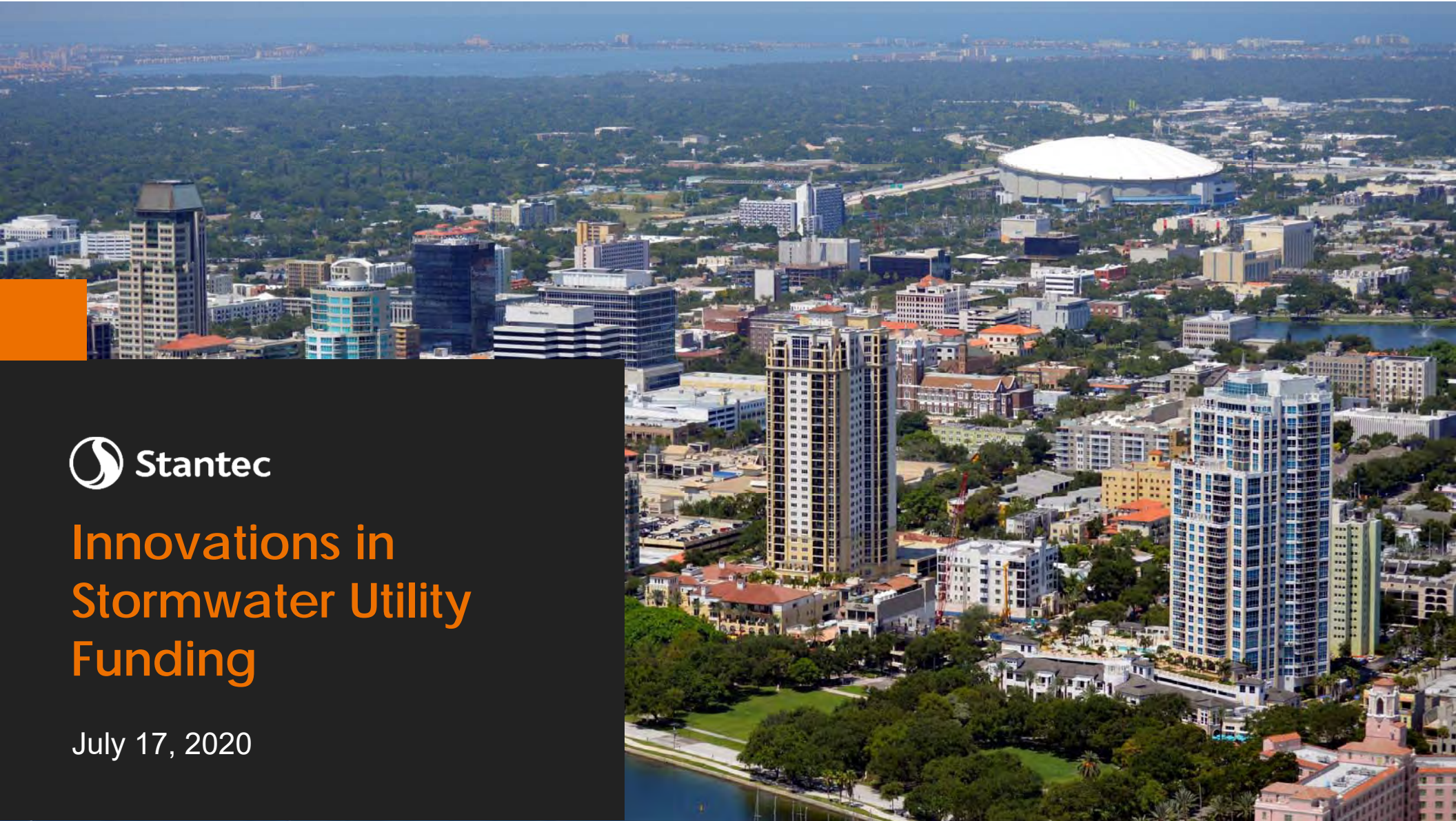




Innovations in Stormwater Utility Funding

July 17, 2020





Stantec Team



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Toolbox



Dynamic Forecasting Model



GIS Technology



Innovative Fee Structures



Credits and Incentives



Customer Engagement

Panel

Funding Options

Assumptions

CIP

KPI

Exp Summary

Scenarios

Panel

| | FY 2020 | FY 2021 | FY 2022 | FY 2023 | FY 2024 | FY 2025 | FY 2026 | FY 2027 | FY 2028 | FY 2029 | FY 2030 |
|--|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Storm Water Rate Plan | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| Single Family Storm Water Bill | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 | \$1.90 |
| General Fund Baseline Funding Adjustment | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% | 0.00% |
| General Fund Support (\$M) | \$9.49 | \$9.84 | \$10.19 | \$10.48 | \$10.82 | \$11.17 | \$11.54 | \$11.91 | \$12.30 | \$12.70 | \$13.12 |

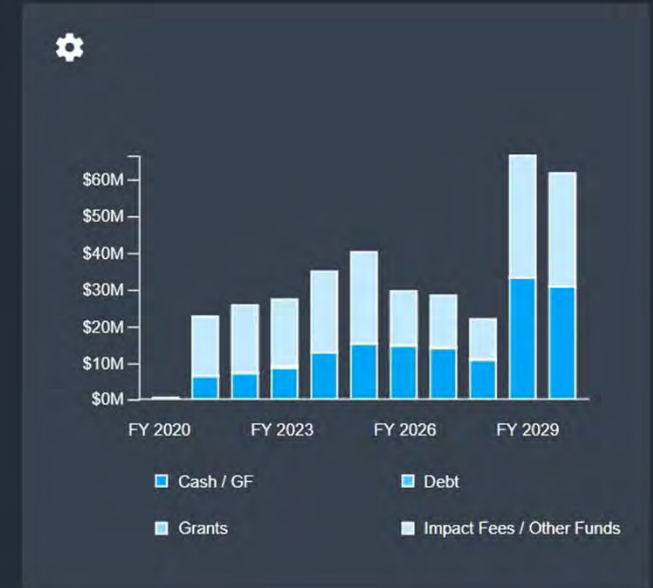
Operating Fund (Cash)



