



Board of Directors Meeting  
October 11, 2006

**Level of Service, Rates, and Rate Structures**

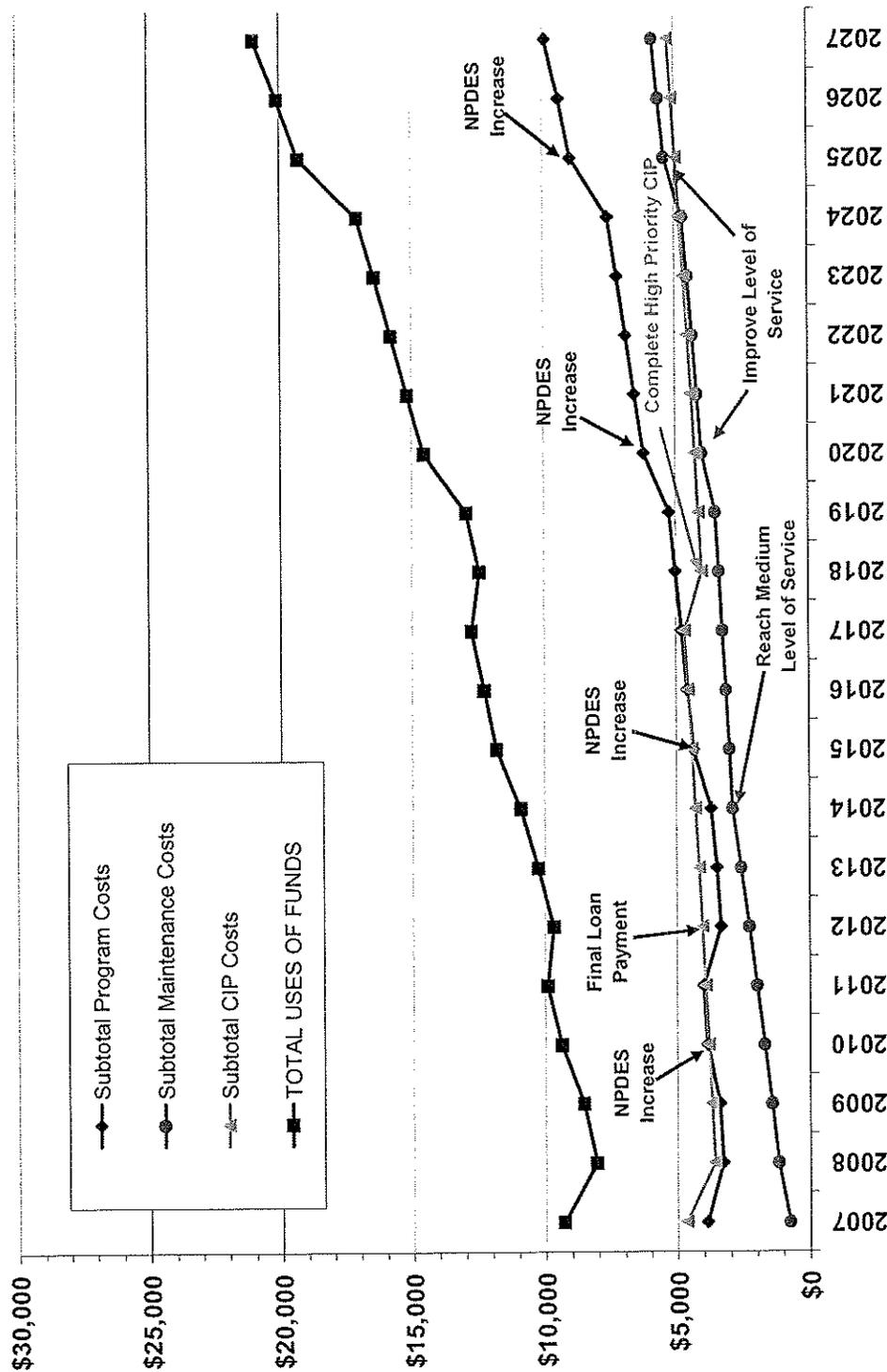
Jon Sorensen  
Bob McGregor

## **Proposed Program Recommended Level of Service**

- **Capital**
  - Critical CIP: \$30 Million Constructed in Years 1 - 10
  - Medium CIP: \$20 Million Constructed in Years 11 – 20
  - Emerging Needs: \$0.75 Million per year for yet to be identified needs for emergencies and new master plans
  
- **Maintenance**
  - Low Level for the first 2 years
  - Increase 25% after additional 5 years to reach Medium Level of Service
  - Increase additional 50% after additional 10 years to further improve service
  
- **Program**
  - Staff levels remain constant
  - NPDES Program needs increase 15% once every 5 years with each NPDES Permit renewal
  
- **Assumptions**
  - Inflation 3% per year
  - Salary and benefits costs increase 5% per year

# Total Uses of Funds Recommended Program

**Total Uses of Funds**  
Defined Level of Service with Supporting Rate Assumptions  
Southeast Metro Stormwater Authority  
(1,000s)



# Rates to Support Recommended Program

## Option A

- **Initial Rate**
  - \$6.50 per month SFR detached, 3,300 sq ft impervious
- **Increases**
  - 3% inflation per year
  - 2% per year to support program improvements
- **Assumptions**
  - 1.75% growth in Impervious area (Rate Base) per year
  - 1.00% delinquent accounts
  - 2.00% credits

