

Total SAW Grant - City of Rochester Hills
SAW Grant Cost Summary

Wastewater AMP	\$	1,124,444
Stormwater AMP	\$	1,150,000
Stormwater Mgt. Plan	\$	170,000
TOTAL	\$	2,444,444

MDEQ Funding	\$	2,000,000	(max = \$2 million, 90% on first million, 75% on second million)
Local Match	\$	444,444	

MDEQ formula for first \$1 million grant: STATE MATCH / 0.9 = TOTAL PROJECT
 \$ 1 million / 0.9 = \$1,111,111
 Local Match = \$111,111 on first \$1 million of grant

MDEQ formula for second \$1 million grant: STATE MATCH / 0.75 = TOTAL PROJECT
 \$ 1 million / 0.75 = \$1,333,333
 Local Match = \$333,333 on second \$1 million of grant

Rochester Hills Match:	\$	111,111	(from first million of state match)
	\$	333,333	(from second million of state match)
	\$	444,444	TOTAL

Rochester Hills
SAW Grant: Wastewater Asset Management Plan (AMP)

Scope Item	Description	Approximate Cost	Notes/Assumptions
1a-b	Collect/review data	\$ 20,444	Includes OHM reimbursement for SAW Grant scoping and application
1c	Software/Hardware/Training	\$ 65,000	Assume field equipment purchase (Trimble units + Tablets + Training)
1d-g	Data Management, needs identification	\$ 20,000	
1	TOTAL - Data Management	\$ 105,444	
2a	Evaluate existing data, ID meter locations	\$ 10,000	
2b	Flow metering	\$ 160,000	Assume \$120K in metering hardware rental and installation costs, \$40K in data download and analysis
2c-d	Hydrologic/Hydraulic modeling	\$ 75,000	Assume \$25K in additional field survey (rim/invert verification)
2e	SSES - Smoke Testing	\$ 80,000	Targeted areas after flow metering effort
2	TOTAL - Flow Metering/Modeling/SSES	\$ 325,000	
3a	Cleaning and CCTV - collection system	\$ 435,000	Assume approximately 200,000 LF (\$2.05/LF + \$25,000 for contingency and contract admin)
3c	Manhole Inspections	\$ 75,000	MACP inspection of manholes in CCTV area, about 790 manholes (10% of system)
3d	As-Built Drawings - GIS Database	\$ 9,000	Assume as-built research at City Hall, 2 weeks full time
3	TOTAL - Asset Evaluation	\$ 519,000	
4a-f	TOTAL - Asset Mgt Plan	\$ 90,000	
5	TOTAL - CIP	\$ 35,000	
6	TOTAL - Rate Study/Revenues	\$ 50,000	Estimate from Tom Traciak
TOTAL: WASTEWATER AMP		\$ 1,124,444	

Rochester Hills
SAW Grant: Stormwater Asset Management Plan (AMP)

Scope Item	Description	Approximate Cost	Notes/Assumptions
1a-b	Collect/review data	\$ 15,000	Includes OHM reimbursement for SAW Grant scoping and application
1c	ID additional mapping needs	\$ 6,000	(e.g. detention ponds, bridges, culverts, open channels)
1d	Compile SWMP findings	\$ 7,500	
1	TOTAL - Data Management	\$ 28,500	
2a	Public Meetings	\$ 8,000	
2b	Online Survey + Data Analysis	\$ 10,000	
2c	Select drain districts for analysis	\$ 5,000	
2d	H/H Models	\$ 90,000	20 districts (16 hours hydrology, 32 hours hydraulics for each district)
2e	Sewer level monitors (4)	\$ 24,000	(\$5,000 per meter + \$4,000 data analysis)
2f	Sewer system survey	\$ 17,000	Assume 2 weeks of supplemental survey for key invert elevations
2g	Regional Stormwater Detention	\$ 15,000	Review options for flood storage to reduce peak flows and prevent flooding
2	TOTAL - System Modeling	\$ 169,000	
3a	Sewer cleaning / CCTV	\$ 587,000	Assume approximately 180,000 LF @ \$3.10/LF + \$29K for contract admin
3b	Manhole Inspections	\$ 50,000	Assume 10% of storm manholes (~500 manholes) at \$100/MH for MACP inspection
3c	Catch basin/inlet evaluation	\$ 20,000	Assume 750 structures at 10 minutes per structure
3d	As-Built Drawings - GIS Database	\$ 10,000	Assume as-built research at City Hall, 3 weeks full time
3e-h	Detention pond inventory	\$ 55,000	70 detention basins, 8 hours per basin
3	Asset Evaluation	\$ 722,000	
4	Asset Management Plan	\$ 90,000	
5	Capital Improvement Plan (CIP)	\$ 40,000	
6	Rate Study / Revenues	\$ 100,000	Funding Feasibility Study, SWAC Meetings, Rate Model, Pre-Referendum Coordination
TOTAL: STORMWATER AMP		\$ 1,150,000	

Rochester Hills
Stormwater Management Plan (SMP)

Scope Item	Description	Approximate C	Notes/Assumptions
1a-b	Identify Baseline Conditions	\$ 5,000	
1	TOTAL - Baseline Conditions	\$ 5,000	
2a	ID key drainage courses	\$ 2,500	
2b	Streambank Inventories	\$ 60,000	10 miles streambank assessment at 20 labor hours per mile = \$20,000 + \$15,000 for rating system, \$10,000 GIS integration, \$15,000 report
2c	Channel cross section survey	\$ 35,000	Cross section survey of studied reach of open channels (about 240 cross sections total)
2d-g	Compile stream/culvert data - import to GIS	\$ 7,500	
2	TOTAL - Asset Evaluation	\$ 105,000	
3a	H/H Modeling / Floodplain Review	\$ 20,000	Combined with AMP modeling effort (represents only marginal additional effort)
3	Capacity Analysis	\$ 20,000	
4a-b	Water Quality Considerations	\$ 10,000	Documentation of known problems, identification of BMPs to address stormwater quality
4	Water Quality Considerations	\$ 10,000	
5	CIP	\$ 10,000	Project evaluation, export information to Asset Management Plan
6	MS4 Program Updates	\$ 20,000	Ordinance updates, develop BMP inspection/enforcement program)
TOTAL: STORMWATER SMP		\$ 170,000	