

**Solid Waste Expenditure Benchmark Study
2021**

Resource Recovery and Recycling Authority of Southwest Oakland County



Introduction and Executive Summary

The Resource Recovery and Recycling Authority of Southwest Oakland County (RRRASOC) recently evaluated solid waste related expenditures in the RRRASOC communities and conducted a comparison to the solid waste related expenditures of other communities in southeast Michigan.

We reviewed municipal sanitation/solid waste expenditures as expressed in the current municipal budgets of communities in southeast Michigan. The expenditures of thirty-nine communities, as well as historical expenditure data for the RRRASOC communities, are included in the analysis.

In summary, we found the following:

- Solid waste expenditures budgeted for the current fiscal year by the RRRASOC communities total \$13,278,850, which represents \$47.55 per capita or \$179.10 per serviced household unit;
- Expenditures in all of the RRRASOC communities continue to be among the lowest in the region on a per capita and per household basis, with all community expenditures well below the regional average;
- Total annual solid waste expenditures in the RRRASOC communities, when calculated on a per household basis, are nearly \$3.6 million less than they would be if the expenditures were at the median level for the region;
- Among the RRRASOC communities, solid waste program expenditures continue to be well contained, with total budgeted expenditures for FY 2021 - 2022 being only 11.3% above expenditures in FY 2007 - 2008. Per capita expenditures are only 7.3% more than they were fourteen years ago;
- Total solid waste program expenditures for the RRRASOC communities are more than \$4.33 million (28.9%) below where they would have been if annually adjusted for inflation and population growth over the past fourteen years.

Findings

The RRRASOC communities have collectively budgeted \$13,278,850 for solid waste expenditures in FY 2021 - 2022, for an aggregate per capita expenditure of \$47.55 or \$179.10 per serviced household.

Per Capita Comparisons

As depicted in Graph 1, regional per capita expenditures range from \$39.73 to \$261.70, with an average of \$99.74 and a median of \$85.57. RRRASOC communities range from \$39.73 to \$83.77, with an average of \$53.28.

The aggregate expenditure in the RRRASOC communities of \$47.55 per capita is 52.3% below the regional average and 44.4% below the regional median.

Per Household Comparisons

As depicted in Graph 2, regional expenditures per household range from \$137.09 to \$586.61, with an average of \$256.57 and a median of \$227.00. RRRASOC communities range from \$158.66 to \$228.70, with an average of \$182.12.

The aggregate per household cost in the RRRASOC communities of \$179.10 is 30.2% below the regional average and 21.1% below the regional median.

Another way in which to view the expenditures of the RRRASOC communities is to compare them to what the total budgeted expenditures would be if the communities all spent at the median per household level for the region. In that case, total expenditures would be \$16,830,492, or \$3,551,642 (26.7%) higher than budgeted for the current fiscal year.