# Rate

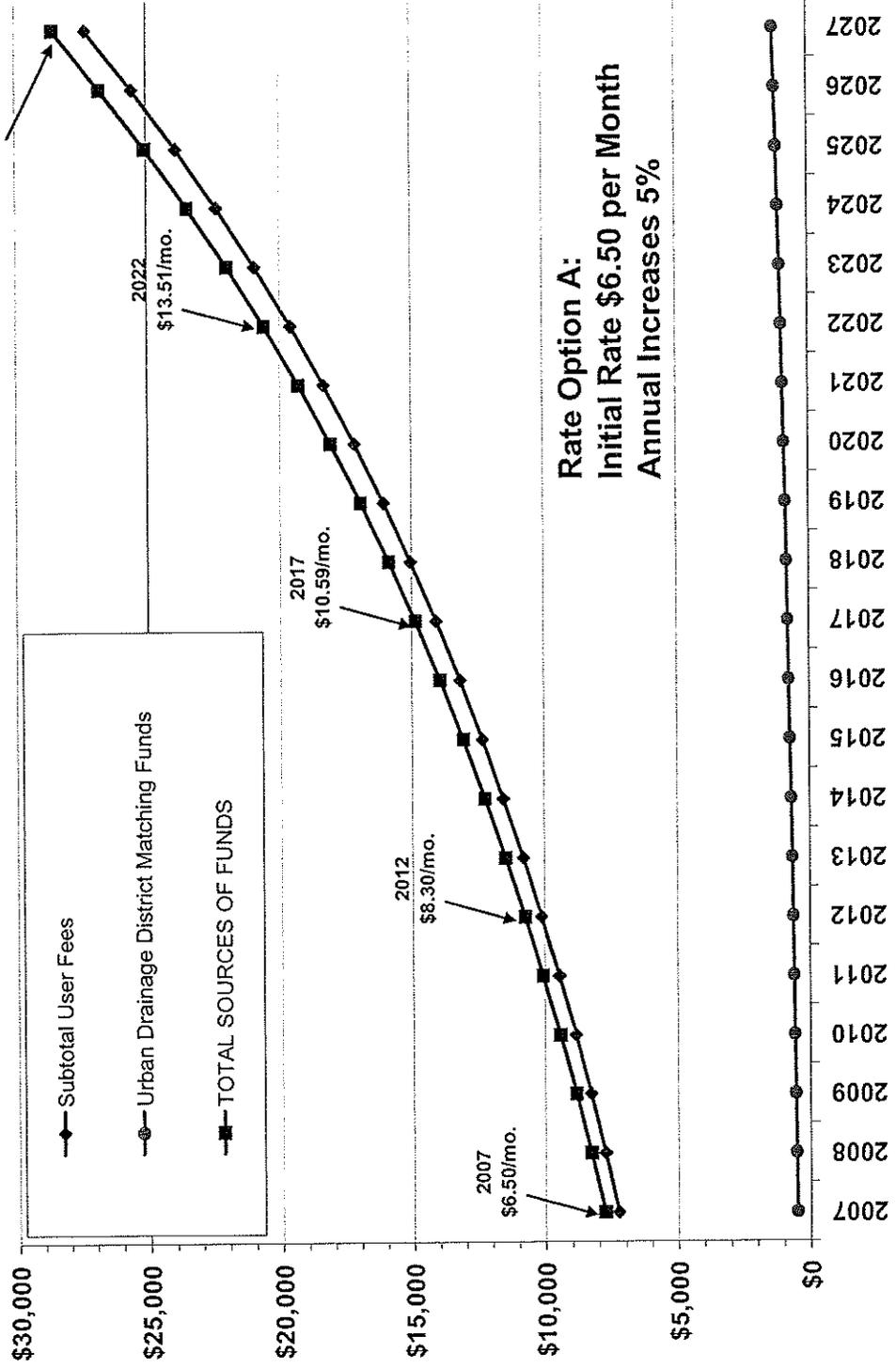
**Option A: Initial rate \$6.50 per month, increase 5% per year**

## Total Sources of Funds Rate Option A

Defined Level of Service with Supporting Rate Assumptions

Southeast Metro Stormwater Authority

(1,000s)



# Rate

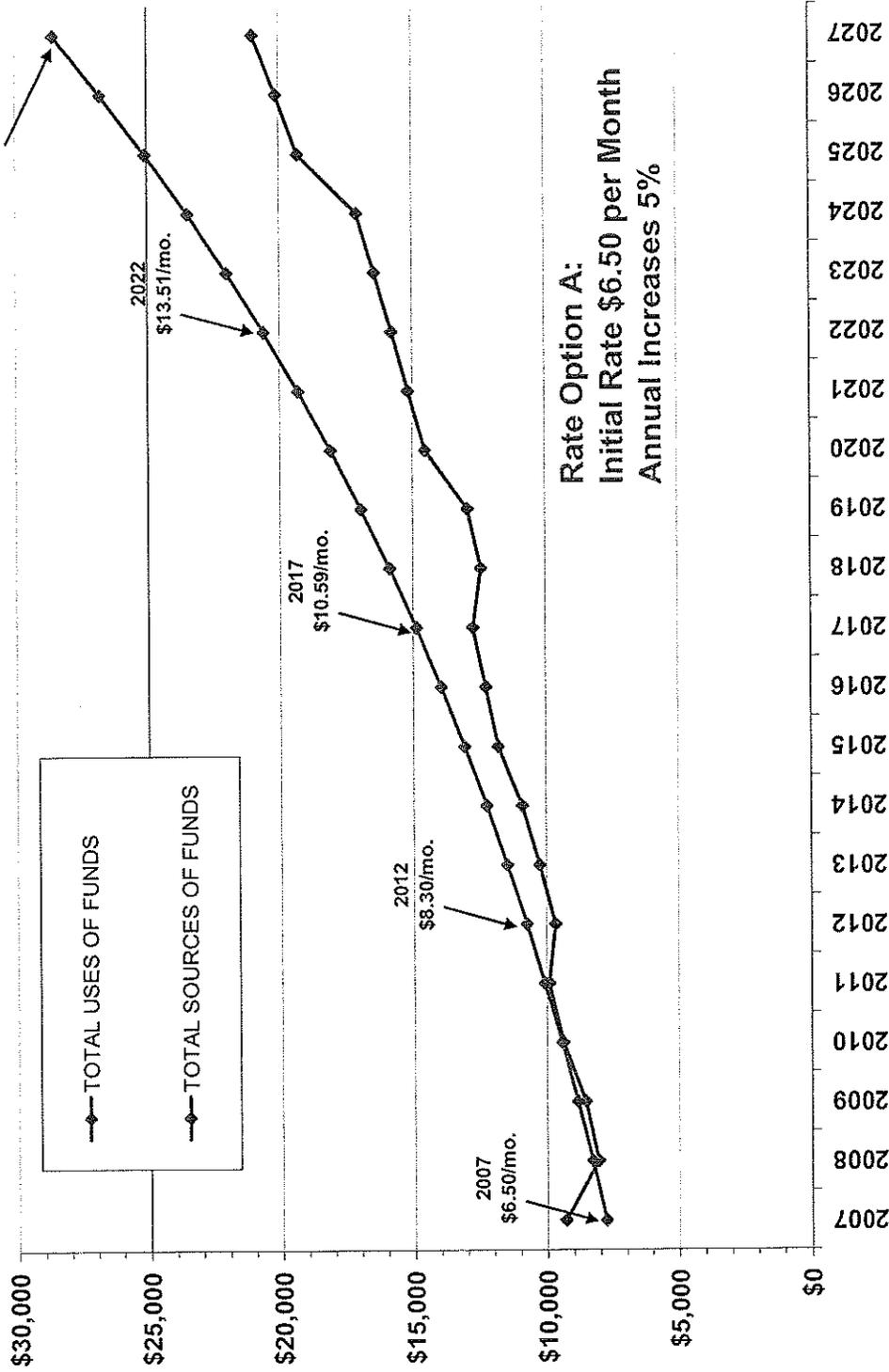
## Option A: Initial rate \$6.50 per month, increase 5% per year

