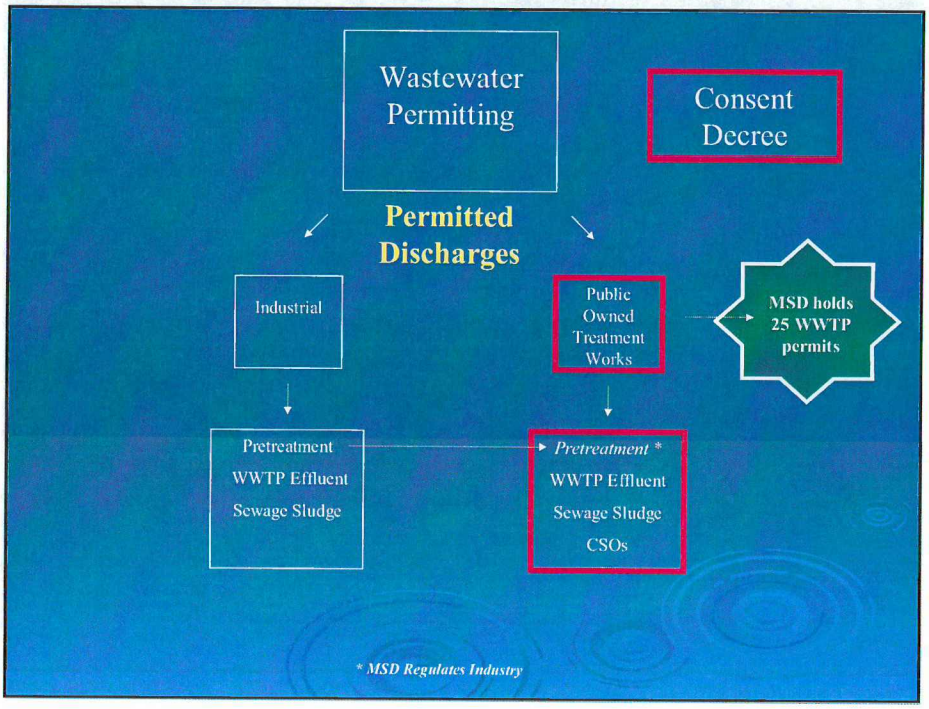
Duty to Comply
Duty to Reapply
Duty to Mitigate
Proper Operation & Maintenance
Duty to Provide Information
Inspection and Entry
Monitoring and Records
Signatory Requirements
Reporting Requirements
Bypass Provisions
Upset Provisions

NPDES Statutory Framework

- All "point" sources
- "Discharging pollutants"
- Into "waters of the U.S."

Must obtain an NPDES permit from EPA or an approved State

1-27



Our Consent Decree
Stipulated Penalties

Unauthorized Discharge Penalties

- Dry Weather Discharges
  - $2,000 per location, per occurrence
  - Effective September 30, 2006
- Unauthorized Sanitary Sewer Discharges
  - $500 per location, per occurrence
  - Effective August 12, 2007
- Unauthorized Discharge from Big 4
  - $5,000 per location, per occurrence
  - Effective after respective elimination dates

Our Consent Decree
Stipulated Penalties

- Planning Activities
  - $1,000 to $3,000 plus $100 per day
- Construction Activities
  - 1 to 30 days $1,000 per day
  - 31 to 60 days $2,000 per day
  - 61 to 120 days $3,000 per day
  - > 120 days $5,000 per day

Capacity	PLAN THE SYSTEM Design and Build Per Plan CWA – Treat 100% Collected Flow
Management Operation Maintenance	PERFORMANCE As Designed CWA – No Backups, No SSOs

Asset Management
Sanitary Sewer System

CMOM: Best practices, written procedures and tools used to manage performance

- Design and construct for O&M
- Know what's in the system
- Know where it's located
- Know what condition it's in
- Plan and schedule work based on condition and performance
- Repair, replace, rehabilitate based on condition and performance

Asset Management
Combined Sewer System

CSO Policy - Nine Minimum Controls

- Proper operations and maintenance
- Maximum use of the collection system for storage
- Review and modification of pretreatment requirement to ensure CSO impacts are minimized
- Maximization of flow to the POTW for treatment
- Elimination of dry weather overflows
- Control of solids and floatables in CSOs
- Pollution prevention to reduce contaminants in CSOs
- Public notification of CSOs and impacts
- Monitoring to effectively characterize CSO impacts

Our Consent Decree
Reporting Requirements

- Discharge
  - Sewer Overflow Response Protocol (SORP)
- Programmatic
  - Quarterly
  - Annual

Documentation, Documentation, Documentation

Our Consent Decree
Certifications, Right of Entry, Records

- Construction Certifications
  - Within 30 days on all projects listed in Consent Decree or planning documents
- Submittal Certifications – on all notices, documents, and reports
- Cabinet or EPA may review or visit at any time – full access.
- We must retain all records for a minimum of 5 years. Must notify Cabinet and EPA of intent to destroy.

Our Consent Decree
Force Majeure and Dispute Resolution

- Force Majeure
  - Claims by telephone by end of next business day and in writing within 10 days
  - Notice shall estimate the length of delay
  - If parties disagree, go to dispute resolution
- Dispute Resolution
  - Formal Procedure
  - 30 day informal resolution period
  - Then to court
  - Impacted schedules may be revised

Louisville & Jefferson County Metropolitan Sewer District Operations Overview

Wet Weather Team
Stakeholder Group Meeting
July 20, 2006

AGENDA

- MSD Mission and Responsibilities
- Service Area Information
- MSD Facilities
- MFWTP
- Organization and Staffing

Louisville and Jefferson County Metropolitan Sewer District

Mission

We at MSD will build, maintain, and operate quality wastewater and storm water facilities for the people of our community.

Vision

Putting our Customers First

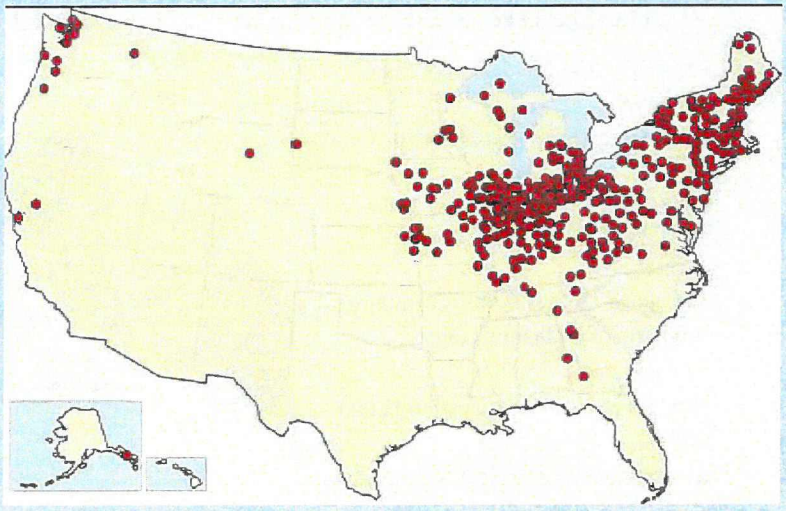
Clean Water

Green Environment

Growing Community

MSD's Service Area is a Small Piece of a Much Larger Watershed

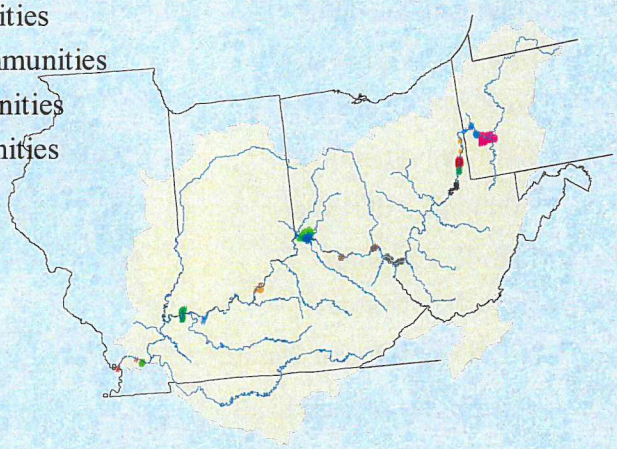
CSOs in the United States



Picture taken from USEPA Report to Congress

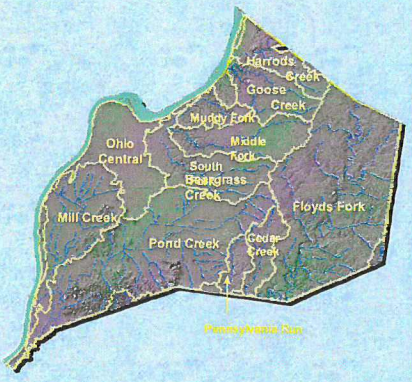
Ohio River CSO Communities

- Pennsylvania – 10 communities
- West Virginia – 10 communities
- Ohio – 10 communities
- Kentucky – 10 communities
- Indiana – 7 communities
- Illinois – 2 communities



Louisville and Jefferson County, KY Metropolitan Sewer District (MSD)

- Formed in 1946 by action of State Legislature
- Facilities include sewers installed in 1800's
- First treatment plant on-line 1946 (Fort Southworth, now Morris Forman)
- 385 square miles (Jefferson County and parts of Oldham County)
- 11 watersheds
- 220,000 customer accounts, 693,000 people
- Annual operating budget $78 million

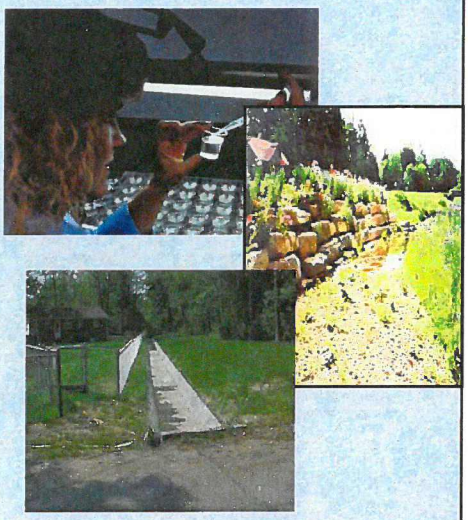


MSD Facilities

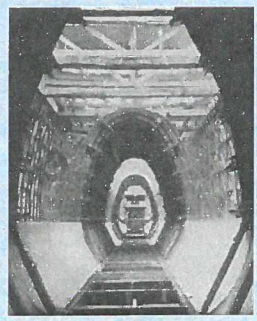
- 6 Regional Wastewater Treatment Facilities
- 19 Small Wastewater Treatment Plants
- 304 Pump Stations
- 3,000 miles of Sewers
- Ohio River Flood Protection System
  - 16 Flood Pump Stations
  - 29 miles of Floodwall

What Else Do We Do??