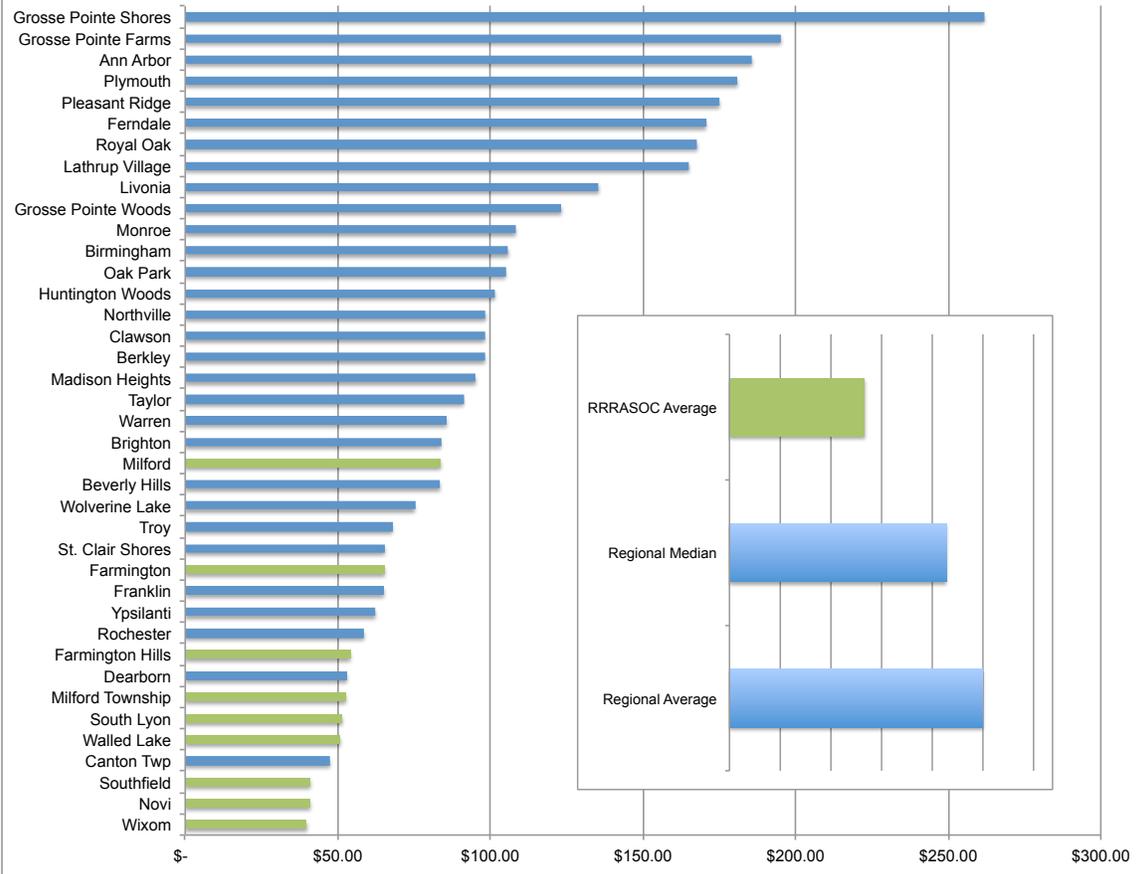
Blended Metric Comparisons

The "blended cost" metric is the average of the first two figures and is designed to provide some mitigation to the influence of housing demographics, providing a more normalized measure of expenditures for purposes of comparisons.

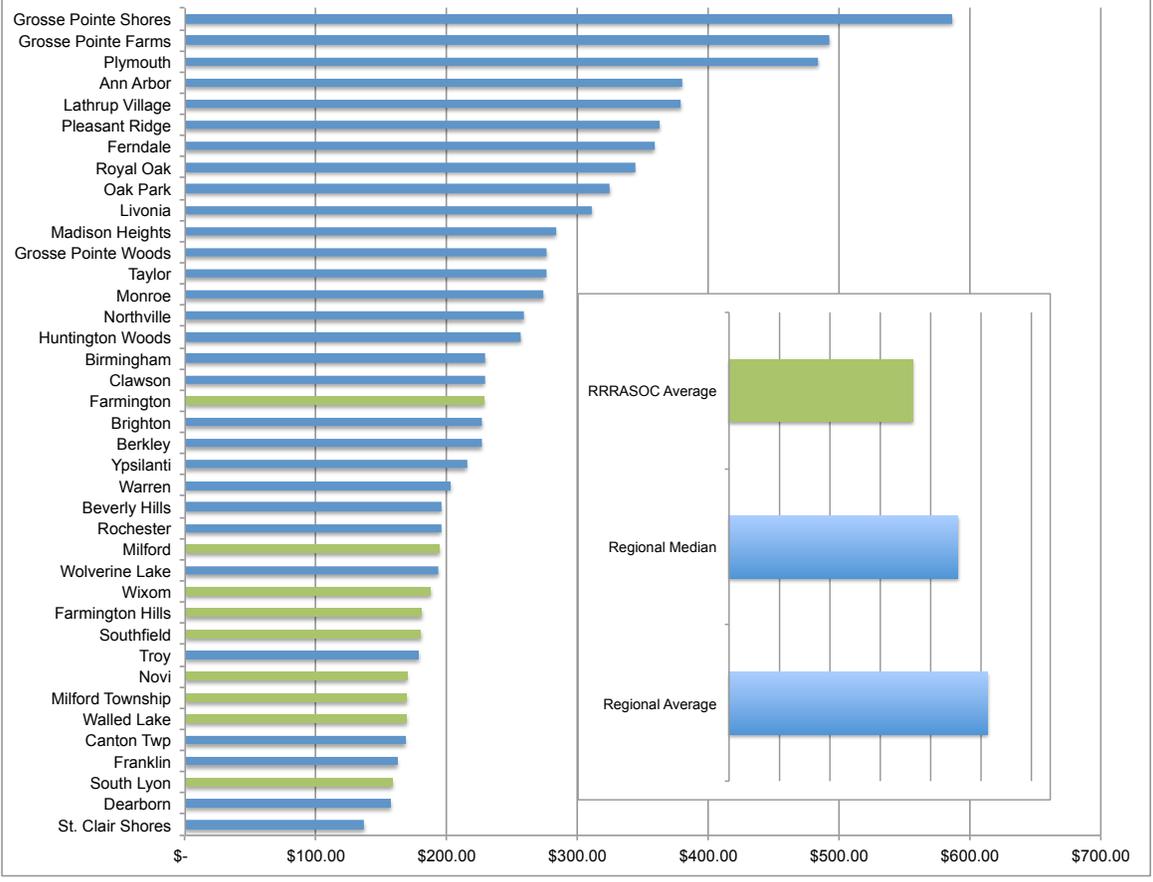
Depicted in Graph 3, the blended cost metric ranges from \$101.26 to \$424.16, with an average of \$178.16 and a median of \$155.40. RRRASOC communities range from \$105.07 to \$147.02, with an average of \$117.70.

