Gannett Fleming

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wood.

Ferguson Township
Evaluating Stormwater User Fee Funding: Assessing Needs / Creating Strategies

Agenda

- Introductions & Background
- Project Approach & Progress
- Review of Gaps and Development of Priorities & Strategies
- Funding Strategies
- Questions / Conclusion

Stormwater Advisory Committee

Name	Representative	Name	Representative
Albert Jarrett	Agricultural Engineering	Darlene Chivers	Master Gardener / Resident
Steve Balkey	Contractor / Resident	Andrew McKinnon	Resident / Water Resource Activist
Jason Little	SCASD	Rob Cooper	PSU
Todd Irvin	Farmer	Darryl Slimak	Resident
Craig Bowser	Resident	Ansusan Brewer	HOA
Jim Carpenter	CRPR	Gary Petersen	Geology
Jennifer Myers	CBICC		

Background

- Challenges in stormwater management place pressure to find strategies to meet short term and long term program objectives with sufficient funding.
- The purpose of this study is to evaluate the feasibility of establishing a user fee in the Township to provide stormwater management service funding for infrastructure needs, regulatory compliance, and maintenance objectives.

Study Process

- What is the current stormwater management program?
- What are the problems, needs, and opportunities?
- Why change the current funding method?
- What are the priorities in the next 5 years and what are the long range goals?
- What is the best organizational structure to deliver services to the community?
- What program elements require additional funding?
- What is the best way to pay for stormwater management?

Scope of Work

- Program Review
- Stormwater Management Program Development
- Public Outreach / Education
- Stakeholder Advisory Committee
- Organization and Staffing
- Rate Structure


Where
do I
start?

Priority Analysis

Gap	Priority / Goal	Strategy
• Current stormwater program ‘gaps’	• As determined by the SAC and Township Staff	• The action item to resolve or begin resolving the gap

Program Level of Service Options

Current

- Current Level of Service is the “business as usual” option with minimal to no change in program or services.

Basic

- Basic Level of Service – This is the minimum improvement to a program or service.

Medium

- Medium Level of Service – This is an increased level of effort most closely aligned as being proactive.