Funding Gap Analysis



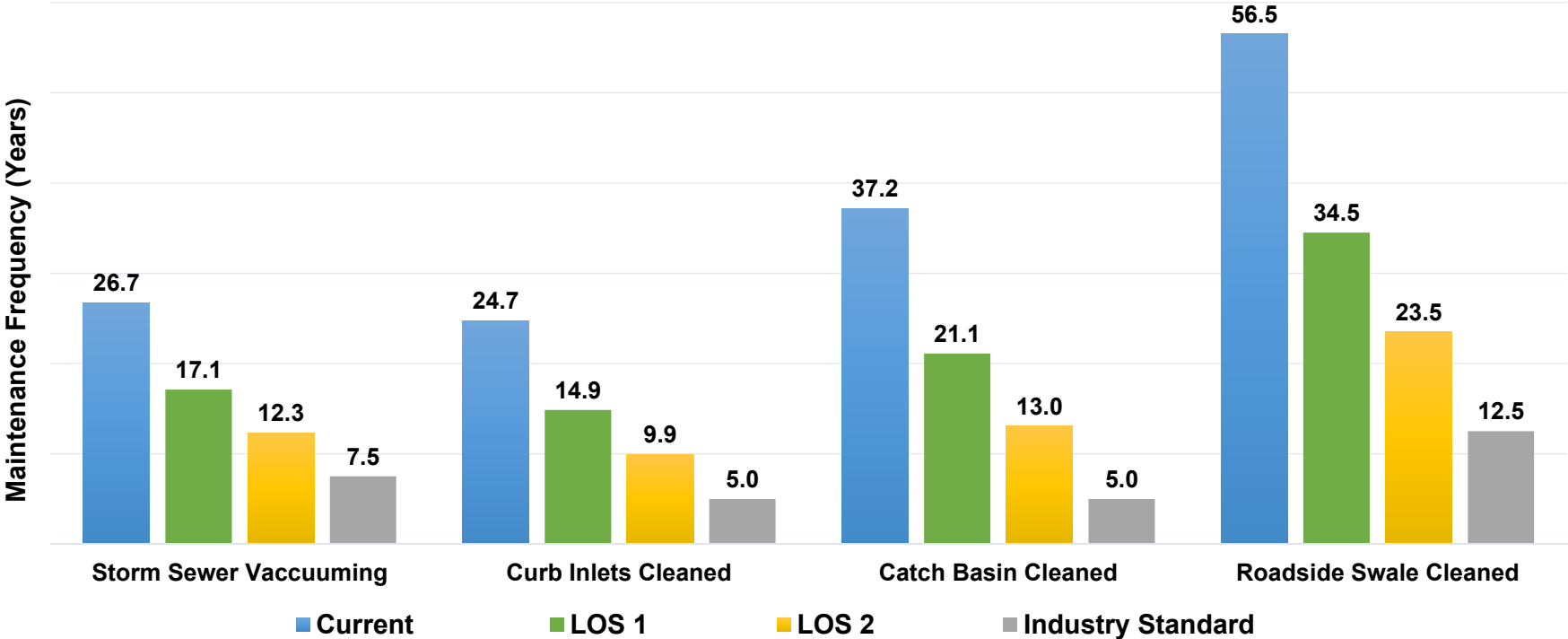
CIP Funding



Revenues Vs. Expenses

Level of Service Analysis

| | Monthly Stormwater Fee Per ERU |
|-------------------|--------------------------------|
| Current | \$4.58 |
| LOS: 1 | \$7.50 |
| LOS: 2 | \$9.50 |
| Industry Standard | \$10.00 |
| All Capital Needs | \$10.90 |





Toolbox



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Innovative Fee Structures



Credits and Incentives



Customer Engagement

Impervious Area GIS Tool

- Best measure of stormwater contribution (volume and rate)
- Easy to understand, defensible and equitable approach for fees



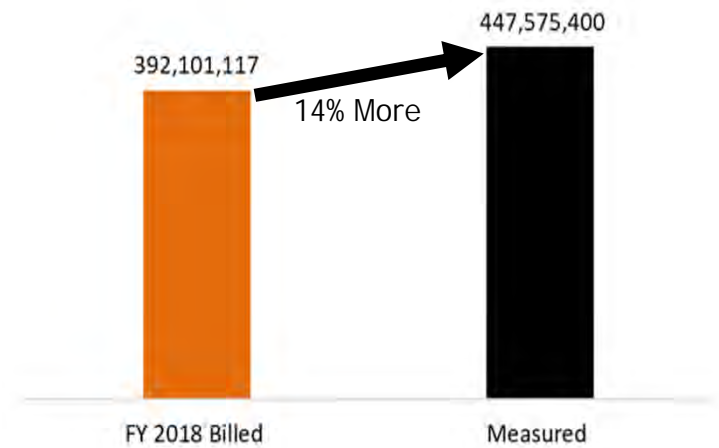
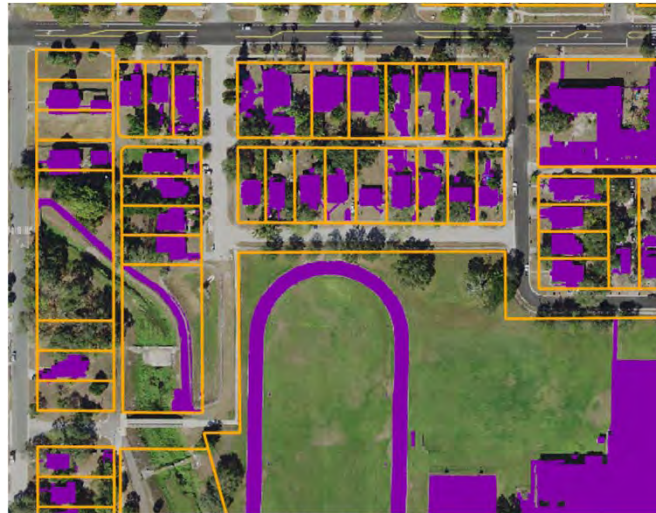
IMPERVIOUS AREA
Rooftops, parking, driveway,
patio, tennis and basketball
courts, etc.