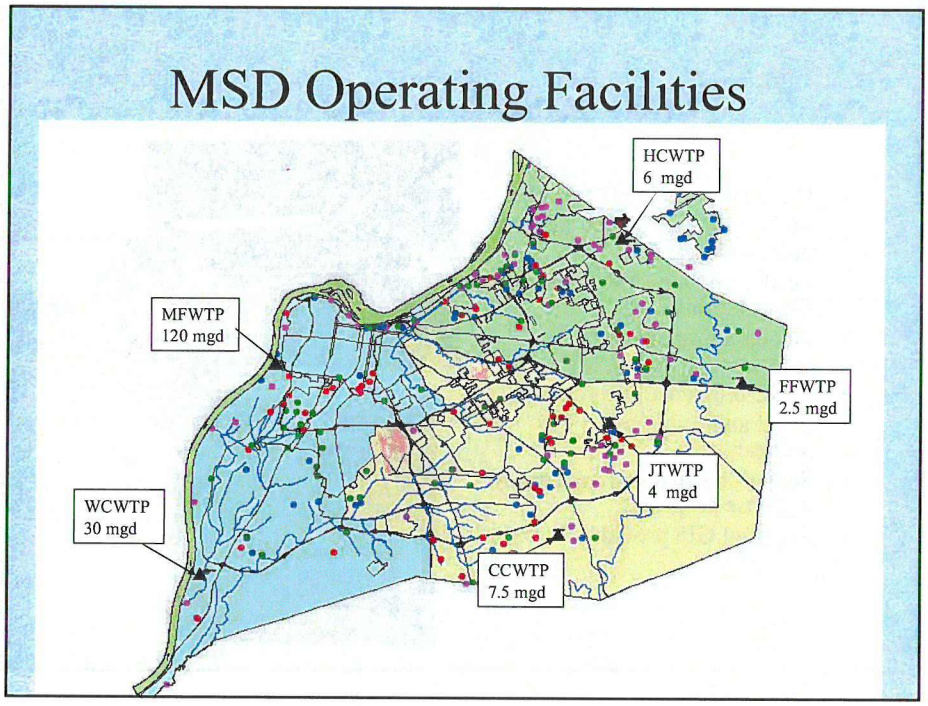
- Drainage and Flood Control
- Monitor Water Quality for 790 miles of Streams
- Lead agency for MS4 Storm Water Permit
- Floodplain ordinance enforcement
- EPSC ordinance enforcement
- Local authority for pretreatment
- Support hazmat and emergency response programs
- Regional GIS provider



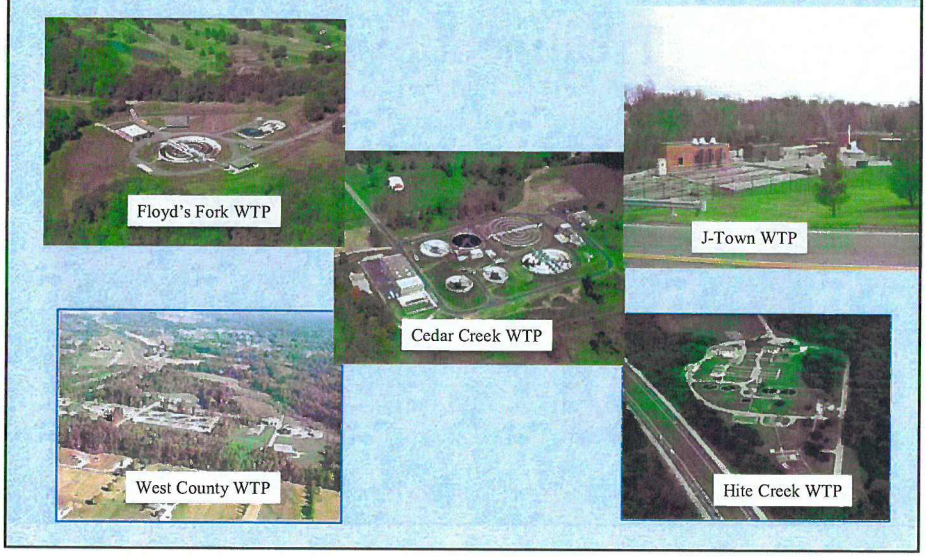
Louisville's Combined Sewer Collection and Treatment System



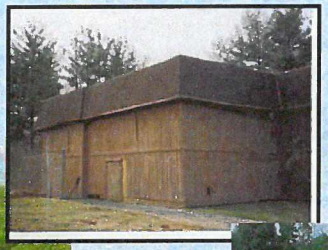
MSD Operating Facilities



Regional Plants Serve Separate Sewer Areas

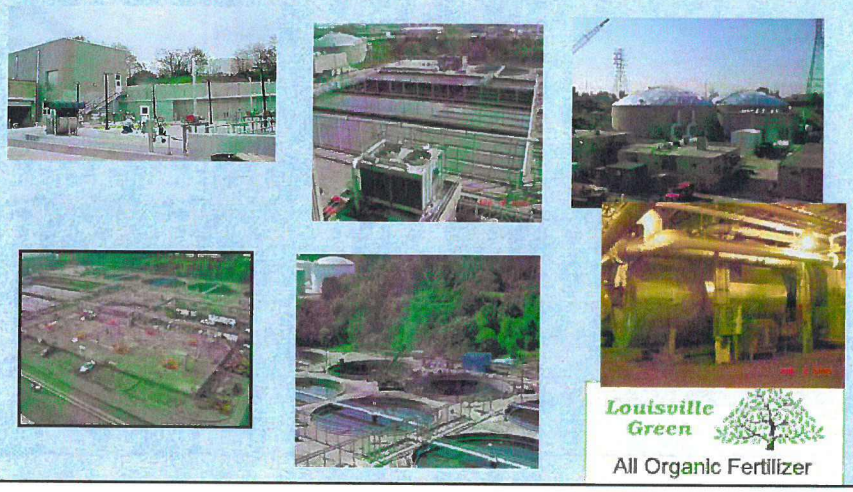


19 "Package Plants" Still Serve Individual Developments

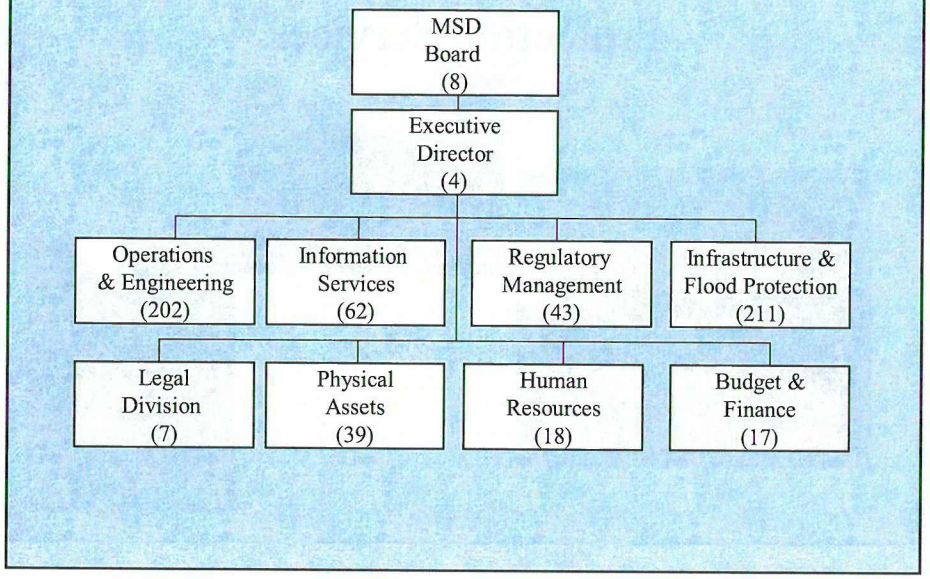


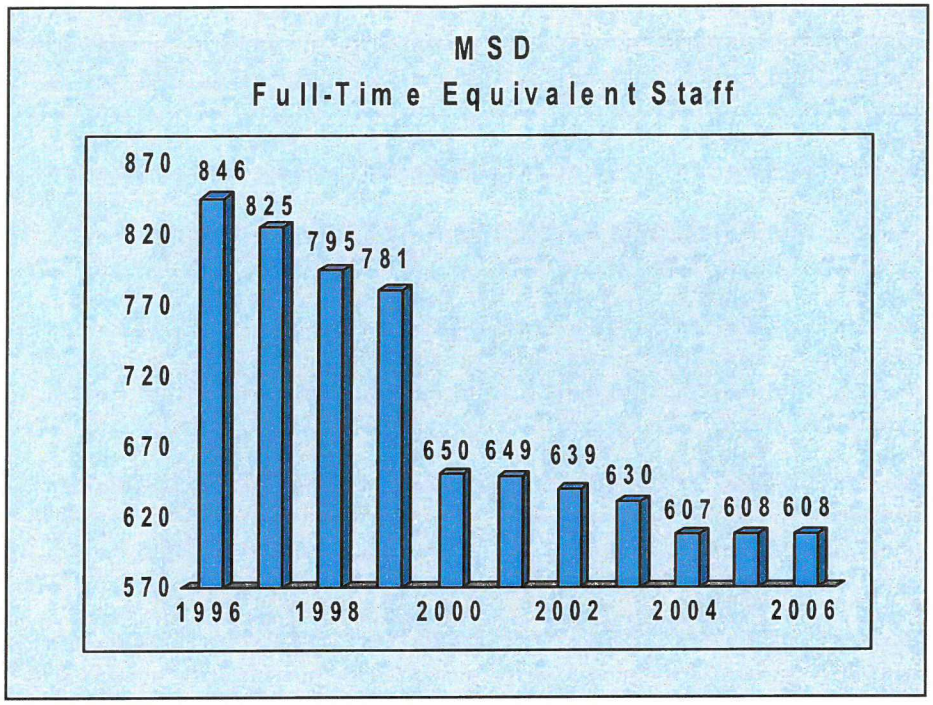
Over 300 Pump Stations Provide Sewage, Stormwater, and Flood Protection Services

