

Ferguson Township
Stormwater Advisory Committee

Meeting No. 2 Phase II Priorities Level of Service Policy Discussion

Phase II
Stormwater User Fee Feasibility Study

May 1, 2019



Agenda

Welcome & Introductions

Priorities Discussion:

- Program Analysis – Additional Services
- Prioritization Background Review
- Program Costs – Updated
- Projected Cost for Priorities including Capital Improvement Program

Level of Service and Service Area Policy Discussion

Review of Program Priorities by Year



Year One – Program Actions / Changes

- Research and inventory BMP's / Basins (geolocate)
- Conduct rapid assessment of all drainage inlets (condition, material, size, photograph, geolocate)
- Contract CCTV Inspection of entire pipe system
- Conduct inspection / assessment of “West End” cross pipes (add inventory to database)
- Contract system wide assessment for above ground system components (basins, channels, BMPs)
- Comply with MS4 pollutant reduction plan/permit
- Convert one position to full time and use interns (2) for inventories
- Implement non-roadway CMP lining projects with neighborhood focus based on adopted CIP
- Maintain on-going staffing support through Public Works and City Engineer

Year Two - Program Actions / Changes

- Maintain existing services and address critical maintenance as identified in year one assessment with existing resources
- Establish and implement maintenance plan (above ground system repairs based on assessment and prioritization)
- Purchase vector truck & continue borrowing / sharing for other equipment as needed
- Maintain MS4 capital investment based on adopted CIP
- Maintain permit compliance
- Implement CMP lining projects (non-roadway) in neighborhood
- Update CIP as needed based on completed assessment

Year Three - Program Actions / Changes

- Evaluate need for CCTV Camera / Truck Rig for long-term pipe inspections
- Hire field crew (4 members) to accomplish maintenance plan
- Maintain CMP lining program for neighborhood projects in adopted/amended CIP
- Maintain MS4 permit compliance including PRP requirements
- Implement/maintain inspection program for all infrastructure as developed
- Initiate CIP projects identified by critical needs from assessment

Year Four - Program Actions / Changes

- Sustain routine inspection program of all above ground facilities
- Sustain inspection and maintenance programs for inlets, pipes, BMPs, channels, etc.
- Prepare system wide master plan to identify sites for Green Stormwater Infrastructure and potential partnerships (reduce runoff volume impacting streams and channel erosion)
- Evaluate overall investment program in GSI based on Master Plan (identify strategies and opportunities for partnering in subsequent years)
- Purchase flusher truck to complement other equipment additions and support maintenance plan
- Implement CMP lining projects for neighborhood improvements as well as critical projects identified by assessment based on updated/adopted CIP

Year Five - Program Actions / Changes

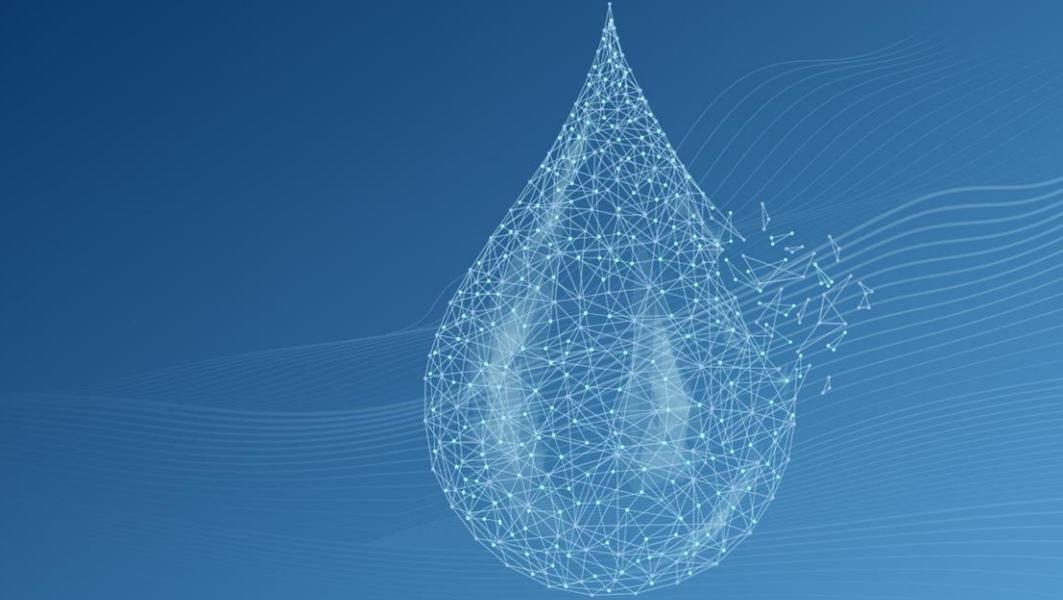
- Maintain service level based on inspection plan and maintenance plans
- Renewed MS4 permit changes programmed for next five year MS4 plan
- Develop design standards for LID and GSI in Ferguson Township. Assess needs for updates to Ordinances
- Continue with program for a consistent level of expenditures and levels of service, making minor adjustments as needed
- Implement CMP lining projects as well as critical system projects added to CIP based on system assessment and inspection program and project 10 year reinvestment plan