The aggregate per blended cost in the RRRASOC communities is \$113.33, which is 36.4% below the regional average and 27.1% below the regional median.

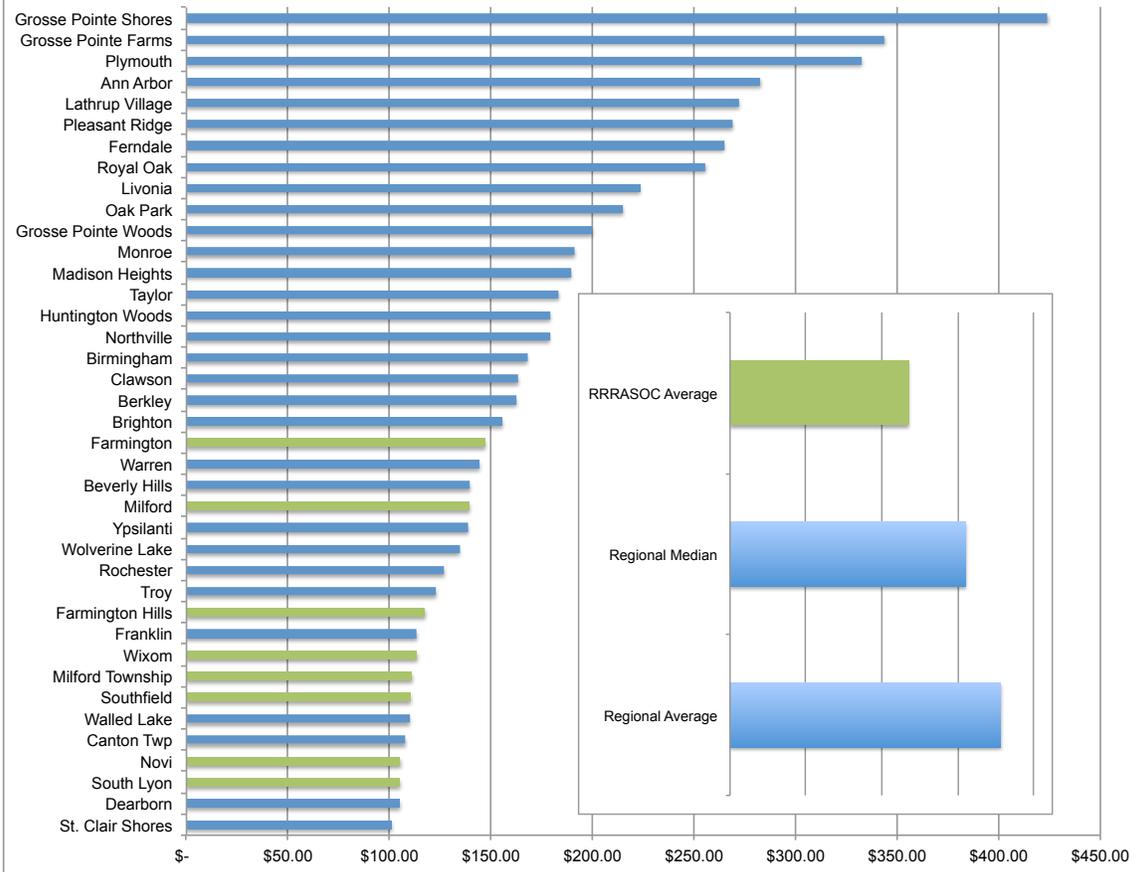
Graph 1
Budgeted Municipal Solid Waste Expenditures Per Capita
FY 2021 - 2022