Morris Forman WTP is the "Flagship" of MSD Facilities



MSD Organization & Staffing

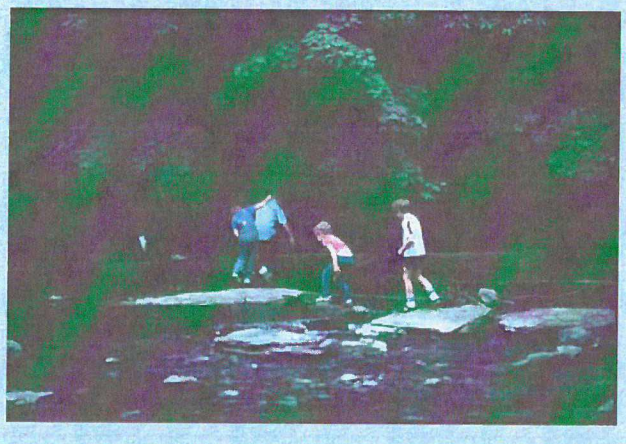




Significance of Facilities Familiarity to Wet Weather Team Objectives

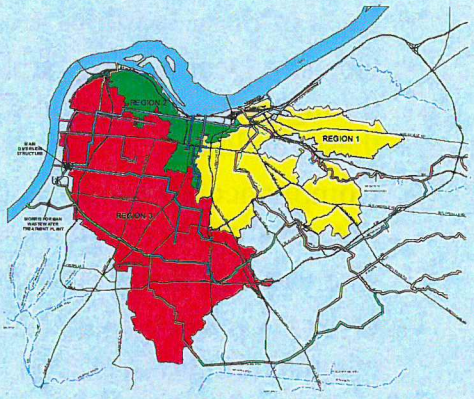
- Each of these facilities are regulated under CWA
- Consent Decree compliance will be achieved through expansion, modification, and operation of these facilities
- Compliance decisions require understanding of the relationships between these components
- The value of these assets is several billion dollars
- Over the past 10 years MSD has spent over $1B in expansions and upgrades

Questions



Louisville's Combined Sewer System

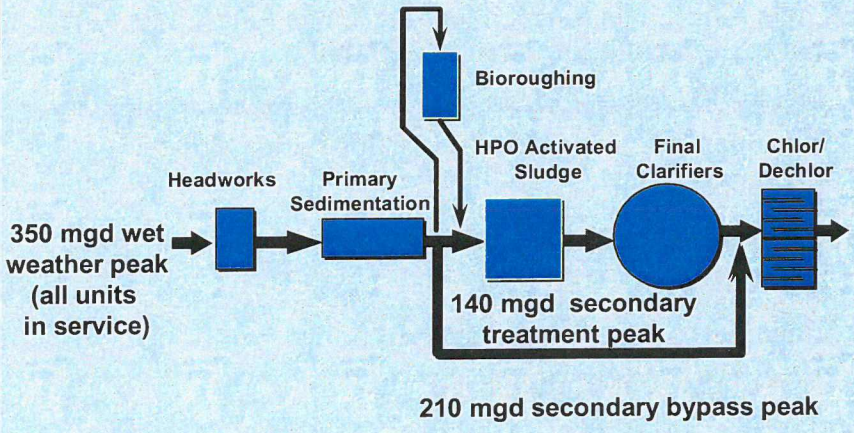
- Combined sewer area
  - 24,000 acres
  - 324,000 people served
- Evaluated as three regions
- Separate sewer area tributary to CSS
- 114 active CSO

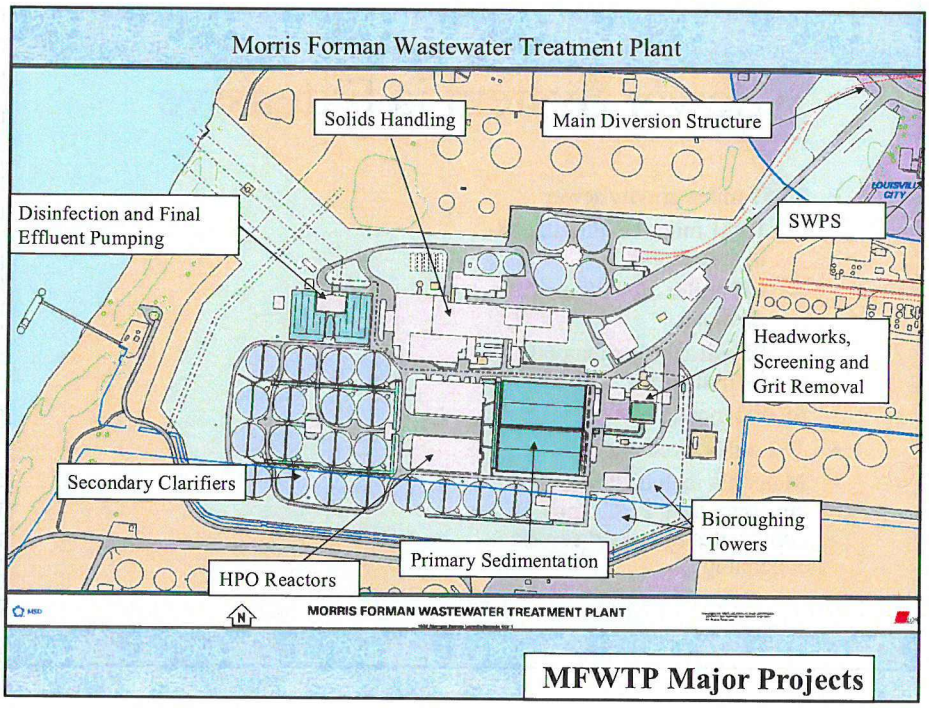


Sewer System is Extensive

- 2,957 miles gravity sewer
  - 1,931 miles smaller than 8-inch diameter
  - 931 miles 12 – 60 inch diameter
  - 95 miles larger than 60 inch diameter
- 65,000 manholes
- 162 miles force main
- Materials include brick, clay, concrete, iron, PVC, and composites (no wood sewers remaining)

Morris Forman Wastewater Treatment Plant Flow Schematic





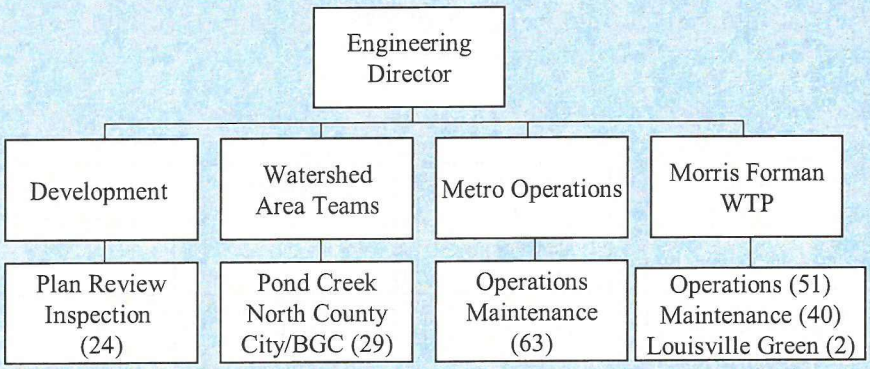
Morris Forman Service Area Facts and Figures

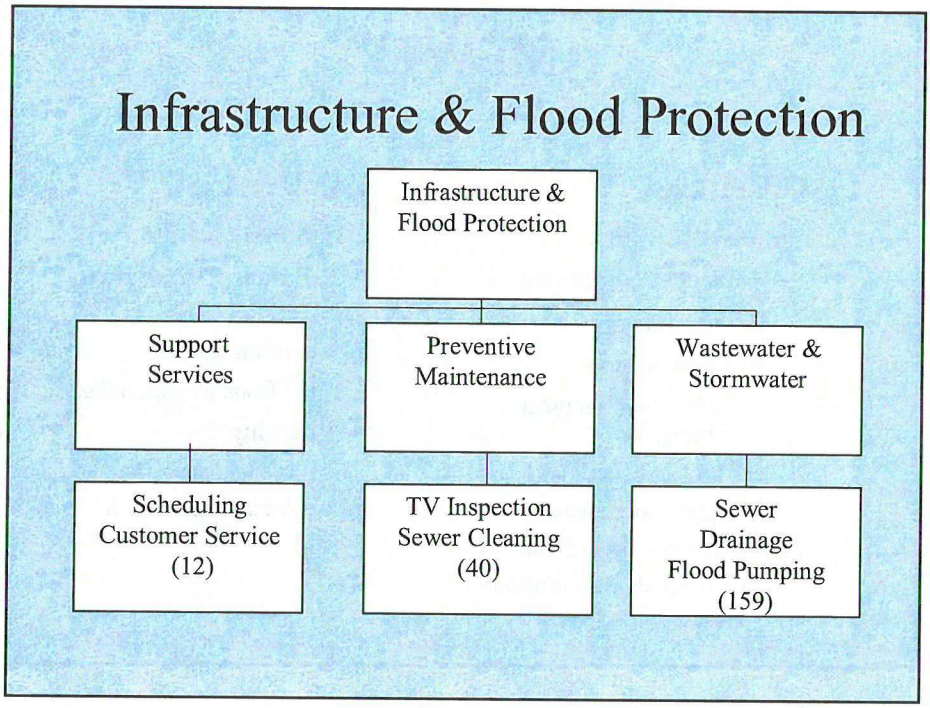
- Serves a population of over 400,000
- Over 140 square miles in area - 45% Residential, 10% Commercial, 10% Industrial, 10% Parks, and 15% Undeveloped
- All of the Combined Sewer Area (portions over 100 years old)
- Base flows are 20% industrial
- BOD load is 40% industrial