Machine Learning

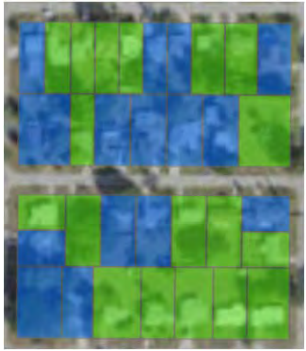
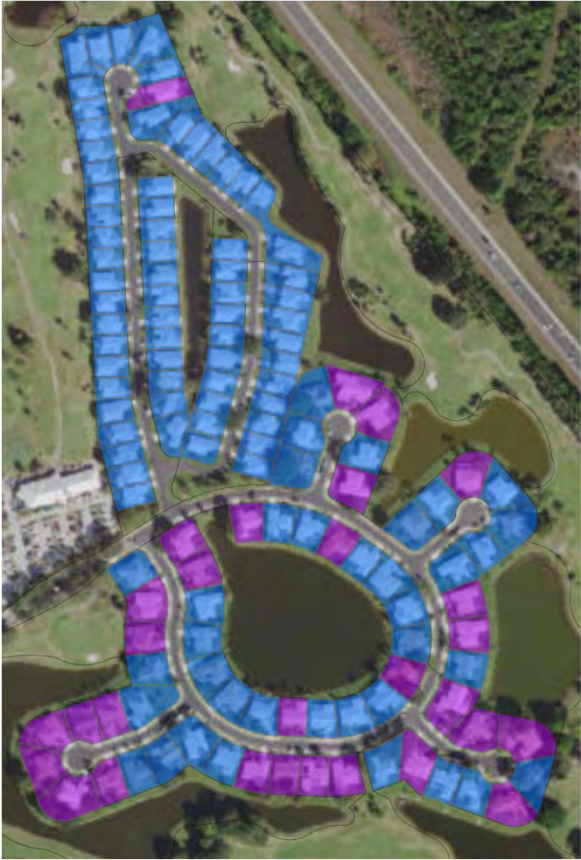
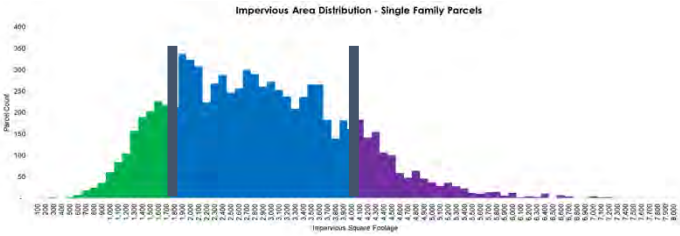
Segmented imagery with objects of similar pixels extracted and grouped.



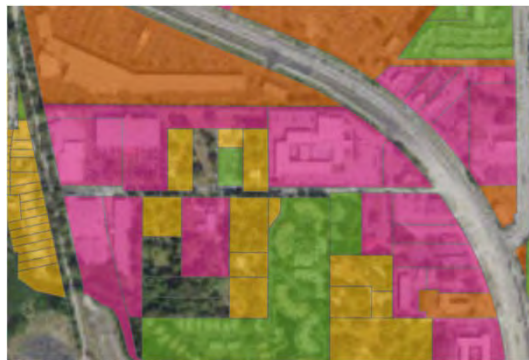
Impervious area with parcel lines used to calculate impervious area per property.








Residential Impacts



Full Customer Impacts



| | |
|---|----------------------|
|  | High Intensity Co... |
|  | Industrial |
|  | Low Intensity Co... |
|  | Multi-Family |
|  | Single Family |





Toolbox



Dynamic Forecasting Model



GIS Technology



Innovative Fee Structures



Credits and Incentives



Customer Engagement

Stormwater Cost Allocations

Taxable Value

Dwelling Units

Gross Area

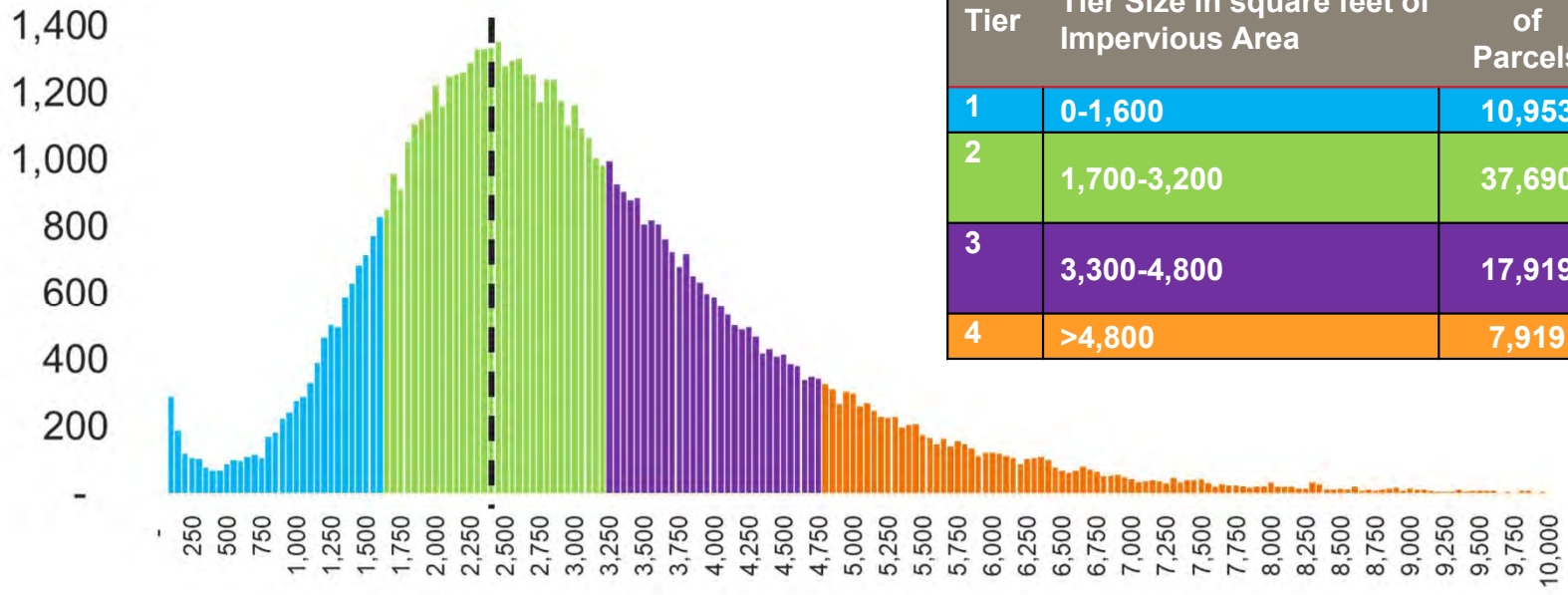
Pervious Area

Impervious Area



St. Petersburg, Florida

Tiered Fee Structure



| Tier | Tier Size in square feet of Impervious Area | Number of Parcels | Percentage of Parcels | SFU Basis |
|------|---|-------------------|-----------------------|-----------|
| 1 | 0-1,600 | 10,953 | 15% | .50 |
| 2 | 1,700-3,200 | 37,690 | 51% | 1.00 |
| 3 | 3,300-4,800 | 17,919 | 24% | 1.57 |
| 4 | >4,800 | 7,919 | 10% | 2.34 |

