

## **Stormwater User Fee Study – Phase 2**

### **Stormwater Services Funding Policy**

#### **1. Statement of Purpose for Stormwater User Fees**

It is important to define specifically the purpose of the user fee and the programs that it will support. Public awareness will be heightened and expectations, managed through public outreach and education, clearly set. Although services have been on-going in stormwater management over many decades, expectations of change, of new services, of immediate problem solution are heightened when a change in funding occurs. The public hears that they will pay a fee-for-service and will decide whether the value of their contribution is demonstrated by activities they can “see.” It is important that revenues solve real problems, improve system performance, and protect water quality in ways that are recognizable by the paying public. The background summary of the program of stormwater services evaluated during the Study provide the critical message to the public of what will be addressed, how service delivery may change, and outcomes targeted.

Ferguson Township Stormwater Program Focus: In the Program Recommendations – 10 Year Plan, the overall initiatives to address on-going services, increased asset management, water quality permit compliance and capital projects reflect the purpose of dedicated funding for stormwater operations. These priorities represent additional staff and equipment to address both Municipal Separate Storm Sewer System (MS4) NPDES discharge permit mandates and overall stormwater collection system, treatment, and discharge operations. Capital projects are identified for the planning period to address MS4 permit requirements for pollutant reduction loading from the stormwater system as well as critical collection system improvements to address nuisance flooding, older corrugated metal pipes, and stormwater asset resiliency.

#### **2. Basis for Cost Distribution (rate base)**

The basis for cost distribution is the presence of hardened surfaces, technically defined as Imperviousness. The definition of imperviousness (or impervious area) is part of the ordinance language for adoption of the utility and user fee rates.

Ferguson Township Rate Basis: Impervious area is the factor used in assigning a fee for service to individual properties. An analysis of the impervious area at the parcel level was based on digital data captured by the Township staff during this study for all parcels. Two rate methodologies have been defined and analyzed for the Phase 2 Study. The two rate methods are:

- A fixed billing unit per square feet of impervious area. The cost of service analysis and rate estimate used 1,000sf of impervious area for determining potential rates.
- An Equivalent Residential Unit (ERU) which sets defines the billing unit as the average of all single-family-detached-residential parcels. The ERU billing unit for Ferguson Township is 3,563 sf of impervious area.

In addition to the rate methodologies, based on discussions with the SAC and staff, it was recommended that some costs of services should be shared by all properties. These costs include: administration and general overhead, MS4 permit compliance including capital projects for the Pollution Reduction Plan,

partnership projects and the Park Hills infrastructure improvements. These costs were identified specifically for the nature of the activity that serves all the properties within the Township.

After identification of the two rate methodologies and the establishment of a cost center to be burdened across all parcels, consideration was given to the variability of population density and the level of services delivered, based on the infrastructure owned, operated, and regulated by the Township. Two methodologies to differentiate levels of service were evaluated during the study.

1. Service Area by Infrastructure Type

Service Area 1 – higher frequency and level of service

- Any lot that fronts on a Township street segment that has 50% or more of that street segment with a parallel storm pipe, or
- Any lot that fronts on a Township street segment that has 50% or more of a street segment with curb on one or both sides.

Service Area 2 – lower frequency and level of service

- Any lot that fronts on a Township street segment that is not in the Service Area 1; or
- Any lot that fronts on a street owned by another MS4 permittee, or a private street; or
- Any lot that is covered by a separate MS4 Permit with DEP.

Each service area has about 24,000,000 square feet of impervious area. Costs of various operations were reviewed, and an analysis completed to assign a cost to either Service Area 1 or Service Area 2.

2. Growth Area/Non-Growth Area Designation for Services

Using the Township established Growth Area boundary, properties were classified as “within the Growth Area” or “within the Non-Growth Area.” Costs of various operations were reviewed, and an analysis completed to assign a cost to either the Growth Area or Non-Growth Area.

A review of the two refinements in allocation of costs by geographical or infrastructure, it was recommended that the use of the Growth Area boundary was a more equitable approach.

### 3. Cash Demand Analysis and Rate Estimation

**Personnel:** The following tables set forth the long-range financial plan for personnel, identifying current and future staffing needs, by Position.

