

Sanitation District No. 1 of Northern Kentucky

Watershed Consent Decree



**Amanda Waters, Legal Counsel
November 7, 2007**

“The Southern Side of Cincinnati”



Sanitation District No. 1 History

1946

SD1 Established

1995

Sewer Consolidation

2003

Storm Water Management

2004

Public Service Park Opened

2007

Consent Decree Signed

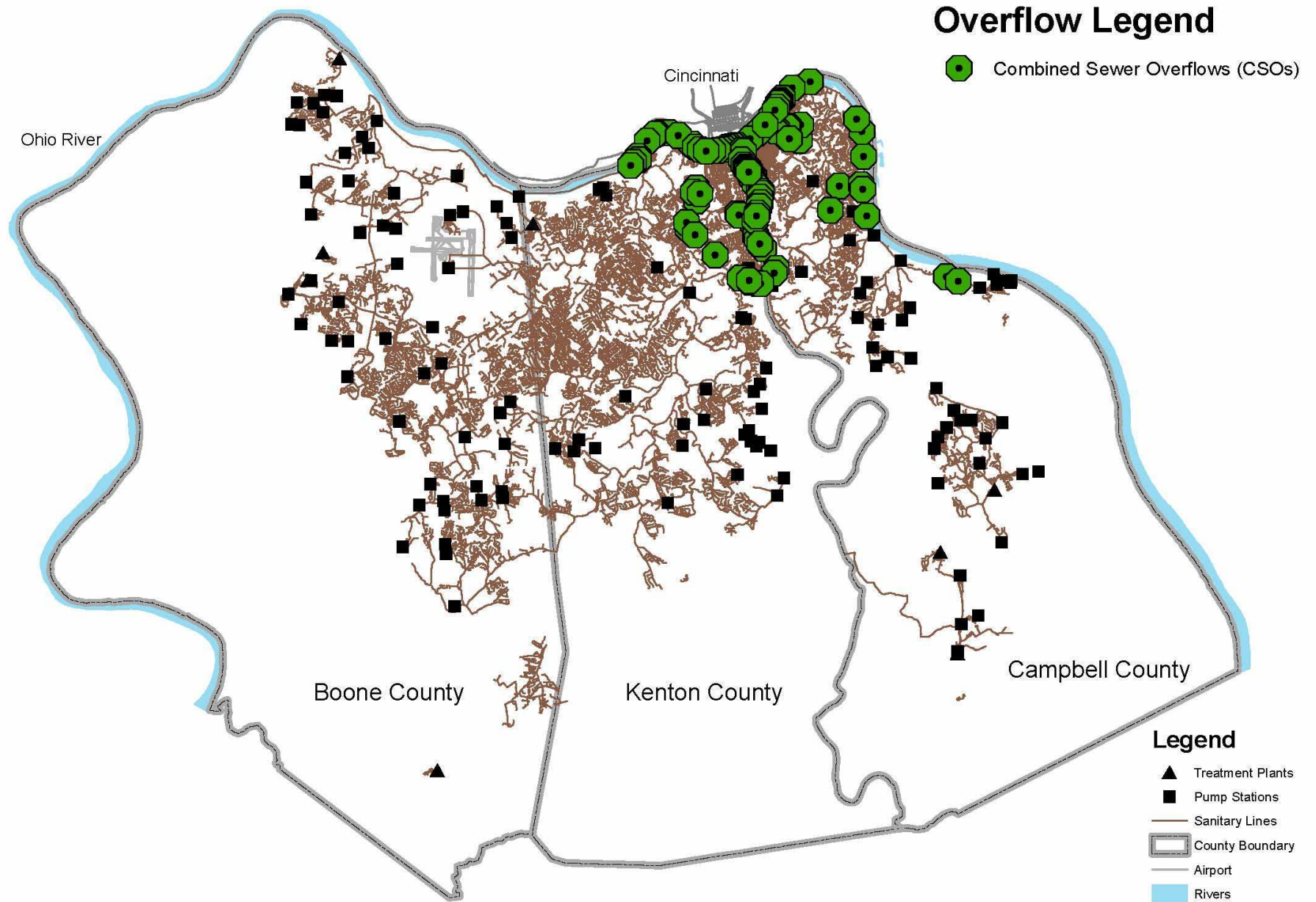
2007

Eastern Regional Water Reclamation Facility Opens



Construction of the Dry Creek Wastewater Treatment Plant

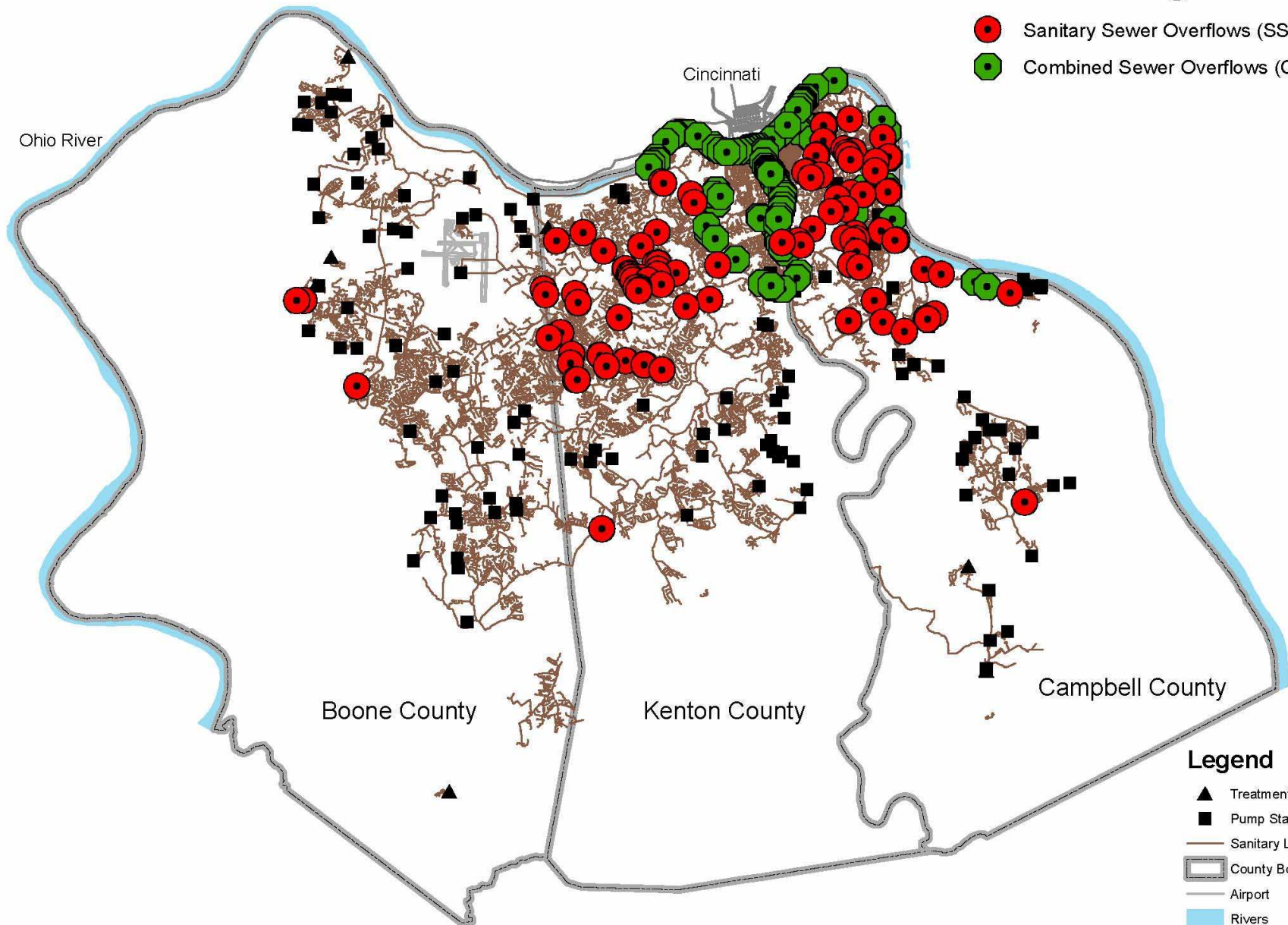
Sanitation District No. 1 Combined Sewer Overflow (CSOs)



Sanitation District No. 1 Sanitary Sewer Overflow (SSOs)

