

Integrated Planning/Permitting: Past, Present and Future

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Just for Fun

- ▶ **“lex non intendit aliquid impossibile”**
- ▶ **“the law does not compel the doing of impossible acts” (AMSA 2004; NACWA)**

- ▶ **“Sanitary sewer overflows must be eliminated” (EPA)**

Presentation Outline

- ▶ **History of watershed approaches, wet weather policy and integrated planning**
- ▶ **Examples – Cities/POTWs that have been working on integrating for a while**
- ▶ **Discussion of EPA’s Integrated Planning Framework – EPA’s perspective**
- ▶ **Discussion of outstanding issues related to integrated planning**

Quick History

Past History

- ▶ 1970s – 208 Planning

Recent History

- ▶ 1999–2000 – Almost SSO rule
- ▶ 2002 – EPA Watershed–based Policy
- ▶ 2002 – TMDL/Stormwater Memo
- ▶ 2003 – 2007 Watershed–based Permitting Guidance
- ▶ 2003 – Proposed Blending Policy
- ▶ 2005 – Proposed Peak Flow Policy (Blending)
- ▶ 2007 – Compliance Schedule Policy Memo
- ▶ 2010 – New and Improved TMDL/Stormwater memo
- ▶ 2010–2011 – Listening Sessions
- ▶ 2012 – Integrated Planning Framework

Watershed Management Strategy

Review WQS

Watershed Mgmt. Plans

Point Sources

Nonpoint Sources

Integrated Planning

CSO

SSO

POTW

MS4

PEFTF

Characterization

Evaluate/prioritize controls

Integrated Plan

Watershed-based NPDES permit

Trading?

Voluntary controls

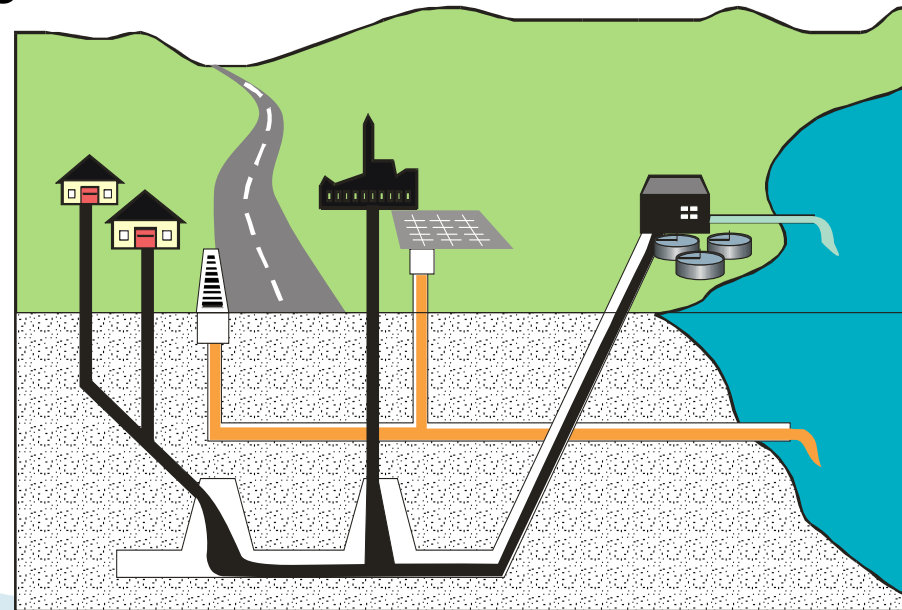
Monitor/Assess WQS Attainment
Achieve Watershed Goals

Nostalgia

- ▶ **Watershed-based permitting**
 - 2002 Policy directive from Assistant Administrator for Water to all regions and Headquarters Offices
 - 2003 Watershed-based Permitting Policy
 - 2003 Implementation Guidance
 - 2007 Technical Guidance

Permit Type: Consolidating Permits

- ▶ Bundle all requirements from a single entity for multiple discharges (e.g., multiple wastewater plants) into a single permit
- ▶ Municipal example:
 - Secondary treatment limits
 - TMDL WLA/WQBELs
 - CSOs
 - Stormwater
 - Biosolids
 - Pretreatment



Examples

- ▶ Richmond, VA
- ▶ Clean Water Services, OR
- ▶ San Antonio, TX
- ▶ Sanitation District #1, Kentucky

