

Louisville MSD's MS4 Program

5 Cities Plus Conference
Columbus, OH
August 17, 2017

08.17.2017



Presentation Agenda

- Program Background
- 2017 Permit Renewal
- Internal Growth
- Programmatic Goals and Vision for the MS4
- Evaluation of Program Needs to Account for Growth
- Results
- Lessons Learned

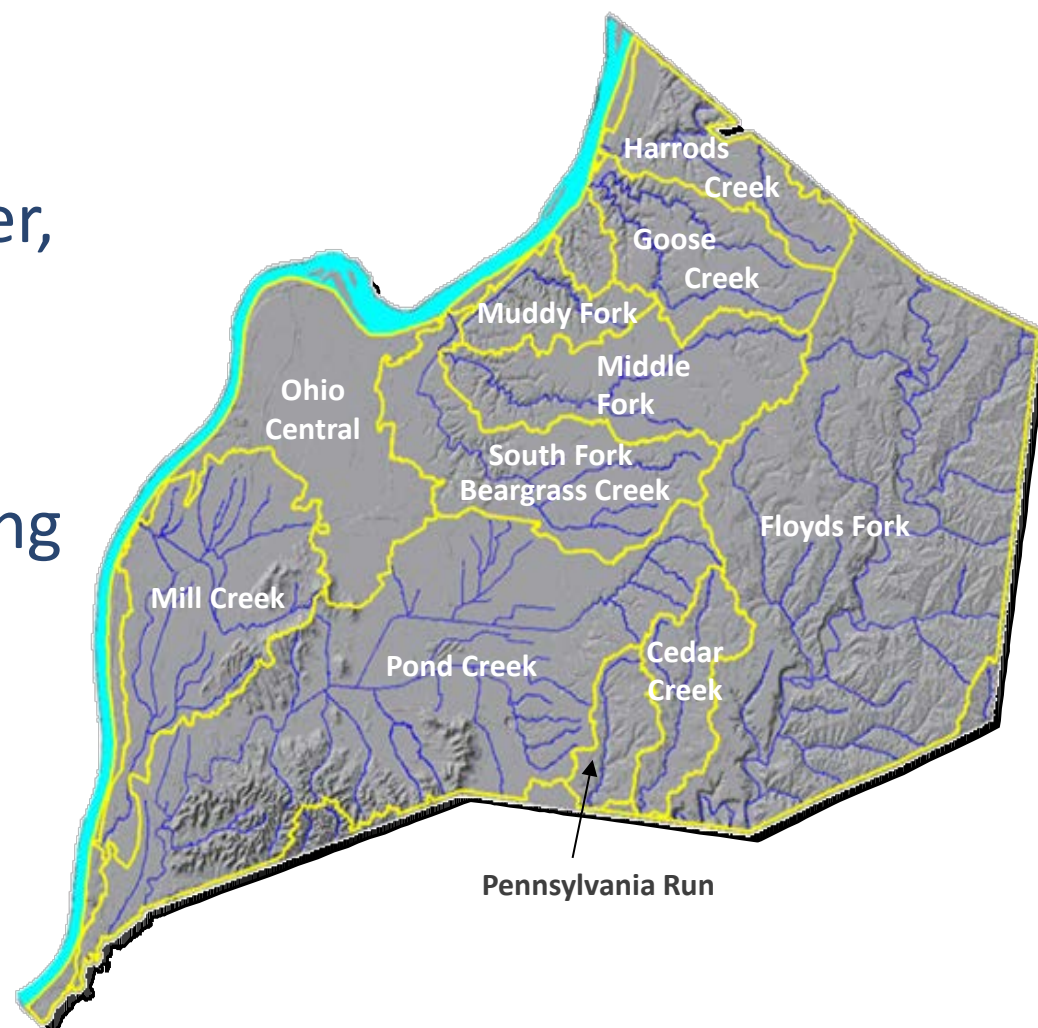


Program Background



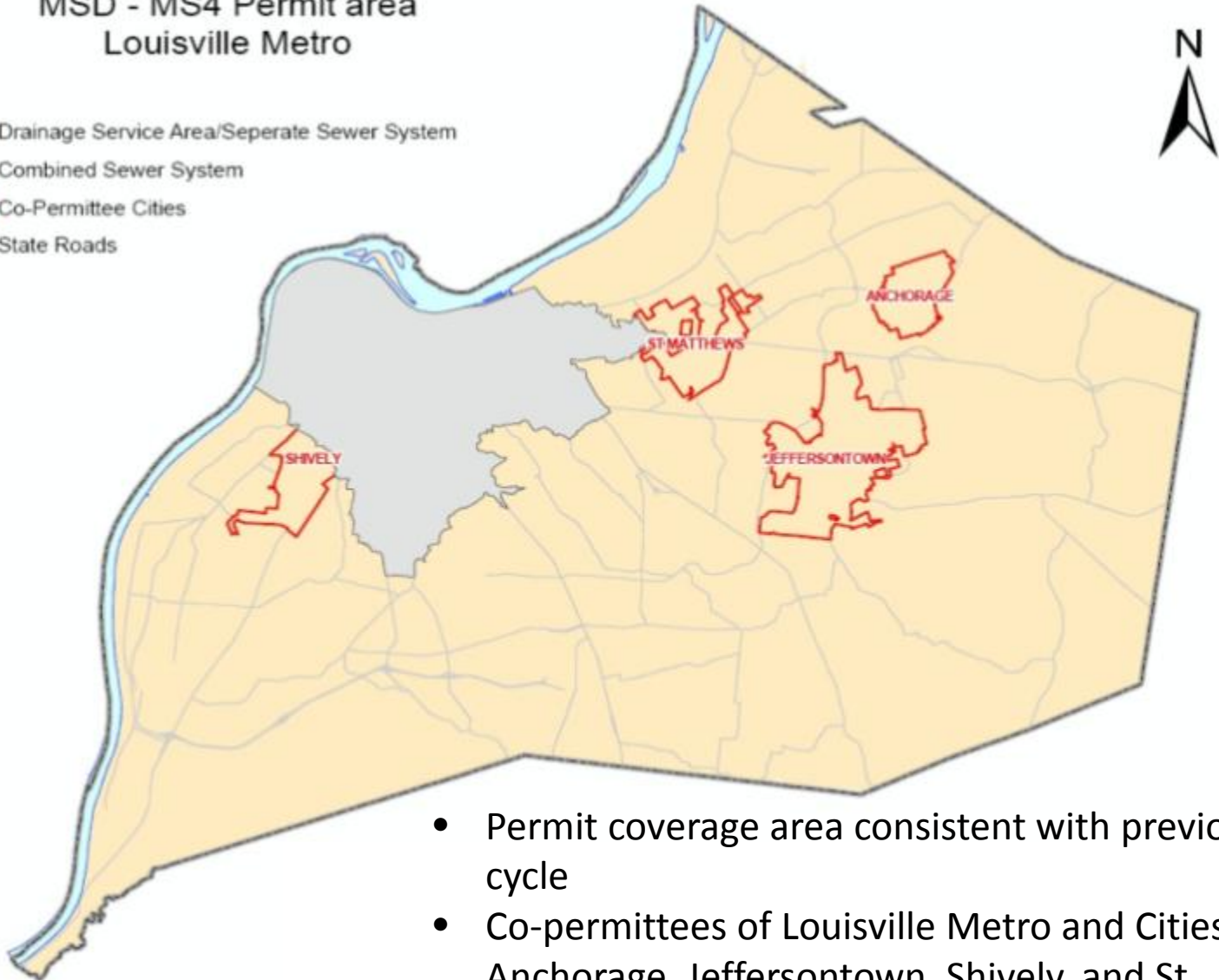
Louisville MSD

- Wastewater, stormwater, and flood protection
- 11 watersheds
- 27 Long Term Monitoring Network Locations
- 220,000 Customer Accounts
- 760 miles of streams
- 38 miles of Ohio River shoreline



MSD - MS4 Permit area Louisville Metro

- Drainage Service Area/Seperate Sewer System
- Combined Sewer System
- Co-Permittee Cities
- State Roads



- Permit coverage area consistent with previous cycle
- Co-permittees of Louisville Metro and Cities of Anchorage, Jeffersontown, Shively, and St. Matthews

2017 Permit Renewal



Audit

- EPA Enforcement Audit – March 2012
 - Update of Co-permittee ILAs
 - Update of SOPs for Construction and Industrial inspections
 - Third party oversight inspections for Industrial
 - Development of SWPPPs
 - Co-permittee enforcement
- KDOW Audit – September 2015

Louisville-Jefferson County Metropolitan Sewer District
Louisville, Kentucky
Municipal Separate Storm Sewer System (MS4) Inspection Report
March 19 - 22, 2012

Prepared for:
EPA Region 4
61 Forsyth Street, S.W.
Atlanta, GA 30303-8960

Prepared by:
Science Applications International Corporation
416-B West Mountain Street
Kernersville, North Carolina 27284

