



*Sedgwick County...  
working for you*

# Final Business Plan



929 Walnut, Suite 200  
Kansas City, Missouri 64106

For the Sedgwick County  
Stormwater Management  
Advisory Board



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# Prepared For

**Sedgwick County Public Works Department  
Sedgwick County Stormwater Management Advisory Board**

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Adopted by

the Stormwater Management Advisory Board on:

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M.S. Mitchell, Chairman

Date

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## Acronyms

BMP	Best Management Practices
CIP	Capital Improvements Plan
CRS	Community Rating Service
EOC	Education and Outreach Committee
ERU	Equivalent Residential Unit Fee
FEMA	Federal Emergency Management Agency
FMT	Floodplain Management Taskforce
GIS	Geographic Information Systems
MAPD	Metropolitan Area Planning Department
PES	Preliminary Engineering Studies
PRC	Project Ranking Criteria
REDC	Recreation and Economic Development Committee
SMAB	Stormwater Management Advisory Board
SWM	Storm Water Manual
TAC	Technical Advisory Committee

## I. Executive Summary

In October 2007, the Sedgwick County Commission chartered the Stormwater Management Advisory Board (SMAB) with the mission to protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical, and other assistance to all entities within Sedgwick County that are concerned with stormwater management. Effective stormwater management requires cooperation across jurisdictional boundaries, a major reason for chartering the SMAB and creating a county-wide, collaborative stormwater program.

This project is the next step in the evolution of the SMAB. In June 2009, Sedgwick County began the process of developing a Strategic Business Plan, which would help define the future Stormwater Management Program.

A highly effective and functional Stormwater Management Program will protect life and property and enhance quality of life, while creating community assets that provide recreational opportunities and promote economic development. The Program focus is stormwater management, not just "flood control". Specific goals include:

1. Minimizing threats to life, property, and infrastructure from flooding.
2. Enhancing quality of life for citizens throughout Sedgwick County, not just those directly impacted by flooding.
3. Making investments to avoid future taxpayer liabilities.
4. Building public support for actions, activities, and behaviors that lead to the protection of water resources.
5. Fostering high-quality economic development.
6. Protecting environmental quality.

The SMAB then developed the following, more specific, Program objectives. The objectives apply to multiple goals, as shown below:

- A. Avoid future liabilities (Goals 1 through 6).
- B. Secure dedicated funding (Goals 1 through 6).
- C. Educate the public, staff, and elected officials about proper watershed management and its benefits to the community and natural environment (Goals 1 through 6).
- D. Create multiple-benefit improvements (Goals 1 through 6).
- E. Provide appropriate technical guidance and model regulations (Goals 1, 3, and 6).
- F. Perform studies and prepare stormwater master plans for all Sedgwick County watersheds (Goals 1 and 6).
- G. Adopt a comprehensive flood risk management approach (Goals 1, 3, and 5).
- H. Integrate watershed, land use and open space planning (Goals 1, 2, 4, 5 and 6).
- I. Prevent pollutants from entering Sedgwick County waterways (Goals 2, 3, 4 and 6).
- J. Preserve wildlife habitat that provides stormwater management benefits (Goals 1 and 6).



As envisioned in this plan, the SMAB would oversee Program administration and operations to accomplish these goals and objectives, with assistance from several committees and a small team of dedicated staff. In addition to the existing Technical Advisory Committee the SMAB could expand its committee structure to include a Recreation and Economic Development Committee; an Education and Outreach Committee; and an Executive Committee. The Committees would provide expertise and help facilitate countywide coordination, to help create programs and solutions that enhance quality of life and promote economic development as well as stormwater management. Dedicated staff will be required to effectively and efficiently address the many responsibilities of a full-scale Program. When possible and when funding becomes available, this plan proposes hiring a Program Planner and a Stormwater Engineer, and eventually a dedicated Program Manager to shoulder the Program's daily responsibilities.

- The SMAB would review and approve official Program work plans, technical standards, documents and studies.
- The SMAB would review proposed budget requests and expenditures prepared by Program staff and recommend approval by the County Commission.
- During the capacity-building phase (years 1 and 2, or 2010 and 2011) the SMAB would promote policies that further its goals and objectives. Experience shows that well-crafted policies are the most cost-effective stormwater management tool.
- During the implementation phase, Program staff would prepare watershed studies and plans to identify flooding causes and project opportunities, and guide future investments; implement a flood risk management program to reduce risks to life and property; and use prioritization ranking criteria provided in this plan to recommend funding for multiple-benefit capital projects submitted by the cities, watershed and drainage districts, and the County. The SMAB would use the staff analysis to prioritize and recommend projects to the County Commission for matching funding based on available revenue, as described in later sections.

The County Commission retains final authority to approve SMAB appropriations requests, plans, policies and capital project funding recommendations, and projects and policies in the unincorporated area.

Public awareness and education is essential to effective stormwater management, and the Program would also include an awareness and education campaign. The education and awareness effort will be designed to increase public awareness of water resource issues and build public support for local actions and activities as well as changing behaviors that lead to the long-term protection of water resources. Public education and outreach will help individual citizens as well as businesses and organizations become aware of their role in stormwater issues. This element is described in detail in the Public Awareness Strategy document, under separate cover.

The implementation phase of the Program would begin as soon as a dedicated revenue source is secured. The SMAB currently anticipates a public vote on a revenue source would be held in April 2012; and if successful, new revenue would be collected beginning in September 2013. Under this scenario, the Program would ramp up its operations in 2014 when sufficient funds are available, and would be functioning at full capacity by 2015.





## Strategic Business Plan

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Currently, the best estimate of countywide, long-term stormwater funding needs (including Tier I and II activities and anticipated capital projects) is \$236 million. This plan proposes an annual budget of \$10.1 million (in 2015 dollars) to address this anticipated backlog over a 20-year time frame, beginning in 2015. This funding level equates to a 0.375 percent Sales Tax or 2.08 Mill Property Tax according to future revenue estimates for 2015 from the Sedgwick County Division of Finance.

## II. Introduction

In October 2007, the Sedgwick County Board of County Commissioners established by resolution the Stormwater Management Advisory Board (SMAB). The purpose of the SMAB is to “serve as an advisory board to the County Commission on all matters related to stormwater management.” The establishment of the SMAB was the culmination of several years of effort by many individuals and agencies throughout Sedgwick County. The resolution gave the SMAB a broad charge related to stormwater management issues in the County.

This project is the next step in the evolution of the SMAB. In June 2009, Sedgwick County began the process of developing a Strategic Business Plan, which would help define the future Stormwater Management Program.

This section provides a brief overview of the proposed Stormwater Management Program (Program) and its purpose; the Stormwater Management Advisory Board that oversees the Program; the proposed public awareness and education strategy; a brief history of how the plan was developed; and finally, the common elements that run throughout the plan. See the Appendices A and B for more detail.

The report body describes the Program’s goals and objectives as laid out by the SMAB, and describes implementation strategies for the first 6 years as the Program grows to full capacity. Included in the description are proposed policies, tasks, staffing, and budget for each phase. A prioritized list of initial capital funding recommendations is next. The final section of the report presents a detailed discussion of the proposed public awareness and education strategy that will help the SMAB and its stakeholders make the Program a reality.

Detailed, supporting information used to develop the proposed Program and plan are included in the Appendices.

### A. The Stormwater Management Advisory Board

The current SMAB is the culmination of over a decade of strategic planning and stormwater management progress. The following paragraphs describe its evolution, and recommended responsibilities under this plan.

#### ***Floodplain Management Taskforce (FMT)***

In January 2005, the Floodplain Management Taskforce was formed to evaluate then current policies and practices regarding floodplain management. This group included staff representatives from the City of Wichita and Sedgwick County along with other appointees representing stakeholder groups, local governments, state and federal agencies.

The effort culminated in the issuance of *Floodplain Management Task Force Final Report – A Work in Progress*, submitted to the Wichita City Council and Sedgwick Board of County Commissioners in December 2005. This report contained a series of short-, mid- and long-term floodplain management recommendations based upon the FMT’s research. The recommendations were formulated by weighing the issues against business, environmental and neighborhood interests.

The effort led to the appointment of an Organizing Committee to create an entity that could coordinate area-wide drainage and floodplain management efforts.

### **Organizing Committee**

In January 2007, the Organizing Committee submitted their report *Governance Framework for the Stormwater Management Advisory Board Draft Report*. The report included a needs assessment and funding recommendations for the future Stormwater Management Program. The Organizing Committee recommended establishing the SMAB and outlined a number of specific responsibilities and tasks.

### **Stormwater Management Advisory Board**

The Sedgwick County Commission accepted the Governance Framework recommendations described above. In October 2007, the County Commission chartered the SMAB with the mission to protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical, and other assistance to all entities within Sedgwick County that are concerned with stormwater management. See Page 18 in Appendix A.2 for a copy of the SMAB charter.

#### **Recommended Functions and Responsibilities**

The SMAB is chartered as an advisory board to the County Commission. The County Commission retains final authority to approve SMAB appropriations requests, plans, policies and capital project funding recommendations, as well as projects and policies in the unincorporated area. However, the County Commission gave the SMAB the authority to determine what matters it would concern itself with, including the following recommendations from the Organizing Committee:

- Promotion of stormwater basin planning and inter-jurisdictional cooperation;
- Master planning for stormwater management (including coordination of existing basin studies and additional basin studies, as needed);
- Serving as a technical clearinghouse for stormwater management projects;
- Recommending a long-term dedicated source of revenue for stormwater management projects that would supplement funds provided by implementing entities;
- Establishing priorities (using project selection criteria) to implement basin studies (a Capital Improvements Plan) and stormwater management projects;
- Development of recommended minimum standards for facility design, construction and maintenance;
- Development of recommended minimum drainage standards and processes for new urban development, and encouraging participating entities to adopt such standards;
- Public awareness and education programs;



- Creation and maintenance of geographic information systems (GIS) mapping of flood-prone areas and stormwater management projects; and
- Participation in the Cooperating Technical Partners Program (regarding Federal Emergency Management Agency [FEMA] map revisions).

As envisioned in this plan, the SMAB would continue to perform the functions described above. As the Program builds sufficient capacity, it is envisioned that these responsibilities would evolve in the following ways:

- The SMAB would oversee Program administration and operations to ensure that the Program is operating in accordance with the approved Business Plan, and would provide guidance and feedback to Program staff.
- The SMAB would review and approve official Program work plans, technical standards, documents and studies.
- The SMAB would review proposed budget requests and expenditures prepared by Program staff and recommend approval by the County Commission. The SMAB would also review and approve non-administrative expenditures as it does currently, as well as periodic Business Plan updates.
- The SMAB would expand its committee structure as described in the following section.
- The SMAB would appoint committee members; provide guidance and direction for committee work; and review and approve committee recommendations and reports.
- Program staff would use the prioritization criteria to evaluate proposed capital projects submitted by the cities, watershed and drainage districts, and the County. The SMAB would use the staff analysis to prioritize and recommend projects to the County Commission for matching funding based on available revenue, as described in later sections.
  - Initially this plan envisions that the County Commission would approve all expenditures individually. Eventually it is hoped that the approval process be streamlined after the Program successfully demonstrates its effectiveness, equity, and transparency. It is desirable that the Program move to a model where annual budget and project expenditures are administratively approved by signature of the County Commission Chairman, thereby reducing delays significantly while preserving accountability.

### **Recommended SMAB Structure**

SMAB representatives' skills and experience and the SMAB's supporting committees are critical to the Program's long-term success. Under this plan SMAB representatives would be appointed as originally chartered, but because of the intent to promote multiple-benefit approaches the appointment criteria should be expanded to include broad knowledge of and interest in community improvement, outdoor recreation, and economic development as well as stormwater management.

The SMAB Charter authorized creation of the Technical Advisory Committee, which has been instrumental in accomplishing initial tasks. Additional committees would help the Program fulfill

the responsibilities and functions described above. Anticipated responsibilities and meeting schedules are described below.

- **Executive Committee** – The SMAB would have the option of selecting an Executive Committee and delegating specific responsibilities to it. If authorized by the County Commission and created by the SMAB, the Executive Committee would likely set the SMAB agenda, make recommendations for SMAB consideration, handle administrative issues that require immediate attention, and other responsibilities delegated by the SMAB. This Committee would meet in advance of SMAB meetings, and more often if necessary.
- **Technical Advisory Committee (TAC)** – Reviews and oversees the development of technical guidance and watershed mapping and planning efforts; assists the Education and Outreach Committee to advocate for community adoption of technical standards and plans; reviews project prioritizations; provides technical assistance to other Committees (along with staff). Would meet monthly or as needed.
- **Education and Outreach Committee (EOC)** – Would oversee the development and implementation of public awareness information; work to educate elected officials and the public about SMAB activities; work with other Committees to educate elected officials and the public and obtain feedback on their initiatives. Would meet monthly or as needed.
- **Recreation and Economic Development Committee (REDC)** – Would oversee the development of proactive, multiple-benefit projects to catalyze economic development and provide recreational opportunities. Would meet regularly with county and city economic development and parks and recreation officials and others, such as Visioneering Wichita Economic Development and Recreation Alliances, to plan and consider projects. Would review the economic development and recreational potential of capital improvements submitted for funding. Would meet quarterly or as needed.

## B. Public Awareness and Education

Public awareness and education is essential to effective stormwater management. Moving forward into the next five years, the SMAB and its' partners desire to build an effective awareness and education program. The awareness and education program would contain activities that, when enacted together as a part of an integrated awareness and education strategy, will be effective at helping Sedgwick County communicate with the many "publics" involved in stormwater management.

The objective of awareness and education programs is to achieve awareness of water resource issues with the goal of building public support for local actions and activities as well as changing behaviors that lead to the long-term protection of water resources. Public education and outreach is a key component of stormwater management in Sedgwick County that helps individual citizens as well as businesses and organizations become aware of their role in stormwater issues.

Involving the public in local watershed protection efforts is crucial because it promotes broader public support, helps create an ethic of stewardship and community service and enables the public to make informed choices about water resource management. Changes in basic behavior

and practices are necessary to achieve maximum long-term improvements in water quantity and quality management.

The purpose of this Awareness and Education element is to outline activities, materials, and strategies that could, when implemented, function as an integrated awareness and education program and provide the needed outreach and education support for stormwater management in Sedgwick County. This element is described in detail in the Public Awareness Strategy document, under separate cover.

## C. Program Purpose, Goals, and Objectives

Sedgwick County has taken several steps in the right direction regarding stormwater management. Yet there is much the region can still do to enhance public safety, minimize property and infrastructure damages, protect water quality and build stronger communities. Reasonable and effective actions can be implemented to accomplish the SMAB's purpose as defined in its charter: "To protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical and other assistance to all entities within Sedgwick County that are concerned with stormwater management."

The Sedgwick County Commission chartered the SMAB with the mission to protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical, and other assistance to all entities within Sedgwick County that are concerned with stormwater management. Effective stormwater management requires cooperation across jurisdictional boundaries, a major reason for chartering the SMAB and creating a county-wide, collaborative stormwater program.

A highly effective and functional Stormwater Management Program will protect life and property and enhance quality of life, while creating community assets that provide recreational opportunities and promote economic development. Creating a Program that goes beyond public infrastructure is important to the Program's success, because successful programs:

- Have broad community appeal, like Lenexa's Rain to Recreation program.
- Provide benefits to the broader community, like parks and recreation opportunities, generates voter support.

Since the inception of Sedgwick County's cooperative stormwater planning efforts, the Sedgwick County community has identified several specific goals and objectives for its multiple-jurisdiction Stormwater Management Program. After reviewing previous recommendations and discussing the future Program's emphasis in detail, the SMAB articulated the following goals and objectives for the Program.

### Goals

The Program focus is stormwater management, not just "flood control". Specific goals include:

1. Minimizing threats to life, property, and infrastructure from flooding.
2. Enhancing quality of life for citizens throughout Sedgwick County, not just those directly impacted by flooding.



3. Making investments to avoid future taxpayer liabilities.
4. Building public support for actions, activities, and behaviors that lead to the protection of water resources.
5. Fostering high-quality economic development.
6. Protecting environmental quality.

## Objectives

The SMAB then developed the following, more specific, Program objectives. The objectives apply to multiple goals, as shown below:

- A. Avoid future liabilities (Goals 1 through 6).
- B. Secure dedicated funding (Goals 1 through 6).
- C. Educate the public, staff, and elected officials about proper watershed management and its benefits to the community and natural environment (Goals 1 through 6).
- D. Create multiple-benefit improvements (Goals 1 through 6).
- E. Provide appropriate technical guidance and model regulations (Goals 1,3, and 6).
- F. Perform studies and prepare stormwater master plans for all Sedgwick County watersheds (Goals 1 and 6).
- G. Adopt a comprehensive flood risk management approach (Goals 1, 3, and 5).
- H. Integrate watershed, land use and open space planning (Goals 1, 2, 4, 5 and 6).
- I. Prevent pollutants from entering Sedgwick County waterways (Goals 2, 3, 4 and 6).
- J. Preserve wildlife habitat that provides stormwater management benefits (Goals 1 and 6).

The Stormwater Program Implementation section (Section III) describes how Sedgwick County might achieve these goals and objectives.

## D. Plan Development

This business plan provides general and specific guidance for future Program tasks and activities. The methodologies used to create this plan included:

- Review of pertinent documents, legislation, and regulations;
- Identification of Program interrelationships and regulatory authority;
- Targeted stakeholder interviews; and
- Online surveys.

In the course of developing the plan, several Technical Memoranda were used to communicate results of the plan development process to the SMAB. These are included in Appendix A.

Two online surveys were disseminated to 40 individuals. The first, with the intended purpose to leverage the knowledge of the Sedgwick County Stormwater Management Advisory Board and

targeted stakeholders about Sedgwick County residents' attitudes and behaviors toward water quantity and stormwater quality issues and to better understand what residents value. The second, a project survey was distributed to the same group of individuals for the purpose of identifying recent and current stormwater projects and the identification of future stormwater needs.

