

DRAFT FOR REVIEW



**Cost of Service, Rates, and Revenue
for the Water Activity Enterprise**

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1.0 Executive Summary

The purpose of this report is to document the development of the cost of service, rates, and rate structure for the stormwater program developed for Southeast Metro Stormwater Authority (SEMSWA), Water Activity Enterprise (WAE). The WAE was implemented by SEMSWA as a funding mechanism to collect service fees.

The cost of the stormwater services were estimated based on the desired level of service to be provided for the service area. The cost and level of service are separated into three sections for this report; stormwater program costs, maintenance program costs, and capital improvement program costs. The costs of service for the program were developed over a number of years by working with stakeholders, including a citizen advisory committee and ultimately by the SEMSWA Board of Directors.

Stormwater program costs are estimated to increase each year due to inflation, particularly in construction costs, but increased costs are also planned to build up the level of service to a more sufficient level than is provided by costs for the first several years.

The rates and rate structure were designed to generate the required revenue to support the desired level of service. The rates and rate structure were selected to equitably allocate the costs of service to property owners in the form of annual service fees in proportion to the amount of impervious area on each property.

Service fees were planned to increase at 5% per year to provide for inflation and increases in the level of service. This rate of increase should be adjusted periodically to reflect actual inflation and updated needs for program, maintenance, and capital costs.

Appendices are included and referenced where appropriate to provide additional detail to what is given in the main body of the text.

1.1 Background

AMEC Earth & Environmental, Inc. (AMEC) was contracted to provide the services documented in this report by Arapahoe County, the City of Centennial and later by the Southeast Metro Stormwater Authority (SEMSWA). The services were provided from 1999 through the formation of SEMSWA by an intergovernmental agreement (IGA) in September, 2006 and adoption of the level of service, rates, and rate structure in October, 2007.

In 1999, Arapahoe County staff initiated an effort to develop a comprehensive stormwater management program that would better serve the growing needs of the community. After determining, in a joint effort with the City of Centennial, that a stormwater utility was a technically viable option, a Stormwater Advisory Committee (SWAC) made up of local stakeholders was formed in 2002. The focus of the SWAC was to investigate the needs of the stormwater program and to provide input into the

formation of a stormwater utility which would provide an equitable, sufficient, and reliable source of funding.

The SWAC recommended the formation of a stormwater authority to comprehensively manage and consolidate the stormwater functions of the following entities:

- Arapahoe County,
- City of Centennial,
- Arapahoe County Water and Wastewater Authority (ACWWA),
- East Cherry Creek Valley Water and Sanitation District (ECCV),
- Inverness Water and Sanitation District (IWS).

The IGA specified that the 5 entities would form the “Southeast Metro Stormwater Authority” pursuant to section 29-1-204.2, Colorado Revised Statutes. The geographic boundaries of SEMSWA include the City of Centennial, unincorporated Arapahoe County, ACCWA, ECCV, and IWS, excluded are undeveloped, rural areas approximately east of interstate E-470. A portion of IWS extends into Douglas County, which is included in SEMSWA. Areas east of E-470 will be added into the SEMSWA as development occurs.

The IGA also specified that the SEMSWA would take over all stormwater assets and activities of the 5 entities, including the Stormwater National Pollutant Disposal Elimination System (NPDES) permits. The completion of the IGA and formation of the SEMSWA Board of Directors (Board) allowed the preliminary cost of service and rate studies to be finalized.

The Board made decisions on the costs and levels of service and on the final rate and rate structure based on presentations made to the Board. Copies of these presentations are located in Appendix E.

1.2 Cost of Service

The cost of service is the total cost for the stormwater program based on the program components and level of service for each component. During the previous feasibility studies for the project, it had been determined that the cost of service for a reasonable stormwater program would be approximately \$6 to \$8 million per year. This cost of service analysis refined that estimate. Program components include the following:

- Program Costs—include salaries and benefits, building and related, services and administration, and consultant services. The functions included in these costs are administration, customer service, finance, planning and technical management, stormwater quality management, and regulation and enforcement.
- Maintenance Costs—include salaries and benefits, equipment, materials, field operations, and associated costs.
- Capital Project Costs—include engineering, land acquisition, permitting, construction, and associated costs.

The cost of service was established prior to the development of the rates, rate structure and service fees and set the amount of revenue required for each year. **Table 1-1** shows the cost of service projected for the stormwater program.

Table 1-1 Cost of Service 2008

	2008 (\$1,000s)
Program Costs (less loan payments)*	\$2,598
Maintenance Costs	\$1,248
Capital Project Costs (from Service Fees)**	\$3,600
Total Uses of Funds	\$7,446

* Loan payments were not included in the Cost of Service analysis, but were included in the cash flow analysis.

** Additional capital costs funded by non-service fee revenue sources are not included.

1.1.1.3 Rates and Rate Structure

The rates and rate structure of the stormwater program were selected to equitably allocate the costs of service to property owners. The rates charged are based on the square foot amount of impervious area. The rate structure is how the costs are allocated to different sizes, types, and classes of property.

The SEMSWA Board selected a 5-tier rate structure for single family residential (detached) parcels based solely on the square feet of impervious area; therefore, the rate is the same per square foot for each tier, as shown in **Table 1-2**. This rate structure was selected by the Board because, for single family residential (detached) parcels, as a group, the percent of the total parcel that is impervious is relatively constant; therefore, the percentage of impervious area to total parcel area was not a factor in the rate. The 5-tier system is also easily understood by homeowners.

Table 1-2 Rate Structure for Single Family Residential (detached) Parcels

Tier	Impervious Area (Square Feet)	Annual Fee	Monthly Rate per Square Foot of Impervious Area
1	100 – 2,000	\$45.00	\$0.001970
2	2,001 – 2,900	\$60.00	\$0.001970
3	2,901 – 3,900	\$78.00	\$0.001970
4	3,901 – 7,500	\$105.00	\$0.001970
5	7,501 – 50,000	\$228.00	\$0.001970

For all other properties (commercial, multi-family, industrial, government, tax exempt, and others), a 3-tier rate structure based on the percentage of impervious area to total parcel area was selected. This rate structure was selected by the Board due to the large variation in the percentage of impervious area to total parcel area and the large variation in total parcel area for this group of parcels. The rate structure for all non-single family residential parcels is shown in **Table 1-3**.

Table 1-3 Rate Structure for All Non-Single Family Residential (detached) Parcels

Tier	Impervious Percentage	Monthly Rate Per Square Foot Of Impervious Area
1	2% - 40%	\$0.001280
2	41% - 70%	\$0.001970
3	71% - 100%	\$0.002659

Table 1-4 shows the projected revenue from the rates and rate structure.

**Table 1-4 Rate and Revenue Model Results for
2007 Median SFR- Monthly Fee of \$6.50**

	Number of Parcels	Subtotal
Single Family Residential	43,788	\$3,481,326
Non-Single Family Residential	13,540	\$3,950,486
Total Estimated for 2007		\$7,431,812
Total Estimated for 2008		\$7,530,000