- ▶ Others not covered

City of Richmond, VA

The City of Richmond, Virginia and the Middle James River Watershed - Service Territory



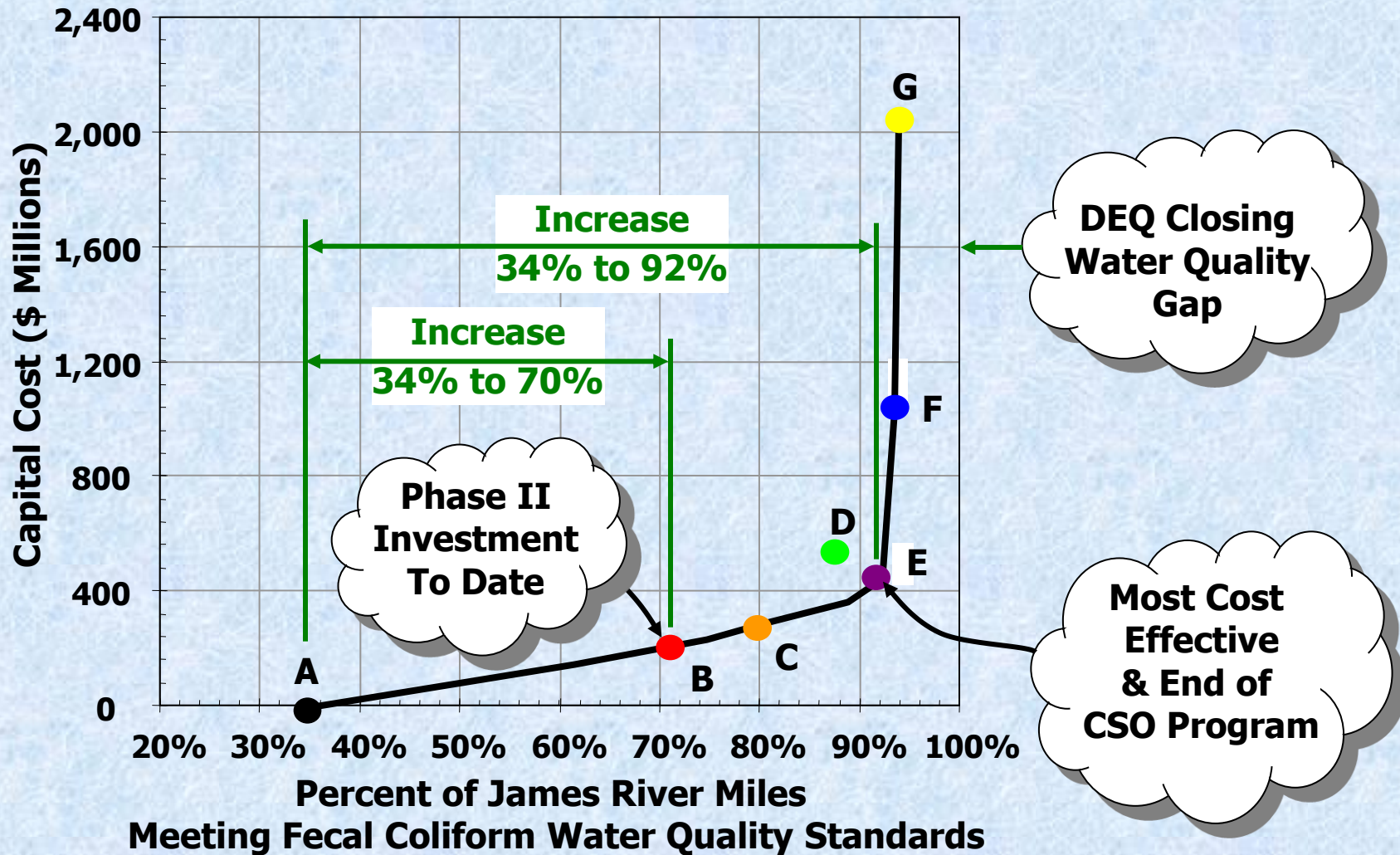
CITY OF RICHMOND

DEPARTMENT OF PUBLIC UTILITIES



CSO LTCP Selection Bases

Percent of James River Miles Meeting WQS



Clean Water Services, OR

Integrated Municipal Permit: Clean Water Services; Washington County, OR

Problem:

**Impaired watershed
CWS responsible for
several NPDES
requirements in Tualatin
River Watershed**

Why Does This Make Sense Here?

