

Village of Downers Grove Stormwater Master Plan Update

Appendix H

Technical Memorandum

Stormwater Program Funding



TABLE OF CONTENTS

	Page
1. INTRODUCTION	2
2. EXISTING FUNDING	3
2.1 Operation and Maintenance	3
2.2 Capital Improvements	3
2.3 Funding Issues	4
3. STORMWATER PROGRAM COSTS	3
4. ANTICIPATED STORMWATER PROGRAM BUDGET NEEDS	6
4.1 Stormwater Permit Compliance	6
4.2 GIS	6
4.3 Capital Improvement Project Backlog	7
4.4 Operation and Maintenance	7
5. FUNDING OPTIONS.....	9
6. FUNDING RECOMMENDATIONS.....	11

1.0 INTRODUCTION

Financing a successful stormwater program requires a stable, reliable source of income. The need for adequate funding becomes clear when considering the multiple responsibilities the Village now has with respect to stormwater program management:

- Meeting National Pollution Discharge Elimination System (NPDES) Phase II permit requirements
- Addressing stormwater problem areas
- Adapting infrastructure to accommodate widespread redevelopment pressure
- Meeting Total Maximum Daily Load (TMDL) requirements for the East Branch DuPage River
- Providing sewer system mapping and inventory (including GIS maintenance)
- Performing Sewer televising, cleaning, and general system maintenance
- Meeting DuPage County stormwater technical review responsibilities
- Maintaining an adequate Capital Improvement Program
- Providing erosion control review and site inspection
- Performing site plan review
- Administering public/private cost share projects
- Performing general administrative activities

Many of these responsibilities are new (less than four years since initially implemented).

This memorandum describes the Village's current funding levels with respect to existing program needs and identifies options for establishing new funding sources.

2.0 EXISTING FUNDING

2.1 Operation and Maintenance

During the last several years, the Village of Downers Grove has experienced fluctuations in its stormwater budget (see Figure 1) for operation and maintenance. Although the budgets have increased, the increases generally have covered only personnel costs.

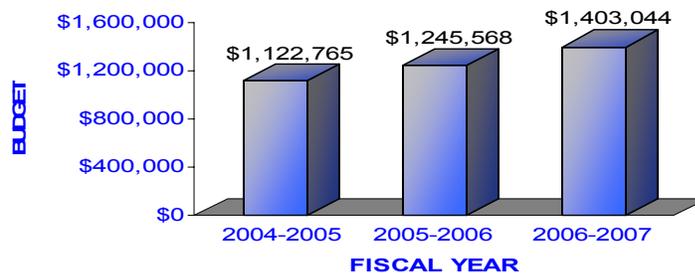


Figure 1 – Downers Grove Stormwater Operating Budget

Existing activities that make up the Village’s stormwater program are illustrated in Figure 2. A large portion of the personnel costs are associated with plan review, permit enforcement, inspection, and system maintenance.

The budgets do not allow for an increase in the level of service to address any additional stormwater responsibilities or emerging stormwater quality (NPDES) permit requirements.

Capital Improvements

Village staff has identified numerous stormwater capital projects totaling over \$8 million in estimated construction costs. These projects consist of stormwater system improvements to:

- Enhance public safety
- Prevent flooding
- Repair channel erosion
- Replace aging sewer system components

However, the budget for capital improvements for stormwater has varied considerably over the past several years. This noticeably inconsistent funding results in a capital improvement backlog that grows each year. The current funding process makes it difficult for the Village to adequately respond to stormwater infrastructure needs. As the Village’s infrastructure continues to age, capital improvement project needs will accelerate.