Overflow Legend

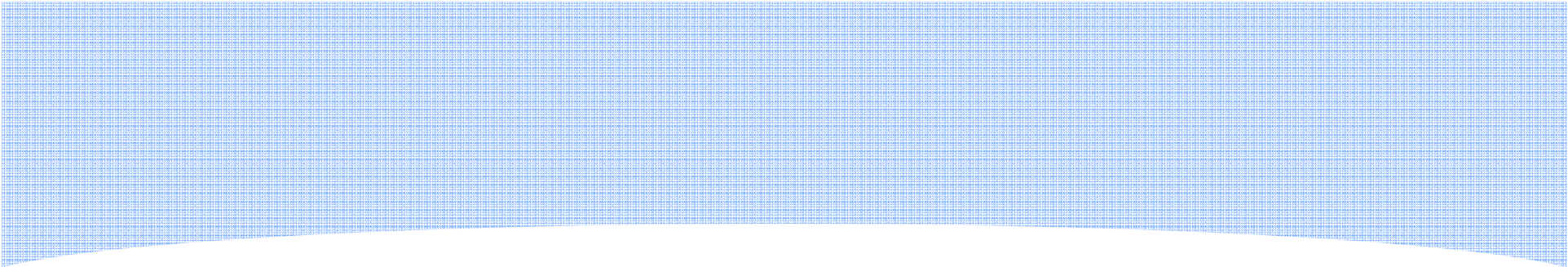
- Sanitary Sewer Overflows (SSOs)
- Combined Sewer Overflows (CSOs)



Other Sources of Potential Water Quality Problems

- Storm water runoff from residential commercial, industrial and agricultural areas
- Industrial or other discharges permitted under the Kentucky Pollutant Discharge Elimination System regulations
- Failing septic systems
- Deteriorating condition of system (even where no overflows have yet developed)





What are other
communities facing?



Cincinnati

- Consent Decree
 - Initial decree entered in 2002
 - Final decree entered in 2004
- \$1.5 billion over 19 years
- Addresses CSOs, SSOs and basement backups
- 9% rate increase every year



Atlanta

- Consent Decree entered in 1998 to address CSOs by 2007
- Decree amended in 1999 to address SSOs by 2014
- \$2 billion in improvements



Louisville Jefferson County

- Consent Decree entered in 2005
- Address CSOs and SSOs
 - Elimination of 80% of SSOs by 2013
- \$800 million over 18 years

Consent Decrees in Kentucky

- Consent Decrees filed on Aug. 6, 2007
- Address 94 CSOs and 77 SSOs
- 15 Communities
 - Ashland
 - Catlettsburg
 - Frankfort
 - Harlan
 - Henderson
 - Loyall
 - Maysville
 - Morganfield
 - Ownesboro
 - Paducah
 - Pikeville
 - Pineville
 - Prestonsburg
 - Vanceburg
 - Worthington



Sanitation District No. 1 Consent Decree Overview

Sanitation District No. 1 Consent Decree

- Negotiated for over one year with KY EPPC and ultimately EPA
- Tendered to the Court on October 7, 2005
- Entered on April 18, 2007
 - Establishes a 20-year plan to address CSOs consistent with U.S. EPA's 1994 CSO Control Policy
 - Requires the elimination of SSOs within 20 years
 - Requires various early-action projects relating to CSOs and SSOs