## **E. Plan Organization**

Since its inception, the SMAB and city and county staff have made solid progress on several initial tasks, including updating topographic mapping and developing technical guidance for stormwater design. This progress, accomplished by the original Board, existing staff and consultants, constitutes the first phase of Sedgwick County's Stormwater Management Program.

Next steps, the subject of this Plan, include formulating policies; creating a dedicated Program structure and delegating specific tasks; identifying staffing and budget needs; and securing dedicated revenue sources.

The plan elements emerged as investigations, interviews and discussions took place and are the focus of this Plan. These elements are described below, and carried through the description of Program Years 1 and 2, and Years 3 to 6. Appendix B provides a consolidated description of the proposed Program operations and administration. Example bylaws, agreements, resolutions and practices are provided in Appendix C.

### ***Program Policies***

Experience shows that well-crafted policies are the most cost-effective stormwater management tool; during the near term the SMAB could make the greatest impact by promoting policies that further its goals and objectives. Policies will set the Program's direction and codify the approach to achieving Program goals and objectives. Sound policies will also guide Program operations and provide consistency and certainty for the SMAB, staff, and stakeholders. Finally, effective policies are direct means of accomplishing some goals and objectives, particularly related to avoiding future liabilities.

### ***Program Tasks***

Achieving the Program's goals and objectives will require clearly defined implementation strategies, from Program phasing and funding strategies to specific implementation tasks. Implementation strategies should build on previous studies and recommendations, the SMAB Charter, and review of other successful programs, with direction from the SMAB and staff feedback. Finally, while adopting appropriate guidance and conducting watershed planning is important to avoid future liabilities, the SMAB suggested that a specific list of projects may be needed for a public funding initiative to succeed. The tasks would follow directly from the implementation strategies.



## Staffing

The SMAB is currently operating using Sedgwick County and City of Wichita staff that have been appointed to support the Program. There is agreement among SMAB members that the Program will require dedicated staff and resources to accomplish the tasks included in the SMAB charter and the goals and objectives outlined herein. Program staff would oversee approved projects and conduct public awareness and education functions and provide staff support to the SMAB. Staff would also prepare Program budgets, review capital improvements for funding and administer reimbursements, and draft policy and administrative recommendations for review and approval by the SMAB and County Commission. As the organization matures and evolves, staffing needs will change.

## Source of Funds

There was agreement among SMAB members that the current level of funding is a barrier to Program implementation and effectiveness. There was also agreement that the lack of a dedicated revenue source severely hampers the County's ability to initiate watershed planning or capital improvement projects for stormwater management. The *Governance Framework for the Stormwater Management Advisory Board Draft Report* hereinafter referred to as the *Governance Framework*, reviewed four primary revenue sources for funding capital projects: sales tax, property tax, special assessment and equivalent residential unit (ERU) fee. A property tax of approximately 1.5 mills was recommended at that time.

The SMAB recognizes that a viable Program which addresses the various identified issues may require several revenue sources, and these are likely to change over the course of the Program. For the sake of fairness all community constituencies that benefit should help fund aspects of the Program. It is likely that the County Commission would require a public vote on a dedicated revenue source. And because Sedgwick County is utilizing the full 1-percent retail sales tax allowed by law, either a portion of the existing retail sales tax would have to be reallocated for multiple-benefit stormwater management projects, or the Kansas Legislature would have to authorize a new tax. Based on these considerations:

- Successful stormwater management programs have leveraged multiple revenue sources and partnered with other departments and programs (like Parks and Recreation departments).
- It is highly unlikely that enabling legislation for a dedicated sales tax could be brought before the Kansas Legislature in 2011 in time for a local initiative in November 2011.
  - A local funding initiative vote can precede (and prompt) legislative approval.
  - Placing an initiative on the April 2012 local election ballot is an alternative.
- Other funding sources in addition to a sales tax should be considered.

Section III. C. and Appendix D provides more detail on potential funding sources.



## **Budget**

The Program will require dedicated staff and resources to accomplish the tasks included in the SMAB charter and the goals and objectives outlined herein. During the capacity building phase (Years 1 and 2) the Program would expand its core functions to accomplish more of the tasks described in the SMAB charter, while laying the groundwork for larger-scale planning and capital improvement projects. During Years 3 to 6 the Program would begin implementing multiple-benefit projects and funding high-priority, cost-effective capital projects identified during Years 1 and 2. Projects will be dependent on securing dedicated revenue. Section III. B. and D. and Appendix D discusses the proposed budget in greater detail.

The following section describes how the Program would be implemented.



## III. Stormwater Program Implementation

### A. Introduction

This section describes the policies, tasks, staffing, and funding proposed for the Program to accomplish its goals and objectives. The information presented below is based on Program phasing. Appendices B through G provide additional detail on the proposed Program focus, activities, budget and funding; and supporting information for future operations.

### B. Years One and Two

The following sections outline specific Program elements based on these considerations. Implementation strategies include: Program policies, tasks, staffing, source of funds, and budget. Implementation is broken out into two phases. During years 1 and 2 (2010 and 2011) the Program builds capacity for implementation during years 3 through 6 (2012 through 2015) and beyond. A conceptual timeline for years 1 and 2 is provided at the end of this section.

#### *Program Policies*

##### **Discussion**

During years 1 and 2 the SMAB can make its greatest impact by promoting policies that further its goals and objectives. Experience shows that well-crafted policies are the most cost-effective stormwater management tool.

##### **Recommendations**

Near-term policies are:

- Promote continued cooperation and coordination of public stormwater projects and infrastructure projects that impact drainage, to ensure that local projects are coordinated with other communities and are based on a watershed approach.
- Discourage new projects that create future public or private liabilities by implementing the Storm Water Manual (SWM) in all County communities, and by withholding approval or support for projects that fail to meet the standards.
- Encourage low-impact site design and stormwater management practices that exceed the SWM requirements where desirable and possible, including water quality best management practices (BMP), designing with natural site topography and drainage features, reducing the extent of impervious surfaces, and preserving or enhancing native vegetation where possible.
- Work cooperatively across departments and jurisdictions to combine efforts, programs and projects to accomplish multiple benefits including economic development, recreational opportunities, and improved stormwater management.



- Preserve natural drainage courses, native vegetation and riparian habitats, consistent with maintaining their flood carrying capacities, as future greenways whenever possible by effectively planning the use of man-made facilities and treatments within the drainage channel.

## Program Tasks

### Discussion

Staff, technical and financial resources are needed to meet the SMAB's goals and objectives to have a fully functioning, multiple-benefit and multiple-jurisdiction stormwater program. To accomplish this, the first two years build Program capacity by carefully advocating initial policies and taking on new responsibilities as initial tasks are accomplished.

### Recommendations

The following specific tasks build on current activities. Pursuing these tasks furthers the Program's development during the capacity-building phase.

- **Continue to Facilitate Regional Stormwater Coordination and Cooperation**
- **Encourage Adoption of the SWM** – the County Commission tasked the SMAB with developing recommended minimum drainage standards for new urban development, and encouraging participating entities to adopt these standards. The SMAB has overseen the TAC and consultant team through the development of this initial guidance manual. The SMAB would continue to advocate for Countywide adoption along with the TAC and the EOC.
- **Implement the Strategic Business Plan** – This plan's formal adoption by the Sedgwick County Commission would validate the Program's proposed structure, funding level and revenue source, and activities, and would provide direction for the SMAB and staff from the Governing Body. Specific activities include:
  - Advocating for County Commission adoption.
  - Preparing annual budget requests.
- **Apply for State and Federal Grants** – State and Federal grants to supplement 2011 revenue and build capacity until a dedicated revenue source is secured. Grants would fund special projects or tasks during future Program years.
- **Amend the SMAB Charter** – the October 2007 SMAB Charter authorizes the SMAB to serve as an advisory board to the Sedgwick County Commission; to establish priorities for implementing basin studies and stormwater management projects; and to appoint the TAC to provide technical support. At a minimum, the Charter would have to be amended to allow for an Executive Committee with decision making authority, and may require provisions to expand its role in recommending capital project funding.
- **Develop an Initial Capital Improvements Plan** - Communities, watershed and drainage districts have provided the SMAB with as much as \$250 million in capital projects to

address stormwater management needs. The parties recognize that the projects were not identified using a watershed approach or cost/benefit analysis, and may or may not be the most urgent or beneficial projects.

- Prioritizing the existing list of capital improvement projects to identify the most urgent and beneficial projects. It may be beneficial to have some consulting assistance in this task as well.
  - **Review Existing Projects** – Existing capital projects and drainage studies should be reviewed and screened to identify projects that clearly provide broad benefits and can incorporate multiple benefits. The project rating system developed for this Program (discussed in the Capital Improvements Program section) would be used to evaluate projects and identify those with obvious stormwater management value, selecting the highest priority projects for inclusion in the initial capital projects list during implementation.
  - **Prepare a Final, Near-term Project List** – Preliminary projects information would be updated and reviewed to develop a final recommended list. Prepare a final project list based on SMAB and TAC guidance; update project cost estimates; and create a capital project budget for years 3 through 6.
- **Identify an Initial, Keynote Multiple-Benefit Project** – An initial, high-profile capital project would demonstrate a “quick success” and return on the public’s investment in the Program. Such a project would provide multiple benefits, including economic development and recreational opportunities, and clear stormwater management value. A successful project would appeal to multiple stakeholders and a relatively wide geographic area. Program staff and consultants would work with the EDRC to identify and develop a suitable concept, which would be included in the funding campaign.
  - **Site Selection** –The Program Planner and EDRC, consisting of city and county parks officials and recreation advocates, would identify potential multiple-benefit stormwater projects.
  - **Prepare Conceptual Plan** – A concept plan would be developed for the preferred multiple-benefit project that illustrates its stormwater management and recreational opportunities or amenity value.
- **FEMA Floodplain Mapping (Ongoing)** – FEMA is remapping regulatory floodplains in the County from 2010 to 2013 using the County's Light Detection and Ranging topographic survey data. Floodplain mapping should be updated every 10 years. The Program should request updated topographic mapping in advance of the next cycle, which would begin around 2020.
- **Conduct a Community Survey (Completed)** – In order to optimize the public funding initiative and project budget, and to fine-tune the finance initiative campaign and public awareness message, a citizen survey and a business survey were conducted during the Summer and Fall of 2010. The two surveys provided valuable information about the current state of citizen and business awareness and knowledge and to test potential revenue sources, implementation strategies, and levels. Specific tasks for the two surveys were as follows.

- **Survey Design** – Worked with members of the project team to design a four-page survey instrument for both the residential and business surveys, and a sampling plan to implement each.
- **Administer the Survey** – Worked with members of the project team to mail the survey, cover letter, and postage-paid return envelope to a random sample of residents and businesses, and conducted follow-up phone calls to maximize the response rate.
- **Consolidated Summary Report** – Worked with members of the project team to prepare a summary report of the results. This report was compared with the findings from approximately 400 similar surveys conducted nationwide.

## Staffing

### Discussion

Currently, the County Public Works Department and Metropolitan Area Planning Department (MAPD) provide staff support for SMAB and Program activities. However, dedicated staff can more effectively address the tasks described above. If possible, a Program Planner would be hired to begin laying the groundwork for an expanded Program. If a Program Planner is not retained, the alternative would be for County staff to continue supporting the Program as feasible, with support from outside consultants.

A dedicated Program Planner would oversee the daily Program operations and coordinate the many near-term tasks and activities during the capacity-building phase. A successful Program Planner would have a broad background in watershed and community planning, public involvement, and public finance. The Program Planner would be supervised by the Deputy Director of Public Works until a Program Manager is hired. This dedicated staff person would provide greater support for operations, strategic planning, and capacity building. A particular emphasis would be applying for outside funding. Contractor support would be limited to tasks where the Program Planner and SMAB require specialized assistance. The exact delineation of staff and contractor duties will vary depending on the selected person's training and experience.

The SMAB charter directs the County Public Works Department and MAPD to provide staff support for SMAB and Program activities. Existing staff support is limited by other duties. If a Program Planner is not hired, discrete tasks described above could be contracted to outside consultants with supervision from existing staff and the SMAB. Some limited organizational and strategic planning assistance could be contracted as well.

### Recommendations

During Years 1 and 2 the Program Planner would:

- Conduct strategic planning for the Program and for specific projects and initiatives, and committee operations.
- Provide administrative support for the SMAB and its committees.



- Support the public awareness campaign, providing logistical support and helping facilitate and execute the awareness strategy (described under separate cover).
- Apply for grants and funding from other local, state, and Federal sources.
- Assist the TAC with capital project review to develop an initial capital improvements list.

Existing staff would assist the Program Planner with technical and organizational expertise. If a Program Planner is not retained, existing staff support the tasks described above as responsibilities permit. Additional consultant support could supplement staff resources as described in the following section.

## Source of Funds

### Discussion

As noted previously, the SMAB recognizes that a lack of dedicated revenue seriously limits the Sedgwick County community's ability to accomplish the Program's desired goals and objectives. Funding for the Program would represent an investment in a collaborative, multiple-benefit approach to improve the Sedgwick County community, and would leverage future funds. The major objective for years 1 and 2 would be to secure a longer-term, dedicated revenue source to begin implementing more far-reaching policies, projects, and studies. Dedicated funds would be appropriated carefully to maximize the County's return-on-investment. However, the Program would have to operate on modest available revenue during this capacity building phase.

### Recommendations

- **General Fund** – From Fiscal Year 2009 through 2011, SMAB functions have been and would continue to be financed from the County's General Fund. The initial, annual funding allocation has been set at \$200,000.
- **Apply for State and Federal Grants** – Other state and Federal grants could be pursued to supplement near-term activities, as well as future Program years.

## Budget

### Discussion

The County Commission appropriated \$200,000 in FY 2009 and an additional \$200,000 each for FY 2010 and FY2011. The 2010 appropriation has not been obligated and could be used to fund the first year's activities. The FY 2011 appropriation will allow significant progress on the tasks described above and in the Public Awareness and Education campaign.

### Recommendations

The County Commission appropriated \$200,000 for FY 2010 (\$35,000 of which has previously been encumbered), and \$200,000 for FY 2011. The appropriations would be used to fund the near-term activities, as described in this section and as illustrated in Table 1 below. Two funding



alternatives are provided, which vary depending on whether a staff position is added during Years 1 and 2. Program tasks and funding would be adjusted accordingly based on a staff person's availability and skills. Potential differences include:

- Under the proposed budget, a Program Planner would allow for more emphasis to be placed on Program operations and strategic planning, such as applying for grants and coordinating with potential partners. Depending on skills and experience, this person could help review capital projects and facilitate development and implementation of the public awareness campaign to a greater or lesser extent. Contractor support would be limited to providing in-depth expertise such as public awareness campaign design or capital improvements prioritization. Emphasis on aspects such as developing an initial, keynote project concept would be reduced or eliminated.
- If a Program Planner is not retained, the alternative would be to contract with outside consultants for some organizational support such as helping with Program planning and grant writing, completion of the capital projects review, and design and implementation of the public awareness campaign. Tasks such as developing an initial, keynote project concept could be performed by consultants, or these resources could be shifted to providing more organizational and strategic planning assistance, depending on Program needs.





**Table 1**  
**Budget Recommendations – Years 1 and 2**

**Proposed 2010 Budget**

	<u>Proposed</u>	<u>Alternative<sup>a</sup></u>
Staff	\$100,000	\$0
Contractor Support		
• Organizational Support	\$0	\$25,000
• Capital Improvements Prioritization		
○ Prioritizing the Current Project List	\$35,000	\$50,000
○ Develop Initial, Keynote Project	\$0	\$50,000
• Public Awareness		
○ Topic Forum & Promotional Materials	\$20,000	\$24,000
○ Public Official Briefings (series of 4)	<u>\$10,000</u>	<u>\$16,000</u>
<b>TOTAL</b>	<b>\$165,000</b>	<b>\$165,000</b>

**Proposed 2011 Budget**

	<u>Proposed</u>	<u>Alternative<sup>a</sup></u>
Staff	\$100,000	\$0
Contractor Support		
○ Logistical Support	\$0	\$20,000
○ Grant Writing Support	\$0	\$20,000
• Internet		
○ Website Support (design and support)	\$ 5,000	\$10,000
○ Email Newsletters (content/design)	\$ 2,500	\$ 5,000
• Outreach (design, implementation, and expenses)		
○ Topic Forums (1 to 2)	\$10,000	\$20,000
○ Workshops (2 to 4)	\$20,000	\$40,000
• Community Conversation	\$ 2,500	\$ 5,000
• Citizen Survey Follow-up	\$10,000	\$10,000
Supplies		
• Printed Materials (print/materials costs)		
○ Fact Sheet/Inserts (direct mail cost/printing)	\$15,000	\$20,000
○ Posters/ Kiosks/Displays (printing/kiosks)	\$15,000	\$20,000
• Mass Media (ad & production costs/interface services)		
○ Television/Radio	\$10,000	\$15,000
○ Print Advertising	<u>\$10,000</u>	<u>\$15,000</u>
<b>TOTAL</b>	<b>\$200,000</b>	<b>\$200,000</b>

Note:

a Alternative funding allocations if a dedicated Program Planner is not retained.

## C. Years Three to Six

The following sections outline specific Program elements for the implementation phase. Implementation strategies include: Program policies, tasks, staffing, source of revenue, and budget.

### *Program Policies*

#### **Discussion**

During the implementation phase the SMAB would build on its previous policies and efforts. Implementation phase policies would guide the Program's operations and decisions, but should also begin to integrate sound stormwater management into the broader community's planning and decision making.