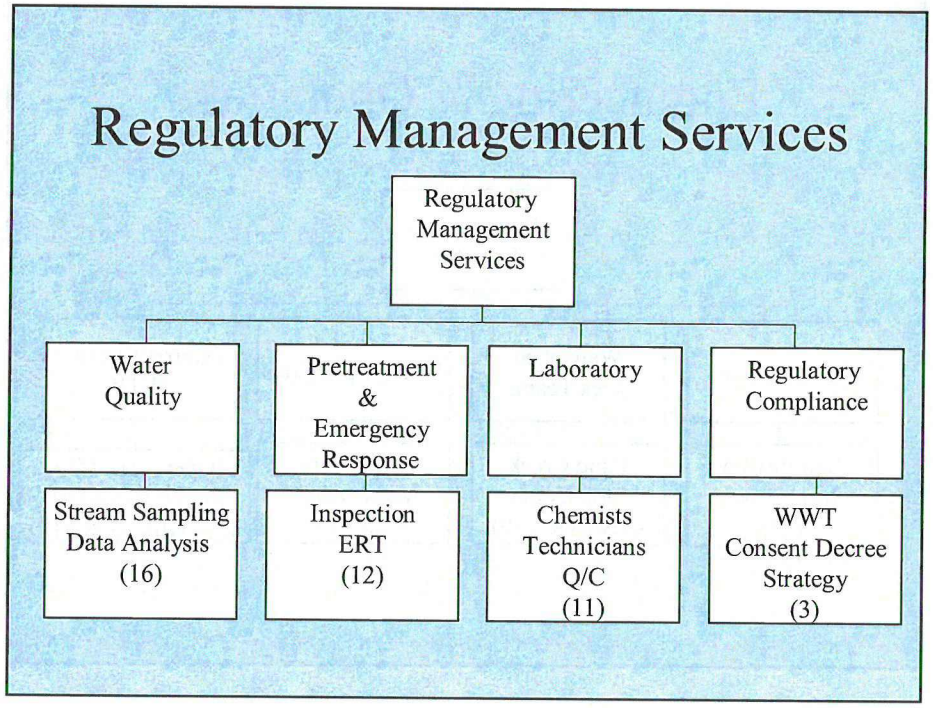
MFWTP

- Operations
  - 3 Shifts - 24/7
  - 4 Process Supervisors
  - 35 Operators
  - Process Support
    - 6 Process Computer Operators
    - Project Coordinator
    - EMS Coordinator
    - Process Technician
    - Biosolids Adminstrator
    - Process Trainer
- Maintenance
  - 3 Shifts - 24/7
  - 2 Process Supervisors
    - 18 Mechanics
    - 10 Electricians
    - 7 Controls Specialists
  - Planning
    - Maintenance Planner
    - Maintenance Tech

Engineering & Operations




Infrastructure & Flood Protection
Infrastructure & Flood Protection
Support Services
Preventive Maintenance
Wastewater & Stormwater
Scheduling Customer Service (12)
TV Inspection Sewer Cleaning (40)
Sewer Drainage Flood Pumping (159)


Regulatory Management Services
Regulatory Management Services
Water Quality
Pretreatment & Emergency Response
Laboratory
Regulatory Compliance
Stream Sampling Data Analysis (16)
Inspection ERT (12)
Chemists Technicians Q/C (11)
WWT Consent Decree Strategy (3)

Louisville & Jefferson County Metropolitan Sewer District Infrastructure Upgrades Overview

Wet Weather Team

Stakeholder Group Meeting

July 20, 2006

MSD

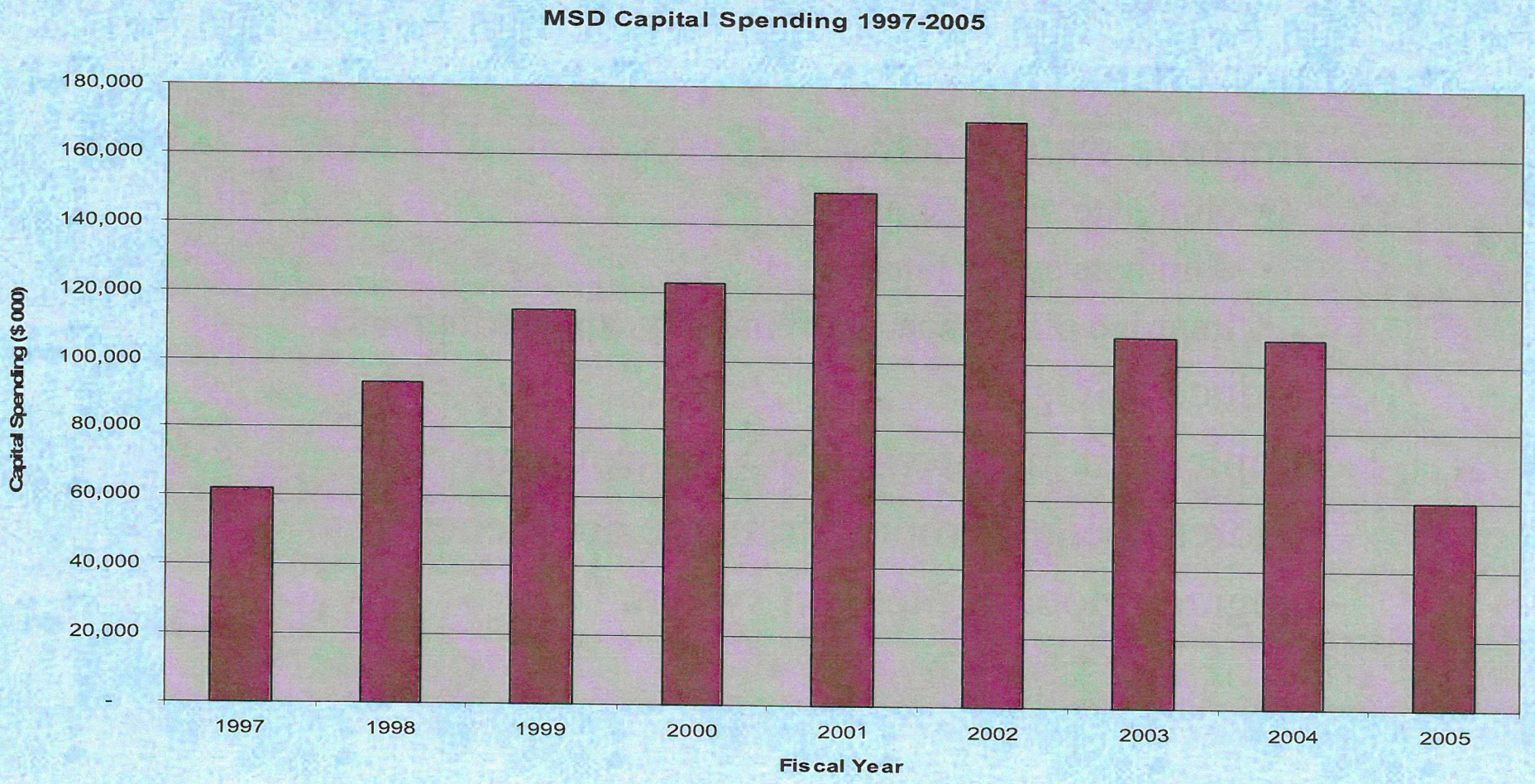
AGENDA

- MSD Capital Spending Trends
- Capital Project Accomplishments
  - 24/7 water quality
  - SSO Abatement
  - CSO Control
- Project Examples
  - Real Time Control
  - MFWTP
  - Drainage and other projects
- MSD Rates

MSD Capital Activity 1997 - 2006

- $1.4 Billion total
- Major Objectives
  - improve water quality 24/7
    - eliminate package plants
    - eliminate septic tanks
    - improve plant capacity, reliability, and performance
  - reduce SSOs
  - implement long-term CSO control plan
  - address neighborhood drainage deficiencies
  - upgrade flood protection system

Capital Spending Trends Indicate Completion of Stated Objectives



So How Have We Done?
24/7 Water Quality Improvements

- 200 privately-owned systems acquired
- 40,000+ of septic tanks eliminated
- 175 "package" STPs eliminated
- 100+ small pump stations eliminated
- 6 Regional Wastewater Treatment Plants expanded, upgraded, or constructed