Top Priorities

- Assessment of all components of the drainage system
- Compliance with the MS4 permit mandates
- Drive changes in LOS by feedback from assessment
- Invest in system repair/rehab based on assessment – transition from current CIP to future CIP focused on assessment
- Critical repairs identified in assessment should drive maintenance program



Program Cost Projections & Assumptions



Financial Assumptions

- **Priority #1 is to complete system assessment**, using interns and contractors (complete within 24 months).
- Capital investments will be driven initially by roadway improvements and non-roadway adopted CIP projects.
- Interns provide great a value for capturing one-time data on inlets and on pre-2003 systems as well as assess inlets throughout the Township.
- Leadership will remain consistent – Public Works and City Engineer support
- MS4 compliance must be achieved each year.
- Intern opportunities should be considered each year to fill-in gaps in information and to support continuing inspection program.

Program Cost Projection – 5 Year Plan

Five Year Plan By Expense Type and Program Area							
		FY2018	Year One	Year Two	Year Three	Year Four	Year Five
Operating Costs							
	Personnel	\$ 196,716	\$ 277,637	\$ 285,534	\$ 571,348	\$ 588,056	\$ 605,266
	Materials/Supplies	\$ 174,432	\$ 702,543	\$ 560,540	\$ 420,279	\$ 706,661	\$ 278,202
Capital - NonRoadway		\$ 1,310,000	\$ 1,001,000	\$ 1,165,000	\$ 1,179,000	\$ 882,000	\$ 1,075,000
Capital - Roadway Related		\$ 101,000	\$ 195,000	\$ -	\$ 159,000	\$ 84,000	
Total		\$ 1,782,148	\$ 2,176,180	\$ 2,011,075	\$ 2,329,627	\$ 2,260,717	\$ 1,958,468
		FY18	Year One	Year Two	Year Three	Year Four	Year Five
Administration		\$ 21,071	\$ 20,637	\$ 22,386	\$ 19,060	\$ 19,630	\$ 20,217
MS4		\$ 337,528	\$ 440,292	\$ 476,266	\$ 451,009	\$ 475,448	\$ 475,044
Infrastructure		\$ 1,322,549	\$ 1,520,251	\$ 1,512,422	\$ 1,700,558	\$ 1,681,639	\$ 1,463,207
Roadway Related Infrastructure		\$ 101,000	\$ 195,000	\$ -	\$ 159,000	\$ 84,000	
Totals		\$ 1,782,148	\$ 2,176,180	\$ 2,011,075	\$ 2,329,627	\$ 2,260,717	\$ 1,958,468

Preliminary Cost Assigned to Program Plan – Year 1

- Research and inventory BMP's / Basins (geolocate) – *Intern @\$7,500*
- Conduct assessment of all drainage inlets (condition, material, size, photograph) – *Intern @\$7,500*
- Contract CCTV Inspection of entire pipe system - *\$415,000 (roadway & private pipe carrying public runoff)*
- Conduct inspection / assessment of “West End” cross pipes (add inventory to database) – *Existing staff*
- Contract system-wide assessment for above ground system (basins, channels, BMPs) - *\$79,000*
- Comply with MS4 pollutant reduction plan/permit - *Ongoing costs: \$211,293*
- Convert one position to full time - *\$63,480 (additional salary and benefits)*
- Implement non-roadway CMP lining projects with neighborhood focus based on adopted CIP - *\$401,000*
- Complete MS4 permit capital project - *\$229,000*
- Replace critical CMP failure - *\$150,000*
- Park Hills project in adopted CIP - *\$171,000*
- Maintain on-going staffing support through Public Works and City Engineer - *\$14,670*