#### **Recommendations**

Long-term policies are:

- Practice watershed-based stormwater management. Consider development impacts upon an entire watershed and whether seemingly localized problems may originate from conditions elsewhere in the watershed. Encourage or require watershed studies as a condition for funding, and weight more heavily projects that address the major concerns within those basins. Fund regional solutions that benefit the greater watershed or community.
- Adopt a comprehensive flood risk management approach. Coordinate policies and activities to quantify and reduce the risk to life, property, and economic development due to flooding and levee failures. Focus on both sides of the risk equation by facilitating activities that reduce both the probability of flooding through runoff reduction and infrastructure improvements; and the consequences by limiting new development at risk within floodplains and behind levees.
- Integrate watershed, land use and open space planning. The Wichita/Sedgwick County Comprehensive Plan contains a broad goal to protect property investment by decreasing stormwater impacts. The SMAB and Program staff should coordinate with MAPD, County and local planning and parks, and elected officials to accomplish the following objectives. See Appendix E for more detail.
  - Floodplains and watersheds should be delineated in land use maps to identify the stormwater management context.
  - Open space plans should be included that provide land for stormwater management and other benefits, such as recreation and parks.
  - Include discussion within land use planning regarding the impacts of land development on floodplains and the role of watershed plans.



- Incorporate watershed based policies into land use plans. This may involve developing policies to minimize development in watersheds where critical issues exist, particularly within floodplains.
- Monitor project performance and local partners' Program compliance to ensure that projects are properly planned, designed, constructed and maintained in accordance with the Program's goals and objectives.
- Give preference to projects where a dedicated maintenance funding source has been identified that will ensure the long term viability of the project or where project design reduces continuing maintenance needs.

## Program Tasks

### Discussion

The implementation phase of the Program would begin as soon as a dedicated revenue source is secured. The SMAB currently anticipates a public vote on a revenue source would be held in April 2012; and if successful, new revenue would be collected beginning in September 2013. Under this scenario, the Program would ramp up its operations in 2014 when sufficient funds are available, and would be functioning at full capacity by 2015.

### Recommendations

The following implementation phase tasks build on the Program's development during the capacity-building phase. Recommended tasks and activities are organized into "Tiers" based on priority and potential funding levels secured during the capacity building phase (Years 1 and 2), as described below. Tier I activities are core Program functions. Tier II activities include watershed planning and prioritization, and flood risk management. Tier III includes capital projects, such as levee rehabilitation and flood mitigation projects, and funding capital project requests from member communities and watershed or drainage districts. Other projects and activities may be added if additional revenue is obtained in any given year or period.

#### Tier I Activities

- **Continue to Facilitate Regional Stormwater Coordination and Cooperation**
- **Provide Technical Assistance and Guidance** – Program staff would establish and maintain a countywide stormwater data clearinghouse, in partnership with the City. This “one stop shop” would house both Program-generated and local data, including stormwater studies and plans; floodplain mapping; GIS data; hydrologic, hydraulic, and water quality models; technical research and guidance, and monitoring data.

The Program would continue to develop technical guidance for both public and private projects as needed and as revenue allows. Program staff and funds could also be used to conduct research or assist local partners with research and development, at the SMAB's discretion and as revenue allows.

- **Public Awareness and Education** – An education and awareness campaign will be a critical component of the Program's success. This Strategic Business Plan anticipates that

an initial campaign for a public finance initiative will transition into an ongoing outreach effort to educate citizens and officials about stormwater management principles and needs, and specific issues as appropriate. The Public Awareness Strategy document provides detailed information on proposed public awareness and educational efforts.

### Tier II Activities

- **Countywide Watershed Prioritization and Pilot Study (Year 5)** – Stormwater study to prioritize watershed studies and conceptual, regional stormwater improvements; and pilot test the standard watershed study scope of work.
- **Watershed Studies and Plans (Years 6+)** – The Program would conduct watershed studies to understand and identify flooding causes and opportunities for future improvements; to provide analytical tools for future private development and public infrastructure projects; and to help anticipate and avoid potential future liabilities. This plan envisions that the Program would:
  - Initiate three to five detailed watershed studies per year.
  - Develop Stormwater Master Plans for each watershed.
  - Update floodplain mapping for each studied watershed.

A draft watershed study scope of work is provided in Appendix F.

- **Flood Risk Management** – The Program would incorporate a comprehensive flood risk management approach during the implementation phase. This approach would coordinate policies and activities to quantify and reduce the risk to life, property, and economic development of flooding and levee failures. The strategy would be built around the FEMA Community Rating Service (CRS) incentives. Program activities would include studies and mapping to better quantify and communicate risk; and stormwater and floodplain management planning and regulations to reduce flood risks and consequences. Specific tasks include:
  - Joining the FEMA CRS to provide a framework for floodplain risk management and reduce flood insurance rates for property owners.
  - Preparing Letters of Map Revision and Conditional Letters of Map Revision as watershed studies and capital projects are completed.
  - Performing a Level II HAZUS-MH Risk Analysis of potential flood losses using updated flood mapping and assessed property values, to better communicate risk to property owners and to guide planning and capital project development.
  - Coordinate flood hazard mitigation with the County's Emergency Management Department and Multi-Hazard Analysis Plan.
  - Preparing and maintaining Floodplain Management Plans and Stormwater Management Regulations to improve CRS scores, reduce flood insurance rates, and comply with Corps of Engineers-funded project requirements. Planning would include coordination with other agencies and communities.
  - Evaluating adopted floodplain management plans on an annual basis, and submitting annual documentation for CRS participation and modifications.

### Tier III Activities

- **Review Preliminary Engineering Studies (PES) and Project Funding Applications** – Local partners would prepare a PES to identify project need and potential solutions. These small studies would provide enough engineering information to verify that the projects are necessary, feasible, and meet Program objectives. Applicants would use PES results to complete a project ranking form and funding application. The Program would fund 75 percent of the PES costs with a 25-percent local match. The final section of this report describes the project ranking criteria.
- **Provide Capital Funding Recommendations to County Commission** – Program staff would review project ranking forms and funding applications, and would rank the projects and requests received during each funding cycle. Staff would recommend qualified projects for funding, and the percentage of Program match, based on these rankings and available funds. The SMAB would use the staff recommendations and its judgment and discretion to recommend a final list of projects to the County Commission for funding. The Program match would range from 50 to 75 percent.
- **Levee Rehabilitation and Flood Mitigation** – FEMA requires that the County and its local partners recertify their flood control levees as a condition of maintaining flood insurance eligibility. The recertification studies identified numerous required levee rehabilitation and improvement projects that must be addressed. Levee improvement projects would be eligible for Program matching funds as with other capital projects. In addition, the National Committee on Levee Safety has recommended that a national levee inventory and improvements be funded by the Federal government. Current proposals call for a 35 percent local funding with a 65-percent Federal match, which could be leveraged by combined Program and local partner funds.

## **Staffing**

### **Discussion**

As noted in the discussion of Years 1 and 2, it is proposed that a Program Planner be hired to oversee daily operations and coordinate the many near-term tasks and activities. If the position is not filled during Years 1 and 2, the Program Planner would be the first dedicated staff hired during Years 3 to 6. County Public Works Department and MAPD would continue to provide staff support for SMAB and Program activities, with the Deputy Director of Public Works serving as the de facto Program Manager.

However, additional, dedicated staff will be required to effectively and efficiently address the many responsibilities of a full-scale Program. Staff would administer the Program on a daily basis, with SMAB guidance and County Commission approval. As proposed in this plan, staff would manage approved projects and conduct public awareness and education functions, and would provide staff support to the SMAB. Staff would also prepare Program budgets, review capital improvements for funding and administer reimbursements, and draft policy and administrative recommendations for review and approval by the SMAB and County Commission.

Recommended staffing for Years 3 to 6 and beyond is discussed below. Figure 1 on the following page illustrates the proposed organizational chart.

## Recommendations

During Years 1 and 2 the Program Planner would focus on program capacity building and outreach and supporting the initial capital projects review and public awareness program development. The Program Planner's role would grow as the Program expands. Additional duties during Years 3 to 6 and beyond would include:

- Overseeing watershed studies and other special projects as directed.
- Assisting the Stormwater Engineer with capital project review and floodplain management activities, particularly those related to floodplain management plans.
- Periodically reviewing local partners' compliance with Program requirements, with assistance from the Stormwater Engineer.

Once the Program Planner is on board, a Stormwater Engineer would be hired to oversee capital improvement project recommendations and implementation. The Stormwater Engineer would also answer to the supervision of the Deputy Director of Public Works or Program Manager, as appropriate. He or she would also provide engineering expertise to the SMAB and its Committees. The Stormwater Engineer must have considerable experience in water resources and civil engineering, construction techniques, project finance and project management.

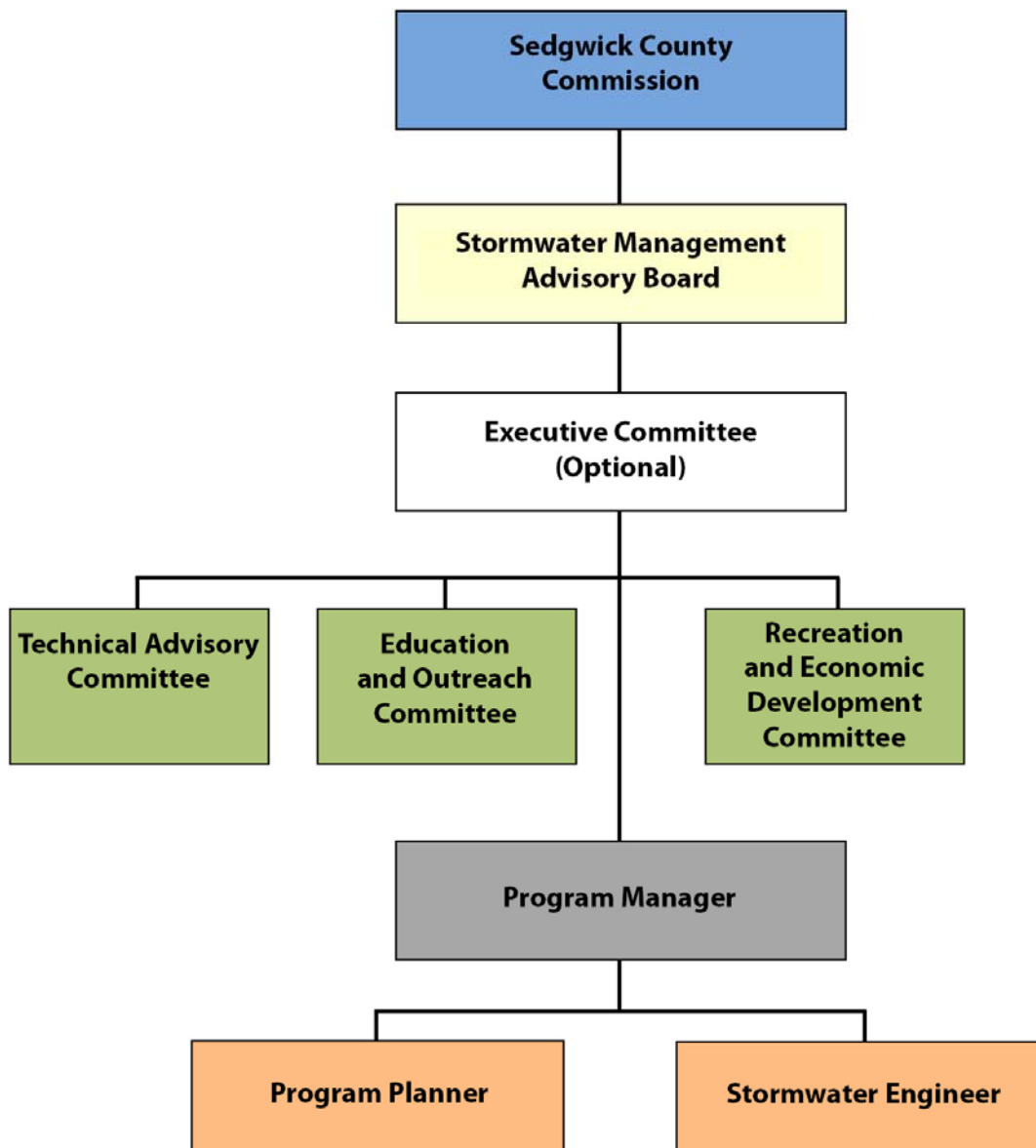
Specific responsibilities would include:

- Reviewing preliminary engineering studies and capital improvements funding requests.
- Assisting the Program Planner with watershed plans and studies and floodplain management plans.
- Managing detailed floodplain mapping and map revisions.
- Conducting final inspections of capital projects' adherence to Program design requirements, and periodically thereafter for proper operations and maintenance.
- Periodically reviewing local partners' compliance with general Program requirements, with the Program Planner's assistance.

Finally, when fully funded and operational, a dedicated Program Manager would oversee the overall Program operations, ensure the Program is aligned with its goals and objectives, and supervise staff and budgets. He or she would also disburse funds for approved projects, and manage the Program project and funding databases. The Program Manager would serve as the main liaison with SMAB and County Commission. He or she must have extensive experience in public administration and public works; and should be familiar with other potentially related activities including parks and recreation, transportation, and economic development. As noted above, it is anticipated that the Deputy Director of Public Works would serve in this capacity until funding and responsibilities justify hiring a permanent Program Manager.



**Figure 1**  
**Program Organizational Chart**



## Source of Funds

### Discussion

Until a dedicated revenue source is secured, Program functions would continue to be financed from the County's General Fund. This Strategic Business Plan assumes this will be the case through 2013. However, it will not be possible to accomplish the Program described in this Plan without substantial additional revenue. In its charter, the SMAB is tasked with identifying and recommending a dedicated, local source to fund stormwater management needs across the County. Local revenue should fund Tier I through Tier III functions to ensure consistency and local control. Other outside sources could supplement local revenues and fund special projects as previously described. See Appendix D for more detail.

### Recommendations

**General Fund** – The General Fund provides revenues for current capacity building activities, and will continue to be the main funding mechanism until a dedicated revenue source becomes effective. Although not anticipated in this Strategic Business Plan, future General Fund allocations could supplement the Program budget, fund new or unanticipated activities, or free up additional dedicated funds for capital improvements.

**Sales or Property Tax** - Through its review and discussions, the SMAB determined that either a dedicated sales or property tax would be appropriate to fund the activities described in this section. Either option would provide local control of Program budgets and consistent funding levels, avoiding drastic swings in annual budgets (and related staffing and projects) that programs which rely on general fund allocations or grants typically experience. A combination of both sales and property taxes could also be enacted or phased in over time, based on a percentage split or on specific Program activities as desired. This approach would spread the Program costs across different constituencies.

The business and citizen survey results indicate that the public prefers a sales tax to fund the Program's activities. The citizen survey is provided under separate cover. The Program should pursue this funding source initially, but may need to fall back on a different revenue source or sources if a funding initiative is unsuccessful, if funding requests are phased in over time, or if future conditions change.

**Private Foundations and Not-for-Profit Organizations** - While likely not a major Program funding source, private foundations and not-for-profit organizations may have funding for multiple-benefit projects and activities. Some foundations predominantly fund civic efforts such as initiatives that benefit disadvantaged communities, provide education, or deliver recreational benefits, for example. Environmental or conservation groups may provide funds for open space protection, habitat restoration, or water quality improvements. These organizations should be contacted regularly, as foundation and not-for-profit priorities shift periodically.

**State and Federal Funds** - State and federal funding sources are limited and are generally very competitive. Matching funds from local sources are usually required under these programs, and many require substantial time and effort for administration and reporting. For these reasons, this Strategic Business Plan does not recommend funding core Program functions with state and federal revenues. However, under the right conditions state and Federal programs could supplement Program implementation, providing technical assistance and program management in





addition to monetary support for special projects or other activities not included in the core Program. The following, additional observations are offered for the SMAB's consideration in developing a federal and non-federal funding program:

- Review and understand the application, funding, administration and reporting requirements when determining whether to pursue a funding or assistance program.
- Recognize that non-local programs will provide a minor portion of the Program's overall revenue package.
- Designate grants or other assistance to specific elements of a project or program, and be flexible if assistance is not provided.
- Remember that federal or non-local funds in any amount add to Program revenues. The non-local funds on a project may not total a high percentage of the cost, but a grant or earmark may free up local funds for enhancements or even to fund another urgent need.
- Use multi-year authorization bills for projects and programs (e.g. Commerce, U.S. Environmental Protection Agency, Department of Transportation, Housing and Urban Development, U.S. Army Corps of Engineers, U.S. Department of Agriculture).
- Use the annual President's Budget for projects and programs where appropriate.
- Consider lobbying for specialized federal legislation addressing countywide stormwater challenges.

State and federal program funding levels and eligibility requirements should be surveyed annually as programs and funding levels change from year to year. See Appendix D for details on potential funding programs.

## **Budget**

Currently the County Commission has approved \$200,000 in annual funding for the Program, and this business plan assumes a similar funding level for FY 2012 and 2013. However, additional funding in FY 2012 or 2013 would significantly improve the Program's effectiveness. For example, the additional investment could allow for more public awareness activities, or for the addition of staff to begin building the administrative and policy framework for expanded operations. It is recommended that the Program request at least \$300,000 in both 2012 and 2013 for this reason, and adjust the planned activities accordingly if successful.

Table 2 on the following page outlines the proposed budget for the first three years of the implementation phase and for the Program's first year of operation at full capacity, which is assumed to be 2015. The proposed budget for 2012 would support education for a public finance initiative, and continued coordination and administrative support. During 2013, funding would transition to more general education and technical assistance, and continued Program coordination and administrative support. The proposed budget assumes that dedicated revenue will become available beginning in 2014, which would begin to fund staff increases and preliminary planning projects. See Appendix D for more detail.