### Total Uses and Sources of Funds Rate Option A

Defined Level of Service with Supporting Rate Assumptions

Southeast Metro Stormwater Authority

(1,000s)



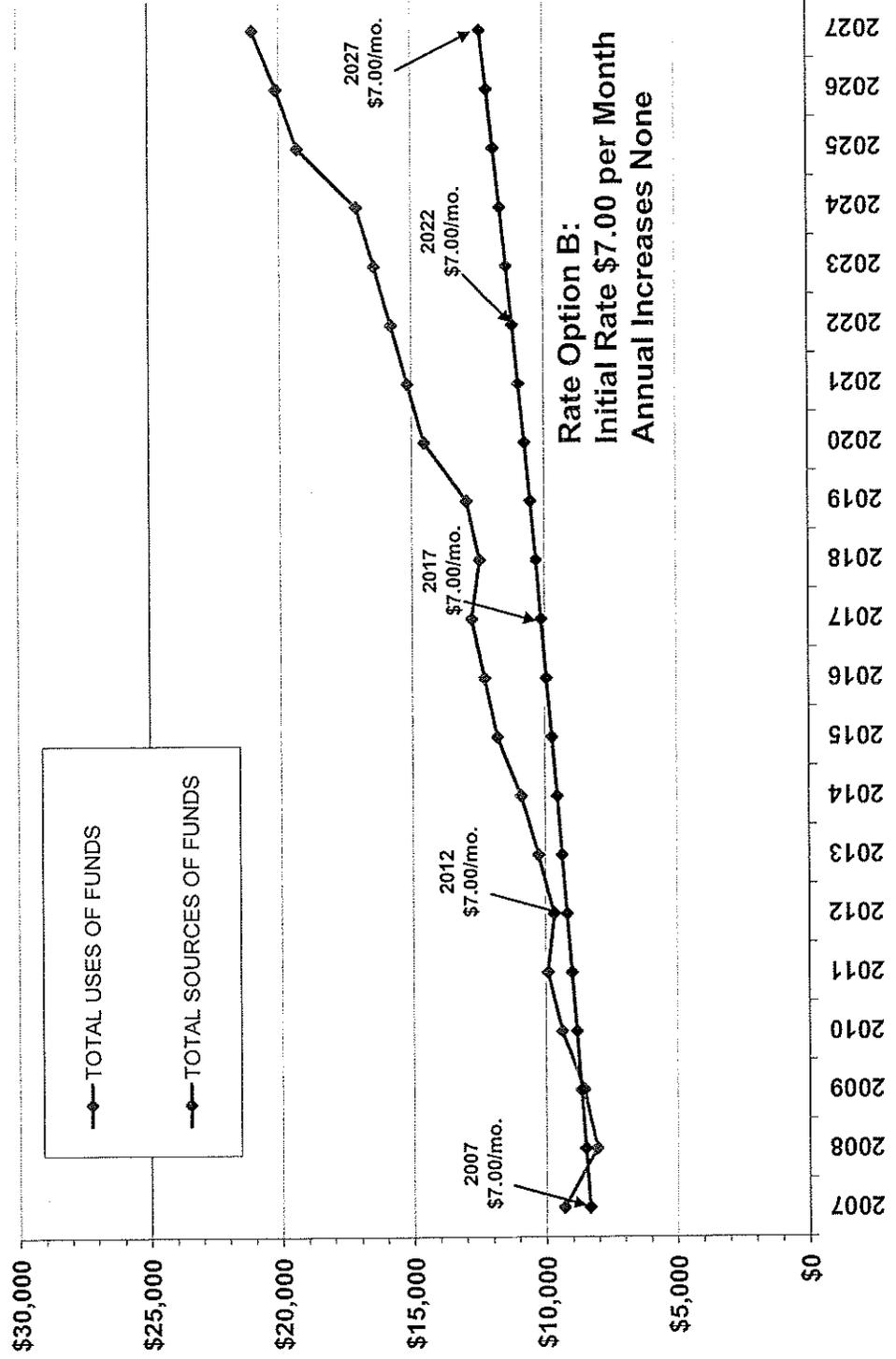
Rate Option A:  
Initial Rate \$6.50 per Month  
Annual Increases 5%