Graph 2
Budgeted Municipal Solid Waste Expenditures Per Household
FY 2021 - 2022



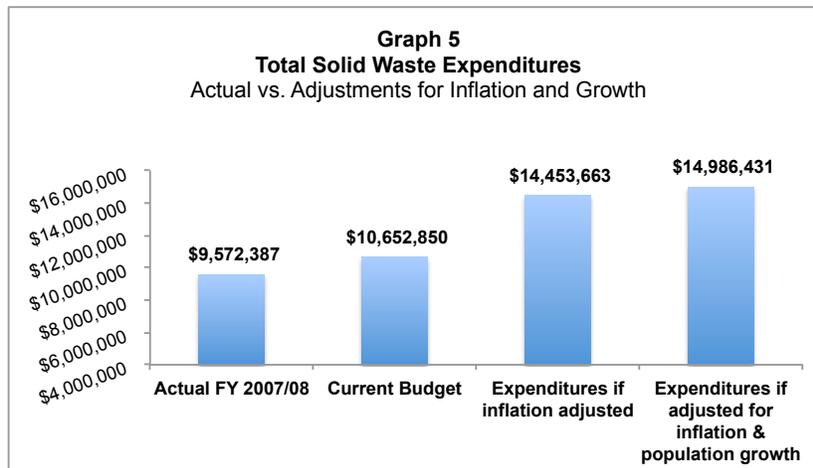
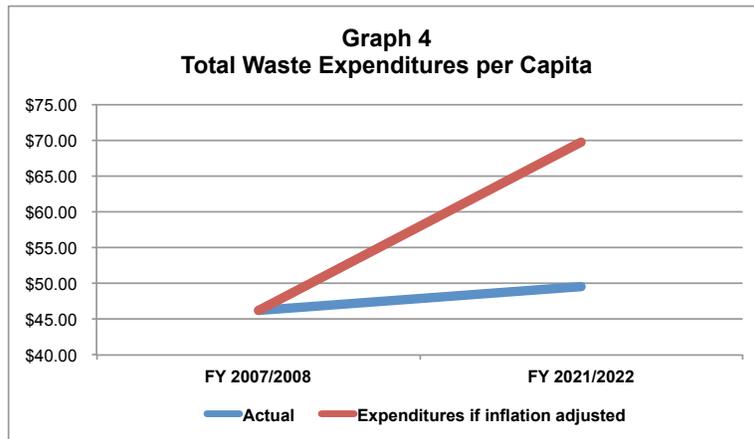
**Graph 3
Blended Cost Metric
FY 2021 - 2022**