Table 1 – Personnel Summary

Township Department	Staff Positions	Pay Grade	Salary Midpoint FY19	Year Position Added or Funded by Utility	Percent of Time Dedicated to Stormwater
FTPW	Public Works Director		\$ 89,000		5%
FTPW	Township Engineer	30	\$ 81,000		15%
FTPW	Assistant Township Engineer	27	\$ 70,000		10%
FTPW	Engineer Technician	22	\$ 55,000		10%
FTPW	GIS Technician	21	\$ 52,000		30%
FTPW	GIS Technician	21	\$ 52,000		10%
FTPW	Road Superintendent	26	\$ 67,000		5%
FTPW	Road Foreman	20	\$ 50,000		5%
FTPW	Road Foreman	20	\$ 50,000		10%
FTPW	Road Workers 11 men	17	\$ 467,500		14%
FTPW	MS4 Engineer part time	22	\$ 55,000		100%
FTPW	Stormwater Engineer	27	\$ 72,800	2021	100%
FTPW	Stormwater Foreman	20	\$ 51,500	2027	90%
FTPW	Stormwater Equip Operator	17	\$ 47,834	2027	90%
FTPW	Stormwater Workers (2)	17	\$ 84,000	2023	90%
FTPW	Interns (2) @\$9600 each		\$ 19,200	2021	100%

Over a period of six (6) fiscal years, a dedicated team is identified, adding staff to Township Engineering by converting a part-time position (MS4 Engineer) to full-time (Stormwater Engineer). An additional crew is recommended for Public Works operations, a foreman, equipment operator, and two stormwater workers. The two stormwater workers are added in FY 23 and the foreman and operator added in FY 27 when the purchase of additional equipment is recommended.

**Direct Costs:** Cost for materials, supplies, training, and equipment as well as professional services are summarized in Table 2.

Table 2 – Direct Cost Summary

	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Equipment Maintenance Costs	\$ 141,030	\$ 144,555	\$ 148,169	\$ 151,873	\$ 155,670	\$ 159,562	\$ 163,551	\$ 167,640
Materials	\$ 14,753	\$ 40,122	\$ 41,125	\$ 42,153	\$ 43,207	\$ 44,287	\$ 45,395	\$ 46,529
Personnel Support	\$ 33,964	\$ 34,813	\$ 35,684	\$ 36,576	\$ 37,490	\$ 38,427	\$ 39,388	\$ 40,373
Contracts/Programs/Equip Purchases	\$ 225,297	\$ 229,958	\$ 236,111	\$ 244,373	\$ 249,358	\$ 256,481	\$ 274,216	\$ 173,588
TOTALS	\$ 415,044	\$ 449,448	\$ 461,090	\$ 474,976	\$ 485,725	\$ 498,758	\$ 522,549	\$ 428,130

Equipment purchases are funded by contribution to a sinking fund, based on date of anticipated purchase (new or replacement), providing an annual contribution to the fund to manage the cash flow needed for acquisitions. The Program Plan identified purchases and anticipated date for acquiring the equipment.

**Capital Projects:** Costs were identified for capital projects for stormwater infrastructure major repair/replacement outside of roadway-related needs. For capital investments linked to a roadway project, the Transportation Improvement Fund is used for related stormwater improvements within the roadway right-of-way.

Capital projects captured in the stormwater user fee cost of service, total cost summarized in Table 3, include:

1. MS4 Chesapeake Bay Pollutant Reduction Plan Implementation (design, permitting, construction)
2. Park Hill Drainage Improvements
3. Corrugated Metal Pipe Lining (5000' a year)
4. Inlet Repairs (5 a year)
5. Partnership Program (50% match with private property owner for improvements)

Eight Year Plan By Expense Type and Program Focus								
	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Capital	\$ 515,000	\$ 2,170,450	\$ 749,914	\$ 810,855	\$ 843,348	\$ 717,471	\$ 753,307	\$ 790,940
Total	\$ 1,253,696	\$ 2,953,961	\$ 1,667,093	\$ 1,756,844	\$ 1,815,484	\$ 1,718,791	\$ 1,972,116	\$ 1,939,218

**Total Program Cost Summary:** The following table summarizes all costs included in the Cash Demand Analysis and Rate Estimate.