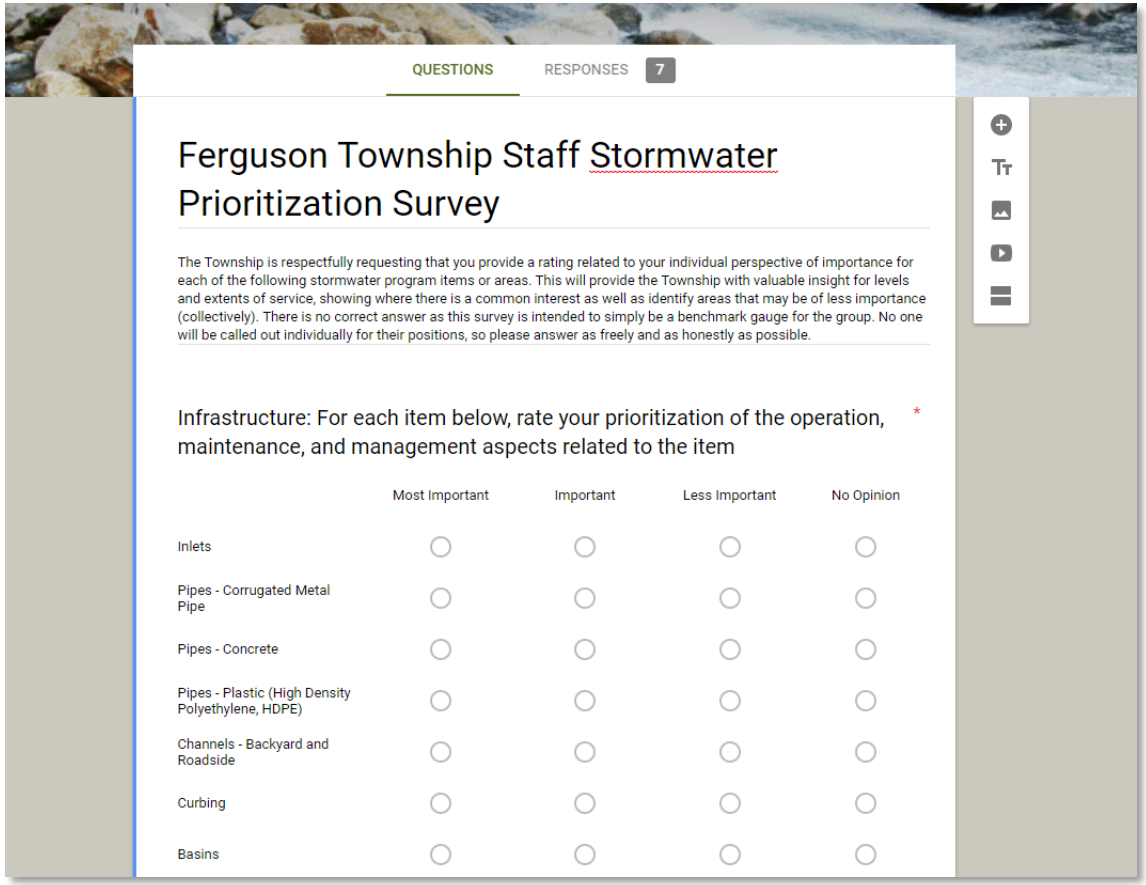
High

- High Level of Service – This is the optimum level of effort for a particular program or service.

Prioritization Survey

- Infrastructure
- Operations
- Investment
- Regulatory
- Issues

Web-Based Poll



QUESTIONS RESPONSES 7

Ferguson Township Staff Stormwater Prioritization Survey

The Township is respectfully requesting that you provide a rating related to your individual perspective of importance for each of the following stormwater program items or areas. This will provide the Township with valuable insight for levels and extents of service, showing where there is a common interest as well as identify areas that may be of less importance (collectively). There is no correct answer as this survey is intended to simply be a benchmark gauge for the group. No one will be called out individually for their positions, so please answer as freely and as honestly as possible.

Infrastructure: For each item below, rate your prioritization of the operation, maintenance, and management aspects related to the item *

	Most Important	Important	Less Important	No Opinion
Inlets	○	○	○	○
Pipes - Corrugated Metal Pipe	○	○	○	○
Pipes - Concrete	○	○	○	○
Pipes - Plastic (High Density Polyethylene, HDPE)	○	○	○	○
Channels - Backyard and Roadside	○	○	○	○
Curbing	○	○	○	○
Basins	○	○	○	○

Stormwater Collection System - Drainage Inlets

- Township owns almost 2,000 drainage inlets
- Routine inspection & maintenance is not conducted (limited shared work force)
- Inlets replaced/repaired as part of or ahead of highway projects.

Collection / Conveyance System : Drainage Inlets

Gap

- Unknown inlet conditions
- Inlets only repaired as part of road projects

Priority / Goal

- Create Prioritization of necessary inlet repairs

Strategy

- Conduct rapid assessment of all public drainage inlets
- Connect assessment to GIS mapping / database
- Provide resources to address 10-15 major repairs (annually)

Collection / Conveyance System : Drainage Inlets

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- Unknown inlet conditions
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Priority / Goal

- Create Prioritization of necessary inlet repairs
- Create Assessment of all inlet conditions

Strategy

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Collection / Conveyance System : Drainage Inlets

Gap	Priority / Goal	Strategy
• Unknown inlet conditions • Inlets only repaired as part of road projects	• Create Prioritization of necessary inlet repairs • Create Assessment of all inlet conditions	• Conduct rapid assessment of all public drainage inlets • Connect assessment to GIS mapping / database • Provide resources to address 10-15 major repairs (annually)

Stormwater Collection System - Pipes

- Township owns approx. 33.5 miles of drainage pipe (with additional privately owned pipe)
- Inspection and Repair/Replacement done in advance of highway projects
- Township has a Capital Improvements Plan for pipe replacement, but not driven by greatest risk of failure.

Collection / Conveyance System : Pipes

Gap	Priority / Goal	Strategy
• Extensive system with unknown pipe conditions • Pipe repairs connected to road improvement projects only	• Create Assessment of Pipe Conditions (with prioritization)	• Contract for system wide CCTV inspection of system • Utilize NAASCO scale for rating system (to prioritize non-critical repairs) • Commit to minimum % of pipe length for relining projects

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Stormwater Collection System - Channels

- Township owns almost 48 miles of roads without curbing (i.e. rely on side drainage / channels)
- Debris in channels (both roadside and “backyard”) is a consistent issue.
- Township has identified approx. 24 miles of existing roadside channels in need of maintenance.