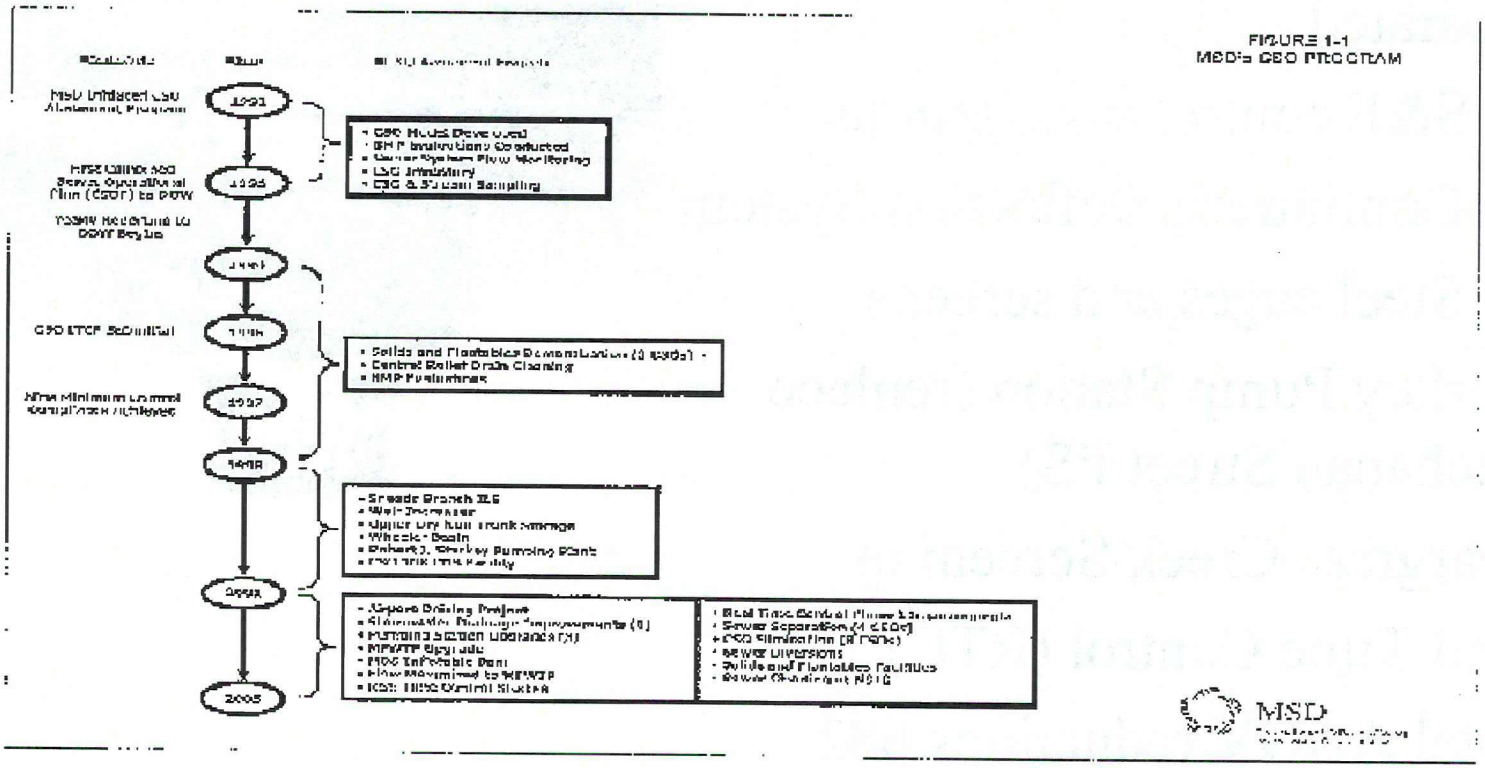
So How Have We Done?
SSO Abatement Program

- 30 Overflow locations eliminated
- 63% - Flow monitoring
- 33% - Sewer System Evaluation Study (SSES)
- 23% - Modeling
- 15% - Manholes rehabilitated
- 0.01% - Sewer main rehabilitated

So How Have We Done?
CSO Abatement Program

- 8 CSOs eliminated
- 66,000 lf combined sewers separated
- 14 S&F control installations
  - Continuous Deflection System
  - Steel cages and screens
- Starkey Pump Station (replace Buchanan Street PS)
- Beargrass Creek Screening
- Real Time Control (RTC)
- Total AAOV reductions 682 MG/YR