Stormwater Cost Allocations

Taxable Value

Dwelling Units

Gross Area

Pervious Area

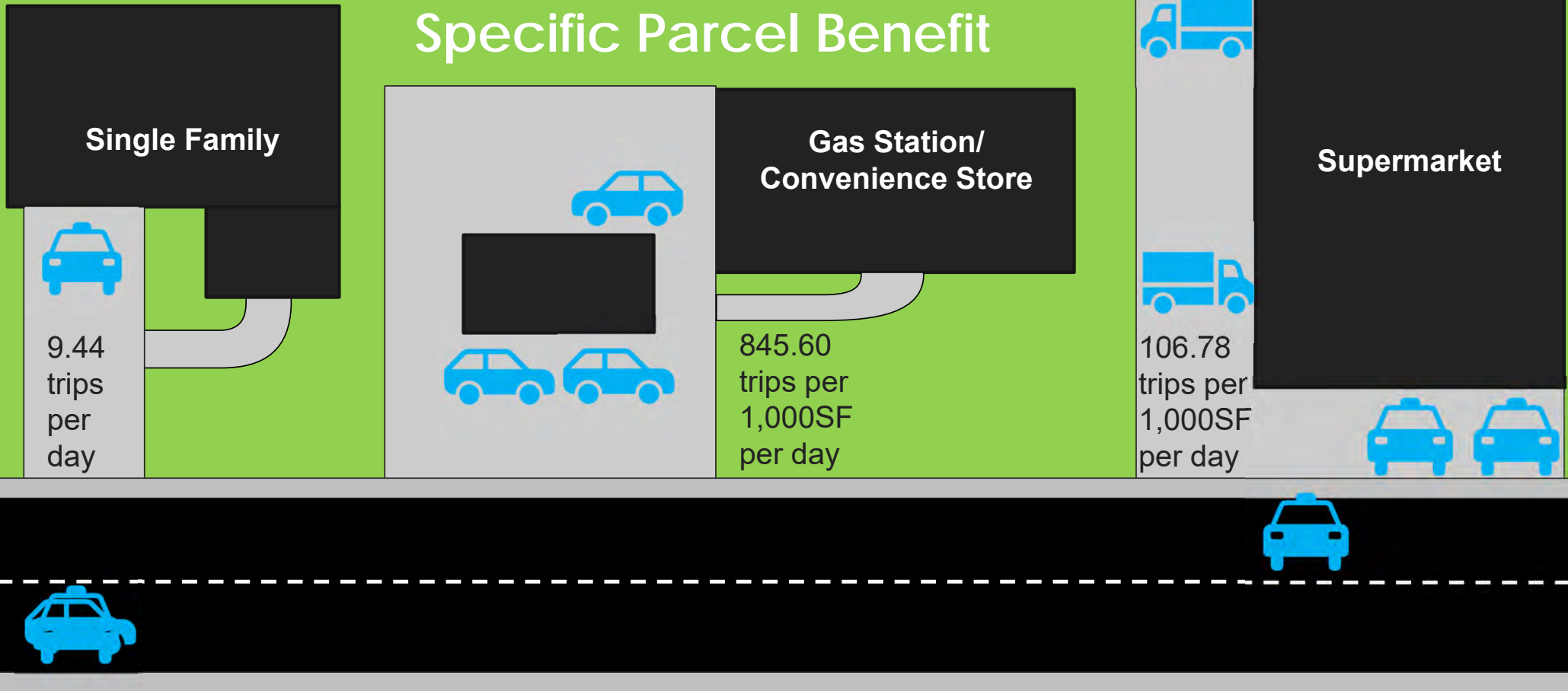
Impervious Area

Trip Generation

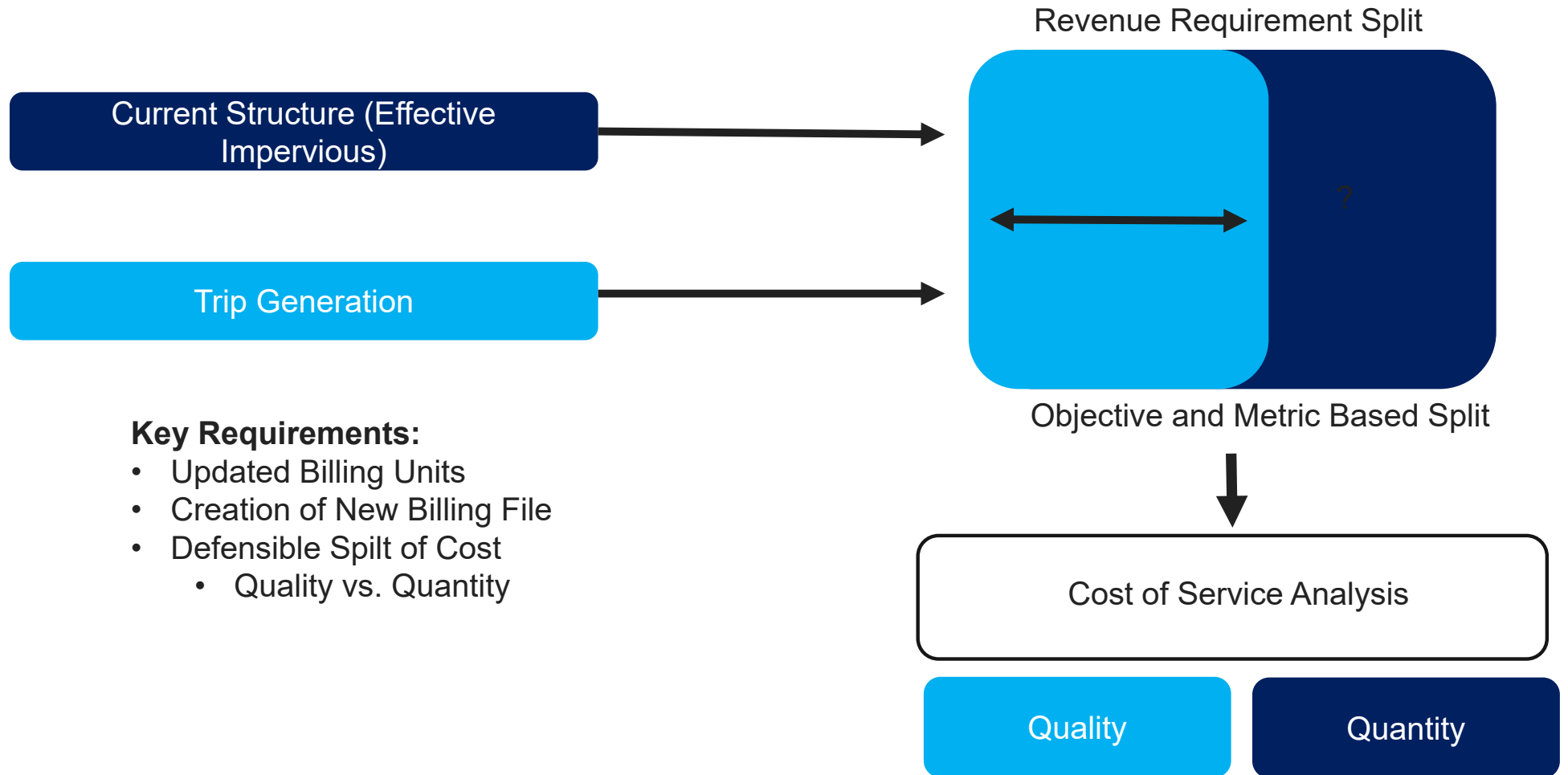


Ft. Lauderdale, Florida


ITE Trip Generation Rates & Specific Parcel Benefit



The Hybrid Fee Model




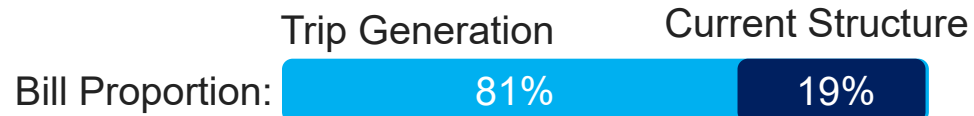
The Hybrid Fee Model

| Single Family Home (1 Dwelling Unit) | Annual | Monthly |
|---|-----------------------------|---------|
|  | Current: \$168.00 | \$14.00 |
| | Calculated: \$258.37 | \$21.53 |
| | Change: \$90.37 | \$7.53 |



The Hybrid Fee Model

| Commercial Example (SQFT) | | Annual | Monthly |
|---|--------------------|-------------|------------|
|  <p>Building 120,158 SQFT Parcel 82,526 SQFT</p> | Current: | \$3,208.30 | \$267.36 |
| | Calculated: | \$22,503.23 | \$1,875.27 |
| | Change: | \$19,294.93 | \$1,607.91 |