**Multiple point source
discharges under one
jurisdiction**

Watershed-Based Approach:

**Conducts long-term monitoring
and water quality modeling of
watershed**

**Permit that integrates all
NPDES requirements for the
watershed**

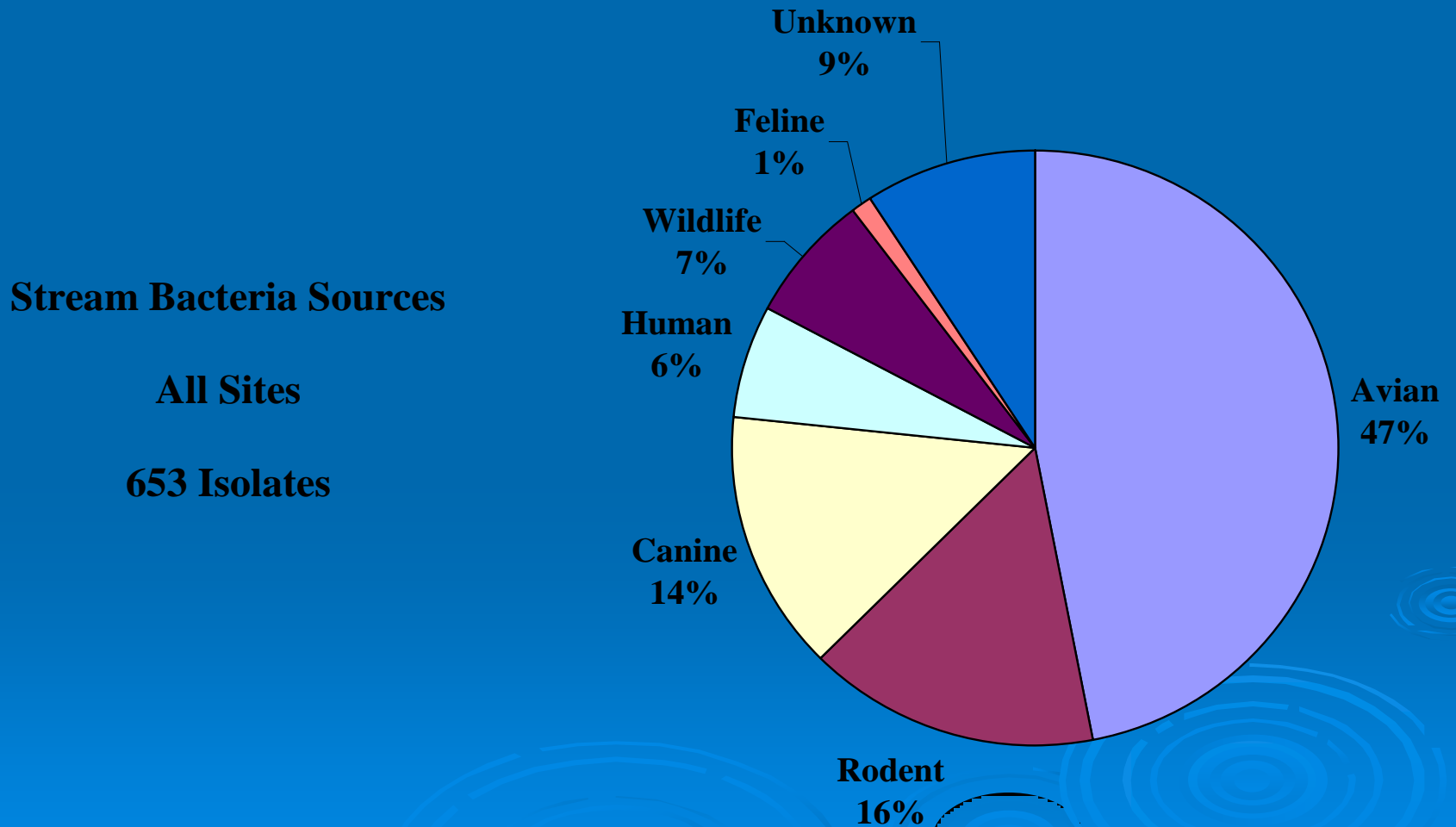
Expected Benefits:

**Streamlined NPDES
activities**

Cross-trained staff

**Better program
management**

DNA Tracking – Sources of Bacteria



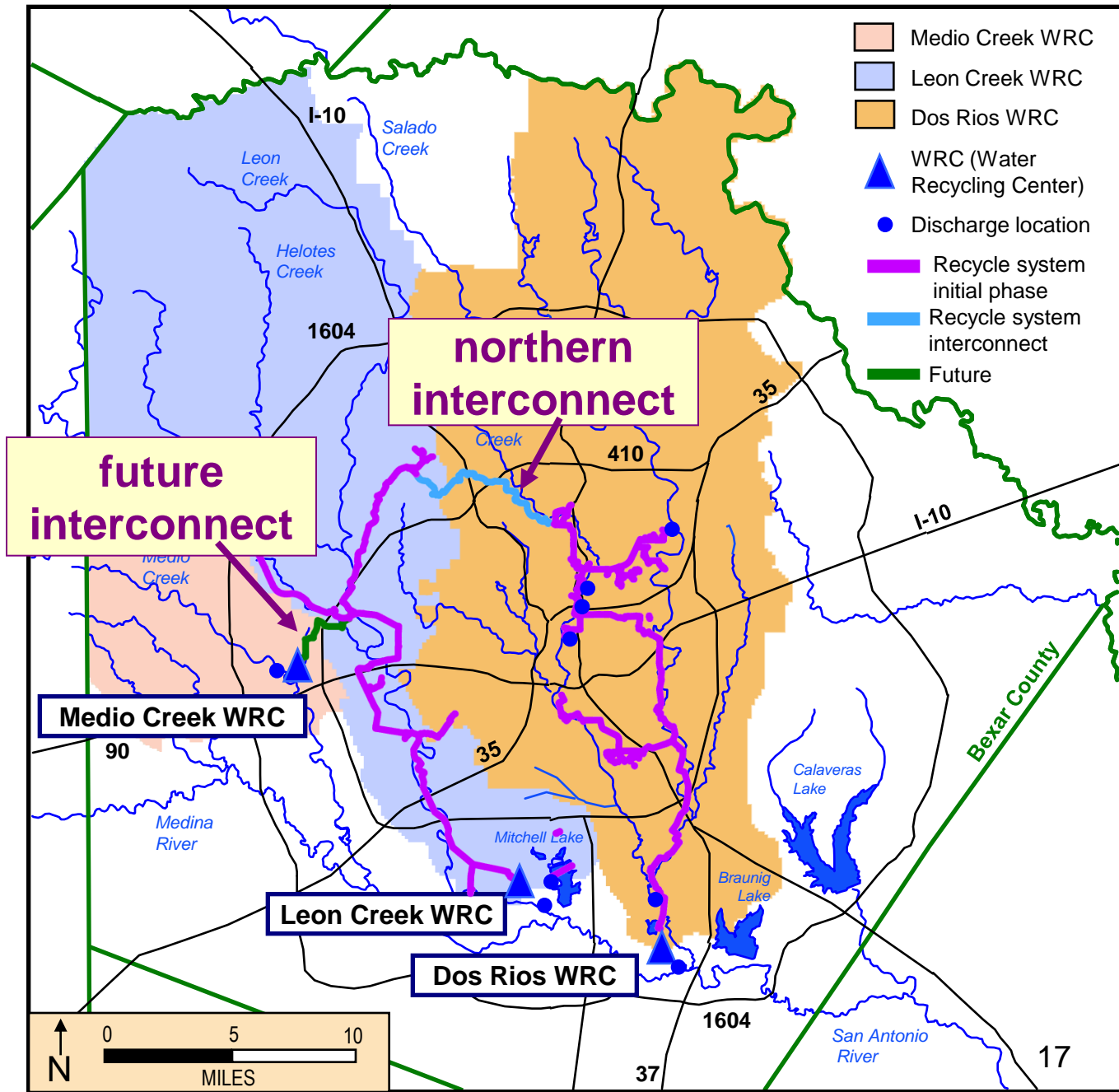
Watershed Perspective

- Tension between objectives
 - Enhancement of riparian corridors
 - Increase in wildlife populations
 - Reduction in bacteria levels



San Antonio, TX

SAWS Recycled Water System



What's needed for Watershed-Based Permitting to move forward

- D.C., Regions and State with same level of commitment
- EPA educates the State on watershed concept
- Modeling on a realistic basis, not unrealistic scenarios
- Shared risk
- Environmental enhancement vs. enforcement mentality
- Recognition that if watershed permit fails, regulators can always fall back on traditional permits