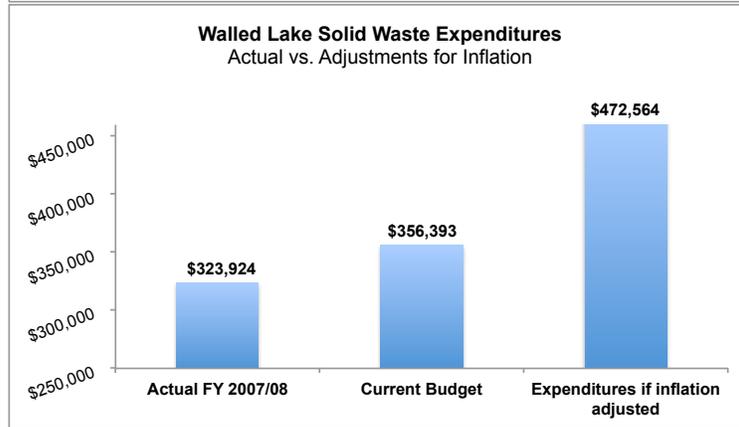
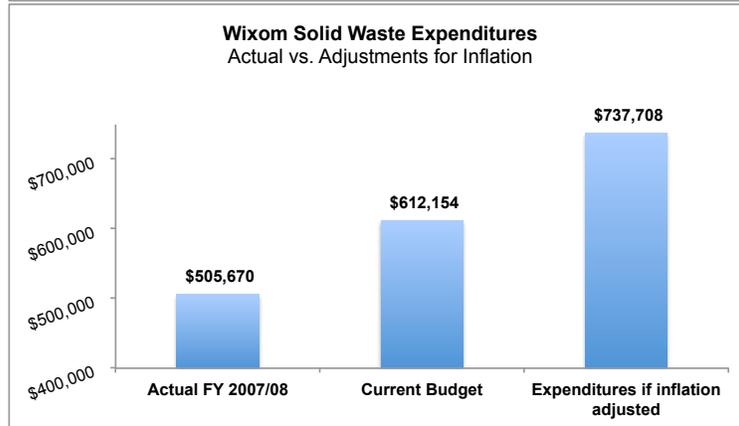
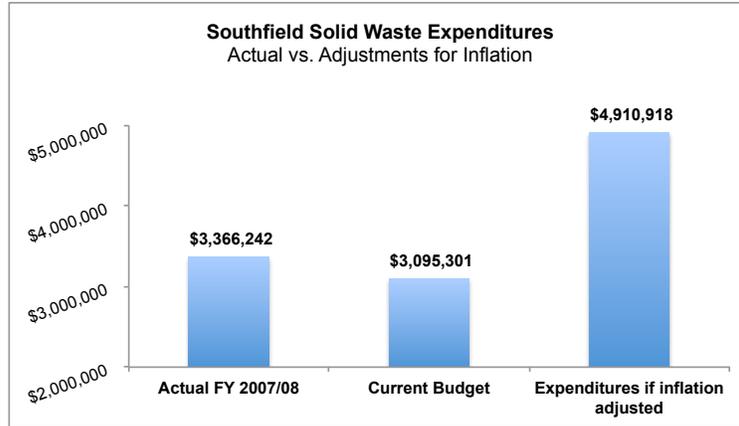
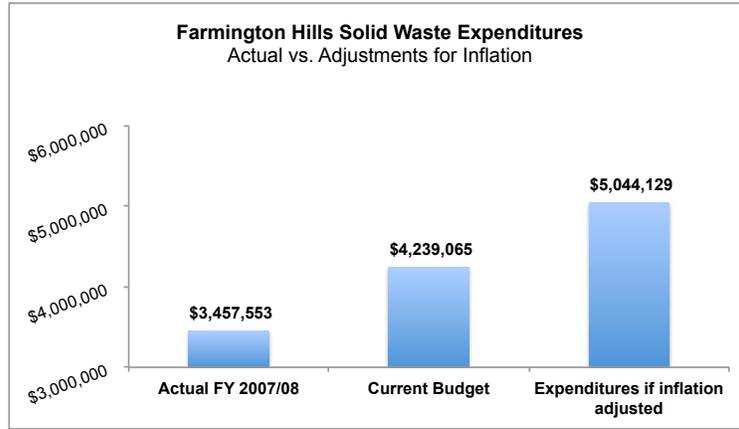


