

# CASE STUDY:

## St. Petersburg Stormwater User Fees

**FINANCIAL MANAGEMENT SERVICES**



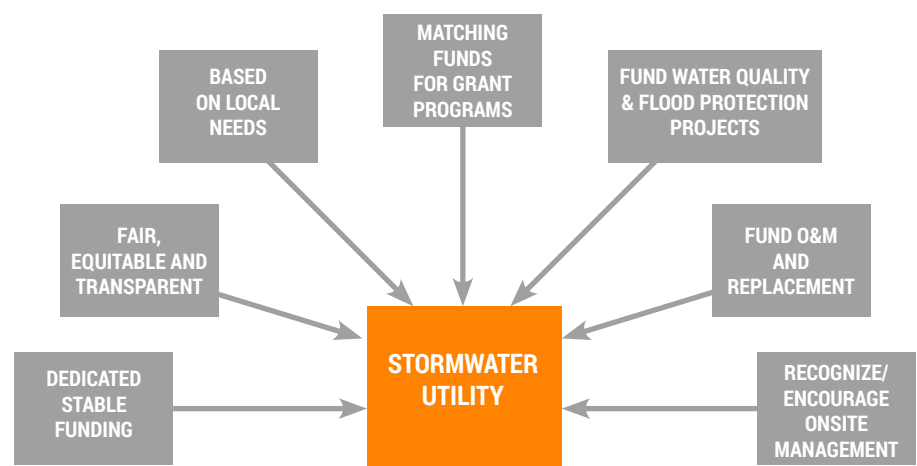
The City of St. Petersburg, Florida owns and operates an extensive Stormwater Management System. The successful collaboration between Stantec and the City resulted in adoption of a new rate structure and credit policies that went into effect on October 1, 2019. The newly modernized single-family residential parcel's (SFRP) fee structure will serve to enhance equity by recognizing impervious area differentials across the single-family residential parcels. The project included a detailed revenue sufficiency analysis (RSA) to evaluate stormwater rate revenues over a multi-year projection period.

### STORMWATER USER FEES: WHEN 'ONE SIZE FITS ALL' NO LONGER FITS

From changing stormwater regulations and urban sprawl to increased storm activity and flooding, municipalities across the United States already have plenty of water-related headaches. Add aging infrastructure to the mix and you have the perfect storm. And with no slowdown expected in the population, impervious surfaces will continue to rise. Treating stormwater management responsibility and as both a physical—and financial—resource is going to be crucial.

While many communities across the country have established stormwater utilities, many more do not and may be unsure of how or where to begin—and how to justify these utilities to the public. As stormwater utilities continue to grow in popularity, the more mature organizations are becoming more adept at capturing these negative externalities and incorporating a fee structure that ideally curbs non-resilient behavior or at least collects fees when it does not. Even better, the most well-run stormwater utilities are incentivizing more responsible behavior and investing in systems that will continue to perform well over the long term.

### BENEFITS OF A STORMWATER UTILITY





## STORMWATER USER FEE EVOLUTION

The City of St. Petersburg, Florida currently owns and operates an extensive Stormwater Management System that provides services within city limits. Management includes essential planning, engineering, design, construction, operations, maintenance, inspection, permitting, and enforcement activities that manage stormwater quantity and quality. Each of these activities are critical to mitigate flooding, protect individual and personal property, manage the water quality of receiving waters, and comply with federal, state, and local regulatory requirements.