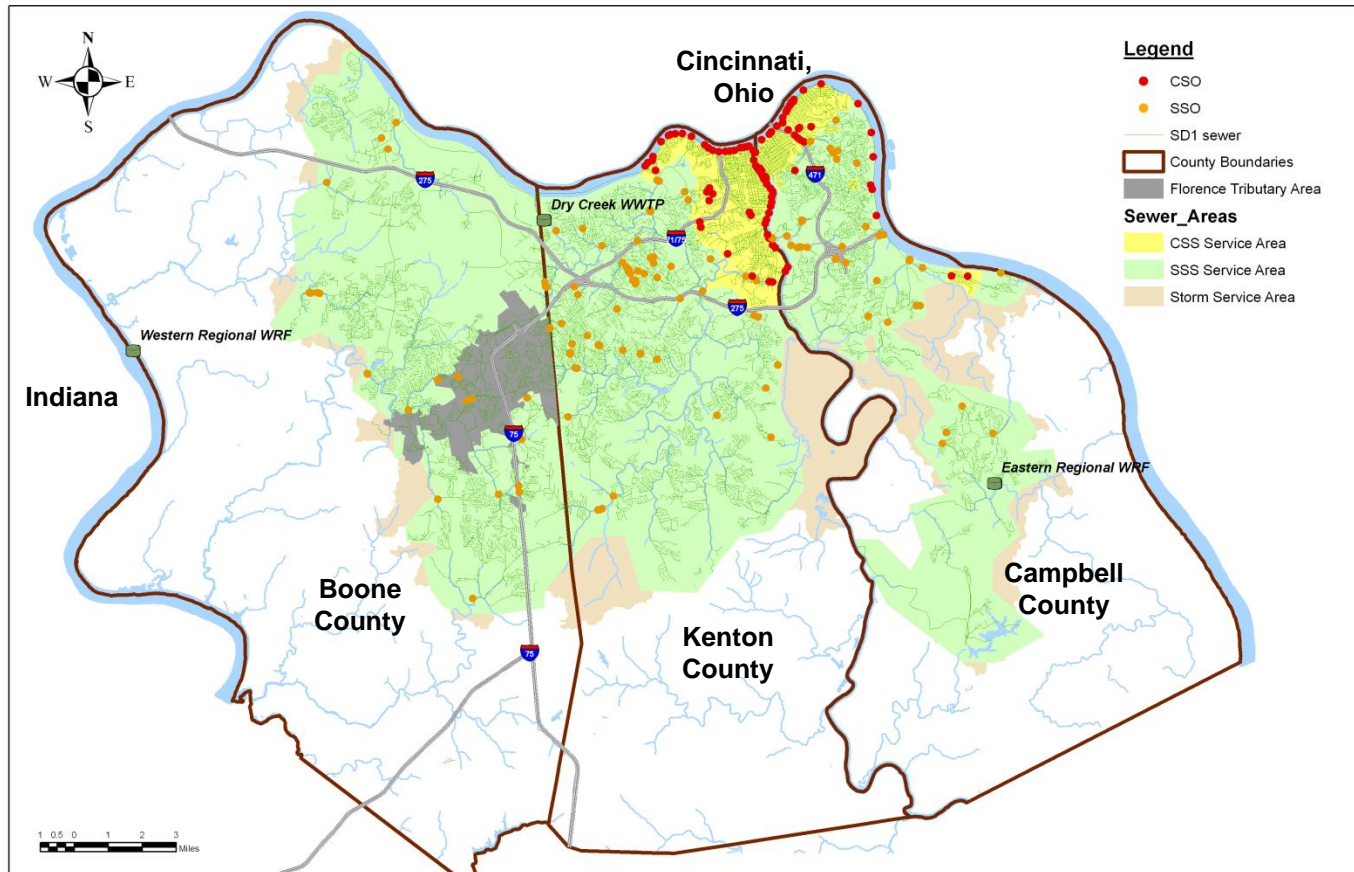
October 6, 2010

Watershed Based Permitting in San Antonio



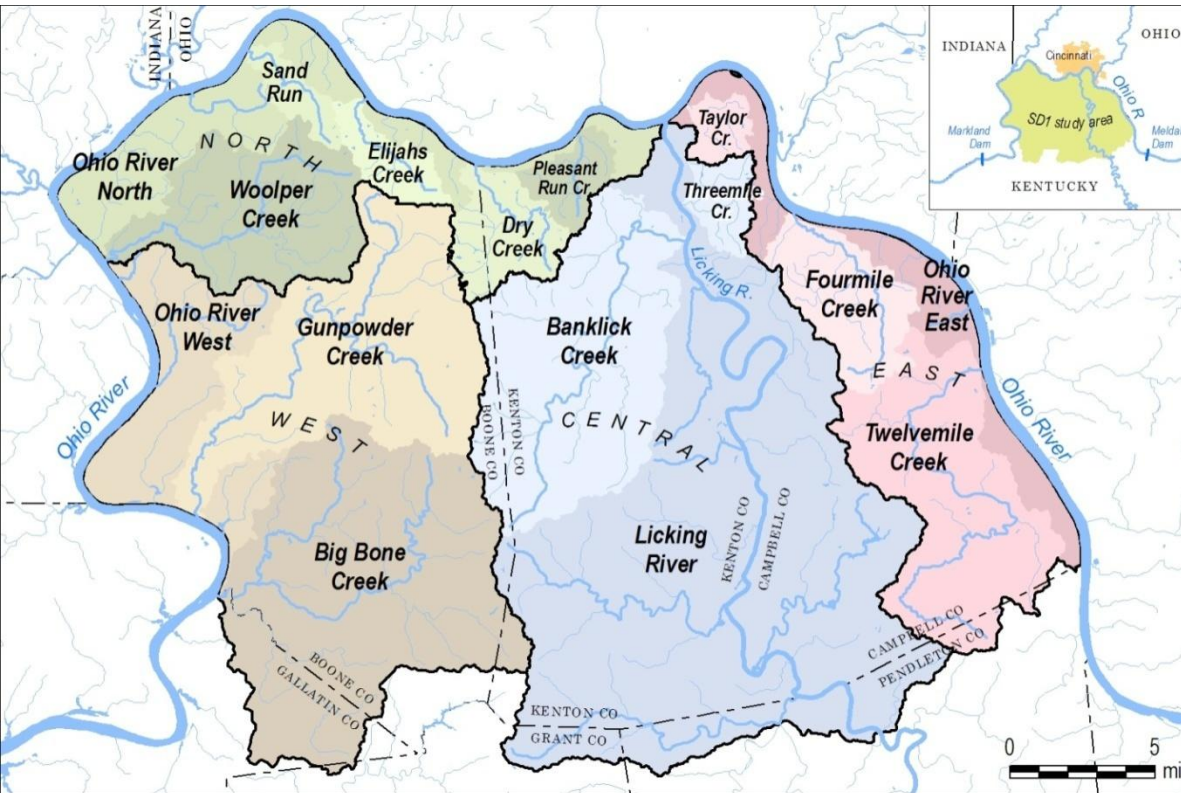
Sanitation District #1, Northern Kentucky

SD1 Service Area



- 229 square miles
- 1,700 miles of pipe
- 129 pump stations & 15 flood stations
- 2 regional water reclamation facilities
- 50.5 MGD treatment capacity

SD1 - A Different Approach



- SD1's Consent Decree implements a **unique watershed approach**
 - Puts CSOs and SSOs into context with other pollutant sources
 - 5 year planning horizon allows for affordable controls
 - Adaptive approach incorporates “lessons learned”
 - Will be updated every five years

SD1 - Key Conclusions

- Traditional approach is not affordable and will not significantly improve water quality
- The unique watershed-based approach that SD1 is taking will:
 - Avoid spending limited funds on higher levels of CSO and SSO control with no improvement in water quality
 - Allows time to investigate new technologies and adjust the approach to lessons learned
 - Provides a process to address highest regional priorities first
 - Opens the door to address more varied sources of pollution
 - Uses an integrated approach of watershed, green, and gray solutions to maximize water quality benefits that will address both dry and wet weather-related sources of pollution
 - Directs funds to projects that provide the greatest benefits
 - Can achieve the ultimate goals of the Consent Decree with respect to CSO and SSO discharges

EPA's Framework

EPA's Integrated Planning Framework History

- ▶ **Stoner/Giles Memo – October 27, 2011**
 - “Achieving Water Quality Through Integrated Municipal Stormwater and Wastewater Plans”
- ▶ **Stakeholder Meeting – December 13, 2011**
- ▶ **Draft Framework – January 13, 2012**
- ▶ **Stakeholder Workshops – January–February 2012**
- ▶ **“Final” Framework – June 5, 2012**