Stormwater Cost Allocations

Taxable Value

Dwelling Units

Gross Area

Pervious Area

Impervious Area

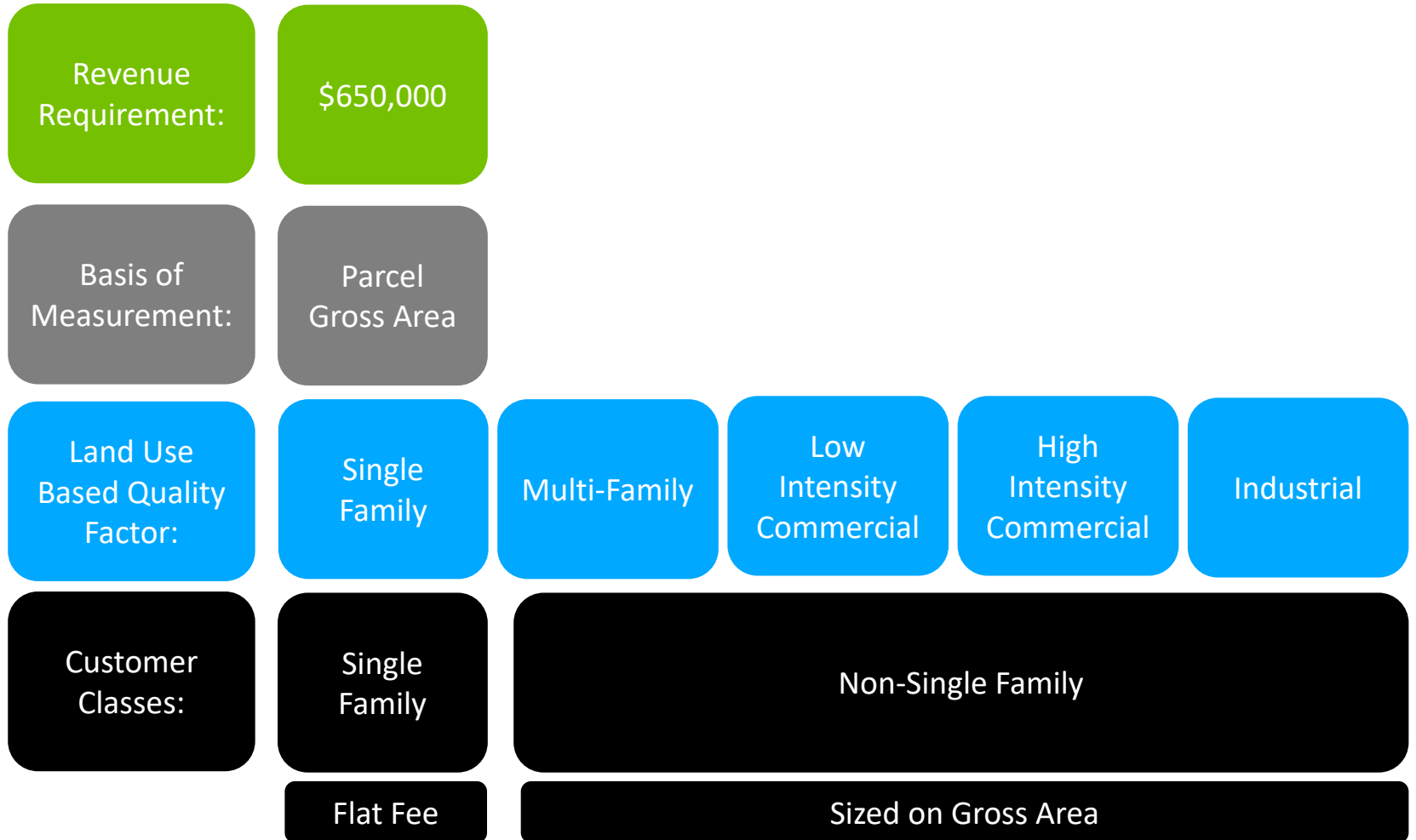
Trip Generation

Water Quality Loading



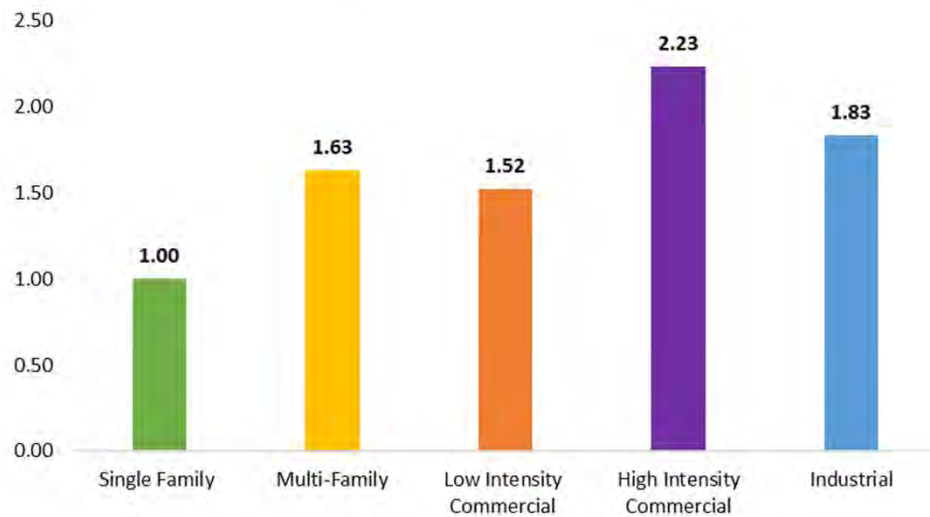
Venice, Florida

Potential Water Quality Fee Structure



Potential Water Quality Fee Structure

Weighted (.2 TN & .4TP& .4TSS)



WQ Fee Per Gross Acre



Data Source: Harper and Baker, 2007, *Evaluation of Current Stormwater Design Criteria within the State of Florida*, FDEP, Environmental Research & Design, Inc.



Toolbox



Dynamic Forecasting Model



GIS Technology



Innovative Fee Structures



Credits and Incentives



Customer Engagement

Cost of Service Analysis



Memorandum

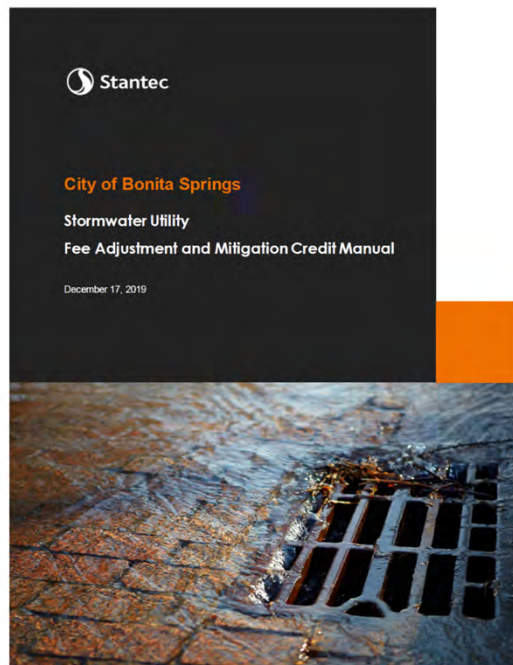


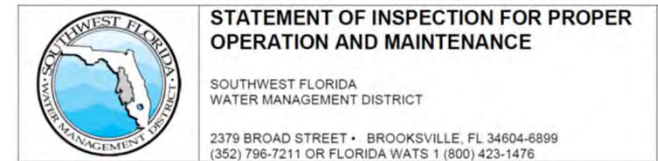
Table 1 - FY 2019 Stormwater Utility Budget Allocation

| Budgetary Item | Cost Components | | |
|-----------------------------------|--------------------|--------------------|--------------------|
| | Base | Quantity | Quality |
| 1293 Stormwater Administration | \$4,485,692 | | |
| 1297 Line Cleaning | | \$894,701 | |
| 1301 Deep Line Repair | | \$444,088 | |
| 1305 Shallow Line Repair | | \$337,023 | |
| 1309 Ditch Cleaning | | \$638,224 | |
| 1313 Heavy Equipment | | \$1,868,225 | |
| 1317 Seawalls & Bridges | | \$301,084 | |
| 1321 Mowing Operations | | \$720,501 | \$720,501 |