**Table 2**  
**Stormwater Management Program Implementation Budget**

Base Level Funding	\$200,000	\$200,000	\$300,000	\$400,000
<b>Tier 1 – Core Functions</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Program Administration/Staff</b>				
1. Program Administration/Watershed Planner (2014-15)	\$25,000	\$25,000	\$100,000	\$100,000
2. Operations and Administration Expenses			\$25,000	\$50,000
<b>Coordination and Technical Assistance</b>				
3. Facilitate Regional Stormwater Coordination	\$25,000	\$25,000	\$50,000	\$50,000
4. Provide Technical Assistance & Guidance			\$25,000	\$100,000
<b>Public Awareness Strategy</b>				
5. Finance and Outreach Campaign	\$150,000			
6. Stormwater Education		\$150,000	\$100,000	\$100,000
<b>Tier 2 – Watershed Planning</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Staff</b>				
7. Stormwater Engineer				\$150,000
<b>Stormwater Activities</b>				
8. Watershed Master Plan Update and Pilot Study			\$1,000,000	
9. Watershed Studies & Plans				\$1,050,000
10. Floodplain Management				\$500,000
<b>Tier 3 – Capital Improvement Funding</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
<b>Staff</b>				
11. Program Manager				\$200,000
<b>Stormwater Activities</b>				
12. PES & Project Funding Applications			\$300,000	\$300,000
13. Capital Funding Recommendations to Commission			\$3.3 Million	\$7.5 Million
<b>Cumulative Tier I, II &amp; III Funding</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
Tier I - Core Functions	\$200,000	\$200,000	\$300,000	\$400,000
Tier II – Watershed Planning	NA	NA	\$1.0 Million	\$1.7 Million
Tier III – Capital Improvement Funding	NA	NA	\$3.6 Million	\$8.0 Million
<b>Total</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$4.9 Million</b>	<b>\$10.1 Million</b>



The proposed annual budget for 2016 to 2024 would be similar to the proposed budget for 2015. The budget allocates \$400,000 per year for Tier I activities, and \$1.7 million for Tier II activities, including additional staff, planning, and flood risk management. The proposed Tier II budget assumes that three watershed studies would be completed annually at a typical cost of \$300,000 to \$500,000 each, with an average cost of \$350,000. A dedicated Program Manager is budgeted in the Tier III along with matching funds for Preliminary Engineering Studies (PES). The remainder of the annual revenue would be allocated for capital expenditures. By 2024, all 30 watershed studies should be completed and the Tier III (capital) budget could be increased proportionally during the subsequent 10 years. Actual funding amounts in any given year could vary by Tier and by activity depending on specific priorities and available revenue during any given budget year.

Currently, the best estimate of countywide, long-term stormwater funding needs (including Tier I and II activities and anticipated capital projects) is \$236 million. See Appendix A for details. The project cost estimates are based upon those contained in the 2007 Governance Framework document and updated by the local jurisdictions through an email survey in October 2009, and 2010 estimates of levee rehabilitation costs. These estimates should be used for planning purposes only and should be updated during program implementation. The proposed annual budget of \$10.1 million (in 2015 dollars) is proposed to address this anticipated backlog over a 20-year time frame. This funding level equates to a 0.375 percent Sales Tax or 2.08 Mill Property Tax according to future revenue estimates for 2015 by the Sedgwick County Division of Finance.

Based on current home prices, the owner of a median-value home would pay about \$30 per year (or \$2.50 per month) if the Program were funded by property taxes. Trust for Public Land found in its 2007 study of open space ballot initiatives that measures which cost \$30 per household per year were consistently approved by the voters. The Citizen Survey indicated that 44% of Sedgwick County homeowners would be willing to pay at least \$2.50 per month or \$30.00 per year to fund the Program, and 75% would be willing to pay at least \$1.00 per month. This survey information should be updated as the Public Awareness Program is implemented.

This estimate is for budgeting purposes only, and is based on information voluntarily provided by some, but not all, of the county's municipalities and watershed or drainage districts. Few of the stormwater projects were identified through watershed studies, and further investigation may reveal that many projects do not address the root causes of problems or urgent needs. Some projects will undoubtedly be eliminated from consideration, while detailed watershed studies will likely identify many other needed and beneficial stormwater management projects. Until watershed studies are completed, \$236 million is the best available cost estimate for the Program. Table 3 on the subsequent page provides an overview of the Program's estimated, cumulative funding over 20 years of full operation. However, if the Program funding is less than anticipated, less capital funding will be available and more than 20 years will be required.

The scenario presented below is based on several assumptions. First, debt service is not included in the budget and should be carefully considered on a case-by-case basis. Operating on a pay-as-you-go basis would maximize project and capital expenditures. Long-range planning and budgeting for major, capital projects will be important to avoid "diluting" the value of the Program's revenue stream. Second, the 70-percent average match assumes that not all projects would be recommended for the full, 75-percent Program match. Some projects may be lower-priority or may not provide multiple benefits. In addition, sufficient revenue may not be available to fully match all project funding requests and still complete the anticipated backlog



within 20 years. If revenues are less than anticipated, if some larger projects are debt-financed, or if the SMAB recommends and the County Commission approves consistently higher levels of Program match, more than 20 years may be required to complete the anticipated capital projects.

**Table 3 - Program Funding Summary**

Anticipated Program Revenues (20 Years) <sup>a</sup> :	\$ 202.0 Million
Non-Capital Expenditures:	<u>(\$ 37.5 Million)</u>
Available Capital Funds:	\$ 164.5 Million
Total Capital Program Cost:	\$ 236.0 Million
Available Capital Funds:	<u>(\$ 164.5 Million)</u>
Local Matching Funds:	\$ 71.5 Million
Average Program Match:	70% Program/30% Local Funds

Notes:

a \$10.1 Million/year; equivalent to a 0.375% Sales Tax or 2.08 Mill Property Tax (2015 Dollars).

## D. Capital Improvements Program

### Project Prioritization

One of the SMAB's main objectives is to provide funding for stormwater management projects that public entities sponsor in Sedgwick County. An effective method of determining which projects should be funded is to rank them by priority. With this in mind, the Program would use set criteria to evaluate and prioritize all projects for capital funding. Two variations of Project Ranking Criteria (PRC) would be used to assist with project prioritization. One is for ranking watershed plan and study requests, and the other for stormwater management infrastructure projects. See Appendix G for more detail.

The purpose of the PRC is to objectively measure potential project impacts against regional stormwater management goals and objectives, recommended technical direction and funding availability. The PRC is designed to determine which projects would provide the greatest benefits relative to one another so that Program staff, the SMAB, and the County Commission can make an informed decision and spend Program resources effectively. Additionally, the PRC are specifically designed to work with small and large projects in both urban and rural settings. When the PRC are applied, worthy projects throughout the county will be able to compete and secure funding.

The PRC are based on four primary assumptions:

- The funding may be provided for watershed plans or studies, and for infrastructure projects.
- The SMAB would fund between 50 and 75 percent of total project costs.



- The Program will establish a list of priority watersheds. The priority watershed list would be updated as detailed watershed studies are completed, and would be based on the stormwater management needs within each watershed.
- For the Infrastructure Projects PRC, a PES would be completed for the project. A PES would be submitted by a licensed engineer, and would be valid for 5 years if conditions do not change.

The following project information would be needed with each PRC:

- The name of the entity requesting SMAB funding;
- The name(s) of the watershed(s) where the project's study area is located;
- The total estimated project cost; and
- The total amount of SMAB funding being requested.

**Watershed/Sub-watershed Plans and Studies PRC** - It is a SMAB objective to eventually comprehensively study all watersheds in Sedgwick County. Funding for SMAB to conduct these plans and studies is accounted for in the business plan. There may, however, be instances where another jurisdiction would like to study a sub-watershed or an area that the SMAB has not identified as being a priority. Should the SMAB decide to fund such studies, this set of PRC provides a tool whereby their benefits could be assessed.

**Infrastructure Projects PRC** - Infrastructure projects would not ranked solely by a point total. Rather, the cumulative point total is divided into the amount of SMAB funding requested. This provides a rough cost to benefit ratio by which projects will be compared.

### ***Capital Improvements Plan (CIP) Funding Recommendations***

PRC rankings would be the starting point for determining the relative community benefits of a given project. As envisioned in this plan, the process would be used to develop a CIP funding plan that would be updated on an annual basis, as described below. Ultimately, it will be up to the SMAB to finalize the PRC rankings, taking into consideration a wide variety of factors and applying their expertise and knowledge.

Program staff would work with applicants for funding, providing guidance on the application process and requirements, project ranking criteria, and PES requirements. Staff would assist the applicants as necessary and feasible, short of completing documentation or analysis that are the applicants' responsibility. Staff would review submittals for accuracy and completeness and adherence to the Program's requirements. The process would include the following steps:

- The PES would be the first step in the funding application process. Municipalities or districts would submit an application describing the potential project or issue and request funding to conduct a PES. Program staff would review the requests as received and recommend to the SMAB whether or not to fund the request.
- Once the PES is completed, the applicants would use the results to complete a PRC form and submit a formal funding application to the Program. Staff would review the PRC for completeness and accuracy. Once accepted, staff would make a funding recommendation including the percentage of Program matching funds if applicable.



Funding would be recommended for the highest-ranking projects that available revenues will support during the funding cycle.

- The SMAB would consider staff recommendations and either approve the recommended funding requests or make changes at its discretion. If the SMAB requests changes to the prioritization it would work with Program staff to determine what projects can be funded with the available revenues.
- Upon award the applicants would prepare designs and construct the approved projects, periodically requesting reimbursement (quarterly or monthly if staff resources permit) from the Program, up to the approved funding ceiling. Project designs would have to comply with the SWM or other adopted design guidance. It is not anticipated that the Stormwater Engineer would review individual project designs, but the SMAB would reserve the right to review applicants' programs periodically to ensure that they are complying with adopted policies, design guidance, operations and maintenance requirements, and the terms of their interlocal agreements with the County. The SMAB could decline to fund future requests from applicants that violate Program policies and guidance.

### **Future Projects**

Unspent funds would become available for future projects during the next funding cycle. In some cases a project funding request may be withdrawn by the applicant after approval. In such cases, the allocated Program revenue would also become available for the next funding cycle. Project funding requests that are unfulfilled would remain on the proposed CIP funding list as long as they are valid and do not change substantially, but they would still be subject to the competitive prioritization process. If a project changes significantly, the SMAB could require the applicant to revise its PRC and resubmit its funding application.

## IV. Appendices

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# Appendix A

## Technical Memoranda

1. Review of Stormwater Projects
2. Future Program Technical Focus

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*Sedgwick County...  
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## MEMORANDUM

**Date:** November 11, 2009  
**To:** Jim Weber, P.E. (Sedgwick County)  
**From:** Scott Dunakey, AICP (PEC)  
**Cc:** Scott Schulte (PBA)  
**Re:** Technical Memorandum #1 - Review of Stormwater Projects

### Introduction

This memorandum was prepared as the initial task of the Sedgwick County Stormwater Management Strategic Business Plan. It will serve as a baseline for the technical focus of the program. Contained within are a review of recent and current stormwater projects in Sedgwick County and listings of identified future stormwater needs.

The information was collected from two primary sources. First, a project survey was distributed to 38 individuals that represent the Sedgwick County Stormwater Management Advisory Board (SMAB) and other agencies throughout Sedgwick County that conduct stormwater management projects. This online survey was created, distributed and collected using the Survey Monkey online service. The distribution list is included as Attachment A. Second, many of the future projects were found in the 2007 *Governance Framework for the Stormwater Management Advisory Board* prepared for Sedgwick County.

### Survey Design and Results

The survey was designed to facilitate the information gathering effort. It consisted of six primary sections:

- Agency Information
- Community Background Information
- Recent Significant Projects
- Current Projects
- Future Project Needs
- Questions/Comments



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Of the 38 surveys distributed, there were ten completed surveys and one partially completed survey, for a response rate of 29%.

In the “Community Background Information” section of the survey, three questions were asked to gain an understanding of community stormwater perceptions and practices. The results of the three questions are summarized below.

### Stormwater Management Issues

Respondents were first asked to rate several stormwater management issues based upon level of concern in their respective communities. Three primary issues were identified. First, excessive street run-off/stream flooding was identified by 82% of respondents as a moderate or major concern. Second, 63.7% identified structural/stream flooding as a moderate or major concern. However, over 45% named this as a major concern, which makes structural/stream flooding the highest ranked major concern. Third, poor drainage was identified by 100% of respondents as a moderate or major concern. The results indicate that these three issues may be the most important regional stormwater management concerns. Figure 1 illustrates the full set of responses.

Rate the following stormwater management issues based on their level of concern in your community.									
Answer Options	Not a concern		Minor concern		Moderate concern		Major concern		Response Count
	#	%	#	%	#	%	#	%	
Excessive street run-off/stream flooding	0	0.0%	2	18.2%	7	63.6%	2	18.2%	11
Structural/stream flooding	2	18.2%	2	18.2%	2	18.2%	5	45.5%	11
Loss of natural habitat	3	27.3%	6	54.5%	2	18.2%	0	0.0%	11
Loss of property through erosion	1	9.1%	4	36.4%	5	45.5%	1	9.1%	11
Poor drainage	0	0.0%	0	0.0%	6	60.0%	4	40.0%	10
Poor water quality	3	27.3%	3	27.3%	5	45.5%	0	0.0%	11
Stream debris (limbs, trash, etc.)	2	18.2%	2	18.2%	6	54.5%	1	9.1%	11
Unsafe streams/stream banks	5	45.5%	2	18.2%	4	36.4%	0	0.0%	11

Figure 1: Community Stormwater Management Issues

Respondents were also asked to identify the degree to which certain common stormwater management practices have been implemented within their communities to address drainage concerns. Most common practices are implemented, or planned to be implemented to some degree. However, it is worth noting that 45.5% stated that there is no implementation planned for regional stormwater detention. Since flooding is a regional concern not bound by political boundaries, this may represent a future project opportunity.

Another notable response is that low impact development construction practices are being implemented within local communities. In fact, about 82% indicated some current level of implementation within their community, with another 18.2% having planned future implementation. That total accounts for all respondents, with none indicating that no implementation is planned. This may indicate a higher level of acceptance of low impact development construction practices exists than might be expected. The results follow in Figure 2.

**To what degree has your community implemented each of the following stormwater management practices to address drainage concerns?**

Answer Options	Throughout community		A few locations implemented		Planned future implementation		No implementation planned		Response Count
	#	%	#	%	#	%	#	%	
Stormwater inlet and pipe system	3	27.3%	4	36.4%	2	18.2%	2	18.2%	11
Open channel and drainage system	5	45.5%	3	27.3%	2	18.2%	1	9.1%	11
Local stormwater detention	3	27.3%	6	54.5%	1	9.1%	1	9.1%	11
Regional stormwater detention	0	0.0%	3	27.3%	3	27.3%	5	45.5%	11
Enhanced natural waterways	0	0.0%	3	27.3%	5	45.5%	3	27.3%	11
Low impact development construction practices	1	9.1%	8	72.7%	2	18.2%	0	0.0%	11

Figure 2: Community Implementation of Stormwater Management Practices

Figure 3 below shows the parties responsible for the maintenance of stormwater infrastructure located on private property. The responses were mixed between private land owners, homeowners associations and cities at large. With 21 responses between 11 respondents, this indicates that some communities have no overarching policy for funding facility maintenance. Rather, they rely upon a mix of one or more maintenance funding strategies.

**How does your community maintain floodplains, creeks and drainage ways located on private property? (Multiple responses allowed.)**

Answer Options	Response Percent	Response Count
City	54.5%	6
Homeowners Association	63.6%	7
Private Land Owners	72.7%	8
<i>answered question</i>		<b>11</b>

Figure 3: Maintenance Responsibility of Stormwater Infrastructure

### Stormwater Projects

The remaining survey questions requested information regarding recent past projects, current ongoing projects and future needed projects. Respondents were asked to provide information for the three most significant projects in each (past, current and future) category. The bulk of projects identified in the survey are infrastructure upgrades, detention projects and channelization projects. However, several watershed studies have either been completed or identified as future needs. The full set of responses is summarized in Attachments B, C and D respectively.

### Governance Framework Report Projects

The aforementioned *Governance Framework* report completed for Sedgwick County in 2007 also surveyed agencies regarding their future stormwater management project needs. The report identified future needs projects totaling over \$213 million. A summary of these projects is included as Attachment E.

Unlike the current survey, the 2007 report does not categorize projects by project type (i.e. plan or study, public information/education, infrastructure upgrade, channelization, detention, water quality). However, a brief review of the projects shows that the primary focus appears to be on infrastructure improvements, channelization projects and watershed studies. The project team will attempt to identify the project type for each of the future projects identified in the 2007 report. The results will be incorporated in the Technical Focus White Paper, the next deliverable scheduled with this current project.

## **Total Future Project Needs**

There is some overlap in future needs between the current survey and the 2007 report. A map of future project locations is included as Attachment F. After filtering out duplicate, completed and current projects, the total estimated cost for identified future project needs is \$248,505,000. However, the actual amount is likely to be significantly higher, as several agencies did not respond to information gathering efforts for the survey nor the 2007 report. Agencies that did not respond to either request for information include:

- City of Bentley
- City of Colwich
- City of Derby
- City of Garden Plain
- City of Goddard
- City of Haysville
- City of Kechi
- City of Mount Hope
- City of Viola
- Spring Creek Watershed District
- Whitewater River Watershed District

Estimating the future needs of all Sedgwick County agencies may be an important future task that could illustrate the full extent of funding necessary to adequately address regional stormwater management issues.