Stoner/Giles Memo to Regions

October 27, 2011

- ▶ Encourages Regions to work with States and communities on implementing comprehensive, integrated planning approaches
 - CWA and implementing regulations and guidance provide necessary **flexibility**
 - Existing regulatory standards will be maintained

- ▶ EPA is developing integrated planning framework
 - Will obtain feedback from States, local governments, utilities and environmental groups
 - Looking to identify municipal leaders to serve as models

Municipal CWA Programs

- ▶ **From October 2011 Memorandum**
 - A comprehensive and integrated planning approach to a municipal government's CWA waste- and storm-water obligations offers the greatest opportunity for identifying cost effective and protective solutions and implementing the most important projects first.”
- ▶ **“waste- and storm-water obligations”**
 - Treatment plant effluent, blending, CSO, **SSO**, stormwater

Outline of EPA's Framework

- ▶ **Background**
- ▶ **Principles**
 - Overarching Principles
 - Guiding Principles
- ▶ **Elements of an Integrated Plan**
 - Scope
 - Plan Elements
- ▶ **Implementation**
 - Permits
 - Enforcement



Integrated Approach

- ▶ Under an integrated approach, EPA and States would use the **flexibility** of EPA's existing **regulations and policies** and encourage municipalities to evaluate how best to meet all of their CWA requirements and within their financial capability to better allow—
 - sequencing wastewater and stormwater projects in a way that allows the highest priority environmental projects to come first, and
 - **innovative solutions**, such as green infrastructure

Principles

- ▶ **Overarching**
 - Maintain existing regulatory requirements, attempt to balance CWA requirements
- ▶ **Guiding**
 - Quite a few. Re-state the overarching principles and expand a little. Keep core requirements and use existing flexibilities
- ▶ **Note – Flexibility is mention quite a bit but never described or defined**

Integrated Plan Elements

- ▶ **Element 1: Water Quality, Human Health, Regulatory Issues**
- ▶ **Element 2: Existing Systems and Performance**
- ▶ **Element 3: Stakeholder Involvement**
- ▶ **Element 4: Evaluating and Selecting Alternatives**
- ▶ **Element 5: Measuring Success**
- ▶ **Element 6: Improvements to Plan**

Next Steps for EPA

- ▶ Work with interested municipalities
- ▶ Share information about lessons learned
- ▶ Management of Process
 - Ongoing discussions with Regions



Analysis of the Framework

Analysis: Integrated Planning, Permitting and Enforcement

- ▶ **Planning**
- ▶ **Permitting**
- ▶ **Enforcement**
- ▶ **Permit versus Enforcement – Big difference**

Integrated Planning, Integrated Permitting and Enforcement

▶ Planning

- **What are the goals?**
 - EPA states, “use the flexibility of EPA’s existing regulations and policies and encourage municipalities to evaluate how best to meet all of their CWA requirements”
- **What versus How?**

Integrated Planning, Integrated Permitting and Enforcement

- ▶ **Planning**
- ▶ **Permitting**
 - **Preferred Approach for Municipalities**
 - **Stormwater, CSO, SSO, WWTP – single permit**
 - **Mix of numeric and BMP limits – based on watershed goals**
 - **SSOs and Blending – A lot of questions, no answers**

Integrated Planning, Integrated Permitting and Enforcement

- ▶ **Enforcement –**
 - **Should only apply after permit approach has been used and noncompliance determined**
- ▶ **A lot of questions; no answers**