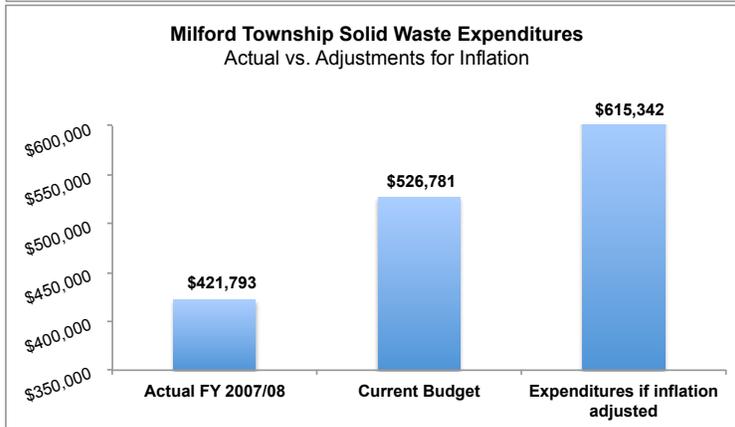
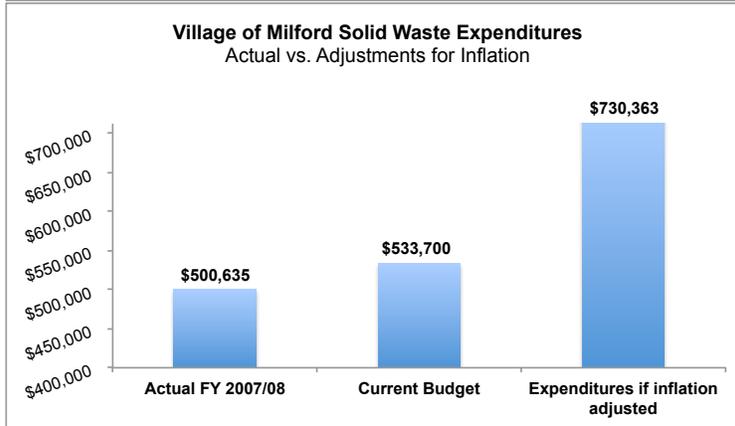
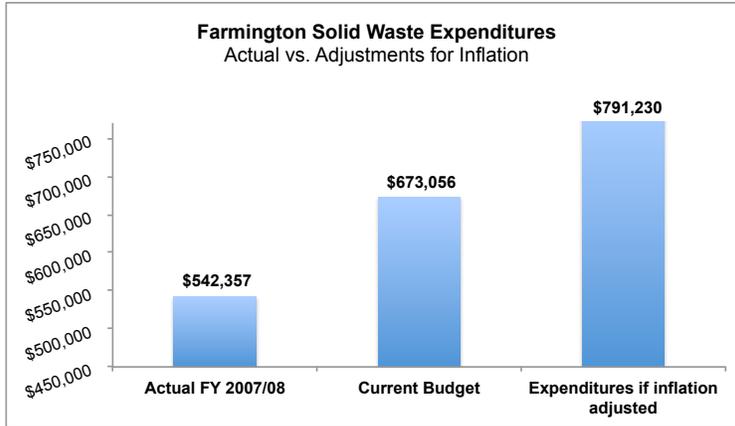
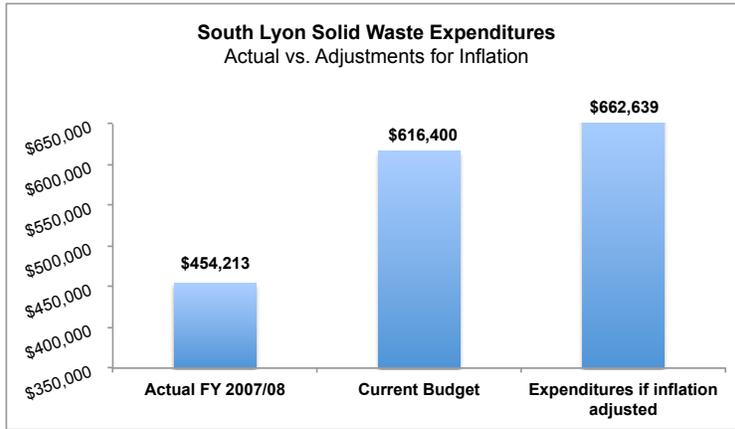
Historical Findings

Total solid waste expenditures in the RRRASOC communities increased from \$9,572,387 in FY 2007 - 2008 to \$10,652,850 budgeted for FY 2021 - 2022, for an increase of 11.3%. When considering population growth, total per capita expenditures only 7.3% more than they were fourteen years ago. Note that the City of Novi is not included in this longitudinal analysis because their curbside program began in 2015.

All eight of the evaluated RRRASOC communities have budgeted expenditures well below inflation-adjusted levels. Had the total FY 2007 - 2008 expenditure level been annually adjusted for inflation as reflected by the *Bureau of Labor Statistics Garbage and Trash Collection Index* and population change, total expenditures would have risen to \$14,986,431. As such, expenditures would have been more than \$4.33 million higher due to inflationary and growth adjustments. In other words, expenditures are 28.9% less than they would have been had they been annually adjusted for inflation and population change.







Conclusions

There is a wide variation in the expenditure metrics between communities. A number of factors contribute to that variation. Factors include service levels, service delivery type, program characteristics, community characteristics and demographics, contract terms, cost accounting procedures, and staffing levels.

Expenditures in the RRRASOC communities are among the lowest in the region, with all expenditures well below the regional average. RRRASOC communities spend nearly \$3.6 million less annually, when compared to the region's median, per household expenditures.