# Rates to Support Recommended Program

## Option B

- **Initial Rate**
  - \$7.00 per month SFR detached, 3,300 sq ft impervious
- **Increases**
  - None
- **Assumptions**
  - 1.75% growth in Impervious area (Rate Base) per year
  - 1.00% delinquent accounts
  - 2.00% credits

**Rate**  
**Option B: Initial rate \$7.00 per month, no increase**  
**Total Uses and Sources of Funds Rate Option B**  
 Defined Level of Service with Supporting Rate Assumptions  
 Southeast Metro Stormwater Authority  
 (1,000s)



# Rates to Support Recommended Program

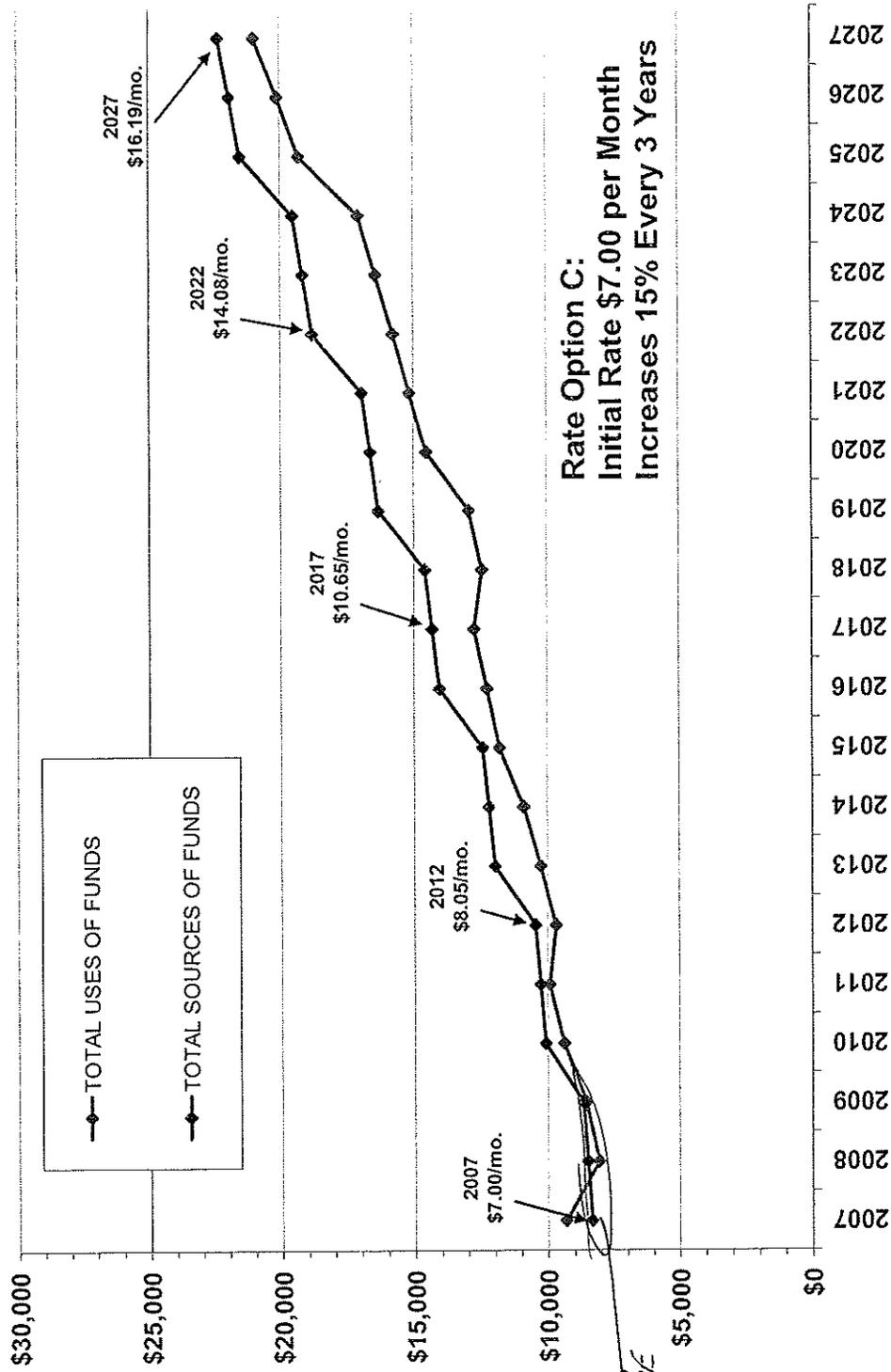
## Option C

- **Initial Rate**
  - \$7.00 per month SFR detached, 3,300 sq ft impervious
- **Increases**
  - 9% inflation every 3 years
  - 6% to support program improvements every 3 years
- **Assumptions**
  - 1.75% growth in Impervious area (Rate Base) per year
  - 1.00% delinquent accounts
  - 2.00% credits

# Rate Option C: Initial rate \$7.00 per month, increase 15% every 3 years

## Total Uses and Sources of Funds Rate Option C

Defined Level of Service with Supporting Rate Assumptions  
 Southeast Metro Stormwater Authority  
 (1,000s)



*BLUE SHOULD BE FLAT ??*

## **Rates to Support Recommended Program Option D**

- **Initial Rate**
  - \$7.00 per month SFR detached, 3,300 sq ft impervious
- **Increases**
  - 15% inflation every 5 years
  - 10% to support program improvements every 5 years
- **Assumptions**
  - 1.75% growth in Impervious area (Rate Base) per year
  - 1.00% delinquent accounts
  - 2.00% credits