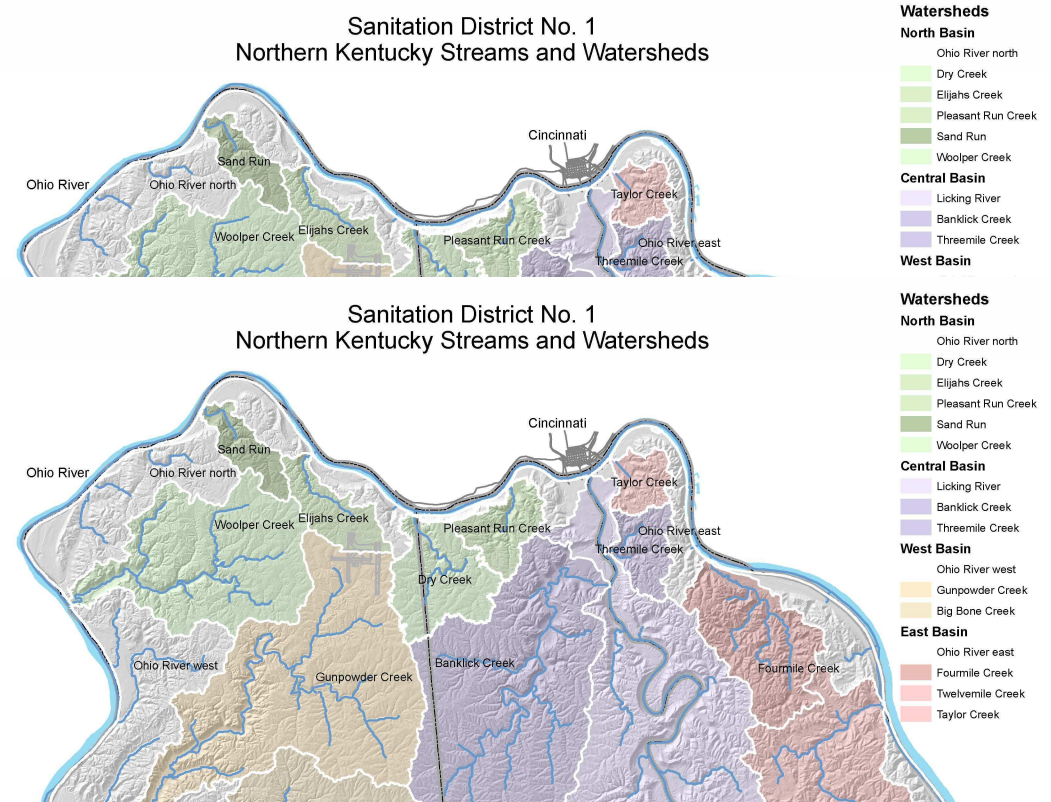




How is the District's Consent Decree Unique

Watershed Management Approach

- Implements a unique watershed approach for evaluating and prioritizing projects for improving water quality, including those projects to address CSOs and SSOs



Why a Watershed Management Approach?

- Eliminates the “silo” effect of addressing individual source types
 - Puts CSOs and SSOs into context with other pollutant sources
- Engages and educates stakeholders
- Establishes workable plans that can be implemented to improve water quality
- Provides mechanism for assessing watershed problems not easily addressed within the CWA framework

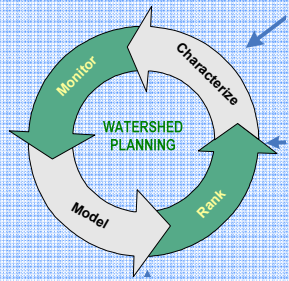
Watershed Management Approach

- Watershed plans developed on holistic basis
 - Determine a combination of cost-effective watershed and infrastructure controls to improve water quality, eliminate SSOs, and comply with the CSO Policy
- Watershed plans updated every 5 years
- EPA/State approval on all plans and submittals for watershed projects
- Accommodates cost-effective planning through prioritization of projects

Consent Decree Requirements for the Watershed Framework

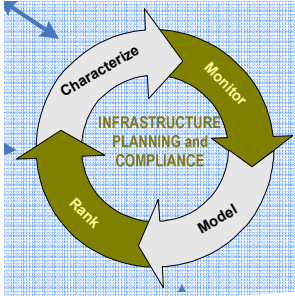
39(a)(2) “The Framework shall describe the manner in which the District plans to prioritize, pursuant to the SSOP component of the Watershed Plans, the elimination of SSOs and Unpermitted Discharges...”

39(a)(3) “...the Framework shall describe the manner in which the District plans to identify and incorporate such other permitted point sources and nonpoint sources and, where appropriate, how the District intends to insure that necessary controls are implemented at these sources.”