**ATTACHMENT A**  
**SURVEY DISTRIBUTION LIST**

Organization	Agency Representation	First Name	Last Name
SMAB Contacts	Commission District #1	George	Sherman
	Commission District #2	Clement	Dickerson
	Commission District #3	Mitch	Mitchell
	Commission District #4	Steve	Jackson
	Commission District #5	Clark A.	Sholts
	Cheney	Randy	Oliver
	Derby	Kathy	Sexton
	Goddard	Brian	Silcott
	Haysville	Randal	Dorner
	Kechi	Lyle	Powers
	Maize	Bill	McKinley
	Mulvane	Kent	Hixson
	Park City	Jack	Whitson
	Valley Center	Cheryl	Nordstedt
	Wichita	Chris	Carrier
	Eagle Drainage District	Bob	Seiler
	Spring Creek Watershed	Terrell	Black
	Whitewater River Watershed	Harry	Clayton
	Wichita-Sedgwick County MAPD	John	Schlegel
	Wichita-Sedgwick County MAPD	Dave	Barber
Sedgwick County	David	Spears	
Sedgwick County	Jim	Weber	
Wichita	Scott	Lindebak	
Other City/County Contacts	City of Andale	Virginia	Edwards
	City of Bel Aire	Ty	Lasher
	City of Bentley	Daylene	Beckner
	City of Clearwater	Kent	Brown
	City of Colwich	Terrence D.	Spexarth
	City of Eastborough	Thom F.	Rosenberg
	City of Garden Plain	Tony	Flax
	City of Mount Hope	George	Dick
	City of Sedgwick	Jaclyn	Reimer
	City of Valley Center	Joel	Pile
City of Viola	Ronda	Mollenkamp	
Other Contacts	Cowskin Creek Watershed WRAPS	Richard	Basore
	Little Arkansas River Watershed WRAPS	Don	Snethen
	Sedgwick County WRAPS	Cherrie	Nolden
	Wichita WRAPS	Becky	Lewis



**ATTACHMENT B**  
**RECENT PAST PROJECTS**

### Recent Stormwater Management Projects Completed in Sedgwick County

Agency or Jurisdiction	Project Name	Project Location	Project Type	Project Cost	Project Funding Source
City of Park City	Hartman Arena Terrytown Channel	77th & I-135 Fairchild to Gary east of Tarrytown	Detention Infrastructure Upgrade	\$ 2,000,000 \$ 100,000	GO Bonds General Budget
City of Maize	E. Parkview Channel Re-construction Detention Pond	E. Parkview at Evanston 53rd & Maize branch of Big Slough	Infrastructure Upgrade Detention	\$ 275,000 \$ 120,000	Undisclosed General Budget
City of Wichita	County Wide LiDAR - Storm Water Inventory	Countywide Citywide	Plan or Study Plan or Study	\$ 900,000 \$ 3,000,000	County/City Storm Water Utility Storm Water Utility
City of Bel Aire	Gypsum Creek Channel & SWS Improvements 46th St. Culvert Stormwater Ordinance	Pawnee to Woodlawn 46th and Krueger - Tributary 3 Citywide	Channelization Infrastructure Upgrade Plan or Study	\$ 2,100,000 \$ 40,000 \$ 4,000	Storm Water Utility GO Bonds General Budget
City of Sedgwick	Perryton Culvert Eastside Drainage Study & Detention Dam Cemetery Retention Dam Sedgwick Industrial Park 2nd Addition	Perryton and Gunnison - Tributary 7 East of RR tracks in city limits Hilside Cemetery Ridge Rd. and Wheatland Drive	Infrastructure Upgrade Plan or Study Plan or Study Infrastructure Upgrade	\$ 40,000 \$ 60,000 \$ 20,000 \$ 1,000,000	GO Bonds GO Bonds City GO Bonds

**ATTACHMENT C**  
**CURRENT PROJECTS**

### Current Stormwater Management Projects Underway in Sedgwick County

Agency or Jurisdiction	Project Name	Project Location	Project Type	Project Cost	Project Funding Source
City of Maize	Maize Road and South Basin for Maize	Maize & Central	Detention	Est. \$1,000,000 - \$5,000,000	Unknown
City of Park City	Fairchild Ditch Repair	Fairchild between Tarrytown and Wendell	Infrastructure Upgrade	\$ 50,000	Capital Improvement Fund
City of Wichita	Calfskin/Dry Creek Creek Flood Study	Watershed in West Wichita and Sedgwick County	Plan or Study	\$ 600,000	Storm Water Utility
	Cowskin Creek Local Flood Protection Project	Cowskin Creek between Kellogg and Maple Ave.	Channelization	\$ 4,000,000	Federal Government and Storm Water Utility
	Dry Creek Channel Improvements	Between Lincoln to Orme	Channelization	\$ 3,500,000	Storm Water Utility
City of Bel Aire	Marking Stormwater Inlets	Citywide	Public Information/Education	\$ 3,000	General Budget
	Eagle Lake Rip Rap	Eagle Lake	Detention	\$ 30,000	General Budget
	Door Hangers - Notice of BMPs	Citywide	Public Information/Education	\$ 2,000	General Budget
City of Sedgwick	Sedgwick NE Detention Dam	Hoover & 96th St.	Detention	\$ 1,000,000	FEMA Mitigation Funds or GO Bonds
	Cemetery Retention Dam	1/4 mile east of Harrison and north of 125th St.	Detention	\$ 125,000	City/Cemetery District
	West side drainage improvements	West of Ridge Road on 4th St. & 125th St.	Infrastructure Upgrade	\$ 50,000	General Budget

**ATTACHMENT D**

**FUTURE NEEDED PROJECTS**

### Future Stormwater Management Projects Needed in Sedgwick County

Agency or Jurisdiction	Project Name	Project Location	Project Type	Project Cost	Project Funding Source
City of Mulvane	Styx Creek drainage	Between Franklin and Prather Streets	Undisclosed	Undisclosed	Undisclosed
City of Park City	Channel widening (Chisholm Creek)	Chisholm Creek Park Road to Hydraulic	Channelization	\$ 350,000	Unknown
City of Andale	Peltzer and Orth Addition	Southwest portion of city	Plan or Study	Unknown	Unknown
City of Wichita	Dry Creek Overflow Project	13th Street North and 167th Street West	Detention	\$ 20,000,000	Storm Water Utility/Sedgwick Co./ Fed. Funds
	South Meridian Outfall Project	Meridian Between Pawnee and Orient RR	Infrastructure Upgrade	\$ 11,000,000	Storm Water Utility and City GO bonds
	West Branch of Dry Creek SWS Improvements	Between Kellogg Ave and 12th Street North	Infrastructure Upgrade	\$ 16,000,000	Storm Water Utility
City of Bel Aire	Tributary 7	South of 45th St. and West of Woodlawn	Channelization	\$ 1,000,000	Grants, GO Bonds, General Budget
	Woodlawn Improvements	Woodlawn - 37th St. North to 45th St. North	Infrastructure Upgrade	\$ 3,800,000	Grants, KDOT, Wichita, County, Bonds, Budget
	39th and Harding Plan	39th and Harding	Channelization	\$ 30,000	Grants, General Budget
City of Eastborough	Channel Improvements, Erosion Control Street and Drainage Improvements	North of Douglas, East of Straiford	Channelization	\$ 300,000	Available Grants or City General Fund
		West of Woodlawn - Douglas to 2nd St.	Infrastructure Upgrade	\$ 200,000	Available Grants or City General Fund
	Channel improvements, Erosion Control	Woodlawn east and Kellogg north to City Limits	Channelization	\$ 750,000	Available Grants or City General Fund
City of Sedgwick	Eastside Sedgwick Drainage Ditch	East of Harrison from 7th Street to Little Ark River	Channelization	\$ 3,000,000	Undisclosed
	Storm sewer upgrades	various locations in City	Infrastructure Upgrade	\$ 1,000,000	Bonds/Stormwater District

**ATTACHMENT E**

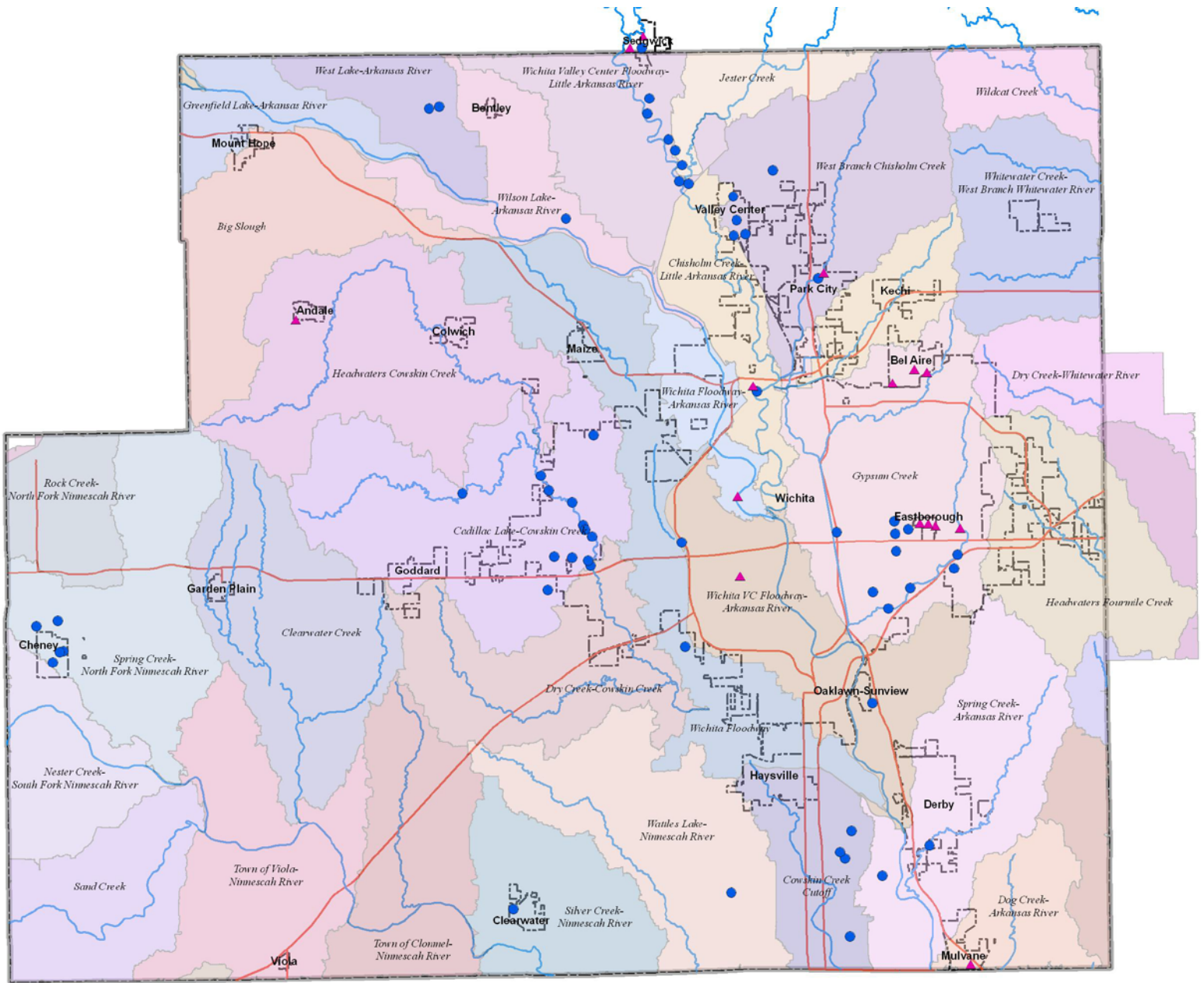
**FUTURE PROJECTS FROM 2007 GOVERNANCE FRAMEWORK**

Agency/Jurisdiction	Project Name	Estimated Cost
Cheney	Channel maintenance - Jefferson to Hoover	\$ 50,000.00
	East Tributary channel/pond	\$ 195,000.00
	Main and South Ave.	\$ 150,000.00
	Erosion control - 3rd and Harrison St.	\$ 15,000.00
	Erosion control/maintenance - 391st and Golf Course	\$ 20,000.00
Clearwater	Clearwater Tributary 1 to Ninnescah	Undisclosed
Eagle/Greeley Drainage Districts	Slough diversion at west edge of Williams property	\$ 270,000.00
	5' X 5' concrete boxes at south end of Diversion #1	\$ 275,000.00
	Construct Burmac Rd. diversion to Arkansas River	\$ 1,045,000.00
Park City	Channel clearing - Park to 69th St. North	\$ 350,000.00
Sedgwick City	East side detention dam	\$ 380,000.00
Sedgwick County	Channel on Bluff - 87th St. South to 103rd St. South	\$ 1,790,000.00
	Clifton channel improvements - South of 47th St. South	\$ 1,500,000.00
	D21 Meridian - 79th St. South to Sumner County line	\$ 3,150,000.00
	D15 Spring Creek channel - Derby to Arkansas River	\$ 425,000.00
	D12 North Waco detention basin	\$ 10,000,000.00
	D13 South Waco detention basin	\$ 11,300,000.00
	D17 channel in Midland Valley RR - 79th St. South to 87th St. South	\$ 1,100,000.00
	D19 enlarge South Waco detention basin	\$ 4,100,000.00
Sedgwick Valley Drainage District	New span bridge on 109th Street	\$ 225,000.00
	Field/farm equipment crossings and miscellaneous structures	\$ 20,000.00
	Outfall structure at Little Arkansas River	\$ 20,000.00
	Erosion control and sediment barrier	\$ 25,000.00
	Site clearing and restoration	\$ 75,000.00
	Easement acquisition	\$ 80,000.00
	Engineering design fees and construction administration	\$ 165,000.00
Valley Center	Northeast Valley Center/Chisholm Creek	\$ 1,800,000.00
	Industrial Park drainage	\$ 430,000.00
	Meridian and 77th St.	\$ 2,880,000.00
	Concrete channel - North Meridian	\$ 300,000.00
	East Main St.	\$ 155,000.00
Wichita	Streambank maintenance	\$ 20,000,000.00
	Dry Creek detention - 13th St. and 167th St.	\$ 20,000,000.00
	Cadillac Lake	\$ 1,000,000.00
	Dry Creek - Douglas to 9th St. North	\$ 3,500,000.00
	Dry Creek - Lincoln to Orme	\$ 2,000,000.00
	Dry Creek - Edgemoor to Central	\$ 700,000.00
	Gypsum Creek - Pawnee to Woodlawn	\$ 2,100,000.00
	Gypsum Creek - Rock to Eastern	\$ 2,200,000.00
	Gypsum Creek (Rock Tributary) - Rock to Harry	\$ 1,000,000.00
	Gypsum Creek - West of Hillside	\$ 2,100,000.00
	Dry Creek buyouts - South of Mt. Vernon	\$ 1,500,000.00
	Dry Creek - Kellogg to Douglas	\$ 2,530,000.00
	Wichita drainage canal	\$ 850,000.00
	Pump Station #1 collection system	\$ 5,200,000.00
	37th St./Woodrow Pump Station	\$ 5,250,000.00
Wichita/Sedgwick County	Channel improvement - Kellogg to Maple	\$ 3,890,000.00
	Channel improvement - Maize to Central	\$ 5,085,000.00
	Raising Maize Rd.	\$ 470,000.00
	Calfskin Creek detention	\$ 3,785,000.00
	Channel improvement - Maple to Maize	\$ 3,135,000.00
	Channel improvement - Central to 119th St.	\$ 7,365,000.00
	Channel improvement - 119th St. to 13th St.	\$ 810,000.00
	Channel improvement - 13th St. and 21st St.	\$ 5,450,000.00
	Calfskin/Cowskin confluence to 119th St.	\$ 1,880,000.00
	Channel improvement - 119th St. to Kellogg	\$ 2,795,000.00
	Channel improvement - 119th St. to Maple	\$ 1,240,000.00
	Wichita-Valley Center flood control	\$ 50,000,000.00
	Topography - watershed studies	\$ 15,000,000.00
<b>TOTAL</b>		<b>\$ 213,125,000.00</b>







**ATTACHMENT F**

**MAP OF IDENTIFIED FUTURE PROJECTS**



## Legend

- |                                                                                     |                               |                                                                                      |                  |
|-------------------------------------------------------------------------------------|-------------------------------|--------------------------------------------------------------------------------------|------------------|
|  | Survey Projects               |  | Rivers & Streams |
|  | Governance Framework Projects |  | SedgwickHwys     |
|  | Watershed Boundaries          |  | City Limits      |
|                                                                                     |                               |  | Sedgwick County  |



Sedgwick County...  
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## Future Program Technical Focus



For the Sedgwick County  
Stormwater Management  
Advisory Board

January 22, 2010

**Patti Banks Associates**

929 Walnut, Suite 200

Kansas City, Missouri 64106



## **Prepared For**

**Sedgwick County Public Works Department**

**Sedgwick County Stormwater Management Advisory Board**

**by**

**Patti Banks Associates**

**and**

**Professional Engineering Consultants, P.A.**

**PBA Project No. P-08090**

**January, 2010**

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## Introduction

### Background

In October 2007, the Sedgwick County Board of County Commissioners established by resolution the Stormwater Management Advisory Board (SMAB). The purpose of the SMAB is to “serve as an advisory board to the County Commission on all matters related to stormwater management.”<sup>1</sup> The establishment of the SMAB was the culmination of several years of effort by many individuals and agencies throughout Sedgwick County. The resolution gave the SMAB a broad charge related to stormwater management issues in the County.

This project is the next step in the evolution of the SMAB. In June 2009, Sedgwick County issued a request for proposals (RFP) seeking consulting services for development of a strategic business plan,<sup>2</sup> which would help define the future stormwater management program. Subsequently, the SMAB retained Patti Banks Associates (PBA) as the prime consultant. PBA assembled an experienced consultant team that included Professional Engineering Consultants (PEC) and Black and Veatch Corporation (BV).

### Purpose and Methodology

The purpose of this paper is to provide recommendations on the technical focus of the SMAB’s stormwater management mission that will help build a better community and enhance the local economy. Furthermore, we have identified strategies that will help maximize taxpayers’ return on investment in stormwater management while protecting public safety.

The initial consultant recommendations contained in this report are based upon a comparison between:

- Past projects
- Recent successes
- Needs
- State of the Practice Solutions

---

<sup>1</sup> Sedgwick County Resolution #242-07 (contained in Appendix A).

<sup>2</sup> Sedgwick County RFP #09-0161 “Consulting Services for Stormwater Management (Strategic Business Plan and Public Awareness Strategy).”

Going forward through the process, these initial recommendations will be refined with the help of County staff and the SMAB prior to the development of final program recommendations.

In October 2009, the team submitted a Technical Memorandum that presented an overview of future stormwater needs identified by the various agencies and jurisdictions in Sedgwick County. This task leverages the data collection efforts outlined in that submission and provides a further analysis of identified project needs.

## Recent Projects and Initiatives

### Floodplain Management Taskforce (FMT)

In January 2005, the Floodplain Management Taskforce was formed to evaluate then current policies and practices regarding floodplain management. This group included staff representatives from the City of Wichita and Sedgwick County along with other appointees representing stakeholder groups, local governments, state and federal agencies.