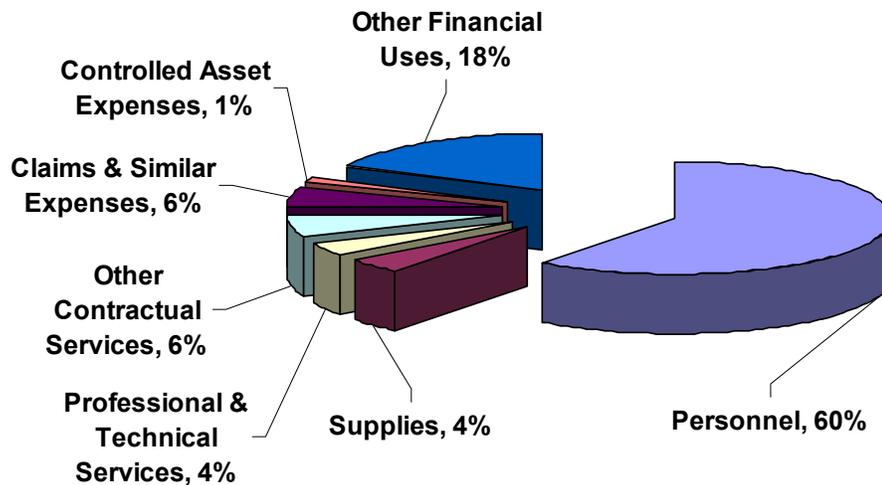


Figure 2 – Stormwater Budget Distribution

2.2 Funding Issues

The funding for stormwater services is generally at the mercy of other more visible activities supported by the General Fund, such as Fire, Police, and other services that often require significant capital expenditures. During years when money is needed to fund other activities, stormwater funding may temporarily disappear.

Village staff have ongoing regulatory responsibilities with respect to stormwater, which will likely require additional staff, more capital improvement projects, and enhanced system maintenance. As stormwater regulations are becoming more formalized, stricter and wide-reaching, more effort will be needed to maintain Village compliance to local, state, and federal stormwater standards. This will require a consistent and dedicated funding source.

3.0 STORMWATER PROGRAM COSTS

A typical stormwater program places a larger emphasis on capital improvements and operations/maintenance, as illustrated in the figure below.

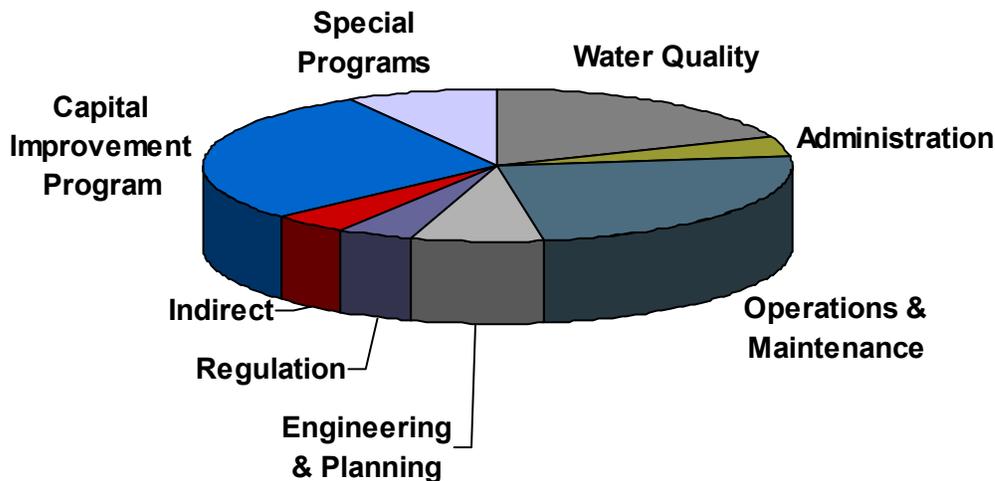


Figure 3 - Typical Stormwater Program Components

Overall stormwater program costs vary by the complexity of the program, and, as illustrated in Figure 4, the intended level-of-service. Given the complexity of the Village's stormwater program (due to TMDL requirements, DuPage County *Complete Waiver Community* responsibilities, and redevelopment pressures), it would be expected that the Village would have a program between the "moderate" and "advanced" stage. At this level-of-service, the stormwater program can be expected to cost \$50-\$75 per capita per year.

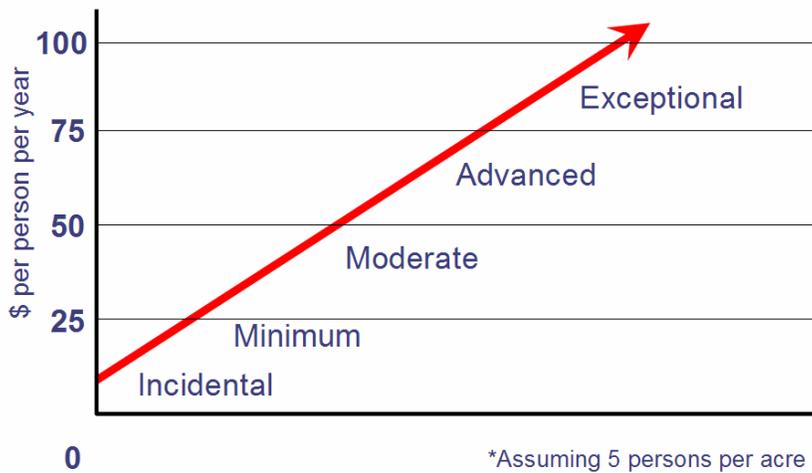


Figure Source: AMEC Earth & Environmental (used with permission)