Overview of Watershed Team Work Plan

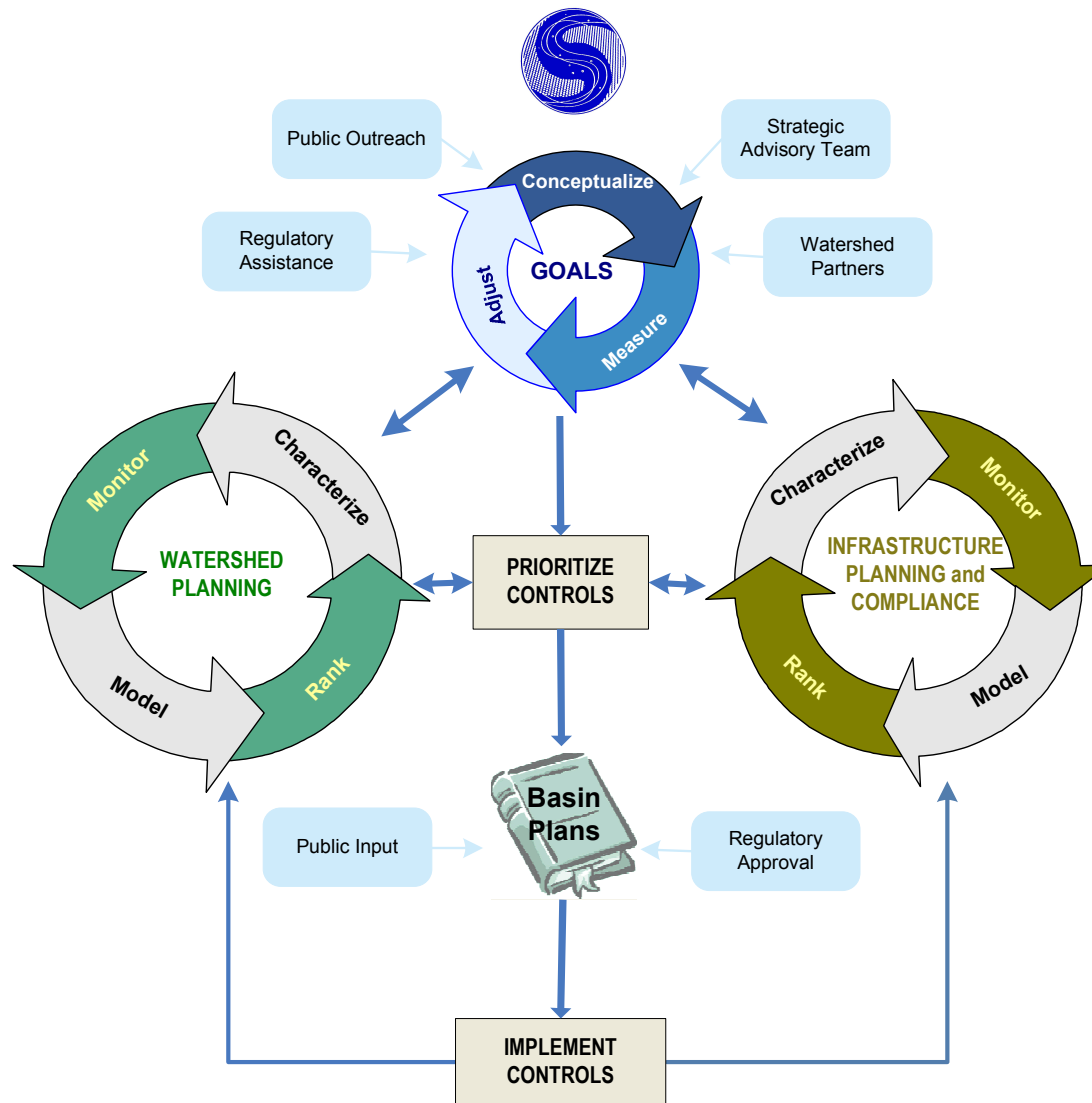
- Collect data to characterize watersheds, pollutant sources, instream water quality, biota, and designated and current uses
 - Provide one location for all historic and future data
 - Develop watershed monitoring program to support development of Watershed Plans
- Develop comprehensive reports on each watershed
 - Facilitate discussions about watershed goals and proposed controls
 - Serve as foundation for Watershed Plans and District's Watershed Management Programs
- Develop tools to understand linkages between pollutant sources and impacts on instream water quality
 - Tool for assessing impacts in all watersheds (WAT!) and supporting development of detailed watershed models
 - Detailed watershed and water quality models for evaluating impacts of control alternatives in priority watersheds