| 1325 Street Sweeping | | | \$1,515,830 |
| 1329 FDOT Sweeping | | | \$252,428 |
| 1333 Aquatic Weed Control | \$235,224 | | |
| 1337 Equipment Service Center | \$346,184 | | |
| 1341 Eng & Cap Imp Administration | \$374,440 | | |
| 1349 Engineering Design | | \$139,560 | |
| 2343 Streetscape Maintenance | | | \$1,513,132 |
| Existing Senior Debt | \$2,105,230 | | |
| Cash Funded Capital | \$1,150,000 | | |
| Contribution to Reserves | \$524,187 | \$322,067 | \$241,209 |
| Total | \$9,220,957 | \$5,665,473 | \$4,243,099 |
| Percentage of Total | 48% | 30% | 22% |



Mitigation Facility Credits

- General Credit Requirements
- Proper technical documentation is required
- Proof of biannual inspection and maintenance
- \$100 application fee; \$50 renewal fee



Stormwater Management System Credit (up to 52% of fee):

- Benefit to City is reduced volume and pollutants
- Credit = water quantity/quality portion of expenses, and scaled by % of volume stored for a 100-yr 24hr event
 - Volume has to exceed 10-yr 1hr event (standard)

Tidal Water Discharge Credit (Up to 52% of fee):

- Benefit to City is reduced volume and pollutants
- For properties discharging directly to tidal waters and treated to Outstanding Florida Waters criteria
- Credit = water quantity/quality portion of expenses, scaled by area of parcel flowing to tidal waters