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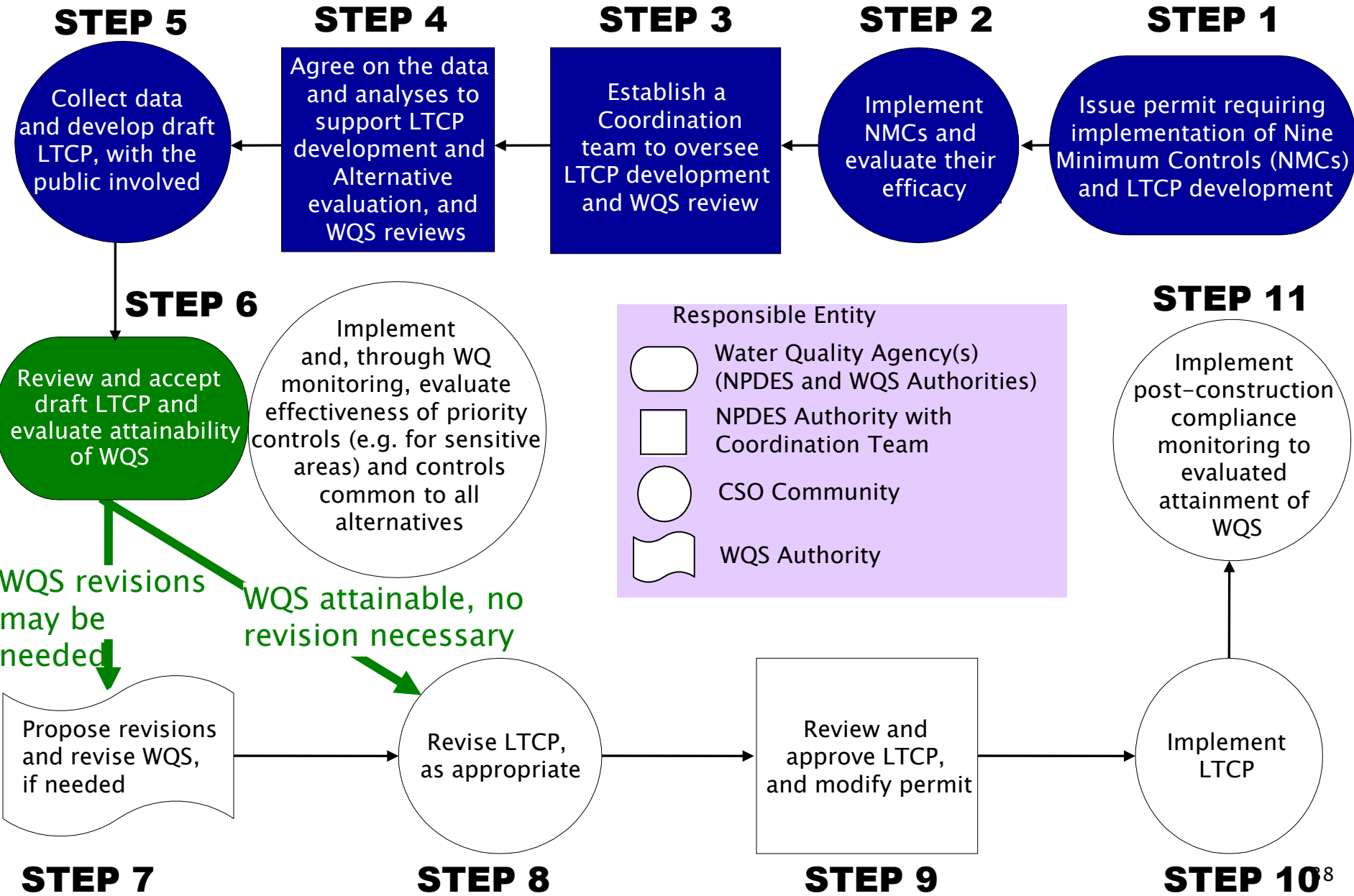
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Monitor/Assess WQS Attainment
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Based on 1994 CSO Policy



Possible Approach

- ▶ **Need clear policy or regulatory clarification from EPA addressing wet weather discharges**
- ▶ **SSOs are point sources, so address them through the NPDES program – similar to CSOs**
- ▶ **Blending is not a bypass**
- ▶ **Apply watershed management approach to assist with prioritization**
- ▶ **Compliance schedules should be applied to wet weather issues that will take many years to solve – via NPDES permit not enforcement**

References

- ▶ <http://cfpub.epa.gov/npdes/integratedplans.cfm>
- ▶ <http://cfpub.epa.gov/npdes/wqbasedpermitting/wspermitting.cfm>
- ▶ http://www.epa.gov/npdes/pubs/wqs_guide_final.pdf
- ▶ <http://www.richmondgov.com/>
- ▶ <http://www.cleanwaterservices.org/>
- ▶ <http://www.saws.org/>
- ▶ <http://www.sd1.org/>

Abbreviations and acronyms

- ▶ PEFTF = Peak Excess Flow Treatment Facility
- ▶ WQBEL = Water Quality-based Effluent Limit
- ▶ WLA = Wasteload Allocation
- ▶ LTCP = Long-term Control Plan
- ▶ BMP = Best Management Practice

Questions?

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