Overview of Infrastructure Team Work Plan

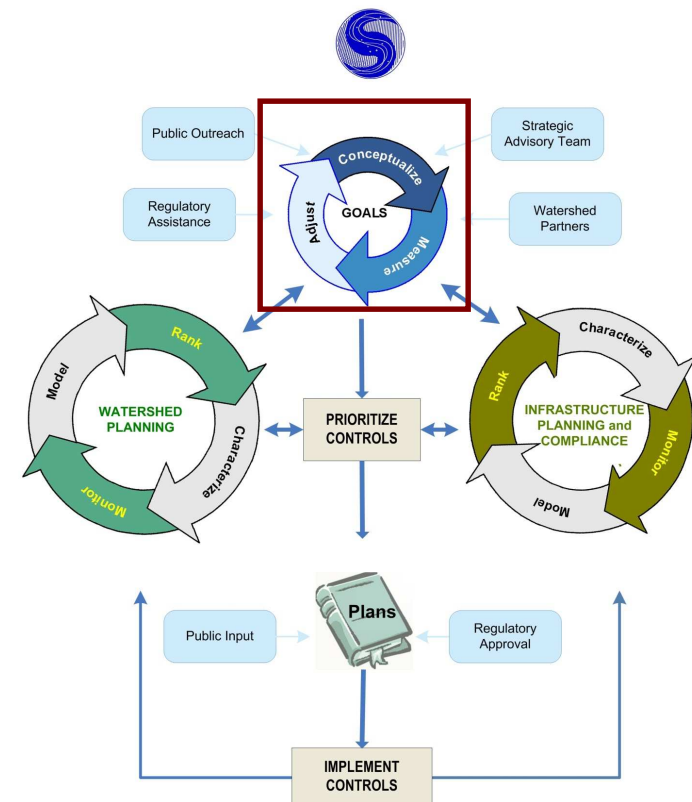
- Step 1: Identify priority overflows for characterization purposes
- Step 2: Characterize priority overflows and the collection system through flow monitoring, outfall sampling, and field surveys
- Step 3: Refine and calibrate collection system models based on field characterization
 - Model both current conditions and future growth

Watershed Management Approach



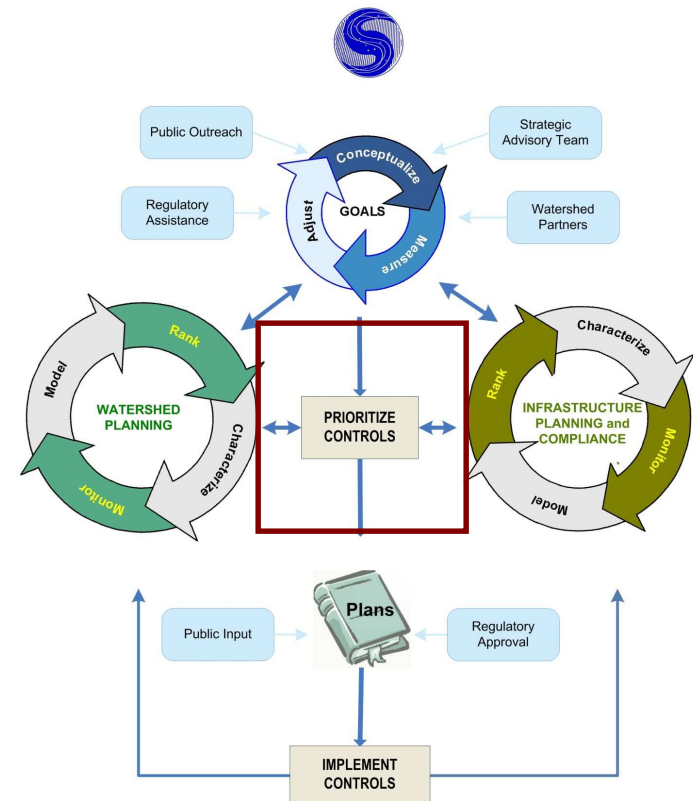
Goal Setting

- Overarching goals
 - Improve water quality
 - Eliminate SSOs & comply with CSO Policy no later than 12/31/2025
- Proposed goals
 - Promote green infrastructure when appropriate
- Watershed-specific goals
- Establish measurements for goals
- Goals may be adjusted based on new information and public input