The effort culminated in the issuance of a report<sup>3</sup> submitted to the Wichita City Council and Sedgwick Board of County Commissioners in December 2005. This report contained a series of short-, mid- and long-term floodplain management recommendations based upon the FMT's research. The recommendations were formulated by weighing the issues against business, environmental and neighborhood interests. The effort led to the appointment of an Organizing Committee to create an entity that could coordinate area-wide drainage and floodplain management efforts.

### Stormwater Management Advisory Board (SMAB)

In January 2007, the Organizing Committee submitted their report.<sup>4</sup> The report included a needs assessment, recommendations for the establishment of the SMAB, responsibilities of the SMAB and potential funding options.

---

<sup>3</sup> "Floodplain Management Task Force Final Report – A Work in Progress" (December 2005)

<sup>4</sup> "Governance Framework for the Stormwater Management Advisory Board (SMAB) Draft Report" (January 2007)

Upon being commissioned, the SMAB was tasked with activities including:

- Promotion of stormwater basin planning and inter-jurisdictional cooperation;
- Master planning for stormwater management (including coordination of existing basin studies and additional basin studies, as needed);
- Serving as a technical clearinghouse for stormwater management projects;
- Recommending a long-term dedicated source of funding for stormwater management projects that would supplement funding provided by implementing entities;
- Establishing priorities (using project selection criteria) to implement basin studies (a Capital Improvements Plan) and stormwater management projects;
- Development of recommended minimum standards for facility design, construction and maintenance;
- Development of recommended minimum drainage standards and processes for new urban development, and encouraging participating entities to adopt such standards;
- Public awareness and education programs;
- Creation and maintenance of GIS mapping of flood-prone areas and stormwater management projects; and
- Participation in the Cooperating Technical Partners Program (regarding FEMA map revisions).<sup>5</sup>

### City/County Stormwater Manual

The first implementation effort was a drainage technical guidance manual that could be adopted by all the jurisdictions in Sedgwick County. The final draft of the *City of Wichita/Sedgwick County Storm Water Manual*<sup>6</sup> has been completed. The project was jointly funded by the City of Wichita and Sedgwick County. At the time of this writing, the City of Wichita is obtaining stakeholder input for incorporation into the document prior to adoption.

The three-volume Manual is a comprehensive guide for the management of stormwater runoff from new development and redevelopment (mostly private sector) projects. It should be noted, however, that it does not address regional flood control efforts such as master planning and flood control

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<sup>5</sup> List excerpted from Sedgwick County Resolution #242-07 (Appendix A)

<sup>6</sup> "City of Wichita/Sedgwick County Storm Water Manual" developed by AMEC for Wichita and Sedgwick County (9/4/09)



infrastructure. Volumes 1 – 3 of the Manual deal with the topics of stormwater policies, technical guidance and site plan preparation guidance respectively.

### Countywide LiDAR

As the second implementation item, the City of Wichita and Sedgwick County jointly funded a countywide project in conjunction with the United States Geological Survey (USGS) in February 2008. This project developed high quality Light Detection and Ranging (LiDAR) data, Digital Terrain Models (DTM) and high resolution ortho-imagery for all of Sedgwick County. The final data are available to the public and private sector development communities. The project ensures the availability of consistent and accurate data to establish drainage networks, analyze watersheds and model hydrology.

### Local WRAPS Programs

In a separate but related effort, the City of Wichita and Sedgwick County have both received grants from the Kansas Department of Health and Environment (KDHE) to develop Watershed Restoration and Protection Strategy (WRAPS) programs. Information for the local WRAPS programs is available at their program websites.<sup>7</sup> Both programs are currently in the development phase.

Essentially, WRAPS is a planning and management framework that engages stakeholders within a particular watershed in a process to:

- Identify watershed restoration and protection needs and opportunities
- Establish management goals for the watershed community
- Create a cost-effective action plan to achieve goals
- Implement the action plan

WRAPS represents a shift from "top-down" government intervention in watershed issues, to a more citizen-stakeholder approach, in which funds, guidance and technical assistance are provided for stakeholders to reach consensus on issues of relevance in their watershed, and then design and execute a plan to address those issues.<sup>8</sup> The local WRAPS programs should actively engaged to build a broad community coalition for watershed management.

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<sup>7</sup> Wichita – [www.wichitawraps.org](http://www.wichitawraps.org); Sedgwick County – [www.sedgwickcounty.org/conservation/wraps.asp](http://www.sedgwickcounty.org/conservation/wraps.asp)

<sup>8</sup> From the Kansas WRAPS website. [www.kswraps.org](http://www.kswraps.org). Retrieved 11/24/2009.

## Identified Issues

While this program development is still in its initial stages, the consultant team has identified several issues through interviews with the SMAB, stakeholders, and County and City staff. A brief discussion of some of the most substantial issues is included below.

## Resources and Funding

The lack of a dedicated revenue source severely hampers the County's ability to initiate watershed planning or capital improvement projects for stormwater management. The *Governance Framework for the Stormwater Management Advisory Board Draft Report*, hereinafter referred to as the *Governance Framework*, reviewed four primary funding mechanisms for funding capital projects: sales tax, property tax, special assessment and equivalent residential unit (ERU) fee. A property tax of approximately 1.5 mills was recommended at that time. However, a viable program that addresses the various identified issues may require several funding sources.

## Watershed Based Approach to Stormwater Management

Three concepts are at the forefront of this issue. First, stormwater management is intimately related to land use. That is to say, as impervious surfaces are developed, stormwater runoff increases. Second, water flows without regard to jurisdictional boundaries. Therefore, the most beneficial stormwater management efforts consider development impacts upon an entire watershed.

Current stormwater management projects and planning are conducted by the various jurisdictions, with the exception of a few watershed studies. Generally, each jurisdiction has identified projects and conducted studies based upon impact within their jurisdictional boundaries without regard to watershed influences. Finally, many seemingly localized problems may originate from conditions elsewhere in the watershed. Conversely, watershed based solutions may address several needs more effectively and economically.

## Regional Coordination

The formation of the SMAB is unquestionably a step in the right direction, in terms of regional coordination. However, there is still the lack of a truly coordinated regional approach to stormwater management infrastructure and policy. In fact, several local agencies/jurisdictions do not yet participate

on the SMAB. As the role of the SMAB evolves and its scope of authority is more fully realized, regional coordination will be strengthened. In the meantime, stormwater planning and infrastructure is likely to continue on a fragmented jurisdiction-by-jurisdiction basis.

Another aspect of regional coordination speaks to an area larger than Sedgwick County. Neighboring counties, both upstream and downstream, represent a potential future opportunity for coordination on stormwater management issues along the Arkansas River. Currently, there exists no formal coordination effort at such a level.

### Stormwater Quality

The current focus of stormwater management projects is the quantity and rate of discharge. While the *City of Wichita/Sedgwick County Stormwater Manual*, hereinafter referred to as the *Stormwater Manual*, does include many best management practices (BMP) for the improvement of discharge quality. As previously mentioned, the City of Wichita is in the process of adopting the manual. According to the City of Wichita Public Works Department<sup>9</sup>, local stakeholders in the development community have expressed concerns that full implementation of the regulations, including BMPs, could dramatically increase development costs.

This issue is critically important for the City of Wichita due to their October 1, 2009 implementation deadline for Phase I of the Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) permit, which has not been met. It is a distinct possibility that enforcing agencies could levy retroactive fines to a maximum of \$20,000 per day for noncompliance.

### Recommendations

Based upon a review of past, current and future stormwater projects within the context of existing organizational structures, the project team has developed the following recommendations for SMAB consideration. Several of these recommendations are interrelated and would require phasing and/or coordination prior to implementation.

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<sup>9</sup> Based upon an interview on 11/24/2009 conducted with Scott Lindebak, P.E., Stormwater Engineer.

There are many proven state of the practice stormwater management solutions that could be implemented. Several aspects of these strategies and concepts are included in the *Stormwater Manual*. It may not be practicable to fully implement each of these. However, they are presented for discussion purposes.

### **Encourage Multiple Benefit Projects**

Often stormwater management projects can be developed in conjunction with another project type to provide multiple public benefits. Such an approach can also be used to minimize project costs and leverage multiple funding sources while creating a more vibrant Sedgwick County community. For example, a conveyance constraint may be alleviated by sizing a road culvert greater than the actual project needs. Or, drainage channels might incorporate a linear park or multi-use recreation trail. Such projects would provide an attractive amenity and preserve valuable habitat. A constructed wetland or other mitigation project might include an educational component. The Wichita Water Center is a good example of a multiple benefit project that includes an education element. This facility not only treats polluted groundwater, but also educates the public on the treatment process and the importance of clean water.

Multiple benefit projects can also play a more pragmatic role in stormwater management for the SMAB. Stormwater management facilities have little appeal on their own merits to stir public support and their benefits may directly impact a limited population. However, paired with projects such as recreational amenities, they can provide tangible benefits to the entire community. This could potentially garner enough public support to pass a referendum. Lenexa's "Rain to Recreation"<sup>10</sup> program is a successful regional example of such an initiative.

### **DEVELOP REGIONAL STORMWATER SOLUTIONS**

Infrastructure should be focused on solutions that benefit the entire region or individual watersheds. While detention/retention structures could be sizable, this could actually result in greater economies of scale, more developable land and comprehensive improvements. Essentially, onsite infrastructure requirements could be reduced so long as the runoff could be conveyed effectively to an offsite location.

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<sup>10</sup> As explained by Ron Norris, former Public Works Director of the City of Lenexa, Kansas.

Regional stormwater facilities also provide outstanding opportunities for multiple benefit projects, such as regional parks and conservation areas.

This would require a shift in the way improvements are designed and funded. In many jurisdictions, offsite improvements are funded by fees-in-lieu. Rather than the project developer actually installing the infrastructure improvements, they pay into a fund that is used to construct the necessary improvements. Fees paid must be in proportion to the needs of a development. Developers could be required to install appropriate infrastructure to convey their runoff to a regional detention/retention basin. But, funding for over-sizing of infrastructure to account for future growth would need to come from other sources.

### **Be Proactive**

Many projects and studies initiated in Sedgwick County have been reactions to flood events. The project team recommends being more proactive on stormwater management issues. While problems caused by past development must be addressed, we must avoid creating future liabilities that will endanger life and property that will add to the project backlog. Future citizens and taxpayers should not pay to subsidize current development projects. The enactment of the following recommendations in this subsection would represent a proactive approach and would enhance public safety, minimize property damage and improve water quality.

Another benefit of proactive solutions is that they signal a community's willingness to address stormwater management issues that have been created locally. Federal and state agencies are much more willing to participate in project funding with communities that have proactively and cooperatively initiated stormwater management efforts rather than trying to circumvent regulatory requirements.

### **RISK ANALYSIS**

A proactive and cost-effective stormwater management program reduces risks to life and property by weighing risks, costs and potential benefits. The Governance Framework recommended a detailed accounting of assessed property and structure values within both the 100- and 500-year floodplains along with the procurement of HAZUS software. HAZUS is a risk analysis tool developed by the Federal Emergency Management Agency (FEMA) for use with the ArcGIS geographic information system (GIS). Using GIS, HAZUS can map the extent of various disaster events, including flooding, and provide

accurate and detailed loss estimates. As an ancillary benefit, HAZUS analysis could also be utilized as a planning tool by emergency management personnel and city planners. Additionally, risk analysis would lay the groundwork for Sedgwick County's entry into the Community Rating System (see below).

### ***COMMUNITY RATING SYSTEM (CRS)***

The CRS is a provision of the National Flood Insurance Program (NFIP). It is a voluntary program for participating communities, which allows flood insurance premium discounts to communities that exceed the minimum NFIP floodplain management requirements. Participant communities are eligible to receive discounts of up to 45%.

The CRS has three primary goals:

- Reduce flood damages to insurable property
- Strengthen and support the insurance aspects of the NFIP
- Encourage a comprehensive approach to floodplain management<sup>11</sup>

The program awards an eligible community a rating of 1 – 10 based upon the level of additional floodplain management measures it has initiated. Upon acceptance into the program a community receives a Class 10 rating. As new programs and policies are implemented to reduce flood risks, a community can increase its rating up to Class 1, which qualifies it for the maximum premium discount. Joining the CRS would help Sedgwick County develop a cooperative relationship with the Federal Emergency Management Agency (FEMA) while managing flood risks in a comprehensive manner.

### ***COMPREHENSIVE FLOODPLAIN MANAGEMENT STRATEGY***

The impacts from development can include measureable increases in flood peaks, flood stages, flood velocities, erosion and sedimentation. Such impacts are borne by property owners downstream from any given land development project. A comprehensive approach is needed to reduce these impacts and risks; experience demonstrates that engineering approaches only address the symptoms and not the root causes.

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<sup>11</sup> CRS Communities and Their Classes. (2008). Federal Emergency Management Agency. Retrieved 12/8/2009 from [www.fema.gov](http://www.fema.gov).

No Adverse Impact floodplain management is a framework developed by the Association of State Floodplain Managers (ASFM). According to the NAI philosophy, “the actions of one property owner are not allowed to adversely affect the rights of other property owners.”<sup>12</sup> While it may be impractical or impossible to avoid all future impacts, communities who embrace NAI adopt a comprehensive floodplain management strategy that specifies acceptable impacts and limits avoidable liabilities. The comprehensive approach identifies appropriate mitigation measures and outlines an implementation strategy. NAI can also be applied to individual watersheds to support broader techniques for stormwater management, such as regional detention/retention facilities. Proposed development projects would have to comply with the policies and measures contained in the adopted plan.

The strength of the NAI philosophy is that it is a locally implemented initiative, but would still be recognized by federal agencies, such as FEMA and the NFIP through the CRS program. If executed in conjunction with the CRS program, NAI strategies could qualify Sedgwick County for an improved CRS rating.

#### ***INTEGRATE WATERSHED, LAND USE AND OPEN SPACE PLANNING***

The region would benefit from integrating stormwater management strategies with land use planning. The *Wichita/Sedgwick County Comprehensive Plan* contains a broad objective<sup>13</sup> to protect property investment by decreasing stormwater impacts, along with some limited policy guidance. However, there is no discussion regarding how land development is related to stormwater management and certainly no specific policies on how to minimize stormwater runoff or development within floodplains. In fact, the *Land Use Guide* (future land use map) within the *Comprehensive Plan* illustrates floodplain areas as appropriate for certain types of intensive development, increasing future risk to life and property and creating future liabilities.

There are several recommended courses of action that are applicable to communities in Sedgwick County. First, floodplains and watersheds should be delineated in land use maps to identify the stormwater management context. Open space plans should be included that provide land for stormwater management and other benefits, such as recreation and parks. Second, include some

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<sup>12</sup> No Adverse Impact White Paper. (2008). Published by the Association of State Floodplain Managers. Retrieved on 12/7/2009 from [www.floods.org](http://www.floods.org).

<sup>13</sup> 1999 Comprehensive Plan Update, Objective VI.B.

discussion within land use plans regarding the impacts of land development on floodplains and the role of watershed plans. Third, incorporate watershed based policies into land use plans. This may involve developing policies to minimize development in watersheds where critical issues exist, particularly within floodplains. Two potential options include organizing land use plans by watershed and the integration of No Adverse Impact (NAI) concepts into planning initiatives. Fourth, the *Stormwater Manual* identifies many specific strategies for impact mitigation. Some of these strategies are appropriate for inclusion in comprehensive plans and development regulations. Stream buffers and LID methods are good examples.

### **LOW IMPACT DEVELOPMENT (LID) PRACTICES**

LID is a comprehensive process approach to manage stormwater while optimizing site development. The principal goal of LID is to emulate the predevelopment site hydrology. Conventional development techniques convey and store runoff in sizeable, expensive detention facilities. LID institutes a “source control concept,”<sup>14</sup> whereby stormwater is managed through site design that minimizes impervious surfaces, managing runoff in smaller, more effective landscape features located on each lot. Typical features of an LID site design include compact site design, reduced imperviousness, onsite micro-storage, functional landscaping, open drainage swales, reduced imperviousness, flat grades, increased runoff travel time and depression storage. When applied properly, such techniques often reduce runoff and improve groundwater recharge, while lowering development costs<sup>15</sup> by reducing site grading, material costs and landscape maintenance.

### **STRENGTHEN WATER QUALITY FOCUS**

There is no doubt that the adoption and implementation of the *Stormwater Manual* will have a significant impact on the region’s water quality. It is recommended that the SMAB move forward with its intention to require the adoption of the *Stormwater Manual* for any jurisdictions that wish to receive future SMAB project funding. This requirement could serve to enhance water quality with a secondary benefit of improving the level of project design consistency from jurisdiction to jurisdiction.

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<sup>14</sup> Low-Impact Development Design Strategies: An Integrated Design Approach. (1999). Prince George’s County Maryland, Department of Environmental Resources.

<sup>15</sup> Rock Creek Watershed Planning – Alternative Futures Study. (2009). Black and Veatch Corp. and Patti Banks Associates.



Another suggestion is to incorporate water quality modeling into watershed and drainage studies, in addition to the hydrologic/hydraulic modeling that is standard. This would provide a clearer picture of water quality impacts to the region's streams, lakes and drinking supplies; and provide opportunities to develop projects that are specifically focused on water quality improvements or include a water quality component.

### **Maximize Economic Benefits**

One important concern is maximizing the economic impact of public money through projects that provide maximum benefit. The recommendations in this subsection are proven methods that can ensure the funding of quality projects that result in high returns on public investments and reduce future taxpayer liability.

#### ***PRIORITIZE PROJECTS***

One of the potential future goals for the SMAB is to fund stormwater management projects. As funding mechanisms are developed and leveraged, it will become critical to ensure that available funding is spent wisely. To this end, the SMAB will need to identify project priorities.

The primary aspect to identifying project priorities is to have a set of objective project selection criteria (PSC). The PSC can be used to pick projects for funding that best accomplish the SMAB's goals.

Developing the PSC is a future project task. A discussion of the some major items to consider in establishing the individual criterion is included below. This is by no means an all-inclusive list. Additional items will be considered as deemed appropriate.