Figure 4 – Stormwater Program Cost Range (Per Capita Basis)

Based on the Village’s official population of 49,000 residents, the annual stormwater program cost range would be \$2.4 million to \$3.7 million (based on Figure 4). However, the daily influx of workers to the large commercial areas in the north part of the Village raises the effective daily population to approximately twice the “official” population. Although the “official” population would typically be used for this analysis (as described above), it could be argued that the high density retail/commercial areas place an additional strain on the Village’s stormwater system.

Upon our review of the size/layout of this business district (primarily located north of I-88), we anticipate that there would be future stormwater quality issues in this area, given the high density land use. This would tend to increase the budget needs above typical levels, as attention to stormwater quality issues in this area reflect an “Advanced” to “Exceptional” program. Considering this, the Village’s overall stormwater program cost would therefore shift towards the higher end of the \$2.4 million to \$3.7 million range.

This range is used for general guidance only. The following text details the anticipated stormwater program enhancements and related costs.

4.0 ANTICIPATED STORMWATER PROGRAM BUDGET NEEDS

During the last three years, the Village of Downers Grove has increased its Stormwater Management budget for operation and maintenance from \$1.1 million per year (FY2004-2005) to \$1.4 million for the next fiscal year (FY2006-2007). This budget will need to be increased above existing funding levels to adequately address the following critical stormwater-related services.

4.1 Stormwater Permit Compliance (NPDES, DuPage County, TMDL)

NPDES compliance costs are spread between the Public Works Management and Permits/Inspections budget. It is anticipated that future strengthening of the NPDES stormwater rules will require additional professional and field staff.

As NPDES requirements increase by the end of the first permit cycle (early 2008) and additional water quality pressures surface (via the East Branch DuPage River TMDLs), additional funding will be required. Additional effort may likely be directed to the following areas:

- Enhance inspection and enforcement efforts for site erosion control
- Coordinate local stormwater education efforts
- Continue and expand *Good Housekeeping* education for employees at municipal facilities
- Continue review and enforcement of DuPage County stormwater requirements
- Plan and design stormwater quality BMPs
- Monitor stormwater quality to verify Village contributions to pollutant loading to the East Branch DuPage River (not a recommendation at this time, but future TMDL enforcement may require it)
- Prepare Notice of Intent for the second permit cycle of the Village's NPDES stormwater permit (due in late 2007 or early 2008)

Approximately \$675,000 per year will be required to fully comply with local, state and federal stormwater requirements. Of this budget estimate, approximately \$200,000 per year is necessary for general NPDES permit compliance activities, bookkeeping, and developing future Notices of Intent. Approximately \$475,000 per year is necessary to maintain a permit review and inspection program to enforce local and state stormwater rules within the Village.

4.2 GIS

As discussed in this Master Plan, a GIS is a critical element of the stormwater system mapping and maintenance process. Using the GIS to its fullest potential requires investment in field hardware, staff training, additional software, and field time to collect system data. Approximately \$75,000 per year will be necessary for the Village to build and maintain an adequate GIS that can be used for system mapping and maintenance planning.

4.3 Capital Improvement Project Backlog

The Village has a significant backlog of Capital Improvement Projects. Addressing these projects is critical, as the backlog will increase as the Village's infrastructure continues to age. In addition to the projects already identified, the following Capital Improvement needs are anticipated:

- Redevelopment creates the need for new storm sewers, sewer size enhancements, and stormwater storage.
- TMDL enforcement may force the Village to implement stormwater quality BMP projects.
- Stormwater facilities should be extended to areas with insufficient or no existing infrastructure.
- Much of the Village's storm sewer system is near the end of its useful life (typically 50-75 years for sewer pipes). Many of these sewers will begin to fail and will need replacement within the next 10-20 years.
- The need for streambank restoration and stabilization has been identified, which will require more proactive measures to protect and beautify the Village's open channel component of the stormwater system.