Incentives

- Why?
 - Promote current programs and encourage green practices
 - Reduce admin requirements
- How?
 - Maximum funding for incentives budgeted annually
 - Set amount or calculate based on present value benefit



Permeable
Pavement
\$300



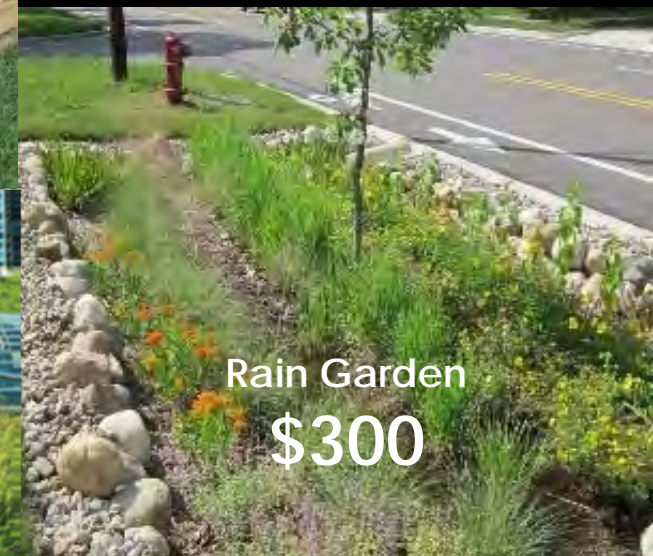
Rain Barrel
\$25



Green Roof
\$300

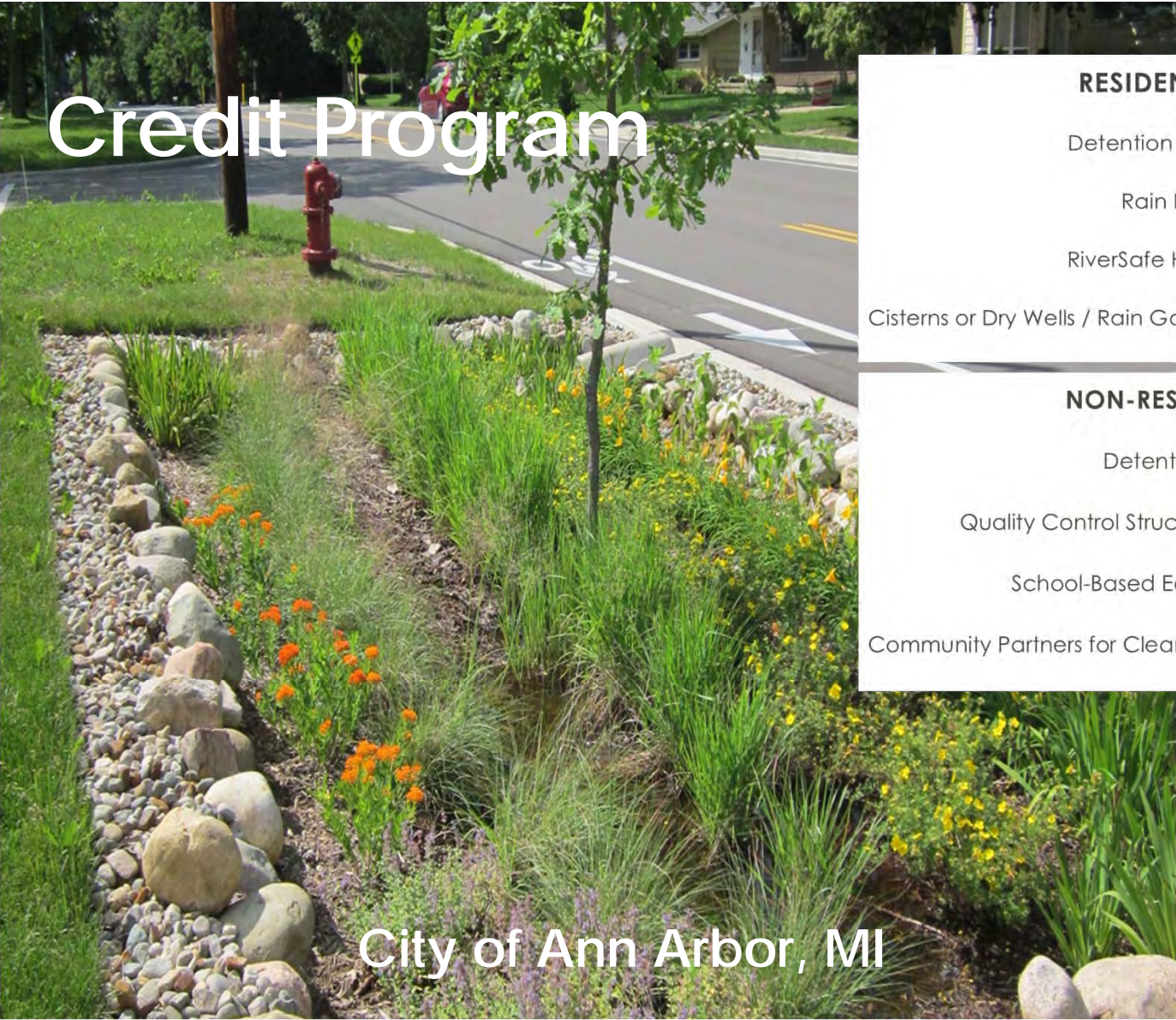


Rain Tote
\$100



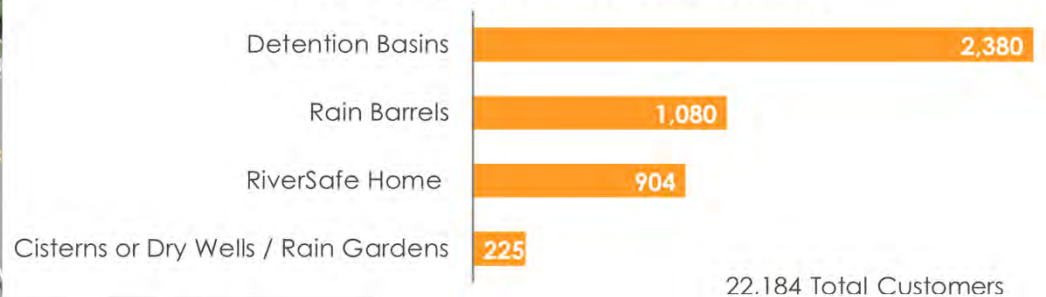
Rain Garden
\$300

Credit Program

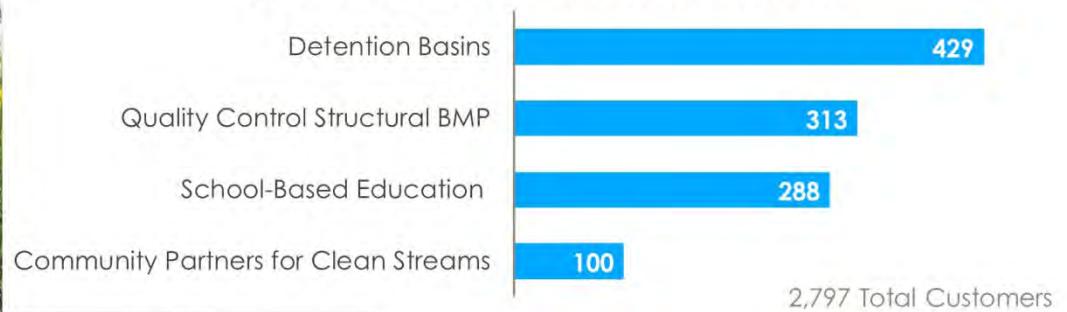


City of Ann Arbor, MI

RESIDENTIAL CREDIT PARTICIPATION



NON-RESIDENTIAL CREDIT PARTICIPATION



Future program possibilities:

- Green Roofs (Reduce I.A.)
- Tree Canopy Credits (Non-Res)



Toolbox



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Credits and Incentives



Customer Engagement



Engagement Tools