Drainage Channels

Gap

- Unknown channel conditions
- Channels only repaired reactively
- Private channels often “critical” link in system

Priority / Goal

- Create Prioritization of necessary channel rehabilitation / stabilization

Strategy

- Conduct rapid assessment of all drainage channels
- Connect assessment to GIS mapping / database
- Develop policy for maintenance of private channels conveying public runoff
- Increase funding and resources for Maintenance of channels

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BMPs (Stormwater Basins)

- Inventory lacks pre-2003 facilities.
- 118 Private BMPs
- 23 Township Owned BMPs
- 20% of post 2003 inspected for permit compliance.

BMPs / Basins

Gap

- Unknown facility conditions
- Unknown site-specific data (records, plans)
- Unknown facility locations
- Limited resources to conduct inspections

Priority / Goal

- Create Prioritization of necessary repairs
- Establish roles for private facilities (receiving public runoff)
- Develop database of BMP facilities attributes

Strategy

- Use interns to research BMPs and collect data
- Contract for system wide assessment of BMPs and create Maintenance Plan from results
- Enforce existing policy re: Maintenance
- Connect assessment to GIS mapping / database
- Increase PT to FT Inspector Position

BMPs / Basins

Gap	Priority / Goal	Strategy
• Unknown facility conditions • Unknown site-specific data (records, plans) • Unknown facility locations • Limited resources to conduct inspections	• Create Prioritization of necessary public facility repairs • Establish roles for private facilities (receiving public runoff) • Develop database of BMP facilities attributes	• Use interns to research BMPs and collect data • Contract for system wide assessment of BMPs and create Maintenance Plan from results • Enforce existing policy re: Maintenance • Connect assessment to GIS mapping / database • Increase PT to FT Inspector Position

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Basins & BMPs – Roles and Responsibilities

- There are “orphaned” basins (one owner providing maintenance for facility serving many)
- Failure of private facilities receiving public land runoff can create safety and health issues, blockages, reduced capacity.

Green Infrastructure & Low Impact Development

- Township required to maintain written program for inspection of BMPs.
- Inspections rely on part time staff member.
- Township is mandated to “encourage” LID practices.

Green Infrastructure (GSI) – Why Invest

- Increased use of BMP's provide on-site solutions addressing water quality and quantity.
- Build on Township Tree Inventory efforts – reduce "heat island" and infiltrate runoff.
- Promote "green" practices such as neighborhood rain barrel programs to engage the public.
- Stream restoration and implementation in agricultural areas support meeting land management goals.

Green Infrastructure

Gap	Priority / Goal	Strategy
• Current policies and ordinances do not fully provide for Township specific GSI details, or strategic / appropriate placement of GSI practices	• Identify priority locations for GSI practices • Ensure GSI facilities are properly designed and utilized • Integrate stormwater efforts into street tree programs	• Fund Shade Tree Program • Contract for Master Plan of prioritized GSI locations in the Township • Contract for preparation of a GSI Design Manual (specific to Township) • Revise Township Ordinances to mandate higher degree of GSI

Green Infrastructure

Gap

- Current policies and ordinances do not fully provide for Township specific GSI details, or strategic / appropriate placement of GSI practices

Priority / Goal

- Identify priority locations for GSI practices
- Ensure GSI facilities are properly designed and utilized
- Integrate stormwater efforts into street tree programs

Strategy

- Fund Shade Tree Program
- Contract for Master Plan of prioritized GSI locations in the Township
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- Current policies and ordinances do not fully provide for Township specific GSI details, or strategic / appropriate placement of GSI practices

Priority / Goal

- Identify priority locations for GSI practices
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Strategy

- Fund Shade Tree Program
- Contract for Master Plan of prioritized GSI locations in the Township
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Regulatory Pressures

- Township in headwaters of streams/rivers leading to Chesapeake Bay.
- 2003 Pennsylvania Stormwater Discharge Permit for Small municipal storm sewer systems (MS4) issued to Ferguson Township.
- 2018 MS4 permit is renewed with additional mandates.
- Five-year permit will be renewed in 2023.

Permit Compliance – Outfall Screening Program

- Township screens 126 outfalls regulated under the MS4 program.
- Inspections currently rely on part time staff member.
- GIS can be useful in management of the screening or data collection effort.

Equipment

- Township rents equipment or shares with other departments and as available. Limits ability to proactively plan and can cause delays in effort and increases in costs.
- Township lacks CCTV truck, flush truck or modern vac truck to perform basic stormwater inspection and maintenance.