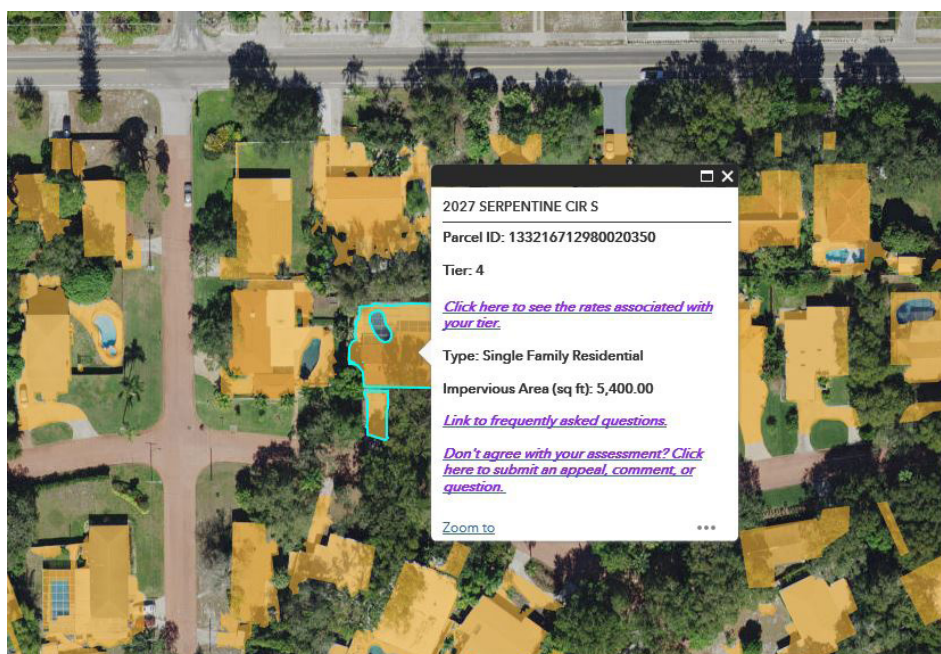
Since the 1990s, the City's stormwater utility has generated revenues from stormwater user fees. The City had used a "one-size-fits-all" approach to charging residential customers for stormwater service since its inception. While charging the same fee for all residential parcels had limited the complexity of administration, key stakeholders within the city expressed concern over the fairness and equity of the approach. At the same time, City Council was asking for ways to incentivize green infrastructure to reduce the volume of stormwater entering Tampa Bay.

## A NEW DAY

To accomplish this, multiple innovative solutions were needed to create a transparent, equitable recovery of increasing stormwater management costs and successfully engage citizens in the process. A new statistically-sound tiered rate structure for residential customers was required, and a menu of green infrastructure options was developed to address the Council's desire to offer a

robust credit and incentive program. The development of a Stormwater Review and Appeals Portal where customers could review their impervious area and billing tier in advance of rate adoption was a top priority to convey transparency and fairness to the community.

There were several challenges that precipitated this comprehensive review of the city's stormwater fee approach and underlying data: (1) impervious area measurements were mostly collected in 1989 and were not representative of current conditions; (2) revenue requirements increased due to capital projects to address flooding and water quality issues; (3) current flat rate fee structure for residential properties reduced equity between residential parcels with large variation of impervious area; and 4) Non-Single Family Residential parcels were charged on their impervious surface area measurement.



**A very thorough web portal was designed to allow citizens to easily review their impervious area, see frequently asked questions, and submit an appeal, comment, or question.**





## GRAY OR GREEN, THAT WAS THE BIG QUESTION

Prior to developing a more equitable rate structure, implementation of city-wide single-family residential parcel's (SFRP) impervious area data by parcel was needed. In most cases, impervious surface area for non-SFRP was based on measurements calculated in 1989.

With such a gap in time since the most recent measurement of impervious area, multiple sets of data were pulled, produced, and analyzed. In order to create a city-wide database for each parcel, this analysis measured both single-family and non-single-family parcels. Unfortunately, the previous direct measurements that would be comparable to the new raw measurements were not available. However, a comparison between the total area effectively billed in Fiscal Year 2018 and the newly measured impervious area was possible.

What was found? New measurements showed 14% or 55 million sq. ft. more impervious area had been measured than was being billed. These differences ranged from very minor updates for parcels relatively unchanged over time, to very large differences where parcels have had large additions or subtractions of impervious area.

## THE IMPORTANCE OF LOOKING AHEAD

Using our Financial Analysis & Management System (FAMS), the City created a detailed revenue sufficiency analysis (RSA) to evaluate the sufficiency of current stormwater rate revenues over a multi-year projection period.

The RSA provided the basis for a plan of annual rate revenue adjustments necessary to satisfy all financial requirements identified during the projection period from Fiscal Year 2020 through FY 2029.