Permit Renewal

- Third Permit expired August 1, 2016
- Administratively extended via permit application renewal request in January 2016 (6 months in advance)
 - Internal work group review
 - Included proposed changes
 - Met with KDOW Staff to facilitate changes
- Draft Permit & Public Notice in August 2016
- Final Fourth Cycle Permit effective February 1, 2017
 - Expires January 31, 2022
- Stormwater Quality Management Plan submitted August 2017

Internal Growth



MS4 Permit Timeline

1st Permit Cycle

Pursuant to the USEPA mandate, KDOW issued Louisville's 1st MS4 Permit in 1990.

2nd Permit Cycle

KDOW renews Louisville's MS4 Permit in 2000.

3rd Permit Cycle

KDOW renews MS4 Permit August 1, 2011.

2014 Streamlining

Annual Report Streamlining, including removal of full SWQMP update and addition of co-permittee certifications

February 2017

Start of 4th permit cycle.



EPA Stormwater (MS4) Phase I

Stemming from the Clean Water Act of 1972, the USEPA mandates stormwater quality for larger cities, including Louisville and Lexington.

MS4 Phase II

Many smaller communities required to participate in the program including several in Metro Louisville area and Southern Indiana.

EPA Enforcement Branch

March 2012. EPA and KDOW audit MSD's stormwater program.

2014 Program Re-focus

- Organizational Re-alignment occurred primarily in MSD Engineering and Operations Divisions
- An MS4 Department was created for the first time ever under the Engineering Division
- Prior to that time, work was almost entirely completed by consulting support
- Since 2014, the department has grown from a single manager to a total team of four with a responsibilities over permit activity management as well as green infrastructure incentives
- Adding staff has allowed MSD to internalize ownership of tasks and reduce capital costs



2017 Historic Program Assessment (2014-2017)

- Assess existing program value
 - Current level of service (existing permit framework)
 - Projected level of service for new permit activities
 - Cost of service
 - Full time equivalent (FTE) staff positions
- Assess programmatic gaps
- Historical knowledge and succession planning

Year	Consultant Contracts	MSD Staff FTE
FY14	\$ 3.0 Million	0.4
FY15	\$ 2.4 Million	2.8
FY16	\$ 2.0 Million	2.75
FY17	\$ 1.8 Million	3
Delta	(\$ 1.2 Million)	+ 2.6
Contract Savings per Added Employee		\$ 461,000

Programmatic Elements Ownership

MSD Staff

- Annual Reporting
- Communication Activities
- Field Day Coordination
- Water Quality Projects (growing at 200 per year)

Contracted Staff

- Monitoring
- Analysis of Thermal Imagery
- 3rd Party Audits
- Stream Restoration
- Environmental Data

Programmatic Goals and Vision for the MS4



Goal Setting for MS4 Program Management/Staffing – How to Build Sustainably

- What are the baseline requirements of the permit?
- Do we do this work consistently?
- Will these tasks roll off at some point?
- Are we as efficient as the external help?
- Can we get more efficient to minimize program costs?
- Are program elements growing in scope?
- Do we have program elements that are becoming more streamlined?



Evaluation of Program Needs to Account for Growth



2017 Program Assessment

- Dual Assessments:
 - Co-permittees
 - Internal staffing plan
- Inter-local Agreement renewals:
 - Required by effective permit
 - Last renewed April 2014
 - First comprehensive cost assessment

INTERLOCAL AGREEMENT

This Agreement, made and entered into this 17th day of April, 2014, by and between the Louisville and Jefferson County Metropolitan Sewer District, (hereinafter referred to as "MSD") and the City of Shively (hereinafter referred to as "Shively").

WITNESSETH

WHEREAS, MSD was created pursuant to the provisions of Kentucky Revised Statutes (KRS), Chapter 76.005, et. seq., on April 1, 1946, and acting by and through its duly appointed Board, its statutory governing body; and,

WHEREAS; under the Interlocal Cooperation Act ("Act"), KRS 652.10 through 65.300, inclusive as amended, any power or powers, privileges or authority exercised or capable of exercise by a public agency may be exercised in cooperation with another public agency under an agreement for joint or cooperative action pursuant to the provisions of the Act; and,

WHEREAS, MSD is the administrative lead permittee and Shively is a co-permittee under the Kentucky Pollutant Discharge Elimination System (KPDES) Stormwater Discharge Permit Number KYS000001, dated June 7, 2011 and effective August 1, 2011 (hereinafter referred to as "the Permit"); and,