Program Cost Projections – By Program Focus

Five Year Plan By Expense Type and Program Area						
	FY2018	Year One	Year Two	Year Three	Year Four	Year Five
Salaries						
Program Management	\$ 14,243	\$ 14,671	\$ 15,111	\$ 15,564	\$ 16,031	\$ 16,512
MS4	\$ 68,338	\$ 138,208	\$ 142,138	\$ 146,186	\$ 150,355	\$ 154,650
Infrastructure	\$ 114,135	\$ 124,759	\$ 128,286	\$ 409,598	\$ 421,670	\$ 434,104
Direct Expenses						
Program Management	\$ 6,828	\$ 5,966	\$ 7,276	\$ 3,496	\$ 3,599	\$ 3,706
MS4	\$ 55,190	\$ 73,085	\$ 89,128	\$ 42,823	\$ 44,092	\$ 45,393
Infrastructure	\$ 112,414	\$ 623,492	\$ 464,137	\$ 373,960	\$ 658,969	\$ 229,103
CIP						
MS4	\$ 214,000	\$ 229,000	\$ 245,000	\$ 269,000	\$ 281,000	\$ 275,000
Infrastructure	\$ 1,096,000	\$ 772,000	\$ 920,000	\$ 910,000	\$ 601,000	\$ 800,000
Infrastructure -Roadway	\$ 101,000	\$ 195,000	\$ -	\$ 159,000	\$ 84,000	
Totals	\$ 1,782,148	\$2,176,180	\$ 2,011,075	\$ 2,329,627	\$ 2,260,717	\$1,958,468

Level of Service (LOS) Service Area



Level of Service

It generally describes how services will be administered, performed, and measured.

- Frequency of service
- Quantity (e.g., number of personnel dedicated/shared)
- Resource capacity (e.g., equipment output/life-time performance)

How should system performance and conditions be judged?

- Level of protection (e.g., size of storm carried by a pipe/swale/ditch; incidence of pipe failure)
- Supporting Township goals (partnership with other community services such as tree management)



What components of the drainage system are the responsibility of the Township?

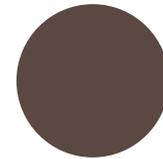
- Pipes, ditches and other system components that manage public property runoff regardless of where they are located
 - Pipe sections that cross private property carrying public property runoff
 - Basins located on private property but handle public property runoff as well
 - Basins located on one or two lots (private property) but serve multiple runoff sources
- Pipes, ditches and other system components that carry public property runoff and are located on Township land (either dedicated by easement or owned outright)

Extent of Service

- The geographical area where:
 - The Township accepts responsibility for and performs stormwater management services,
 - providing regulatory control of engineering and development standards, capital improvements, asset management, and maintenance and operations.
- Corporate boundary is typically the limit of responsibly (service area).
- Can be expanded in locations where “extraterritorial” service boundaries are authorized by state law.
- Within the service area there can be:
 - Differences in level of service
 - Differences in extent of service



Service Area



Issues Identified

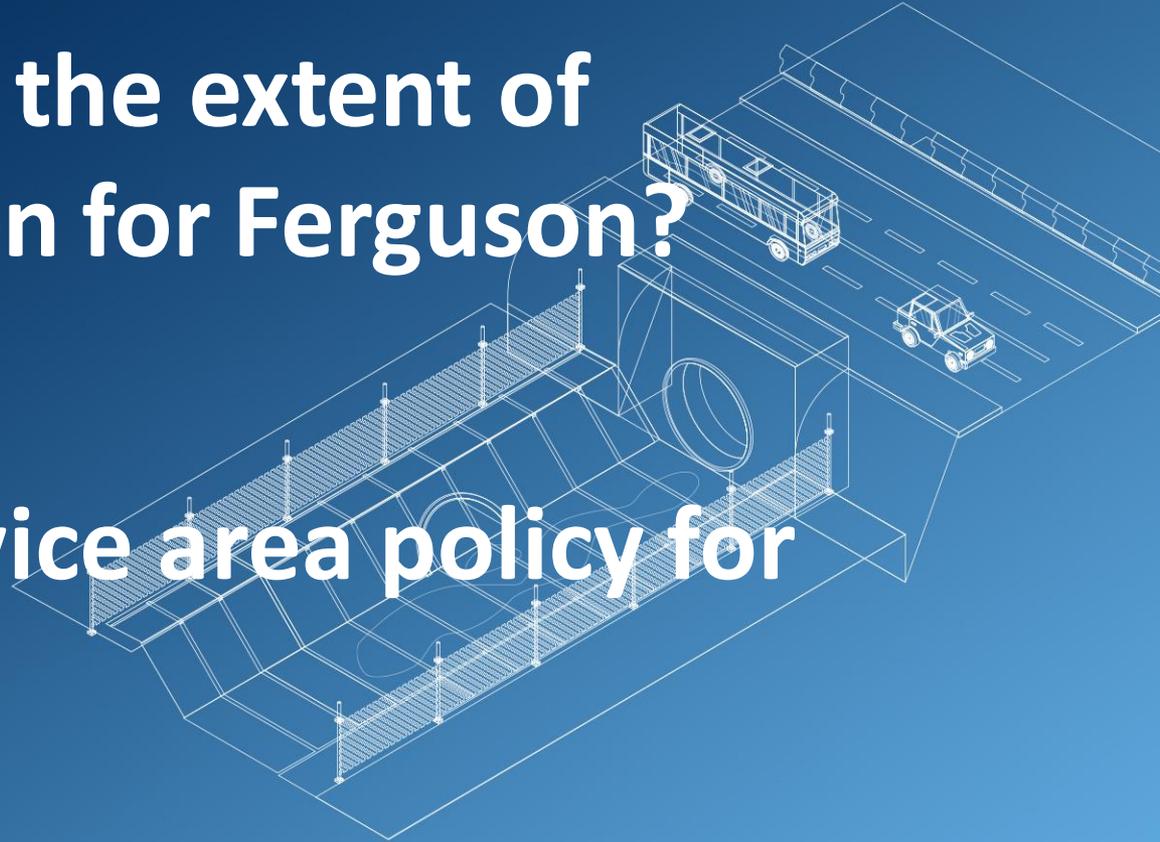
- Difference in LOS in western region
 - Primary responsibility is roadway runoff
 - Does not include driveway pipe carrying roadway runoff
 - Does include ditch maintenance
 - Includes pipe within roadway ROW carrying runoff from one side to the other
- Management of public runoff—responsibility of the Township
- Difference in extent and level of service for various PSU properties