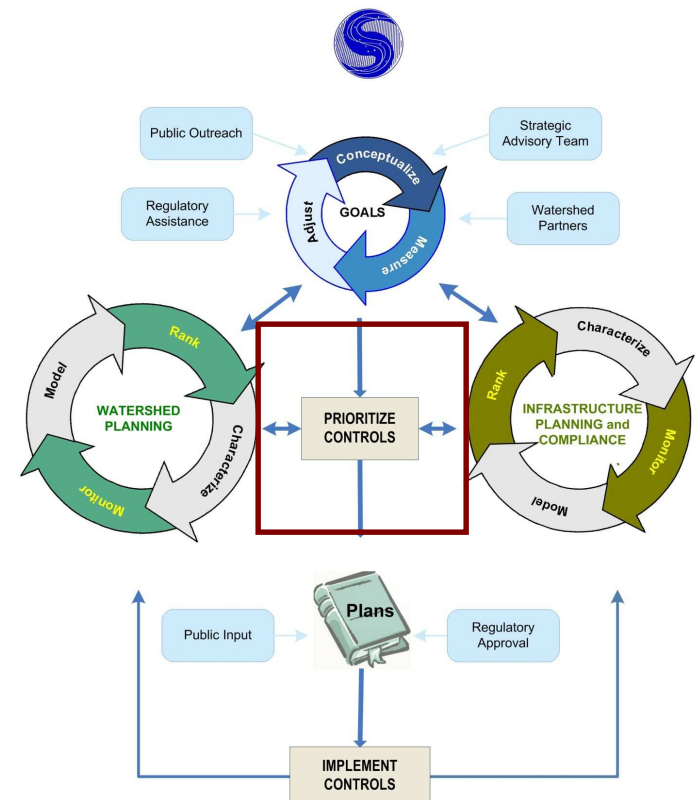
Prioritizing Watersheds

- Characterization process will identify priority watersheds based on factors such as:
 - Priority overflows
 - Bacteria impact
 - Sensitive areas
 - Public interest
 - District priorities
 - Integration with other regional projects