The CIP budget should be adjusted to approximately \$1.1 million per year (which includes \$100,000 per year for Basin Studies and CIP identification). This will allow the Village to address the current project backlog of \$8 million over a 10-year period while having adequate funding to address stormwater quality initiatives. During the next ten-year period, it is anticipated that new projects will be identified, thus maintaining a consistent CIP backlog

4.4 Operation and Maintenance

Because of funding limitations, the Village's maintenance activities do not meet the broader goal of a comprehensive stormwater management program. Additional funding is required to implement a comprehensive, proactive and cost-effective stormwater maintenance program.

The Operations and Maintenance budget should be adjusted to approximately \$1.3 million per year. This allows the Village to implement maintenance activities at appropriate frequencies, as recommended in this report. An additional 5 staff members are needed to effectively implement the maintenance program.

The table on the following page summarizes preliminary stormwater budget needs and shows an annual stormwater program funding level of \$3.2 million. This is on the lower end of the range determined by the per capita funding guideline, as described earlier in this document.

Proposed Stormwater Program Budget

Stormwater Program Activity	Explanation	Estimated annual funding required
Capital improvements Includes \$8 million in existing projects and \$12 million additional in next 10 years	Required to reduce backlog of identified projects and to implement future stormwater projects, including mandated water quality components, improvements in redeveloped areas and extension of facilities to areas without infrastructure	\$ 1,000,000
GIS Includes addition of 1 dedicated stormwater GIS technician	Required for federal NPDES requirements, basin planning, maintenance program	\$75,000
System Operation & Maintenance Includes addition of 5 staff members	Required for implementation of comprehensive maintenance program	\$1,300,000
Regulatory Compliance Includes additional staff efforts to meet new regulatory requirements	Required for: federal NPDES permitting, TMDL & water quality requirements, public education	\$200,000
Permits/Inspections Includes current staff levels	Required for: Regulatory compliance	\$475,000
Basin Studies Includes detailed analysis to determine system deficiencies and identify needed capital projects	Required for: federal NPDES requirements, CIP planning	\$100,000
Program Development Includes effort to develop needed programs, such as maintenance, funding, planning	Required for: Program implementation	\$50,000
	Total	\$3,200,000

5.0 FUNDING OPTIONS

Historically, stormwater programs have largely been funded by taxes. The downside of this funding method is that the taxes can be redirected to other municipal programs, often leaving the stormwater program under-funded for several years. As stormwater has, traditionally, been a low-profile program in the public eye, it is often the first program to receive funding cuts when money is directed to more visible programs (i.e. Police, Fire).

Stormwater program funding usually experiences temporary spikes immediately following significant flooding events, when political pressure directs tax revenue back into the program. Unfortunately, the funding boost is typically short-lived and often doesn't last much beyond the Master Planning stage. As such, it is common to encounter Stormwater Master Plans that are 20-30 years old that have had few, if any, implemented projects or other programs.

Stormwater funding mechanisms, as described below, can provide temporary or permanent additional income. Of the methods described below, only the *Stormwater Utility* provides a reliable and fully-dedicated stream of revenue for a stormwater program.

- **Income / Property Taxes.** A common source of stormwater funding, these taxes are directed to the General Fund, from which stormwater programs are funded. The revenues from these taxes are not dedicated to any particular municipal service, so stormwater projects compete with all other types.
- **Sales Tax.** An additional percentage added to the local sales tax to support a municipal program, such as stormwater. This system provides a reliable source of income, but places the entire burden on local consumers, as opposed to property owners who have the most direct impact on stormwater runoff. The City of Champaign currently uses this method to fund their stormwater program.
- **Stormwater Utility.** A demand-based approach to funding a stormwater program. Property owners pay a “stormwater user fee” that is directly related to their impact on the stormwater system. An individual property’s impact is usually measured by the amount of impervious area on their property. This is usually easy to measure, given the availability of aerial photography and parcel boundaries, as part of the local GIS. A Stormwater Utility is considered an Enterprise Fund, and it is therefore illegal to transfer money from the stormwater fund into other programs.
- **Bond Issues.** Bond issues can be used to fund stormwater-related activities, but can often be re-appropriated when other programs receive political priority. Bond payments can be serviced by a Stormwater Utility or the General Fund.