Eight Year Plan By Expense Type and Program Focus								
	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
<b>Operating Costs</b>								
Personnel	\$ 323,652	\$ 334,063	\$ 456,090	\$ 471,014	\$ 486,411	\$ 502,562	\$ 696,260	\$ 720,148
Materials/Supplies	\$ 415,044	\$ 449,448	\$ 461,090	\$ 474,976	\$ 485,725	\$ 498,758	\$ 522,549	\$ 428,130
Capital	\$ 515,000	\$ 2,170,450	\$ 749,914	\$ 810,855	\$ 843,348	\$ 717,471	\$ 753,307	\$ 790,940
Total	\$ 1,253,696	\$ 2,953,961	\$ 1,667,093	\$ 1,756,844	\$ 1,815,484	\$ 1,718,791	\$ 1,972,116	\$ 1,939,218

	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
Administration	\$ 63,611	\$ 63,590	\$ 62,507	\$ 64,534	\$ 66,633	\$ 68,809	\$ 66,755	\$ 68,984
MS4	\$ 129,151	\$ 208,750	\$ 256,067	\$ 289,885	\$ 293,844	\$ 137,949	\$ 133,209	\$ 137,401
Infrastructure	\$ 1,060,934	\$ 2,681,621	\$ 1,348,519	\$ 1,402,425	\$ 1,455,007	\$ 1,512,033	\$ 1,772,152	\$ 1,732,834
Totals	\$ 1,253,696	\$ 2,953,961	\$ 1,667,093	\$ 1,756,844	\$ 1,815,484	\$ 1,718,791	\$ 1,972,116	\$ 1,939,218

**Rate Estimates:** Based on the policy discussions for the allocation of costs across all properties, using the Growth Area/Non-Growth Area allocation with an “all properties” allocation for administration, MS4 compliance and related capital costs, a cash-demand model was developed for each area. The cash-demand model was analyzed using an ERU and fixed value billing unit of 1,000sf to determine the number of billing units by All Properties, Growth Area, and Non-Growth Area. These are summarized in the following table.

Estimated Rates - ERU Billing Unit Per Year								
Rates	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
All Properties - ERU	\$ 15	\$ 20	\$ 33	\$ 36	\$ 36	\$ 26	\$ 26	\$ 30
Growth Area - ERU	\$ 53	\$ 53	\$ 57	\$ 60	\$ 64	\$ 68	\$ 71	\$ 71
Non-Growth Area - ERU	\$ 20	\$ 20	\$ 20	\$ 20	\$ 22	\$ 23	\$ 25	\$ 25
Resident Annual Fee - GA	\$ 68	\$ 73	\$ 90	\$ 96	\$ 100	\$ 94	\$ 97	\$ 101
Residential Annual Fee - N/GA	\$ 35	\$ 40	\$ 53	\$ 56	\$ 58	\$ 49	\$ 51	\$ 55

Estimated Rates - 1000 SF Billing Unit Per Year								
	FY21	FY22	FY23	FY24	FY25	FY26	FY27	FY28
All Properties - 1000sf	\$ 5	\$ 7	\$ 10	\$ 11	\$ 11	\$ 8	\$ 8	\$ 10
Growth Area - 1000sf	\$ 31	\$ 32	\$ 34	\$ 36	\$ 37	\$ 39	\$ 42	\$ 42
Non-Growth Area - 1000sf	\$ 8	\$ 8	\$ 9	\$ 10	\$ 10	\$ 10	\$ 11	\$ 11
Per 1000 square fee IA - GA	\$ 36	\$ 39	\$ 44	\$ 47	\$ 48	\$ 47	\$ 50	\$ 52
Per 1000 square fee IA - N/GA	\$ 13	\$ 15	\$ 19	\$ 21	\$ 21	\$ 18	\$ 19	\$ 21

In addition to evaluating the impacts on single family detached residential properties and fixed fee per billing unit, an analysis was completed for agricultural parcels within the Township. There are 164 parcels classified by land use code as agricultural in the Non-Growth Area and the impacts of each rate method is summarized based on the total number of billing units represented by this land use and the average annual fee per year for the ERU-method and the fixed billing unit method for FY 21.

<b>ERU Billing Unit</b>	
Total Ag Billing Units x \$35 - Yr1	\$ 76,335
Average Ag Annual Fee - Yr 1	\$ 439
<b>1000 sf Billing Unit</b>	
Total Ag Billing Units x \$13	\$ 86,450
Ave Ag Annual Fee	\$ 494

NOTE: All impacts shown do NOT take into consideration potential credits that would be awarded on a parcel basis.