Prioritizing Controls

Four-Step Process



Prioritizing Controls

Step 1- Screen Potential Technologies



Gray infrastructure



Green infrastructure



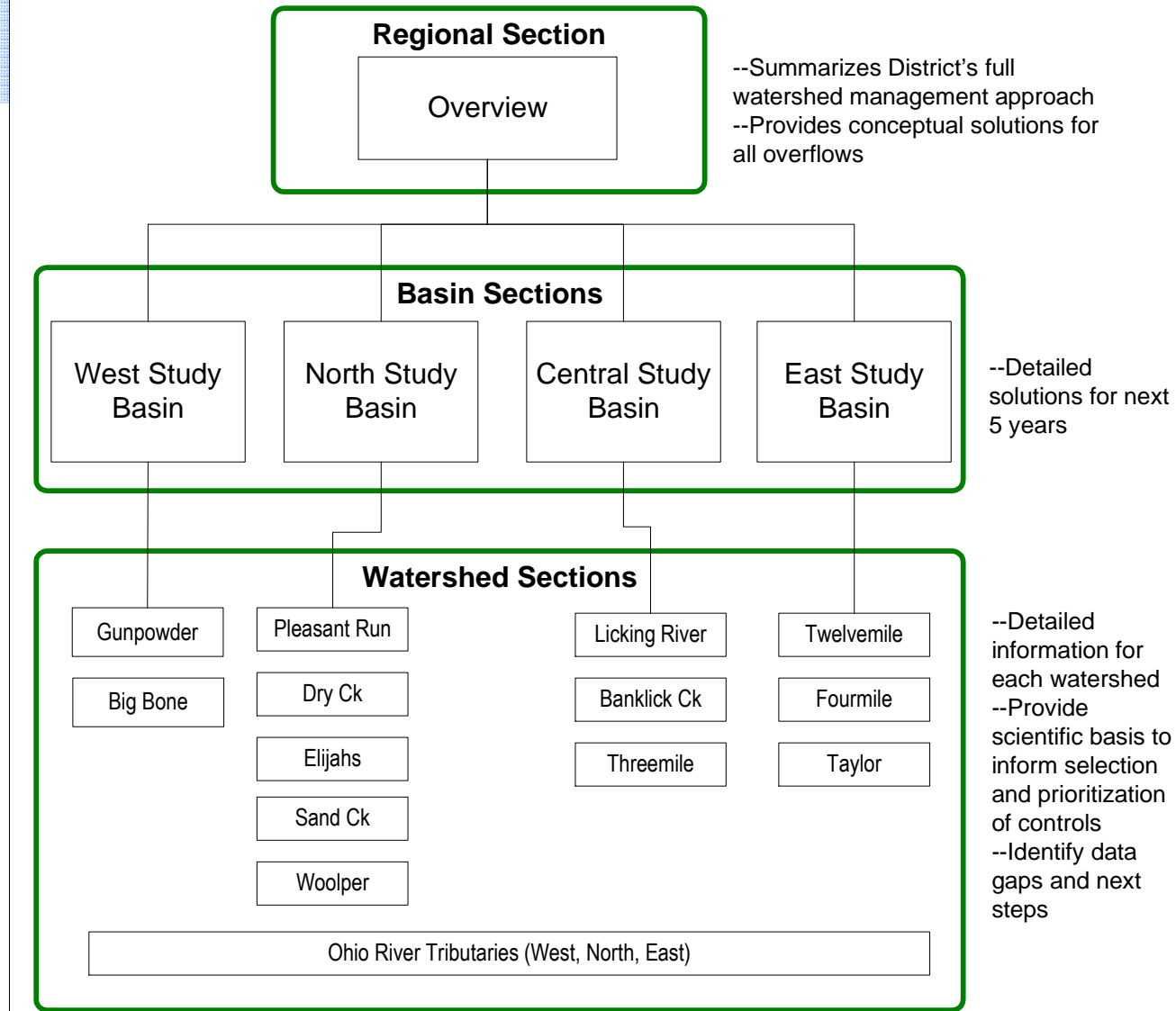
Watershed controls

Prioritizing Controls- Steps 2 to 4

- Evaluate preliminary solutions for all overflows (“conceptual solutions”)
- 3) Evaluate specific solutions for priority watersheds
 - 4) Conduct a cost-benefit evaluation across the entire region and propose detailed solutions for the first five years

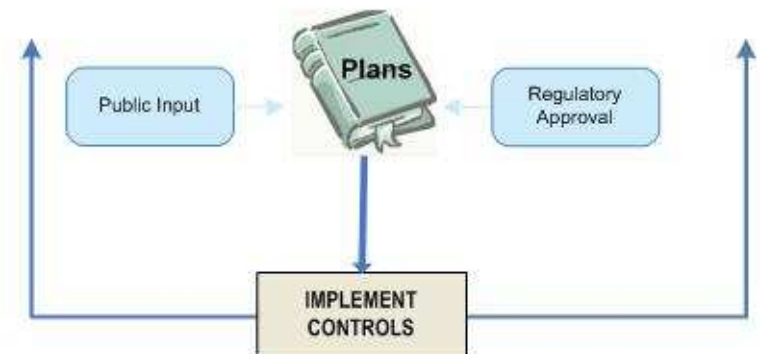
Watershed Plans – Reporting Structure

Watershed Plans



Engaging Others

- **Stakeholders (public, watershed partners)**
 - Watershed Summit, Watershed Community Council, direct communication, website, billing inserts...
- **Regulatory agencies**
 - Direct communication on all items associated with Consent Decree submittals
- **Strategic Advisory Team**
 - Provides input on goal setting process and review of watershed management approach and Plans



Implementation

- Watershed Plans will:
 - Identify infrastructure and watershed controls
 - Provide a schedule for these controls
 - Describe capital improvement projects
 - Identify opportunities for pilot projects
 - Benefits will inform next set of Watershed Plans



The District's Challenges

- Consent Decree Implementation
 - Merging elements of traditional CSO/SSO control with concepts of adaptive watershed management
 - Litigation
- Wet Weather
 - Potential unattainable standards
 - Significant NPS background loads
- Storm Water Asset Transfer
 - Operation and maintenance responsibility for public storm sewer system



The District's Challenges Cont.

- Lack of Federal and State Funding
- Public Education and Acceptance





Financial Outlook

Capital Improvement Program

FY 2007 – 2011

• Existing System Rehabilitation	\$132,377,000
• New Infrastructure	\$216,402,000
• Storm Water/Watershed Management	<u>\$ 56,443,000</u>
TOTAL	\$405,222,000

20-Year Projected Capital Budget

Estimated Total =

\$1.1 Billion

Conclusion

Amanda Waters
Legal Counsel
Sanitation District No. 1

859-547-1318

awaters@sd1.org