MSD's CSO Control Time Line



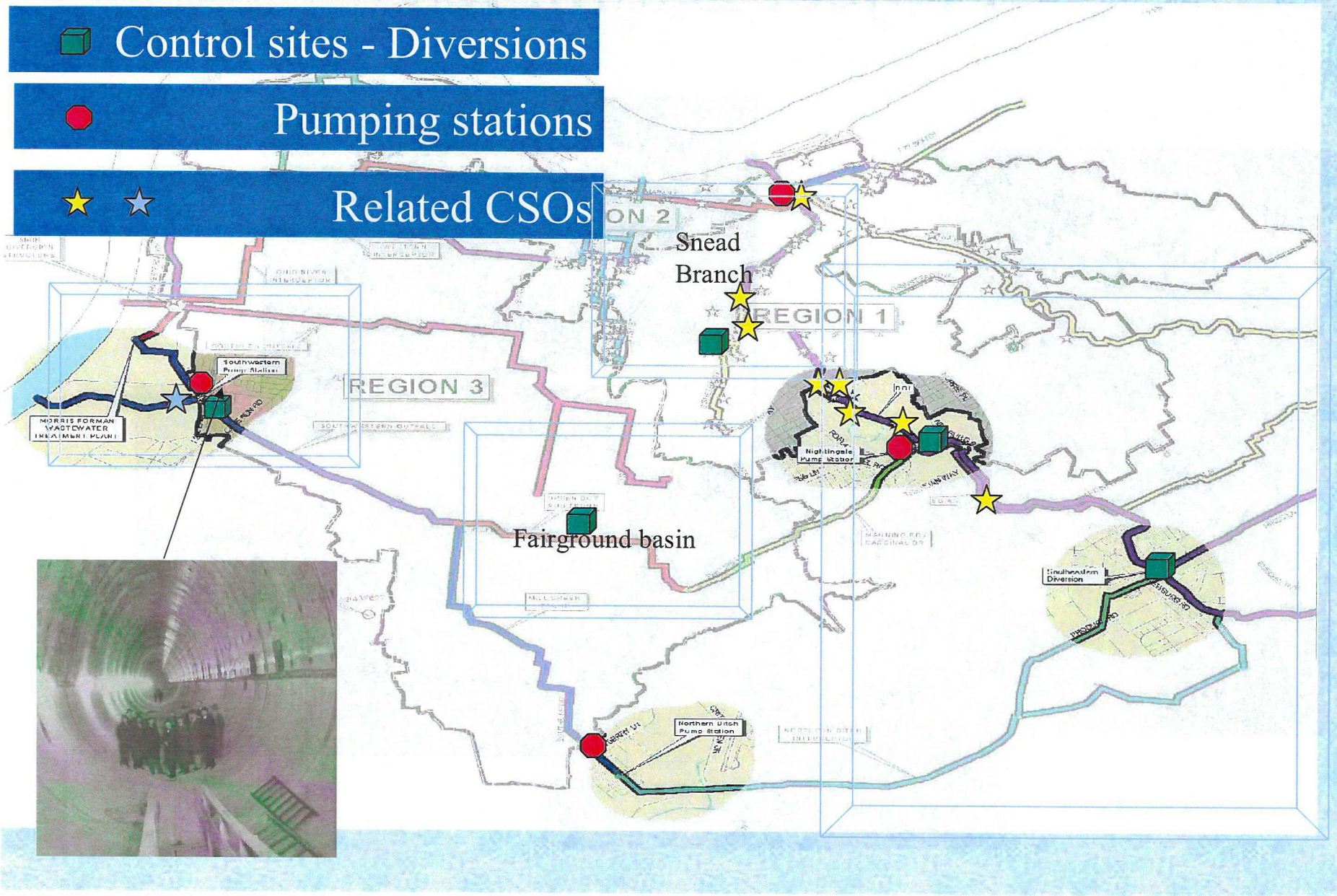
Project Examples

Initial RTC Implementation Project

Control sites - Diversions

Pumping stations

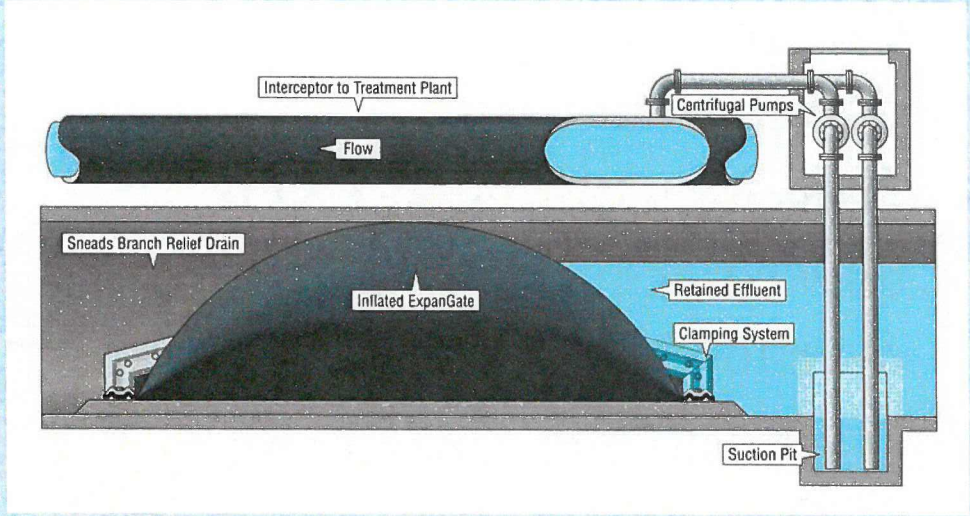
Related CSOs

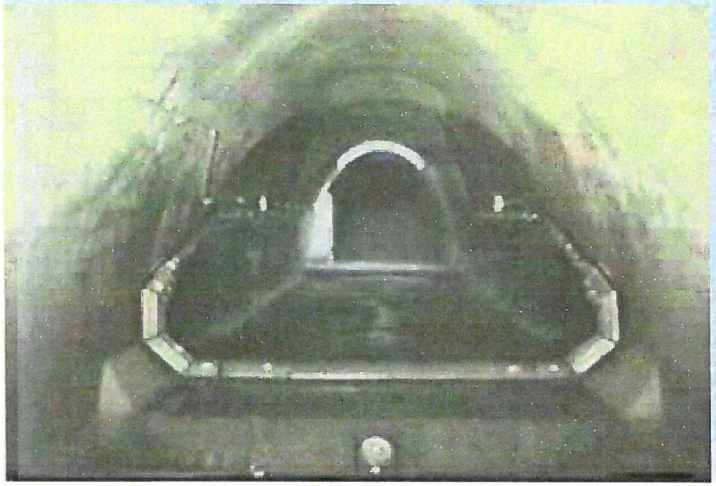


Sneads Branch Relief Drain

Sneads Branch Relief Drain

- 11’ semi-elliptical drain
- 11 tributary CSOs
- 2.5 MG Storage Capacity





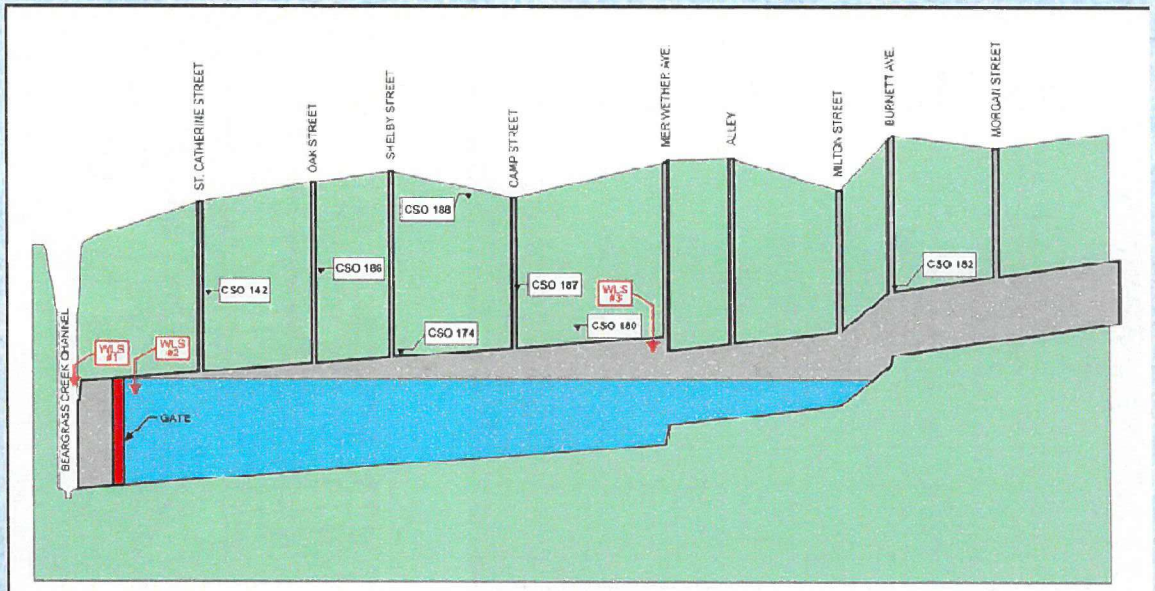
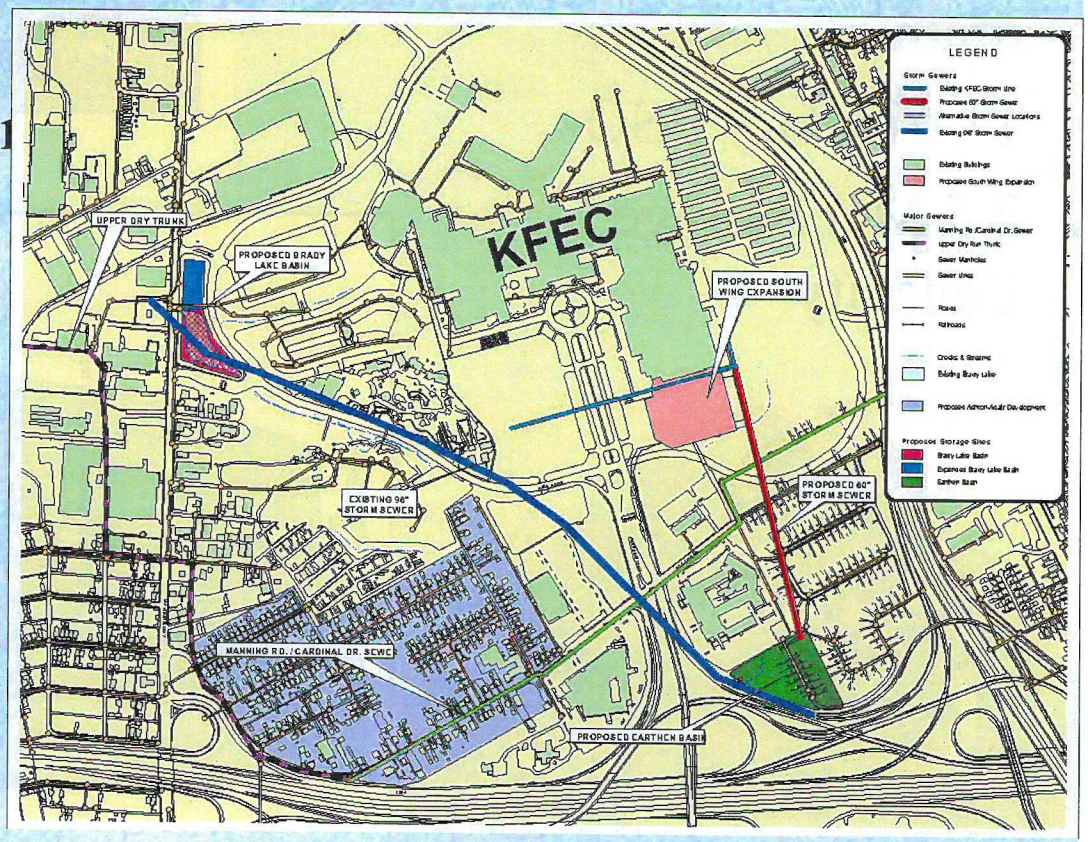


Figure 6

Stormwater Control Basins

- Control outlet gate at downstream basin
- Dewater basins after CSOs downstream stop overflowing
- Use of storage capacity for CSO control
- 33 MG storage capacity



RTC Initial Implementation

• Central RTC Station	$1.8M
• Southeast Diversion Structure	$1.0M
• Snead's Branch Inflatable Gate	$1.5M
• Upper Dry Run Trunk Storage Basins	$7.2M
• Southwestern Pump Station Upgrades	$0.3M
• Weather Prediction Tool	$0.4M
• Rain Gage System Upgrade	$0.2M
Total Expenditure	$12.4M

Expect 10 – 20% reduction in total AAOV due to initial RTC projects

Morris Forman WTP
Capital Improvement Program

$150 Million program to achieve:

- Expanded wet weather capacity, preliminary, primary and disinfection expanded from 225 mgd to 350 mgd peak flow
- Expanded dry weather capacity to serve current and future customers, from 105 mgd to 120 mgd
- Improved process reliability
- Reduced energy consumption
- Elimination of off-site odors

Southwestern Pump Station

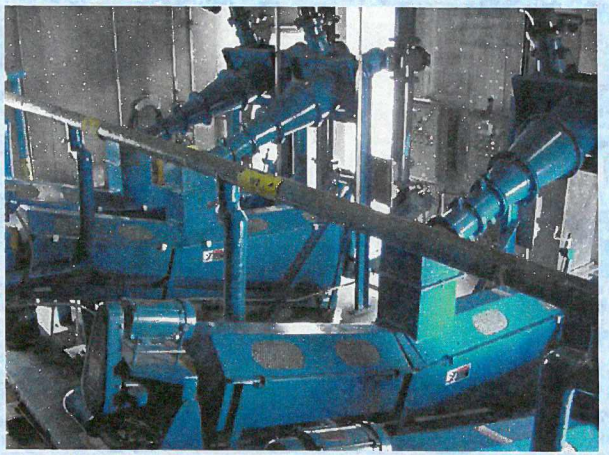
- Replaces 38-year old pumps, motors, drives, improve reliability, reduce flow pulses $2,800,000
- Repair Outfall settlement, $350,000
- HVAC, $751,000
- Gate Control, $265,000

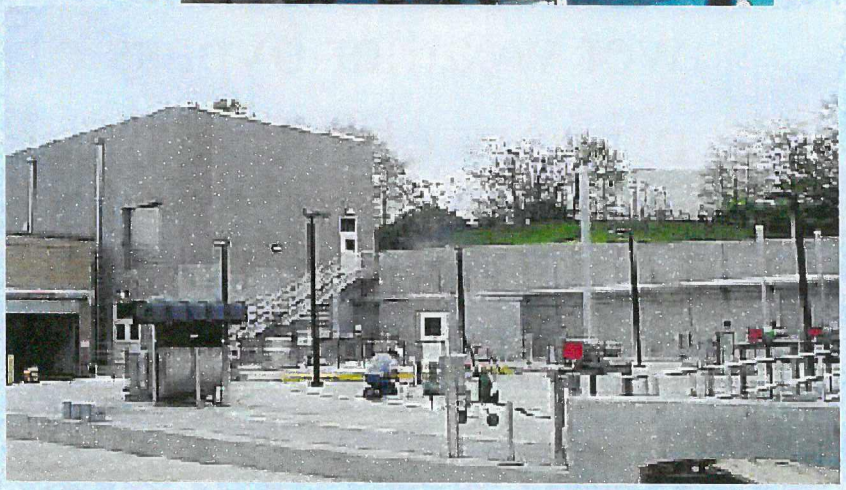
Main Diversion Structure

- Replaced gate actuators and stems for improved reliability and response time for flow control - $1,275,000
- Installed inflatable dam for in-line storage of wet weather flows - $565,000