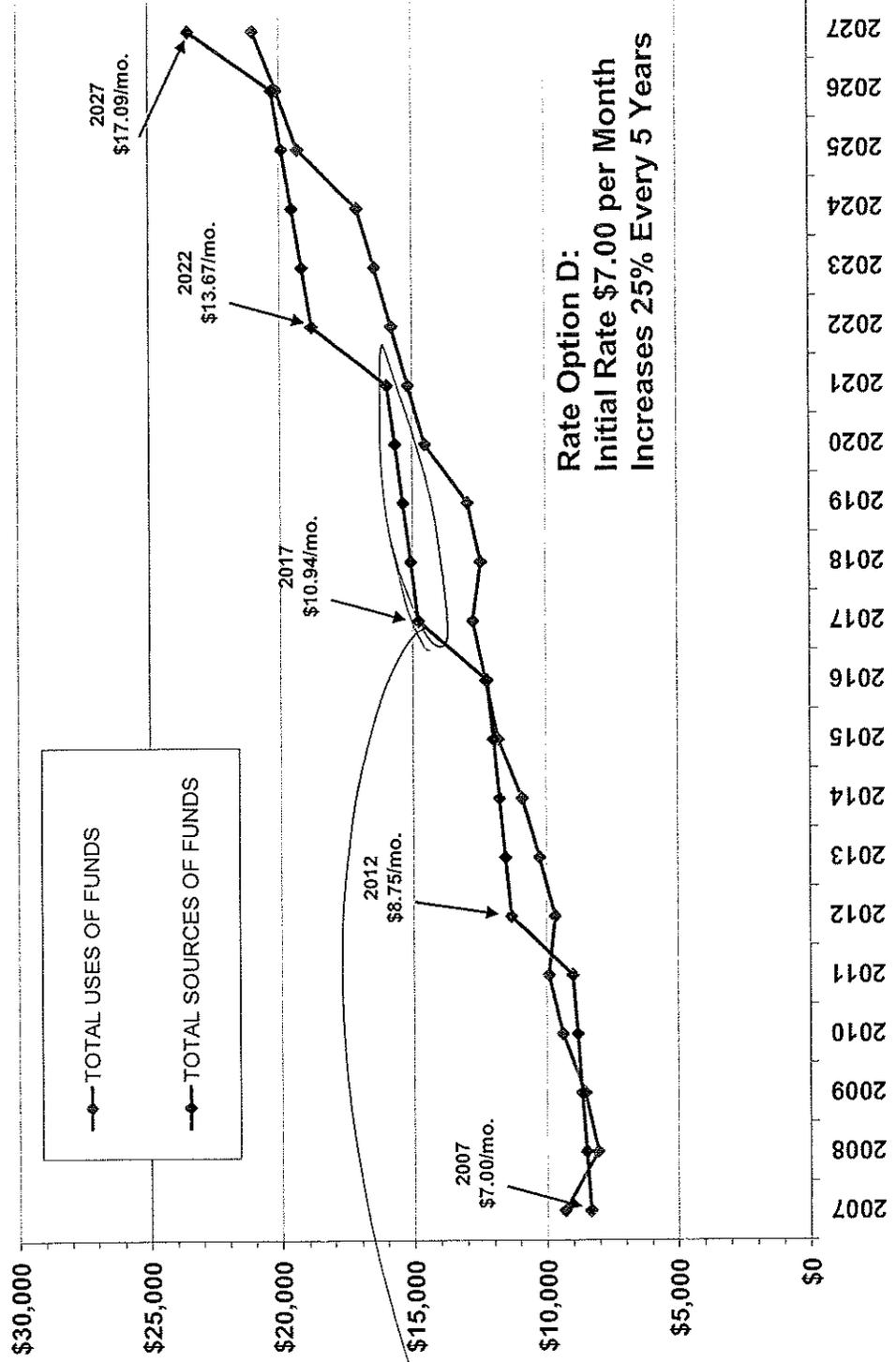
# Rate

## Option D: Initial rate \$7.00 per month, increase 25% every 5 years

### Total Uses and Sources of Funds Rate Option D

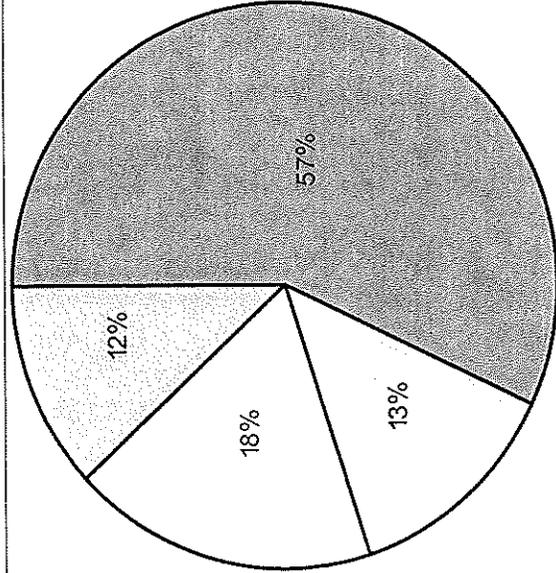
Defined Level of Service with Supporting Rate Assumptions

Southeast Metro Stormwater Authority  
(1,000s)