#### Watershed Based Priorities

Once priority watersheds are studied and planned, projects that address the major concerns within those basins should be weighted more heavily in the PSC. In developing the watershed priorities, decisions should be made based upon actual stormwater management needs and probable benefits.

One potential option is to prioritize projects in watersheds where recent studies have been completed. This would allow funding decisions to be made based upon demonstrated needs and identified solutions. Another benefit to this approach is that it would incentivize the completion of additional watershed studies, which would further benefit the region.

### Cost/Benefit Analysis

Often, stormwater infrastructure projects have higher costs than derived benefits, as measured by the value of protected properties. In fact, frequently it is more cost effective to purchase the properties that would receive the project benefits than it is to complete an infrastructure project, which the existing floodplain buyout program acknowledges. Projects with high relative benefit to cost ratios, as measured by watershed plan objectives and HAZUS analysis, could be given preference in project selection. Floodplain buyouts may be identified as the preferred option in some cases.

### Future Maintenance Funding

A common issue with infrastructure projects is the availability of adequate funding for proper maintenance of the facility. Inadequate long term maintenance significantly degrades the condition of any type of infrastructure. Preference could be given to projects where a dedicated maintenance funding source has been identified that will ensure the long term viability of the project or where project design reduces continuing maintenance needs.

### Performance Measures

Project funding could also be based, at least partially, upon successfully meeting an established set of performance measures or project milestones, as described below. This would require funding to be disbursed incrementally, or it could even be structured as a reimbursement contingent upon meeting the performance measures.

### Quality vs. Quantity

Both discharge quality and quantity are important items to consider. Weighting factors should be assigned to projects that improve the quality of discharge versus the quantity of discharge.

## ***MONITOR PROJECT EFFECTIVENESS***

In order to ensure that public funds continue to be spent wisely over time, a set of project performance measures should be established to objectively assess project effectiveness and determine actual post-project benefits. The results would provide an indication of the types of projects that are most effective and future project selection could be tailored to those project types.

### **PROTECT NATURAL INFRASTRUCTURE**

Generally, the most cost effective stormwater management strategies are those that preserve the integrity of natural hydrologic features. Floodplains serve the important purpose of conveying and storing excessive stormwater runoff. If protected, they can handle a significant amount of runoff from new development, while providing community amenities and recreational opportunities.

The *Stormwater Manual* contains numerous methods to protect natural infrastructure. There are two primary strategies recommended by our project team that would deliver measurable impact. First, streams should be protected by vegetated buffers, wherein development is prohibited. The *Stormwater Manual* suggests a buffer of 50 feet from the top of a stream bank.<sup>16</sup> Second, development within the 100-year floodplain should be carefully scrutinized or discouraged. Development of impervious surfaces within the floodplain significantly hampers its natural storage ability and endangers life, property and valuable stormwater infrastructure. Development built in floodplains, regardless of improvements to handle stormwater, is the most susceptible to flooding.

### **Build and/or Strengthen Regional Partnerships**

Several cities and drainage/watershed districts in Sedgwick County are not currently involved with the SMAB, although they are eligible to appoint a representative. Efforts should be made to recruit representatives from all jurisdictions that are allowed to participate in the SMAB. The primary point of emphasis should be that all participants will derive mutual benefits from their involvement.

A future opportunity for coordination exists within the broader context of the Arkansas River Basin. Sedgwick County should begin talks with neighboring counties to develop a regional coalition of jurisdictions who are concerned with stormwater management issues. This coalition could potentially extend to any Kansas counties within the entire Arkansas River Basin. There is strength in numbers and such a coalition could be a unified regional voice for stormwater management issues, particularly in regards to state funding and policies.

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<sup>16</sup> Volume 2, page 2-6.

## Role of the SMAB

The SMAB is the appropriate entity to meet these challenges and has been chartered with a clearly defined role.<sup>17</sup> Realizing this role is the purpose of this current project. The SMAB is the means to accomplish needed actions. Resources are needed as soon as is feasible to fully establish the commissioned role of the SMAB and bylaws should be authored to better guide the SMAB in their activities.

Going forward, the SMAB's role need not be confined to the role that has been conceptualized. There will certainly be new opportunities for the SMAB that have yet to be considered. As those opportunities are identified and deemed to be in Sedgwick County's best interest, they should be pursued.

## Identified Future Projects

Appendix C contains a listing from Technical Memorandum No. 1<sup>18</sup> of the known future project needs segregated by agency/jurisdiction, project type and watershed. The identified future projects provide a baseline for upcoming stormwater management needs. However, these projects have been identified in a largely piecemeal fashion. The various agencies and jurisdictions in Sedgwick County were asked to submit the projects they feel need to be done to address their concerns, and not all responded. While some of the projects were based on watershed studies, there has been no comprehensive analysis or modeling of most project impacts on the larger region. In fact, many of the projects appear to be "spot fixes" that may have limited impact in a larger context. With that in mind, the project list does not necessarily represent the maximum impact that could be achieved by investing the aggregate estimated cost. Further analysis would be an objective of future watershed studies.

## Conclusions

Sedgwick County has taken several steps in the right direction regarding stormwater management. Yet there is much the region can still do to enhance public safety, minimize property and infrastructure damages, protect water quality and build stronger communities. Reasonable and effective measures can be implemented to accomplish the SMAB's stated purpose "to protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical and

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<sup>17</sup> See pg. 2.

<sup>18</sup> Technical Memorandum dated 10/4/2009 prepared by PEC and PBA for Sedgwick County.

other assistance to all entities within Sedgwick County that are concerned with stormwater management.”<sup>19</sup>

The flood study report done for the City and County in the aftermath of the 1998 Cowskin Creek Halloween Flood encapsulates in one brief paragraph the entirety of the stormwater management issues we are currently facing.

“A comprehensive floodplain management program as advocated herein has a cost, not only an initial cost, but a perpetual cost to be dictated by long term staffing, equipment, and capital improvement program demands for funding. A sustainable funding mechanism will be an essential component of any commitment to remedy future flooding in the Wichita/Sedgwick County Metropolitan Area. Floods impact people. The consequences are both emotional and economic. Floods, however, are not indiscriminate. Only the storm that produces the rainfall that produces the flood is unforeseeable. Floods occur in the floodplain.”<sup>20</sup>

This document provides some initial recommendations for the SMAB’s consideration in formulating the future stormwater management program. As this project proceeds, program elements will be refined with the input of the SMAB and other stakeholders.

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<sup>19</sup> Sedgwick County Resolution #242-07

<sup>20</sup> “Flood Study Report: 1998 Cowskin Creek Flood.” (August 1999). Prepared for the City of Wichita and Sedgwick County by Professional Engineering Consultants.

**Appendix A: Sedgwick County Resolution #242-07**

242-07

## R E S O L U T I O N

**A RESOLUTION ESTABLISHING A STORMWATER MANAGEMENT ADVISORY BOARD; PRESCRIBING THE NUMBER, QUALIFICATIONS AND MANNER OF APPOINTING ITS MEMBERS AND ESTABLISHING ITS RESPONSIBILITIES.**

WHEREAS, PURSUANT TO K.S.A. 19-101, ET SEQ., THE SEDGWICK COUNTY BOARD OF COUNTY COMMISSIONERS MAY EXERCISE THE POWERS OF HOME RULE TO DETERMINE ITS LOCAL AFFAIRS AND GOVERNMENT; AND

WHEREAS, THE SEDGWICK COUNTY BOARD OF COUNTY COMMISSIONERS, WISHES TO OBTAIN ADVISORY SERVICES OF A **STORMWATER MANAGEMENT ADVISORY BOARD (SMAB)**;

WHEREAS, THE PURPOSE OF THE SMAB IS TO PROTECT LIVES AND PROPERTY WITHIN SEDGWICK COUNTY BY PROMOTING BETTER STORMWATER MANAGEMENT AND PROVIDING FINANCIAL, TECHNICAL AND OTHER ASSISTANCE TO ALL ENTITIES WITHIN SEDGWICK COUNTY THAT ARE CONCERNED WITH STORMWATER MANAGEMENT.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF SEDGWICK COUNTY KANSAS:

**Section 1. CREATION.** There is hereby created the **STORMWATER MANAGEMENT ADVISORY BOARD (SMAB)**.

**Section 2. RESPONSIBILITIES OF THE SMAB.** The SMAB shall serve as an advisory board to the County Commission on all matters related to stormwater management. The County Commission will retain final authority over all budget matters and over all plans and policies relating to stormwater management. The County Commission may direct the SMAB, in its sole discretion, to review specific issues or concerns relating to stormwater management.

The SMAB may determine what matters with which it will concern itself and which activities it will undertake, including, but not limited to:

- A) Promotion of stormwater basin planning and inter-jurisdictional cooperation;
- B) Master planning for stormwater management (including coordination of existing basin studies and additional basin studies, as needed);
- C) Serving as a technical clearinghouse for stormwater management projects;
- D) Recommending a long-term dedicated source of funding for stormwater management projects that would supplement funding provided by implementing entities;
- E) Establishing priorities (using project selection criteria) to implement basin studies (a Capital Improvements Plan) and stormwater management projects;
- F) Development of recommended minimum standards for facility design, construction and maintenance;
- G) Development of recommended minimum drainage standards and processes for new urban development, and encouraging participating entities to adopt such standards;
- H) Public awareness and education programs;
- I) Creation and maintenance of GIS mapping of flood-prone areas and stormwater management projects; and
- J) Participation in the Cooperating Technical Partners Program (regarding FEMA map revisions).

**Section 3. RESPONSIBILITIES OF THE PARTICIPATING ENTITIES.** It is the expectation of the County Commission that the municipalities and active watershed or drainage districts that wish to be represented on the SMAB will accept the following responsibilities as participating entities:

- A) To participate in inter-jurisdictional watershed plans, when needed;
- B) To adopt recommended minimum drainage standards and processes for new urban development at such time that those standards and processes are established;
- C) To design and build stormwater management facilities that are recommended for funding by SMAB, as subsequently approved by the County Commission, in accordance with recommended facility standards at such time that such funding and standards are established;
- D) To provide local funding match for projects at such time that funding is provided by the County Commission; and
- E) To maintain facilities in accordance with recommended maintenance standards at such time that such standards are established;

**Section 4. APPOINTMENTS TO THE SMAB.** The SMAB shall consist of representatives of all entities within Sedgwick County that are concerned with stormwater management that agree to comply with all of the responsibilities as outlined in Section 3. Each municipality and each active watershed district or drainage district that wishes to participate may nominate one representative to be appointed by the County Commission. Each County Commissioner shall appoint one representative.



**Section 5. OTHER APPOINTMENTS.**

5a) The **SMAB** may appoint a **Technical Advisory Committee (TAC)** to advise it composed of staff and consulting engineers from the participating entities who have appropriate technical expertise.

5b) The **County Commission** hereby directs the Department of Public Works and the Metropolitan Area Planning Department (MAPD) to provide staff support to the **SMAB** and the **TAC**.

**Section 6. TERM OF OFFICE.** Advisory Board members shall assume membership upon appointment to their positions of office, and shall serve thereon as long as they hold their said respective positions. Advisory Board members appointed by individual commissioners shall serve at the pleasure of the commissioner and those appointed by each entity shall serve at the pleasure of that entity.

In event the commissioner nominating the appointment of said member leaves office for any reason, said term shall expire, except that a member so appointed may continue to serve until a successor has been duly appointed. A vacancy shall be filled in the same manner as the original appointment.

**Section 7. MEETINGS, OFFICERS, RECORDS.** The **SMAB** shall elect one member as its Chair, and one member as its Vice-Chair. The terms of office of the Chair and Vice-Chair shall be for one year. The Director of the MAPD shall serve as Secretary of the **SMAB**. The **SMAB** shall convene for its regular meetings at the location designated by the Chair. The Chair may call special meetings, in which case all **SMAB** members shall be notified. The Secretary shall cause a proper record to be kept of all proceedings of the **SMAB**, and minutes of the meetings shall be provided to the Sedgwick County Board of County Commissioners.

**Section 8. Effective Date.** This resolution shall become effective upon its passage and publication once in the Official County Newspaper.

Commissioners present and voting were:

DAVID M. UNRUH	<i>Aye</i>
TIM R. NORTON	<i>Aye</i>
THOMAS G. WINTERS	<i>Aye</i>
KELLY PARKS	<i>Aye</i>
GWEN WELSHIMER	<i>Aye</i>

DATED this 31 day of November, 2007



BOARD OF COUNTY COMMISSIONERS OF SEDGWICK COUNTY, KANSAS

ATTEST:

*Don Brace*  
 for DON BRACE, County Clerk

*David M. Unruh*  
 DAVID M. UNRUH, CHAIRMAN  
 First District

*Thomas G. Winters*  
 THOMAS G. WINTERS, CHAIR PRO TEM  
 Third District,

*Tim R. Norton*  
 TIM R. NORTON, Commissioner  
 Second District

*Kelly Parks*  
 KELLY PARKS, Commissioner  
 Fourth District

*Gwen Welshimer*  
 GWEN WELSHIMER, Commissioner  
 Fifth District

APPROVED AS TO FORM:

*Robert W. Parnacott*  
 ROBERT W. PARNACOTT,  
 Assistant County Counselor

## Appendix B: Glossary of Acronyms

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The acronyms used in this document are presented below in alphabetical order.

ASFM – Association of State Floodplain Managers

BMP – Best Management Practices (for stormwater management)

BV – Black and Veach Corporation

CIP – Capital Improvement Program

CRS – Community Rating System (of the Federal Emergency Management Agency)

DTM – Digital Terrain Model

EPA – Environmental Protection Agency (federal)

ERU – Equivalent Residential Unit (fee)

FEMA – Federal Emergency Management Agency

FMT – Floodplain Management Taskforce (Sedgwick County)

GIS – Geographic Information System

KDHE – Kansas Department of Health and Environment

LID – Low Impact Development

LiDAR – Light Detection and Ranging

NAI – No Adverse Impact

NFIP – National Flood Insurance Program

NPDES – National Pollutant Discharge Elimination System

PBA – Patti Banks Associates

PEC – Professional Engineering Consultants, P.A.

PSC – Project Selection Criteria

RFP – Request for Proposals

SMAB – Stormwater Management Advisory Board (Sedgwick County)

USGS – United States Geological Survey

WRAPS – Watershed Restoration and Protection Strategy

## Appendix C: Categorization of Future Projects

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Future Needs, Aggregated by Agency/Jurisdiction			
Agency/Jurisdiction	Project Name	Project Type	Estimated Cost
Andale, City of	Peltzer and Orth Addition	Plan or Study	Unknown
Bel Aire, City of	Perryton Culvert - Tributary 7	Channelization	\$ 1,000,000
Cheney, City of	Channel maintenance - Jefferson to Hoover	Channelization	\$ 50,000
	East Tributary channel/pond	Channelization	\$ 195,000
	Erosion control - 3rd and Harrison St.	Channelization	\$ 15,000
	Erosion control/maintenance - 391st and Golf Course	Channelization	\$ 20,000
	Main and South Ave.	Infrastructure Upgrade	\$ 150,000
Clearwater, City of	Clearwater Tributary 1 to Ninescah	Channelization	Unknown
Eagle/Greeley Drainage Districts	5' X 5' concrete boxes at south end of Diversion #1	Infrastructure Upgrade	\$ 275,000
	Construct Burmac Rd. diversion to Arkansas River	Channelization	\$ 1,045,000
	Slough diversion at west edge of Williams property	Channelization	\$ 270,000
Eastborough, City of	Channel Improvements, Erosion Control (North of Douglas and east of Stratford)	Channelization	\$ 300,000
Mulvane, City of	Styx Creek Drainage	Infrastructure Upgrade	Unknown
Park City	Channel clearing - Park to 69th St. North	Channelization	\$ 350,000
Sedgwick County	Channel on Bluff - 87th St. South to 103rd St. South	Channelization	\$ 1,790,000
	Clifton channel improvements - South of 47th St. South	Channelization	\$ 1,500,000
	D12 North Waco detention basin	Detention	\$ 10,000,000
	D13 South Waco detention basin	Detention	\$ 11,300,000
	D15 Spring Creek channel - Derby to Arkansas River	Channelization	\$ 425,000
	D17 channel in Midland Valley RR - 79th St. South to 87th St. South	Channelization	\$ 1,100,000
	D19 enlarge South Waco detention basin	Detention	\$ 4,100,000
	D21 Meridian - 79th St. South to Sumner County line	Channelization	\$ 3,150,000
	Sedgwick Valley Drainage District	Easement acquisition	Other
Engineering design fees and construction administration		Plan or Study	\$ 165,000
Erosion control and sediment barrier		Channelization	\$ 25,000
Field/farm equipment crossings and miscellaneous structures		Infrastructure	\$ 20,000
New span bridge on 109th Street		Infrastructure	\$ 225,000
Outfall structure at Little Arkansas River		Infrastructure	\$ 20,000
Site clearing and restoration		Other	\$ 75,000
Sedgwick, City of	East Side detention dam	Detention	\$ 380,000
	Eastside Sedgwick Drainage Ditch	Channelization	\$ 3,000,000
Valley Center, City of	Concrete channel - North Meridian	Channelization	\$ 300,000
	East Main St.	Infrastructure Upgrade	\$ 155,000
	Industrial Park drainage	Channelization	\$ 430,000
	Meridian and 77th St.	Channelization	\$ 2,880,000
	Northeast Valley Center/Chisholm Creek	Channelization	\$ 1,800,000
Wichita, City of	37th St./Woodrow Pump Station	Infrastructure Upgrade	\$ 5,250,000
	Cadillac Lake	Channelization	\$ 1,000,000
	Calfskin Creek detention	Detention	\$ 3,785,000
	Calfskin/Cowskin confluence to 119th St.	Channelization	\$ 1,880,000
	Channel improvement - 119th St. to 13th St.	Channelization	\$ 810,000
	Channel improvement - 119th St. to Kellogg	Channelization	\$ 2,795,000
	Channel improvement - 119th St. to Maple	Channelization	\$ 1,240,000
	Channel improvement - 13th St. and 21st St.	Channelization	\$ 5,450,000
	Channel improvement - Central to 119th St.	Channelization	\$ 7,365,000
	Channel improvement - Kellogg to Maple	Channelization	\$ 3,890,000
	Channel improvement - Maize to Central	Channelization	\$ 5,085,000
	Channel improvement - Maple to Maize	Channelization	\$ 3,135,000
	Dry Creek - Douglas to 9th St. North	Channelization	\$ 3,500,000
	Dry Creek - Edgemoor to Central	Channelization	\$ 700,000
	Dry Creek - Kellogg to Douglas	Channelization	\$ 2,530,000
	Dry Creek - Lincoln to Orme	Channelization	\$ 2,000,000
	Dry Creek buyouts - South of Mt. Vernon	Channelization	\$ 1,500,000
	Dry Creek detention - 13th St. and 167th St.	Detention	\$ 20,000,000
	Gypsum Creek - Pawnee to Woodlawn	Channelization	\$ 2,100,000
	Gypsum Creek - Rock to Eastern	Channelization	\$ 2,200,000
	Gypsum Creek - West of Hillside	Channelization	\$ 2,100,000
	Gypsum Creek (Rock Tributary) - Rock to Harry	Channelization	\$ 1,000,000
	Pump Station #1 collection system	Infrastructure Upgrade	\$ 5,200,000
	Raising Maize Rd.	Infrastructure Upgrade	\$ 470,000
	Streambank maintenance	Channelization	\$ 20,000,000
	Topography - watershed studies	Plan or Study	\$ 15,000,000
	Wichita drainage canal	Channelization	\$ 850,000
	Wichita-Valley Center flood control	Infrastructure Upgrade	\$ 50,000,000