WHEREAS, Kentucky Division of Water (hereinafter referred to as "KDOW") in the Permit has indicated that both MSD and other co-permittees including: Shively are responsible for compliance with specific elements of the Permit; and,

WHEREAS, pursuant to KDOW, MSD and Co-permittees are required to develop a Storm Water Quality Management Plan (SWQMP) to control the discharge of pollutants from urban runoff; and,

WHEREAS, Shively desires to enter into an agreement with MSD for the implementation of certain requirements of the Permit; and,

WHEREAS, Shively agrees that it is in the public interest that MSD provide some of the services required by the Permit.

NOW, THEREFORE, in consideration of the foregoing, and the mutual understandings and obligations hereinafter set forth in the Permit, the parties agree as follows:

2011-2016 Permit Conditions

- 2011 MS4 Effective Permit requirements
- Additional “value added” components related to, but not directly supporting permit compliance
 - Grant applications
 - Partnerships
 - Targeted water quality sampling
 - Water quality modeling
 - Stream delisting
 - Program benchmarking,



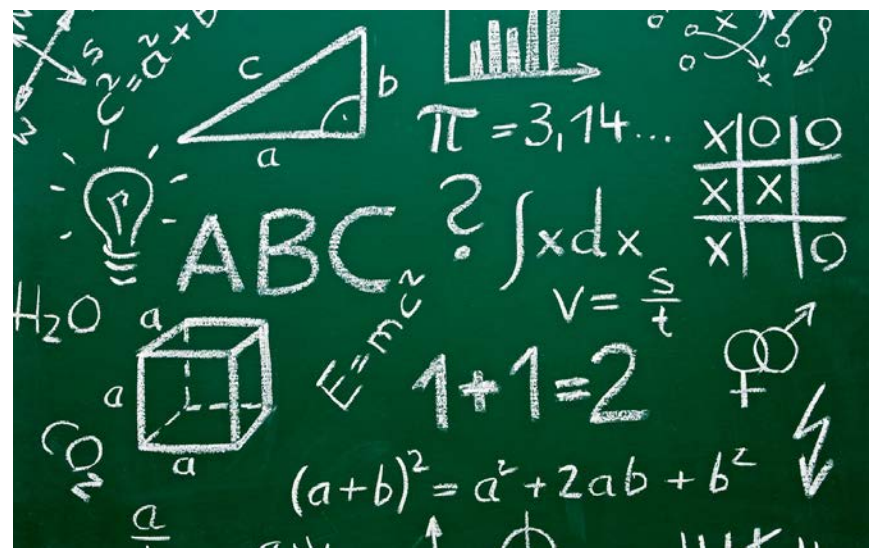
Scoping for What Changed With the 2017 Permit

- Expanded permit requirements based on inspections and national/regional trends
- Increased level of service
 - Stream restoration program
 - No mow/riparian zone program
 - Urban reforestation program
 - Basin retrofit program



Determining Values/Numbers

- Work through each permit item and outline a scope/hours for each item
- Using 2080 hours/FTE determine an FTE count for each required activity
- MSD used an estimated “billing” rate for each FTE based on the type of work
- Using this methodology, MSD was able to develop an estimated cost to meet level of service for each permit item



Results



Results

- Additional staff resources
 - Monitoring
 - Compliance Reporting
 - Post-Construction
- Re-balance staff and consultant support
- Maintain LOS and permit compliance

Program FTE Breakdown	MS4	MS4 (Permit Table Total)	MS4 (Staffing - Daily Tracker)	Consult FTE	Ops/ IWD	Communication	Construction Inspection
Current Total	3	3.22	3.3	11.4	x	0.5	21
Proposed Total (PY5)	5	n/a	5	9.4	x+0.5	0.5	21
DELTA	+2		1.7	(2)	+0.5	0	0

Path Forward

- Rebalance existing staff workloads to account for strengths, weaknesses, experience, and background
 - Current FTEs range from 1.1-1.5/employee
 - Look for opportunities to be more efficient
 - Don't ask Carpenters to do your wiring...
- Limited capacity/consistency of work for projected LOS
- Programmatic resources needed as program grows



Lessons Learned



Lessons Learned

- Don't take on required tasks that won't be sustainable
- Equate the value of internal service costs to an equivalent consultant work effort
- Build business case to internalize tasks
- Align your internal resources with their talents and passions
- Don't overburden staff to the point of burnout



Questions

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