Headworks/Screen and Grit

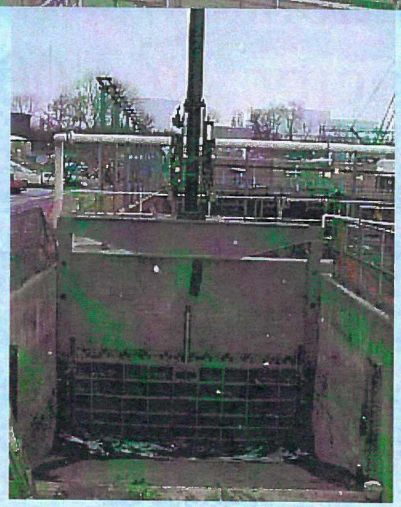
- New screen & grit removal system for dry weather flows - $9,313,000
- Rehab existing equipment for additional wet weather capacity $864,000
- Resultant wet weather capacity 350 mgd





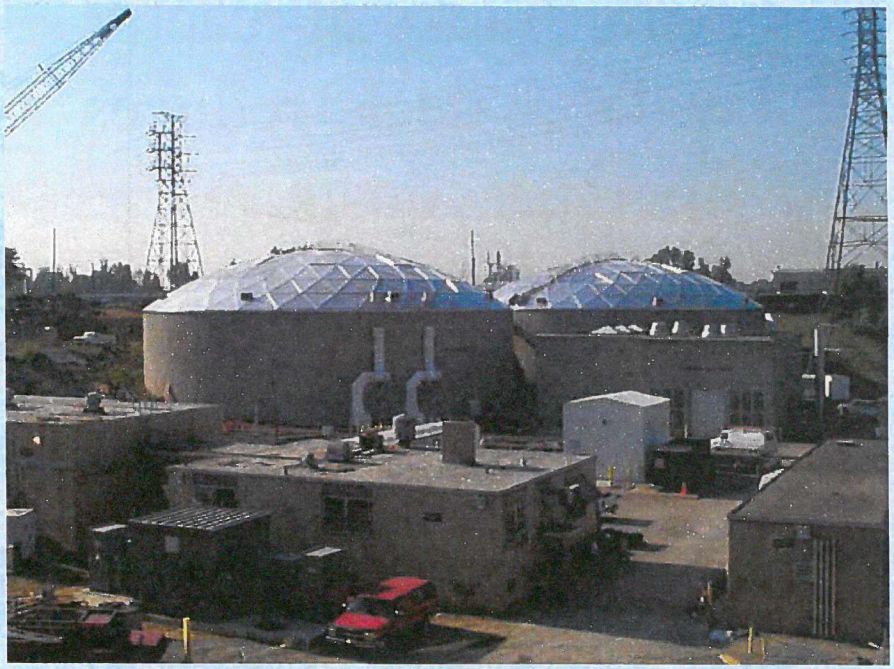
Primary Sedimentation/Wet Weather Bypass

- Chemical-enhancement for added removals - $334,000
- Increased capacity of wet weather bypass of primary effluent to disinfection - $1,514,000
- Replace traveling bridge rails - $412,000



Bioroughing Tower Reconstruction

- Restores Bioroughing Towers to service, increases BOD removal capacity, smooths peaking $4,436,000
- Covers and provides odor control with wet scrubbers $3,498,000



High-Purity Oxygen (HPO) Secondary Treatment Modifications

- Upgrades aerators, seals cracks in reactor walls & deck, reduces operating costs, improves performance $9,045,000
- Clarifier Modifications rebuilds mechanisms in all 20 clarifiers, $2,883,000

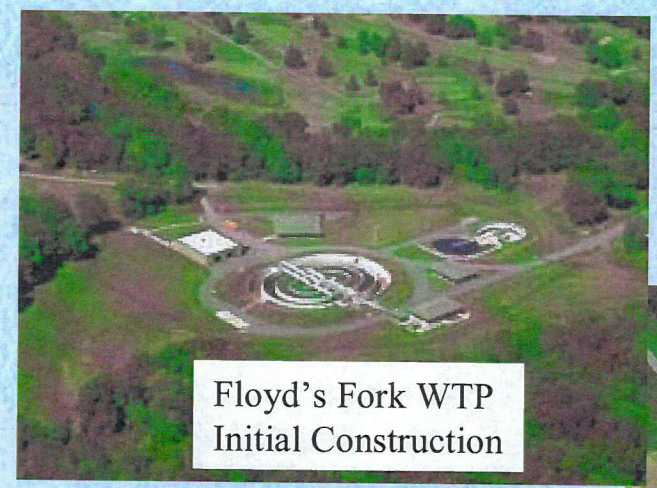
Alternative Solids

- Replaces failing system with new digesters, centrifuges, dryers, and biosolids storage silos, improve reliability, reduce recycle load, reduce odors, $82 M

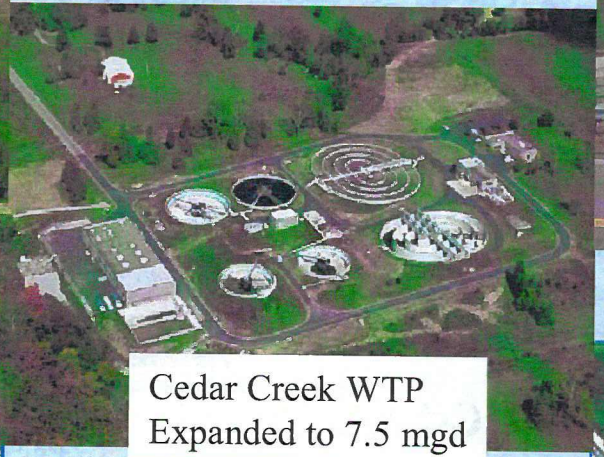
Louisville Green

All Organic Fertilizer

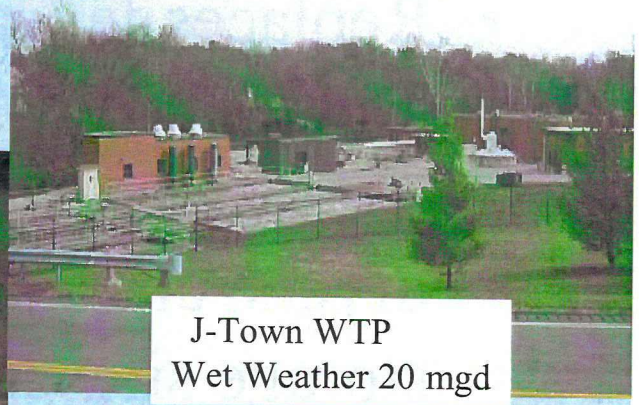
Regional Plants Were all Expanded, Modified, or Constructed



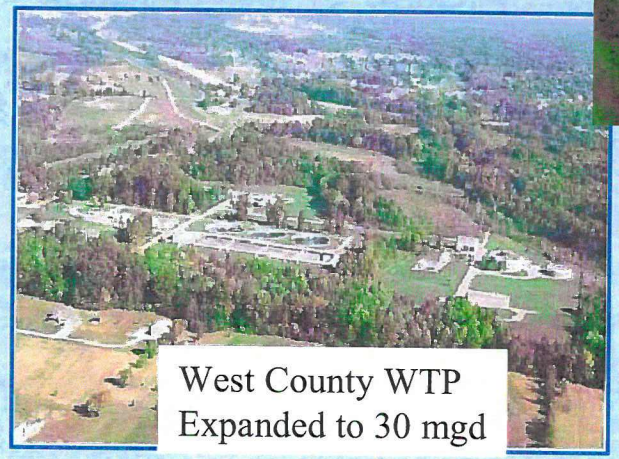
Floyd's Fork WTP
Initial Construction



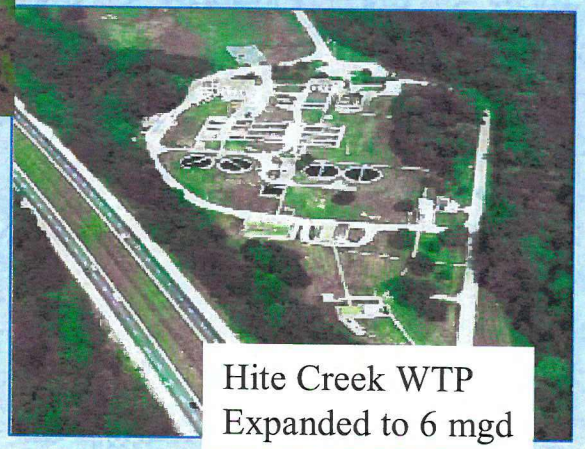
Cedar Creek WTP
Expanded to 7.5 mgd



J-Town WTP
Wet Weather 20 mgd



West County WTP
Expanded to 30 mgd



Hite Creek WTP
Expanded to 6 mgd

Pond Creek/Mill Creek Area Team

Mount Holly Drainage Improvement

Major Projects Completed

Top Dollar Projects Last 5 Year

17 of 18 MC Assessments	- $20,000,000
Fernhaven Rd. Assessment	- $1,200,000
Corps of Engineers	- $12,500,000
Chapel Hill Rd.	- $1,000,000
Bardstown Rd.	- $1,000,000
HMGP	- $6,400,000
DRI Projects (170)	- $20,750,000

Beargrass Creek/City Area Team
Major Accomplishments Last 5 Years

- Project DRI Phase I (37 Projects - $9.5M
- Corps Detention Basin Project Phase I, II– Bashford Manor and Hikes Lane, Old Shepherdsville Road, Richland Avenue Basins and Willowbrook I-Wall
- Lynnview/Charlotte Ann DIP
- Penway/Linwood Assessment Project
- Harold Avenue Assessment Project
- 12 Emergency Sewer Repairs