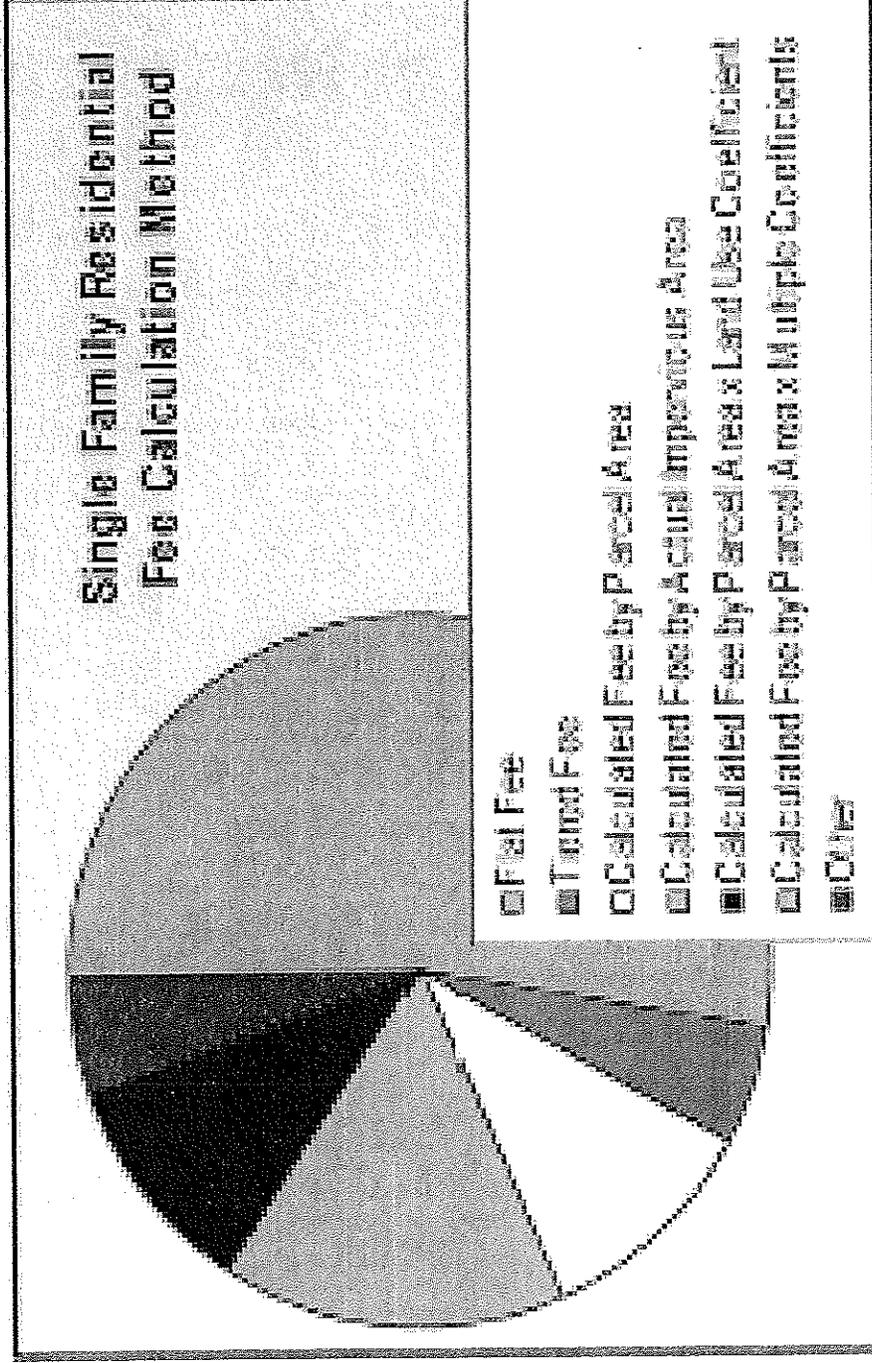
# Rate Structure Options

## Rate Structures in USA



- Impervious Area
- Gross area with runoff or intensity of development factor
- Both impervious and gross areas
- Other (e.g., number of rooms, water use, flat fee)

# Rate Structure Options Rate Structures in Colorado



# **Rate Structure Options**

## *Impervious Area, ACWWA*

- **Arapahoe County Water and Wastewater Authority**
  - **Single Family Residential (detached): Flat Rate \$5.98 per month**
  - **Commercial: \$2.69 base rate + \$0.000864 per square foot impervious area**

## **Rate Structure Options**

### *Impervious Area*

- **Single Family Residential (detached)**
  - *3 Tiered rate*
  - *Actual impervious area*
  
- **Non Single Family Residential**
  - *Charge for amount of impervious area*
  - *Proportional to median single family residence 3,300 sq ft impervious area*

## **Rate Structure Options “Issues” with Impervious Area Rate Structures**

- Does not account for increased runoff from parcels that have high impervious percentages (60% or more).

**These parcels are undercharged.**

- Does not account for decreased runoff from parcels that have low impervious percentages (30% or less).

**These parcels are overcharged.**

## **Rate Structure Options**

### ***Percent Impervious Rate Structures***

- Can combine Single Family Residential (detached) with Multi Family, Commercial, and Tax Exempt Properties
- Rate is 40% lower if under 30% impervious\*
- Rate is 20% higher if over 60% impervious\*

\* Rate differences are consistent with Denver rate structure and increased peak runoff rates with increasing percent impervious area