Questions:

What should be the extent of service definition for Ferguson?

What is the service area policy for Ferguson?



Service Area – Approach to User Fee Development

Recognizing Levels of Service variability within Township:

- Urbanized area with pipe network, basins, inlets.
- Rural area with open channels and ditches and cross-drainage pipe under roadways.

One Approach – Geographic Cost Assignments:

- Set a baseline to address administration and MS4 permit
- Distribute infrastructure costs by geographic areas (urban/rural)

Second Approach – Multifactor Rate Structure:

- Rate Structure includes a density of development factor used to distribute costs along with impervious area



Summary of Approach and Rate Basis:

- All properties charged for Administration and MS4 permit baseline cost.
- Vary infrastructure costs based on services.

Cost Allocation by Area:

Urban: \$128 Year for 1 billing unit

Rural: \$45 Year for 1 billing unit

Five Year Plan - Baseline Expenses (Management and MS4)					
	Year One	Year Two	Year Three	Year Four	Year Five
Operations					
Program Management	\$ 20,637	\$ 22,386	\$ 19,060	\$ 19,630	\$ 20,217
MS4	\$ 211,292	\$ 231,266	\$ 189,009	\$ 194,448	\$ 200,044
Subtotal	\$ 231,929	\$ 253,652	\$ 208,068	\$ 214,078	\$ 220,261
CIP					
MS4	\$ 229,000	\$ 245,000	\$ 269,000	\$ 281,000	\$ 275,000
Subtotal	\$ 229,000	\$ 245,000	\$ 269,000	\$ 281,000	\$ 275,000
Total Baseline Expenses	\$ 460,929	\$ 498,652	\$ 477,068	\$ 495,078	\$ 495,261
Unit Distribution - 18,032	\$ 25.56	\$ 27.65	\$ 26.46	\$ 27.46	\$ 27.47
Five Year Plan - Infrastructure Variable Costs					
	Year One	Year Two	Year Three	Year Four	Year Five
Urban					
Operations	\$ 673,048	\$ 529,802	\$ 727,734	\$ 1,000,324	\$ 617,952
Capital	\$ 772,000	\$ 920,000	\$ 910,000	\$ 601,000	\$ 800,000
Subtotal	\$ 1,445,048	\$ 1,449,802	\$ 1,637,734	\$ 1,601,324	\$ 1,417,952
Unit Distribution - 14107	\$ 102.43	\$ 102.77	\$ 116.09	\$ 113.51	\$ 100.51
Rural					
Operations	\$ 75,203	\$ 62,621	\$ 55,825	\$ 80,315	\$ 45,255
Capital					
Subtotal	\$ 75,203	\$ 62,621	\$ 55,825	\$ 80,315	\$ 45,255
Unit Distribution - 3925	\$ 19.16	\$ 15.95	\$ 14.22	\$ 20.46	\$ 11.53
Total Infrastructure	\$ 1,520,251	\$ 1,512,422	\$ 1,693,558	\$ 1,681,639	\$ 1,463,207
	Year One	Year Two	Year Three	Year Four	Year Five
Urban Costs per ERU	\$ 128	\$ 130	\$ 143	\$ 141	\$ 128
Rural Costs per ERU	\$ 45	\$ 44	\$ 41	\$ 48	\$ 39