To continue to serve the community, many facets of growth were looked at including: 1) operating and maintenance costs; 2) capital improvement program costs; 3) existing and new debt service expenses and corresponding net income to debt service coverage ratios; and 4) adequate operating reserves. The City had anticipated borrowing \$2 million in Fiscal Year (FY) 2020 with additional debt needed in future years to support capital needs. As such, the RSA identified the need for an increase in stormwater revenues of 9% in FY 2020 to satisfy the identified cost of service. The detailed cost of service and revenue requirement results from the RSA were used as the basis of the stormwater fee and credit/incentive programs calculated.

## Stantec and the City developed a plan to navigate through the key challenges:

- 1) digitally map impervious area for all parcels in the city limits to establish a master Geographical Information System (GIS) and calculate impervious area;
- 2) develop a sustainable ten-year financial management program;
- 3) perform a cost-of-service analysis to ensure equity between customers;
- 4) develop a tiered rate structure and updated fee calculation methodology;
- 5) integrate utility billing system with updated impervious area; and
- 6) update credit program to recognize benefits of onsite systems and incentivize green infrastructure.

**FAMS**  
Financial Analysis & Management System | By Stantec

**Cloud-Based Financial Analysis & Management System (FAMS)**

- 24/7 immediate access by multiple users
- Enhanced scenario management capabilities
- Improved efficiency that boosts your productivity
- Intelligent and easy-to-use interface beyond an Excel Rate Model

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Two separate fee structures were recommended for SFRP and Non-SFRP. A tiered fee structure was recommended for SFRP which provided simplicity, while recognizing impervious area differentials. Tiers allowed the City to recognize differentials in SFRP impervious area that are of statistical importance and provide administratively efficient price signals across more than 75,000 individual parcels. A four-tier configuration created (as shown in Figure 1 on the following page) and provides equity to customer classes over the current fee structure.

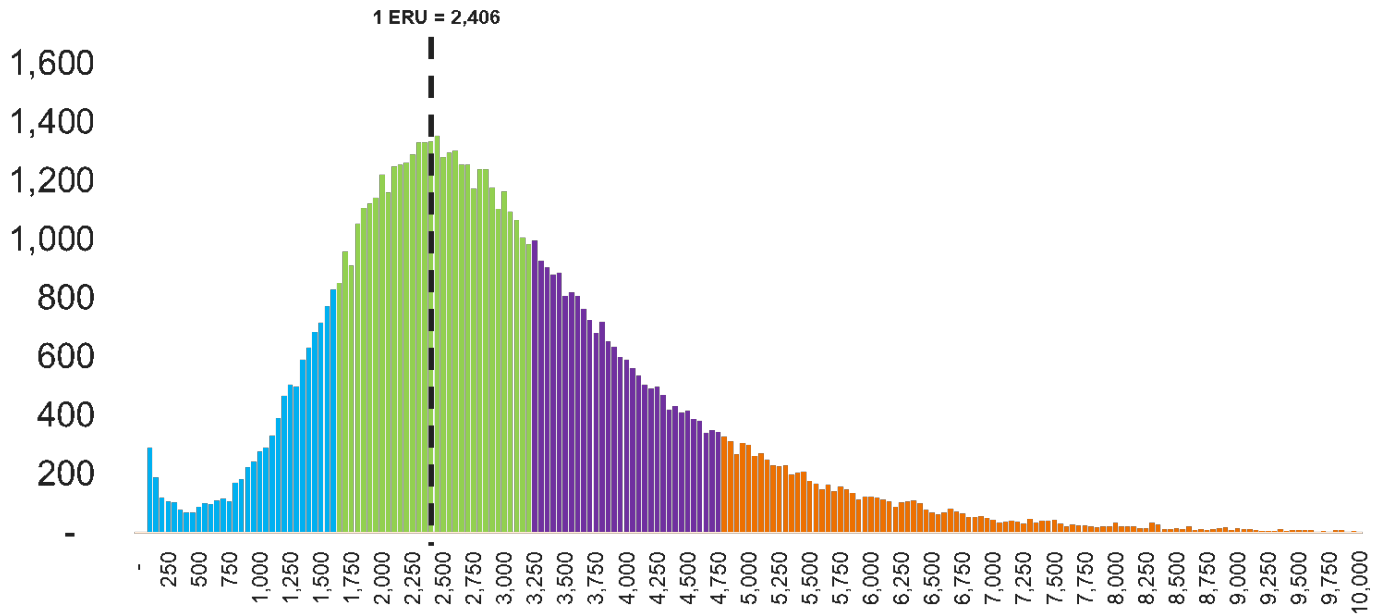


Figure 1: SFRP impervious area distribution and four tier breakpoints.