# Rate Structure Options Impervious Area or Percent Impervious Area

## Impervious Area

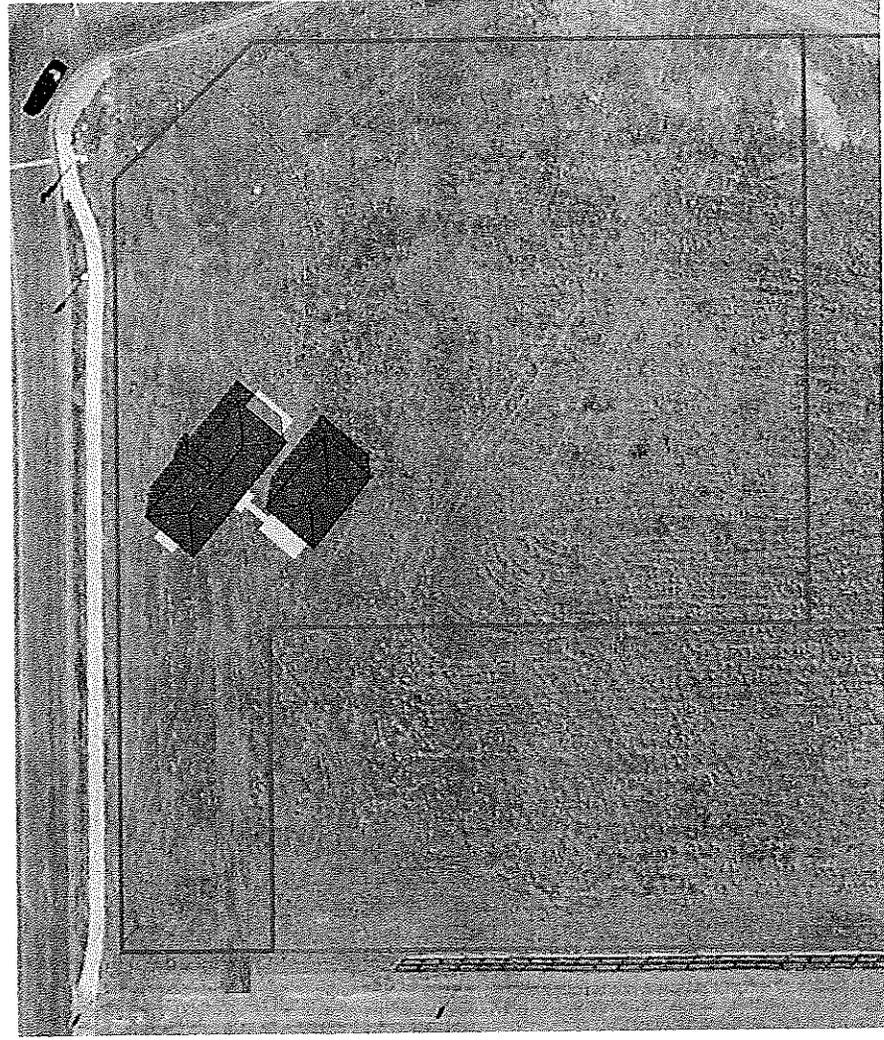
Impervious Area Sq Ft	Monthly Fee
2,500	\$4.92
3,300	\$6.50
4,900	\$9.65
5,900	\$11.62
11,500	\$22.65
25,000	\$49.24
65,000	\$128.03
175,000	\$344.70
550,000	\$1,083.33

## Percent Impervious Area

Impervious Area Sq Ft	Monthly Fee		
	Impervious Percent		
	0 to 30%	31 to 60%	61 to 100%
2,500	\$2.95	\$4.92	\$5.91
3,300	\$3.90	\$6.50	\$7.80
4,900	\$5.79	\$9.65	\$11.58
5,900	\$6.97	\$11.62	\$13.95
11,500	\$13.59	\$22.65	\$27.18
25,000	\$29.55	\$49.24	\$59.09
65,000	\$76.82	\$128.03	\$153.64
175,000	\$206.82	\$344.70	\$413.64
550,000	\$650.00	\$1,083.33	\$1,300.00

# Comparison of Impervious Area and Impervious Percent Rate Structures

## Example A - Single Family Residential (detached)



### EXAMPLE A

Parcel Area: 28,800 sq ft  
Impervious Area: 3,300 sq ft  
Percent Impervious: 11%