Stormwater Equipment / Resources

Gap	Priority / Goal	Strategy
• Resources are required to conduct assessment and ongoing maintenance • Sharing equipment leads to scheduling and productivity issues • Current staffing is split with roadway maintenance	• Secure necessary equipment resources in most cost-effective manner to provide needed services • Ensure appropriate staff is available to support necessary stormwater functions	• Purchase vac truck to replace existing equipment • Continue current borrowing / sharing / contracting arrangements until assessment is done, evaluate purchase of CCTV rig • Develop specialized “stormwater crew” (with foreman, equipment operator and laborer) • Hire Stormwater Program Superintendent

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Strategy

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- Continue current borrowing / sharing / contracting arrangements until assessment is done, evaluate purchase of CCTV rig
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- Hire Stormwater Program Superintendent

Staffing

- Township retains part time stormwater staff member for inspections.
- Township shares role for stormwater with Township Engineer.
- GIS is a key to resource allocation to maintain system and inventory database.
- Proactive management requires additional “dedicated” staff (both office and field)

Conclusions

- Township has some key program “pieces” in place, but focus is reactive or driven by roadway investments.
- Need for infrastructure condition assessment is a common theme for all system components.
- New / Revised stormwater program elements can work in conjunction with other existing Township programs
- Strategies will evolve and be adapted over time

User Fees – Primary Funding Source for Stormwater Services

How is Funding Provided Now?

Two primary sources of revenue support stormwater

- General fund revenues (income (65%); real estate transfer tax, and real property tax (35%)
- Transportation Improvement Fund (dedicated tax) when working in the roadway

Why is Ferguson Evaluating a User-Fee?

- Regulatory requirements will continue to drive much of the future “non-optional” change.
- What, who and how long it takes to “do stormwater” are each growing complex .
- Systems are aging and need reinvestment.
- Costs are typically greater when “reacting” to problems – pay me now or pay me later.
- Collaboration with other communities can help in emergencies or for one-time need. Create challenges in operations planning.

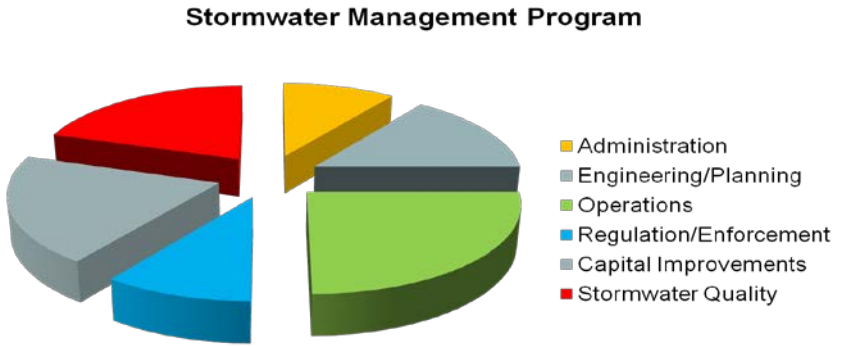
Funding Methodology Selection

Questions that should be considered.

- What method(s) cover the full cost of service?
- What modifiers should be available?
  - Credits for private investments
  - Incentives to handle stormwater on site
- What is the relationship between the revenue basis and the need for a public drainage system/services?
- How stable is the funding source?
- Can funding source be tied to levels of services delivered?
- How flexible is the funding source?

Stormwater “utility” is:

- A way to organize operations and clarify roles.
- A way to quantify root problems and the cost to correct.
- A way to build political support for change in services.
- A way to move along efficiently; goal-driven.
- A way to identify and focus on priorities to meet needs.

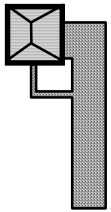


How Are Fees for Stormwater Calculated Today?

- **Impervious area** is the primary link between the parcel and amount of the fee. It is the ‘meter’ for stormwater fees.
- Use of the “ERU” approach– equates all land use to single family residential footprints.
- Shift is to a fixed billing unit – 500 sf, 1000 sf, 1500 sf chosen after an analysis of the data when digital data is available.