Configuring the tier breakpoints based on statistical distribution ensures the tier break points fit the property data and were not arbitrary and capricious. A parcel-specific fee structure was recommended for Non-SFRP. This approach ensured that each parcel's unique impervious footprint is accounted for and the fee levied is proportional, given the wide array of parcel configurations in this customer class.

### GOING GREENER

Next, a review of the City's existing Rainwater Rebate program was performed to identify opportunities to encourage installation of green infrastructure. To determine the appropriate monetary value of the stormwater fee credit or incentive, it was first necessary to estimate the reduced costs incurred by the City as

a result of the property owner's on-site management activities. A cost of service analysis looked at base costs vs. quality and quantity costs.

The City decided to update their policy by offering credits for stormwater management systems and parcels that discharge directly to tidal water basins. A stormwater incentive – a one-time rebate towards the purchase and installation of qualifying green infrastructure – was given to those updates that will provide an annual benefit to the City's stormwater management utility over the life of the infrastructure. Rain barrels, rain totes, and rain gardens were approved as items a homeowner could claim a rebate. The values of the incentives were developed based on the potential reduction in costs associated with reduced stormwater contributions from parcels implementing the control activities.

#### Credits for Proper Mitigation Facilities

Residents were offered one-time incentives for installing mitigation facilities on their property, helping the city reduce volume and pollutants.

#### General Credit Requirements

- Proper technical documentation is required
- Proof of biannual inspection and maintenance
- \$300 application fee; \$100 renewal fee



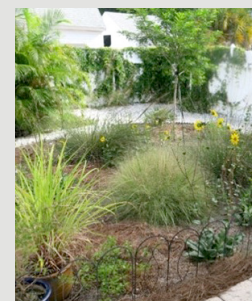
#### Rain Barrel

- \$50 rebate, up to 2 annually; 6 max



#### Rain Tote

- \$100 rebate, 1 annually; 2 max



#### Rain Garden

- \$100 rebate, 1 annually; 2 max



### LESSONS LEARNED FROM CUSTOMER ENGAGEMENT

This new stormwater fee structure needed to not only be easy for the community to administer, but more importantly, easy for the community to understand. Once the tiered rate structure was developed, extensive public outreach was performed to inform the public about the new tiered system, share ways property owners could review their impervious area, and address concerns regarding the new methodology before new rates became effective. Multiple mechanisms were used to advertise six public meetings including the City's social media pages, billboards, the City's website, neighborhood meetings, and the neighborhood app Nextdoor. A very thorough web portal was designed to allow citizens to easily review their impervious area, see frequently asked questions, and submit an appeal, comment, or question.

In the end, this successful collaboration between Stantec and the City resulted in adoption of a new rate structure and credit policies that went into effect on October 1, 2019. The newly modernized SFRP fee structure will serve to enhance equity by recognizing impervious area differentials across the single-family residential parcels.

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Design with community in mind

### APPEALS FORM

St. Petersburg Impervious Appeal

**Parcel ID**  
133216712980020370

**Address**  
7090 21ST ST S

**Owner's Name**

**Owner's Phone #**  
Ex. 123-456-7890

**Owner's Phone #**  
Ex. 123-456-7890

**Owner's Email**

**Today's Date**

**Reason for Contacting the City**

I would like to appeal the Impervious Surface Area Calculation on my property

I have another issue related to Stormwater Utility

**Location**  
Your location has already been set and placed by your address. Please click Submit.

27.70419187 -82.66056044

Please be aware that by not submitting your name and/or email, the City of St. Petersburg will not be held accountable for providing you information on the outcome of your appeal.

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