Beargrass Creek at Spring Street

Floyds Fork / North County Area Team

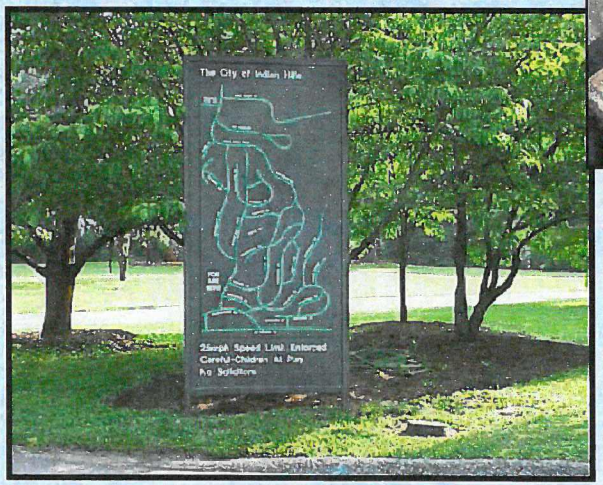
Major Accomplishments Last 5 Years

Long Run Pump Station

5 WTP Eliminations

Ohio River Force Main Valve Impvts

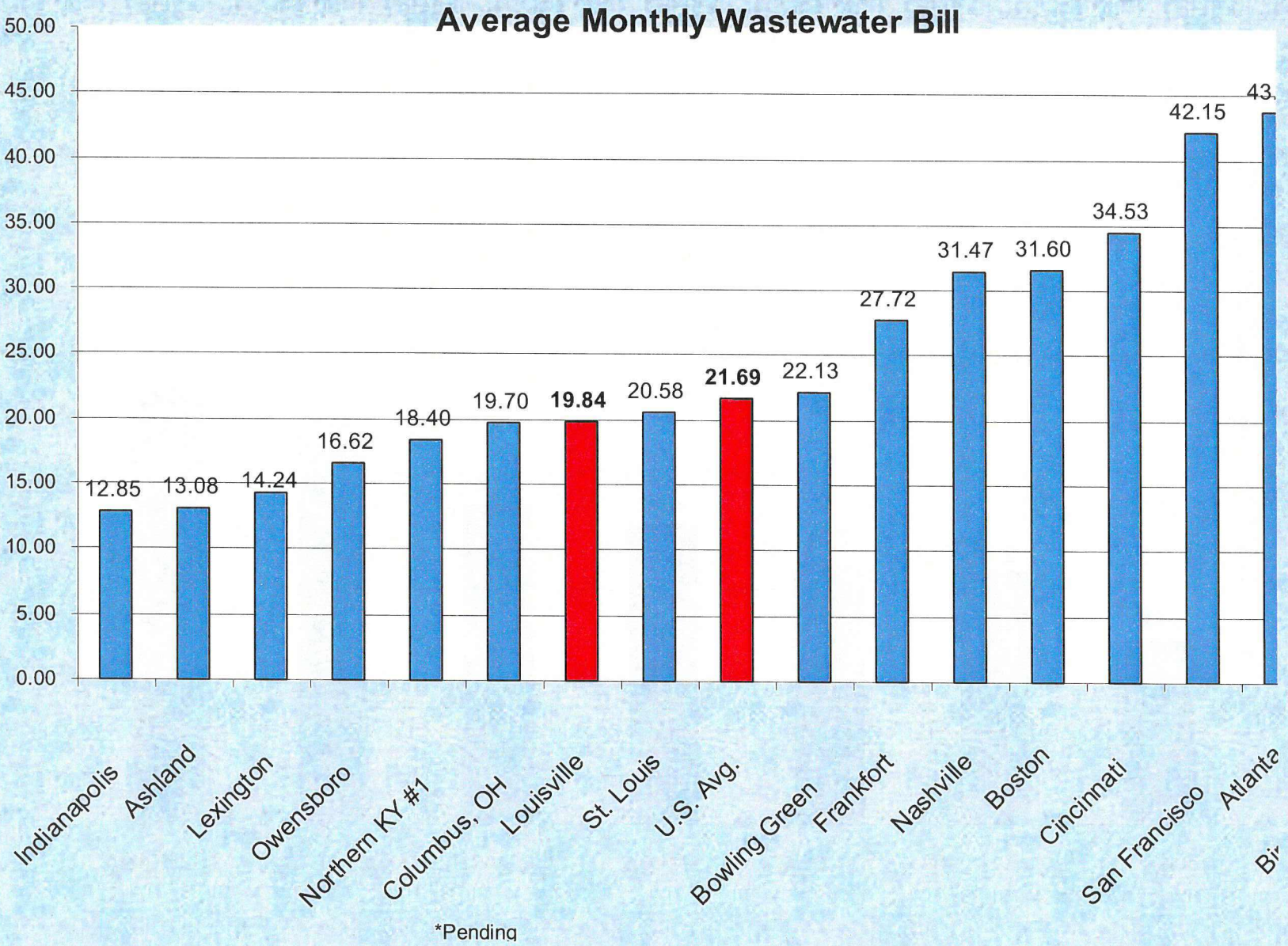
Indian Hills Collector Sewers

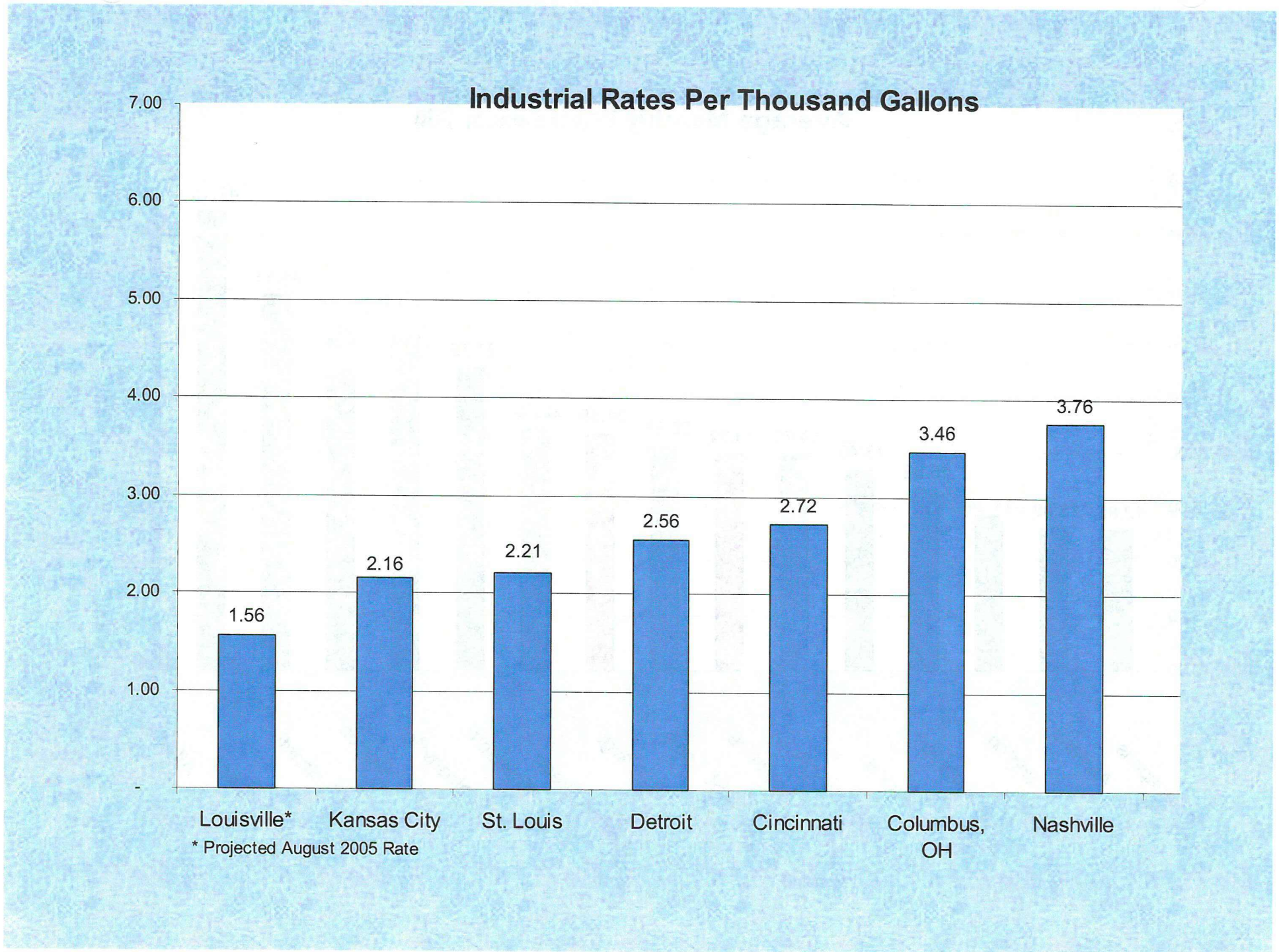


Greenmeadow Circle

After all this capital activity, how do our rates compare nationally?

- Average national monthly residential wastewater bill is $21.69 (source: 2004 American Metropolitan Sewer Association Survey).
- MSD rates are currently in the lower forty percentile in the nation.


Average Monthly Wastewater Bill
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
12.85
13.08
14.24
16.62
18.40
19.70
19.84
20.58
21.69
22.13
27.72
31.47
31.60
34.53
42.15
43.
Indianapolis
Ashland
Lexington
Owensboro
Northern KY #1
Columbus, OH
Louisville
St. Louis
U.S. Avg.
Bowling Green
Frankfort
Nashville
Boston
Cincinnati
San Francisco
Atlanta
Bi
*Pending


Industrial Rates Per Thousand Gallons
7.00
6.00
5.00
4.00
3.00
2.00
1.00
-
1.56
2.16
2.21
2.56
2.72
3.46
3.76
Louisville*
Kansas City
St. Louis
Detroit
Cincinnati
Columbus, OH
Nashville
* Projected August 2005 Rate

SUMMARY

Questions