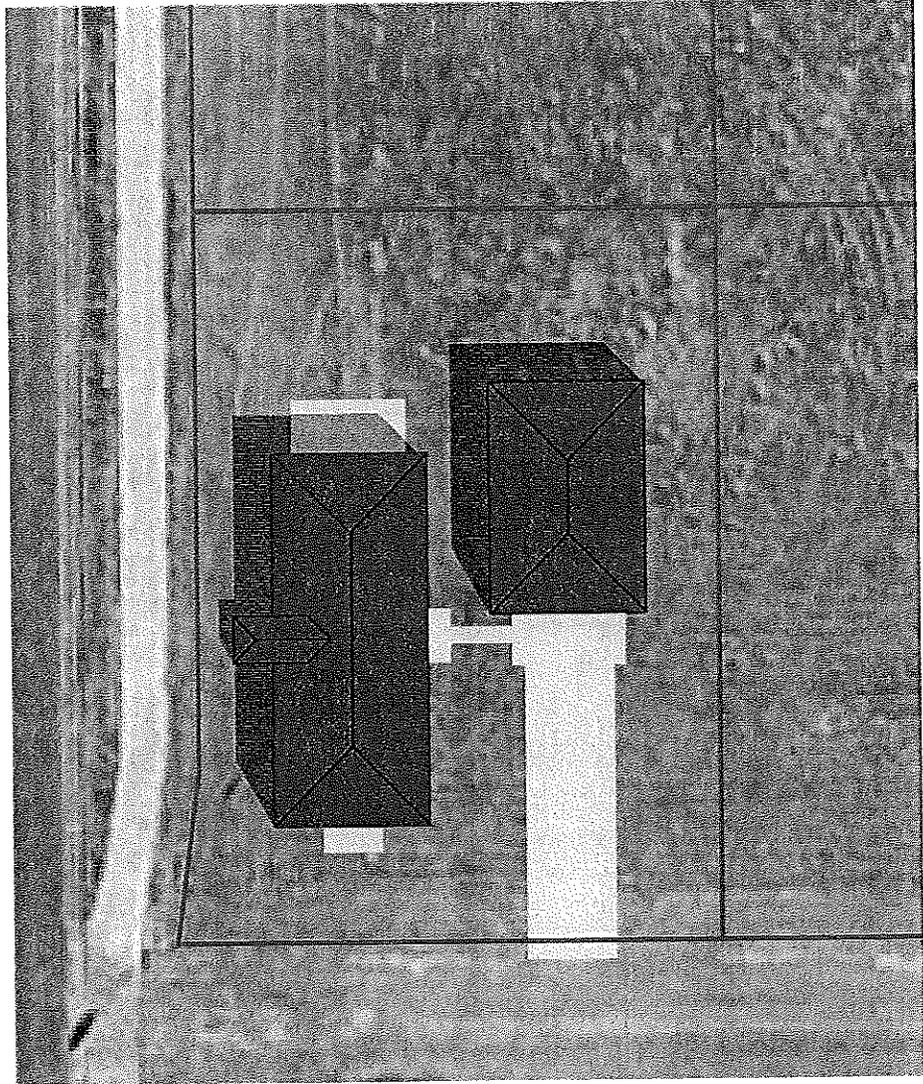
### Monthly Fees

Impervious Area: \$6.50

Impervious Percent: \$3.90

# Comparison of Impervious Area and Impervious Percent Rate Structures

## Example B - Single Family Residential (detached)



### EXAMPLE B

Parcel Area: 4,500 sq/ft  
Impervious Area: 3,300 sq/ft  
Percent Impervious: 73%

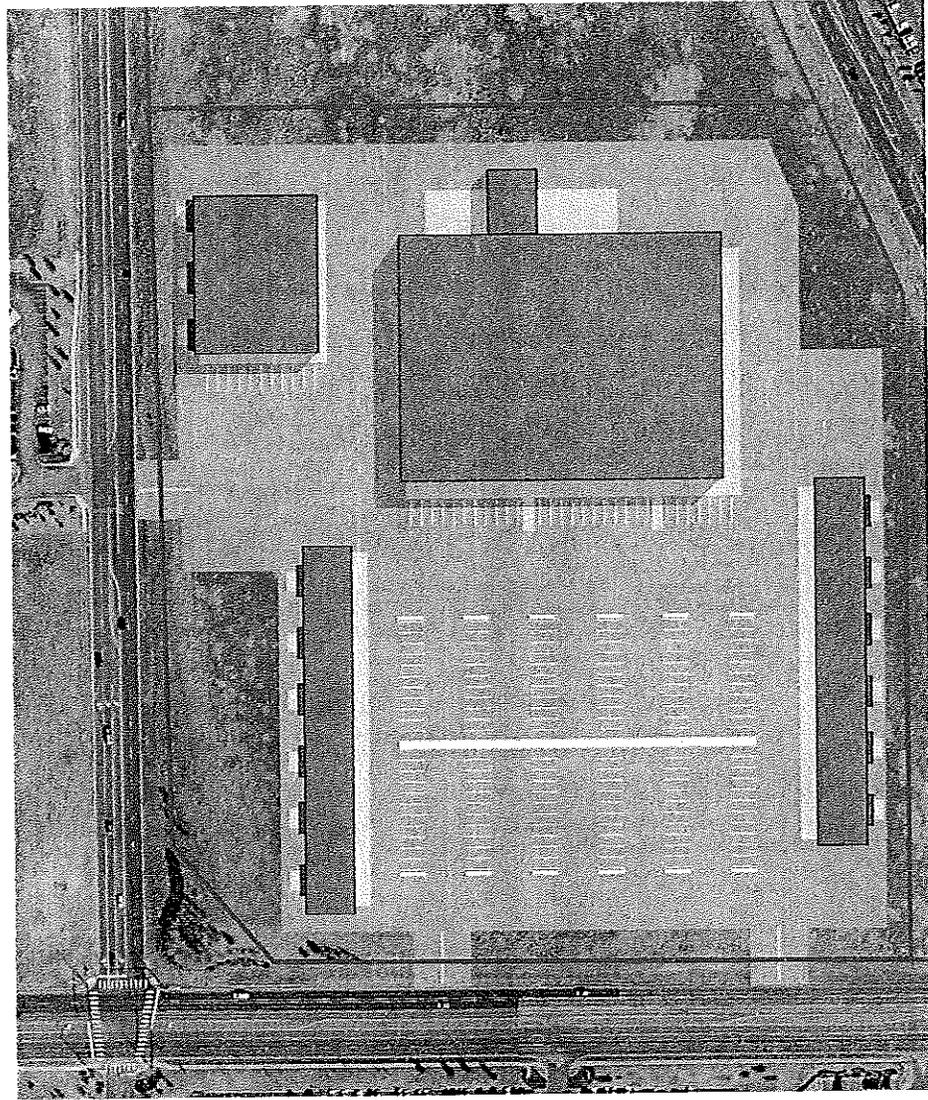
### Monthly Fees

Impervious Area: \$6.50

Impervious Percent: \$7.80

# Comparison of Impervious Area and Impervious Percent Rate Structures

## Example G – Commercial Property



### EXAMPLE G

Parcel Area: 687,500 sq ft  
Impervious Area: 550,000 sq ft  
Percent Impervious: 80%

### Monthly Fees

Impervious Area: \$1,083  
Impervious Percent: \$1,300

# Comparison of Impervious Area and Impervious Percent Rate Structures

## Example H – School Property



### EXAMPLE H

Parcel Area: 2,000,000 sq ft  
Impervious Area: 550,000 sq ft  
Percent Impervious: 28%

### Monthly Fees

Impervious Area: \$1,083  
Impervious Percent: \$650

# Summary Example Comparisons of Rate Structure Options Impervious Area and percent Impervious Area

	Example A Avg House, Large Lot	Example B Avg House Small Lot	Example G Commercial Small Lot	Example H School Large Lot
	Monthly Rate			
Impervious Area	\$6.50	\$6.50	\$1,083	\$1,083
Impervious Percent	\$3.90	\$7.80	\$1,300	\$650
Impervious Area (sq ft)	3,300			
Total Area (sq/ ft)	28,800	4,500	687,500	2,000,000
Impervious %	11%	73%	80%	28%