**STAKEHOLDER
WORKING GROUP**



**WEBSITE WITH
CUSTOMER PORTAL**

Stakeholder Working Group



- Council appointed through Resolution
- Representatives of each customer class:
 - Industrial
 - Golf course community
 - Single family
 - Manufactured homes
 - Condo
 - Commercial/business
- Makes recommendations to Council



Customer Portal

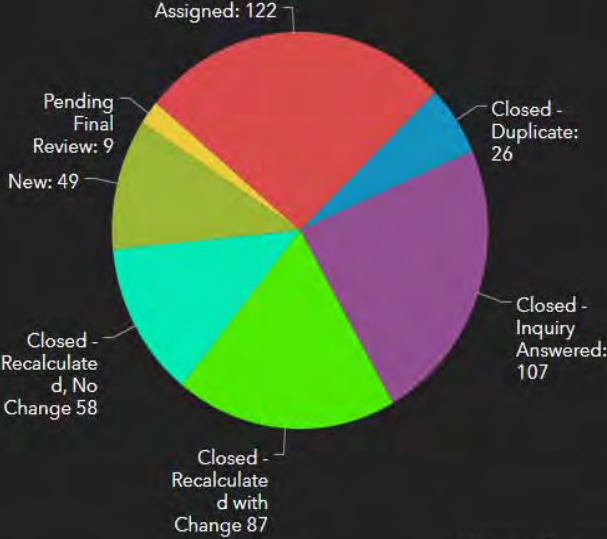


st.petersburg Stormwater Impervious Surface Viewer

- Click on the shaded area to view parcel information -

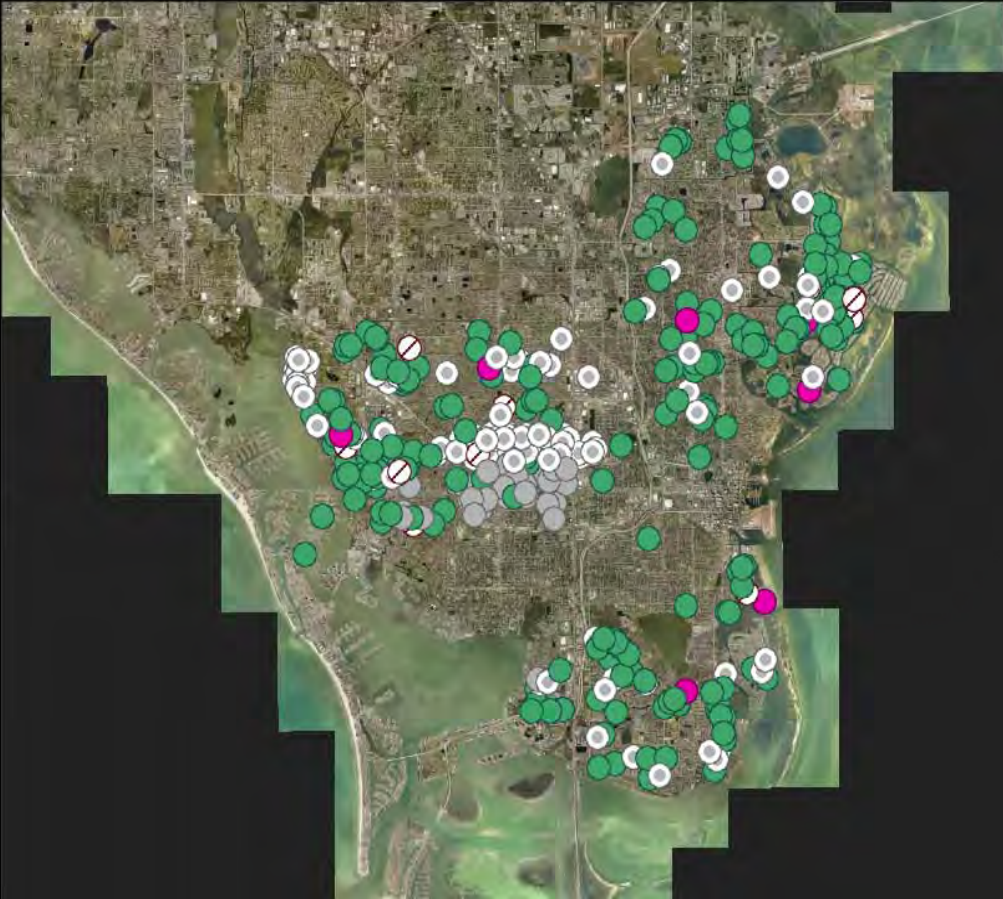


Appeals Status



Last update: a few seconds ago

Total Appeals 459 out of 100,007 Parcels



Appeals Assigned





Toolbox



**Dynamic
Forecasting
Model**



**GIS Impervious
Data**



**Innovative Fee
Structures**



**Credits and
Incentives**



**Customer
Engagement**



What else?