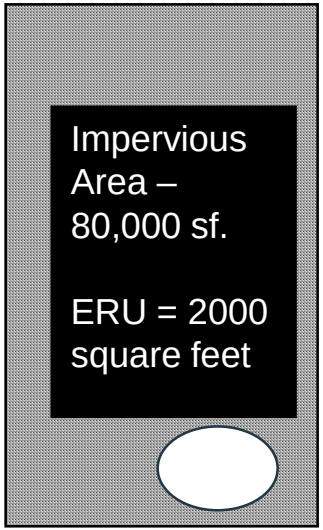
How a Fee Has Been Calculated – Parcel by Parcel

‘Equivalent Residential Units’ – All Single Family Detached Parcels =



= 1 Billing Unit

All other parcels – measured for impervious area and billing units calculated as an “equivalent residential unit”



= 40 ERUs less credit

Rate Structure Options – Basis of a Fee

- All single family residential = 1 billing unit
  - Single family residential in tiers such as small, medium, and large
- All properties pay on the same unit basis
  - By square feet of harden surfaces
  - By lot size and by square feet of harden surfaces
- Different rates assigned in “zones” in the Township
- Different service districts based on services provided

What Values Should Be Taken Into Consideration?

- Stability to Manage Long Term Program?
- Dedication to Stormwater Services Only?
- Linked to Purpose for Public System/Services?
- Easy to Administer? Minimal Overhead Costs?
- Easy to Understand Method(s)?
- Distribute Costs based on Level of Service? (often considered in rural/urban areas)
- Ability to use Credits/Incentives?

Comparison of Funding Methods

Value/Goal	General Funds	Stormwater User Fees
Accomplish Long Term Goals	✓ Yes	✓ Yes
Dedicated to Stormwater Only	o No	✓ Yes
Link to Purpose of Services	o No	✓ Yes
Easy to Administer	✓ Yes	❑ Maybe
Easy to Understand by Public	✓ Yes	Only with Education
Cost Distributed based on LOS	o No	✓ Yes
Ability to Use Credits/Incentives	o No	✓ Yes

Five Year Projection – Focus on Infrastructure

Five Year Plan By Expense Type and Program Area						
	FY2018	Year One	Year Two	Year Three	Year Four	Year Five
Salaries						
Program Management	$ 38,175	$ 39,320	$ 96,539	$ 99,435	$ 102,418	$ 105,490
MS4	$ 103,943	$ 174,881	$ 198,591	$ 204,333	$ 210,247	$ 216,339
Infrastructure	$ 213,723	$ 227,335	$ 252,619	$ 537,661	$ 553,574	$ 569,966
Direct Expenses						
Program Management	$ 6,828	$ 5,966	$ 33,711	$ 18,431	$ 18,977	$ 19,537
MS4	$ 55,190	$ 73,085	$ 313,190	$ 283,624	$ 290,913	$ 298,384
Infrastructure	$ 112,414	$ 583,492	$ 448,640	$ 359,100	$ 643,668	$ 213,351
CIP						
MS4	$ 214,000	$ 229,000	$ 245,000	$ 269,000	$ 281,000	$ -
Infrastructure	$ 1,197,000	$ 1,215,800	$ 1,908,520	$ 1,951,440	$ 1,743,600	$2,354,480
Totals	**$ 1,941,274**	**$ 2,548,879**	**$ 3,496,809**	**$ 3,723,022**	**$ 3,844,397**	**$3,777,546**

Ten Year Projection – Focus on Infrastructure

Ten Year Plan By Expense Type and Program Area

	FY2018	Year One	Year Two	Year Three	Year Four	Year Five
Salaries						
Program Management	$ 38,175	$ 39,320	$ 96,539	$ 99,435	$ 102,418	$ 105,490
MS4	$ 103,943	$ 174,881	$ 198,591	$ 204,333	$ 210,247	$ 216,339
Infrastructure	$ 213,723	$ 227,335	$ 252,619	$ 537,661	$ 553,574	$ 569,966
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Program Management	$ 6,828	$ 5,966	$ 33,711	$ 18,431	$ 18,977	$ 19,537
MS4	$ 55,190	$ 73,085	$ 195,690	$ 163,186	$ 167,464	$ 171,850
Infrastructure	$ 112,414	$ 583,492	$ 448,640	$ 359,100	$ 643,668	$ 213,351
CIP						
MS4	$ 214,000	$ 229,000	$ 245,000	$ 269,000	$ 281,000	$ -
Infrastructure	$ 1,197,000	$ 1,215,680	$ 1,140,260	$ 1,196,220	$ 896,800	$1,452,240
Totals	**$ 1,941,274**	**$ 2,548,759**	**$ 2,611,049**	**$ 2,847,365**	**$ 2,874,149**	**$2,748,772**

Next Steps

Study Completion

- Finalize analysis and options for user fees
- Document needs, potential policies for consideration, and financial factors for consideration.
- Development recommendation(s) to the Board of Supervisors
- Presentations
  - Public Meeting on April 18
  - Final Report to the Board of Supervisors - May

Questions