- **Special Assessments**. Special assessments target those properties directly impacted by a given project, but are very time-consuming to establish, especially for stormwater-related projects that involve detailed watershed delineation and property identification. The administrative effort necessary to establish assessment districts often makes this an unattractive alternative. Furthermore, special assessments are difficult to use for stormwater quality projects and other new program elements to address NPDES requirements.
- **Plan Review / Inspection Fees**. These provide some limited revenue to help offset the costs of additional staff for plan review and field work. These fees are usually dependent on new development or redevelopment and do not provide adequate income for stormwater services relating to existing infrastructure.
- **Grants**. The state and federal government provide grant programs for stormwater-related activities. These grants provide up to several hundred thousand dollars per grant award for projects that address stormwater quality. The Section 319 Grant (administered by the IEPA) provides funding on an annual basis and is a 60/40 matching grant (40% local match). These grant programs generally favor stormwater educational initiatives and provide only limited assistance for implementation (construction) projects. Grants should not be considered for long-term program budgeting purposes, as their availability is sporadic and the funding levels are low, relative to the proposed stormwater program budget.
- **Low Interest Subsidized Loans (SRF)**. These long term (i.e. 20-year) loans are subsidized by the state and provide a positive alternative to bond funding, as the interest rates are often below 3% (based on current market rates).
- **Tax Increment Funding (TIF)**. Funds generated from a TIF district can be used to finance stormwater infrastructure directly related to the associated redevelopment area. However, TIF-related stormwater funding is focused (generally) on small areas and requires significant up-front work to justify and secure the funding. Local opposition to TIF districts is not uncommon and can sometimes hinder efforts seek that funding.

These funding options are summarized in the following table:

FUNDING ALTERNATIVE	ADVANTAGES	DISADVANTAGES
General fund (property tax)	Easily accessible	Not dedicated to stormwater, can be redirected, may require tax increase
Sales tax	Reliable source	Burden on local consumers, not property owners impacting stormwater system
Stormwater utility	Dedicated source, fee directly related to impact on stormwater system	May be perceived as a tax
Bond issues	Can be paid off from general fund or stormwater utility	Funds can be reappropriated, debt limits may restrict
Special assessments	Targets property owners directly benefiting from project	Difficult to administer
Plan review/ inspection fees	Fees generated from activities impacting staff resources	Does not generate significant funds
Grants	Additional funds for stormwater-related projects	Generally limited projects with education focus, limited availability
Low-interest loans	Interest rates well below prevailing market rates	Less flexibility with use of funds, must meet funding agency requirements
TIF Districts	Can generate additional funding for infrastructure	Limited to areas meeting criteria, local taxing bodies often resist

6.0 FUNDING RECOMMENDATIONS

Given the variations in the Village’s stormwater program funding, it is apparent that the Village will need to find new revenue sources to meet ongoing NPDES commitments, CIP goals, increased operations/maintenance needs, and staffing requirements.

Based on current spending levels and anticipated program needs identified in this report, the Village should plan for an annual stormwater program budget ranging from \$3.0 million to \$3.5 million. This will allow the Village to better address its aging stormwater infrastructure and initiate some projects that enhance stormwater quality.

- The Village should conduct a *Stormwater Utility Feasibility Study* to determine how a Stormwater Utility could be used by the Village to fund the proposed stormwater program. This study typically consists of a detailed review of existing budget data, interviews with key Public Works staff, Village legal staff, financial staff, and other key stakeholders. The Feasibility Study includes the following tasks:

- Finalize the proposed stormwater program budget after interviews with key Village staff (typically a 5-year program budget with a cash flow analysis). Much of this work has already been completed as part of this *Master Plan Update*.
- Identify existing funding sources, such as permit fees, grants, other local stormwater fees
- Identify existing debt obligations, such as bonds and low-interest loans
- Prepare a *Preliminary Rate Study* (determine potential user fees and billing methods)
- Identify key potential rate payers
- Prepare a detailed roadmap to full Stormwater Utility implementation
- Present the Feasibility Study and key recommendations to Village Council

Implementing a Stormwater Utility typically takes 12 to 18 months, beginning with the initial steps of the Feasibility Study.

- Based on our recommendations in the *Rules and Standards* section, the Village should charge a stormwater impact fee of \$14,000 per redeveloped acre. Based on recent redevelopment history and average lot size, the Village could generate up to \$300,000 - \$400,000 per year (nearly 10% of the program budget) with this fee, assuming redevelopment rates are maintained at approximately 130 per year.