Total expenditures in the RRRASOC communities have remained well contained in the past thirteen years, with per capita expenditures being 28.9% below the inflation and growth adjusted level of FY 2007 - 2008. In other words, total expenditures are more than \$4.33 million less than they would have been had they kept pace with inflation and population growth over the past fourteen years.

Background and Methodology

Through intergovernmental cooperation, public private partnerships, and contracting, the nine member communities of RRRASOC provide a suite of solid waste and recycling services that are cost-effective, environmentally responsible, and sustainable, as well as consistent with best practices.

RRRASOC annually evaluates solid waste related expenditures in the RRRASOC communities and conducts a comparison to the solid waste related expenditures of other communities in southeast Michigan. We reviewed municipal sanitation/solid waste expenditures as expressed in the current municipal budgets of communities in southeast Michigan. The expenditures of thirty-nine communities, as well as historical expenditure data for the RRRASOC communities, are included in the analysis.

The accompanying figures and graphs are designed to benchmark expenditures pertaining to municipal solid waste activities. It is recognized that service levels and/or service delivery methods may vary from community to community. It is understood that differences in service levels and delivery types can lead to cost differentials. For example, a community that provides curbside brush chipping incurs costs not incurred by a community that does not provide such service. Curbside collection unit costs, as another example, can vary depending upon a variety of factors, including service delivery type, density, community size, and proximity to disposal or recycling facilities.

This study is designed to identify cost metrics for individual communities without attempting to qualify, differentiate, or otherwise normalize service levels. For purposes of this effort, it is assumed that the service level and type selected by each community is consistent with the parameters established by the elected and/or administrative officials in each community. This document should be viewed in a positive rather than a normative sense.

Thirty-nine communities are included in the report. The communities included are those

that provide a minimum level of service that includes weekly curbside refuse, yard waste, and recycling collection. Most also have access to recycling and household hazardous waste drop off programs. Communities in which curbside services are not included in the municipal budget are specifically excluded from this report.

Expenditure information comes from the current fiscal year budget published by each municipality. Expenditures included are those items contained within the municipality's sanitation, rubbish, refuse, or solid waste budget, or within the municipality's public works or services budget and identified as being specifically related to solid waste.

It is recognized that municipalities may utilize different cost-accounting methods and that some communities may charge costs to a sanitation or solid waste budget that are not included by another community. Identifying and differentiating among differing accounting and cost management techniques is beyond the scope of this effort. In that regard, the expenditures included in this report are those costs that the communities have chosen themselves to allocate to sanitation or solid waste line items.

Information for the longitudinal analysis of expenditures in the RRRASOC communities was gathered from each community's audited financial statements as reported to the State of Michigan for the fiscal year ending in 2008.

This study does not evaluate the various revenue approaches among the communities. Those approaches include, but are not limited to, user fees and fees for services, property taxes, general fund appropriations, and material sales revenue.

Due to the variety of factors that influence a community's cost metrics, this report is best used to compare a community's costs to the average and the median, rather than to compare an individual community directly to another community. A more in-depth, case study approach would be required to directly compare communities.

Cost Metrics

Three cost metrics are utilized in this report. The first is per capita cost. For purposes of this calculation, population means the household population as estimated by the *SEMCOG Population and Household Estimates for Southeast Michigan, July 2020*.

While the per capita approach is a standard and useful approach, it does have its drawbacks. For example, curbside service tends to be offered only to single-family households and offered to multi-family units only on a limited basis. Communities with a high proportion of their population in multi-family units with limited service will experience a downward influence on their per capita costs as compared to communities with a higher proportion of single-family homes. However, the per capita metric is a well-accepted measure that merits inclusion in this report.

The second metric is the cost per household. This measure divides total expenditures by the number of household units receiving curbside service. Serviced units are either those reported by the community, its solid waste hauler, or the single-family, duplex, and townhome units as reported in the *U.S. Census Bureau*. If the community provides

commercial or multi-family services appropriate for inclusion in this metric, they are included. This measure is most useful when assessing only curbside service costs. However, its accuracy can skew in the opposite direction of the per capita measure when a community has a high proportion of multi-family units that utilize services such as household hazardous waste collection, recycling drop-offs, or other services.

Because the ratio of multi-family and single-family homes in a community can influence the first two metrics in opposite directions, a third measure has been included. The "blended cost" metric is the average of the first two figures and is designed to provide some mitigation to the influence of housing demographics, providing a more normalized measure of expenditures for purposes of comparisons.