Future Needs, Aggregated by Project Type				
Project Type	Agency/Jurisdiction	Project Name	Estimated Cost	
Channelization	Eagle/Greeley Drainage Districts	Construct Burmac Rd. diversion to Arkansas River	\$ 1,045,000	
		Slough diversion at west edge of Williams property	\$ 270,000	
	Sedgwick County	D21 Meridian - 79th St. South to Sumner County line	\$ 3,150,000	
	Valley Center, City of	Industrial Park drainage	\$ 430,000	
		Meridian and 77th St.	\$ 2,880,000	
		Northeast Valley Center/Chisholm Creek	\$ 1,800,000	
	Wichita, City of	Calfskin/Cowskin confluence to 119th St.	\$ 1,880,000	
		Channel improvement - 119th St. to 13th St.	\$ 810,000	
		Channel improvement - 119th St. to Kellogg	\$ 2,795,000	
		Channel improvement - 119th St. to Maple	\$ 1,240,000	
		Channel improvement - 13th St. and 21st St.	\$ 5,450,000	
		Channel improvement - Central to 119th St.	\$ 7,365,000	
		Streambank maintenance	\$ 20,000,000	
		Bel Aire, City of	Perryton Culvert - Tributary 7	\$ 1,000,000
	Cheney, City of	Channel maintenance - Jefferson to Hoover	\$ 50,000	
		East Tributary channel/pond	\$ 195,000	
		Erosion control - 3rd and Harrison St.	\$ 15,000	
		Erosion control/maintenance - 391st and Golf Course	\$ 20,000	
	Clearwater, City of	Clearwater Tributary 1 to Ninnescah	Unknown	
	Eastborough, City of	Channel Improvements, Erosion Control (North of Douglas and east of Stratford)	\$ 300,000	
	Park City	Channel clearing - Park to 69th St. North	\$ 350,000	
	Sedgwick County	Channel on Bluff - 87th St. South to 103rd St. South	\$ 1,790,000	
		Clifton channel improvements - South of 47th St. South	\$ 1,500,000	
		D15 Spring Creek channel - Derby to Arkansas River	\$ 425,000	
		D17 channel in Midland Valley RR - 79th St. South to 87th St. South	\$ 1,100,000	
	Sedgwick Valley Drainage District	Erosion control and sediment barrier	\$ 25,000	
	Sedgwick, City of	Eastside Sedgwick Drainage Ditch	\$ 3,000,000	
	Valley Center, City of	Concrete channel - North Meridian	\$ 300,000	
	Wichita, City of	Cadillac Lake	\$ 1,000,000	
		Channel improvement - Kellogg to Maple	\$ 3,890,000	
		Channel improvement - Maize to Central	\$ 5,085,000	
		Channel improvement - Maple to Maize	\$ 3,135,000	
		Dry Creek - Douglas to 9th St. North	\$ 3,500,000	
		Dry Creek - Edgemoor to Central	\$ 700,000	
		Dry Creek - Kellogg to Douglas	\$ 2,530,000	
		Dry Creek - Lincoln to Orme	\$ 2,000,000	
		Dry Creek buyouts - South of Mt. Vernon	\$ 1,500,000	
		Gypsum Creek - Pawnee to Woodlawn	\$ 2,100,000	
		Gypsum Creek - Rock to Eastern	\$ 2,200,000	
		Gypsum Creek - West of Hillside	\$ 2,100,000	
		Gypsum Creek (Rock Tributary) - Rock to Harry	\$ 1,000,000	
Wichita drainage canal		\$ 850,000		
Detention		Sedgwick County	D12 North Waco detention basin	\$ 10,000,000
			D13 South Waco detention basin	\$ 11,300,000
			D19 enlarge South Waco detention basin	\$ 4,100,000
			East Side detention dam	\$ 380,000
		Wichita, City of	Calfskin Creek detention	\$ 3,785,000
			Dry Creek detention - 13th St. and 167th St.	\$ 20,000,000
Infrastructure	Sedgwick Valley Drainage District	Field/farm equipment crossings and miscellaneous structures	\$ 20,000	
		New span bridge on 109th Street	\$ 225,000	
		Outfall structure at Little Arkansas River	\$ 20,000	
Infrastructure Upgrade	Cheney, City of	Main and South Ave.	\$ 150,000	
	Eagle/Greeley Drainage Districts	5' X 5' concrete boxes at south end of Diversion #1	\$ 275,000	
	Mulvane, City of	Styx Creek Drainage	Unknown	
	Valley Center, City of	East Main St.	\$ 155,000	
	Wichita, City of	37th St./Woodrow Pump Station	\$ 5,250,000	
		Pump Station #1 collection system	\$ 5,200,000	
		Raising Maize Rd.	\$ 470,000	
Wichita-Valley Center flood control		\$ 50,000,000		
Plan or Study	Andale, City of	Peltzer and Orth Addition	Unknown	
	Sedgwick Valley Drainage District	Engineering design fees and construction administration	\$ 165,000	
		Wichita, City of	Topography - watershed studies	\$ 15,000,000
Other	Sedgwick Valley Drainage District	Easement acquisition	\$ 80,000	
		Site clearing and restoration	\$ 75,000	

Future Needs, Aggregated by Watershed				
Watershed	Agency/ Jurisdiction	Project Name	Project Type	Estimated Cost
Cadillac Lake-Cowskin Creek	Wichita, City of	Cadillac Lake	Channelization	\$ 1,000,000
		Calfskin Creek detention	Detention	\$ 3,785,000
		Calfskin/Cowskin confluence to 119th St.	Channelization	\$ 1,880,000
		Channel improvement - 119th St. to 13th St.	Channelization	\$ 810,000
		Channel improvement - 119th St. to Kellogg	Channelization	\$ 2,795,000
		Channel improvement - 119th St. to Maple	Channelization	\$ 1,240,000
		Channel improvement - 13th St. and 21st St.	Channelization	\$ 5,450,000
		Channel improvement - Central to 119th St.	Channelization	\$ 7,365,000
		Channel improvement - Maize to Central	Channelization	\$ 5,085,000
		Channel improvement - Maple to Maize	Channelization	\$ 3,135,000
Chisholm Creek-Little Arkansas River	Wichita, City of	Dry Creek detention - 13th St. and 167th St.	Detention	\$ 20,000,000
		Raising Maize Rd.	Infrastructure Upgrade	\$ 470,000
Cowskin Creek Cutoff	Sedgwick County	37th St./Woodrow Pump Station	Infrastructure Upgrade	\$ 5,250,000
		D12 North Waco detention basin	Detention	\$ 10,000,000
		D13 South Waco detention basin	Detention	\$ 11,300,000
		D17 channel in Midland Valley RR - 79th St. South to 87th St. South	Channelization	\$ 1,100,000
Dog Creek-Arkansas River	Mulvane, City of	D19 enlarge South Waco detention basin	Detention	\$ 4,100,000
		Styx Creek Drainage	Infrastructure Upgrade	Unknown
Dry Creek-Cowskin Creek	Wichita, City of	Channel improvement - Kellogg to Maple	Channelization	\$ 3,890,000
Gypsum Creek	Bel Aire, City of	Perryton Culvert - Tributary 7	Channelization	\$ 1,000,000
		Eastborough, City of	Channel Improvements, Erosion Control (North of Douglas and east of Stratford)	Channelization
	Wichita, City of		Dry Creek - Douglas to 9th St. North	Channelization
		Dry Creek - Edgemoor to Central	Channelization	\$ 700,000
		Dry Creek - Kellogg to Douglas	Channelization	\$ 2,530,000
		Dry Creek - Lincoln to Orme	Channelization	\$ 2,000,000
		Dry Creek buyouts - South of Mt. Vernon	Channelization	\$ 1,500,000
		Gypsum Creek - Pawnee to Woodlawn	Channelization	\$ 2,100,000
		Gypsum Creek - Rock to Eastern	Channelization	\$ 2,200,000
		Gypsum Creek - West of Hillside	Channelization	\$ 2,100,000
Gypsum Creek (Rock Tributary) - Rock to Harry	Channelization	\$ 1,000,000		
Wichita drainage canal	Channelization	\$ 850,000		
Headwaters Cowskin Creek	Andale, City of	Peltzer and Orth Addition	Plan or Study	Unknown
Jester Creek	Sedgwick Valley Drainage District	Easement acquisition	Other	\$ 80,000
		Site clearing and restoration	Other	\$ 75,000
Silver Creek-Ninnescah River	Clearwater, City of	Clearwater Tributary 1 to Ninnescah	Channelization	Unknown
Spring Creek-Arkansas River	Sedgwick County	Channel on Bluff - 87th St. South to 103rd St. South	Channelization	\$ 1,790,000
		D15 Spring Creek channel - Derby to Arkansas River	Channelization	\$ 425,000
Spring Creek-North Fork of Ninnescah River	Cheney, City of	Channel maintenance - Jefferson to Hoover	Channelization	\$ 50,000
		East Tributary channel/pond	Channelization	\$ 195,000
		Erosion control - 3rd and Harrison St.	Channelization	\$ 15,000
		Erosion control/maintenance - 391st and Golf Course	Channelization	\$ 20,000
		Main and South Ave.	Infrastructure Upgrade	\$ 150,000
Wattles Lake-Ninnescah River	Sedgwick County	D21 Meridian - 79th St. South to Sumner County line	Channelization	\$ 3,150,000
West Branch-Chisholm Creek	Park City Valley Center, City of	Channel clearing - Park to 69th St. North	Channelization	\$ 350,000
		Concrete channel - North Meridian	Channelization	\$ 300,000
		East Main St.	Infrastructure Upgrade	\$ 155,000
		Industrial Park drainage	Channelization	\$ 430,000
		Meridian and 77th St.	Channelization	\$ 2,880,000
West Lake-Arkansas River	Eagle/Greeley Drainage Districts	Northeast Valley Center/Chisholm Creek	Channelization	\$ 1,800,000
		5' X 5' concrete boxes at south end of Diversion #1	Infrastructure Upgrade	\$ 275,000
		Construct Burmac Rd. diversion to Arkansas River	Channelization	\$ 1,045,000
Wichita Floodway	Wichita, City of	Wichita-Valley Center flood control	Infrastructure Upgrade	\$ 50,000,000
Wichita Valley Floodway-Little Arkansas River	Sedgwick Valley Drainage District	Engineering design fees and construction administration	Plan or Study	\$ 165,000
		Erosion control and sediment barrier	Channelization	\$ 25,000
		Field/farm equipment crossings and miscellaneous structures	Infrastructure	\$ 20,000
		New span bridge on 109th Street	Infrastructure	\$ 225,000
	Outfall structure at Little Arkansas River	Infrastructure	\$ 20,000	
	Sedgwick, City of	East Side detention dam	Detention	\$ 380,000
Eastside Sedgwick Drainage Ditch		Channelization	\$ 3,000,000	
Wichita VC Floodway-Arkansas River	Sedgwick County	Clifton channel improvements - South of 47th St. South	Channelization	\$ 1,500,000
Wilson Lake-Arkansas River	Eagle/Greeley Drainage Districts	Slough diversion at west edge of Williams property	Channelization	\$ 270,000
		Pump Station #1 collection system	Infrastructure Upgrade	\$ 5,200,000
N/A	Wichita, City of	Streambank maintenance	Channelization	\$ 20,000,000
		Topography - watershed studies	Plan or Study	\$ 15,000,000



## **Appendix B**

# **Stormwater Management Program Organization, Operations and Administration**

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# Stormwater Management Program Organization, Operations and Administration

## Introduction

The Sedgwick County Commission chartered the Stormwater Management Advisory Board (SMAB) in October 2007, with the mission to protect lives and property within Sedgwick County by promoting better stormwater management and providing financial, technical, and other assistance to all entities within Sedgwick County that are concerned with stormwater management. The Strategic Business Planning process was initiated in part to recommend a more detailed structure and processes for the SMAB and the stormwater management program.

The following sections provide an overview of the proposed Program's governance, staffing, and operations and administration.

## Stormwater Management Advisory Board

This section describes how the SMAB would evolve to fulfill its role, including its structure, authority, and reporting requirements; and outlines the processes and procedures that would guide the Program's operations.

### *Recommended Functions and Responsibilities*

The SMAB is chartered as an advisory board to the County Commission, which retains final authority to approve budgets, plans, and policies. However, the County Commission gave the SMAB the authority to determine what matters it would concern itself with, including the following recommendations from the Organizing Committee:

- Promoting of stormwater basin planning and inter-jurisdictional cooperation.
- Master planning for stormwater management (including coordination of existing basin studies and additional basin studies, as needed).
- Serving as a technical clearinghouse for stormwater management projects.
- Recommending a long-term dedicated source of funding for stormwater management projects that would supplement funding provided by implementing entities.
- Establishing priorities (using project selection criteria) to implement basin studies and stormwater management projects (a Capital Improvements Plan).
- Developing recommended minimum standards for facility design, construction and maintenance.
- Developing recommended minimum drainage standards and processes for new urban development, and encouraging participating entities to adopt such standards.



## Strategic Business Plan

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- Promoting public awareness and education programs.
- Creating and maintaining geographic information systems (GIS) mapping of flood-prone areas and stormwater management projects.
- Participating in the Federal Emergency Management Agency (FEMA) Cooperating Technical Partners Program (regarding FEMA map revisions).

As envisioned in this Plan, the SMAB would continue to perform the functions described above. As the program builds sufficient capacity, it is envisioned that these responsibilities would evolve in the following ways:

- The SMAB would oversee Program administration and operations to ensure that the Program is operating in accordance with the approved Business Plan, and would provide guidance and feedback to Program staff.
- The SMAB would review and approve official Program work plans, technical standards, documents and studies.
- The SMAB would review proposed budget requests and expenditures prepared by Program staff and recommend approval by the County Commission. The SMAB would also review and approve non-administrative expenditures as it does currently, as well as periodic Strategic Business Plan updates.
- The SMAB would expand its committee structure as described in the following section.
- The SMAB would appoint committee members; provide guidance and direction for committee work; and review and approve committee recommendations and reports.
- Program staff would use the prioritization criteria to evaluate proposed capital projects submitted by the cities, watershed and drainage districts, and the County. The SMAB would use the staff analysis to prioritize and recommend projects to the County Commission for matching funding based on available revenue, as described in later sections.
  - Initially this Plan envisions that the County Commission would approve all expenditures individually. Eventually it is hoped that the approval process be streamlined after the Program successfully demonstrates its effectiveness, equity, and transparency. It is desired that the Program move to a model where annual budget and project expenditures are administratively approved by signature of the County Commission Chairman, thereby reducing delays significantly while preserving accountability.

### **Recommended SMAB Structure**

In order to fulfill the mission functions described above, the following paragraphs describe the SMAB's lines of authority and structure.

The **County Commission** retains final authority to approve SMAB appropriations requests, plans, policies and capital project funding recommendations, as well as projects and policies in the



unincorporated area. The County Commission will appoint SMAB members in accordance with the SMAB Charter and as described below. The County Commission will review and approve the SMAB annual budget, and review and approve funding for major projects or capital funding requests. The County Commission will review and adopt recommended stormwater management policies and plans at its discretion. The County Commission may direct the SMAB, at its discretion, to review other, specific issues or concerns relating to stormwater management.

**SMAB membership** is open to all County municipalities as well as watershed and drainage districts. Each municipality and district nominates its own representative for County Commission approval and appointment as described above, to serve for as long as the municipality or district wishes. In addition, each Commissioner appoints one SMAB member to the board, whose terms end when the Commissioner leaves office.

SMAB representatives' skills and experience and the SMAB's supporting committees are critical to the Program's long-term success. Under this Plan SMAB representatives would be appointed as originally chartered, but because the intent is to coordinate with a broad section of the community and to promote multiple-benefit approaches, the appointment criteria should be expanded to include broad knowledge of and interest in community improvement, outdoor recreation, and economic development as well as stormwater management.

The SMAB Charter authorized creation of the Technical Advisory Committee, which has been instrumental in accomplishing initial tasks. Additional committees would help the program accomplish the goals and objectives described above. Anticipated responsibilities and meeting schedules are described below.

- **Executive Committee** – The SMAB would have the option of selecting an Executive Committee and delegating specific responsibilities to it. If formed, the Executive Committee would likely set the SMAB agenda, make recommendations for SMAB consideration, handle administrative issues that require immediate attention, and other responsibilities delegated by the SMAB. This Committee would meet in advance of SMAB meetings, and more often if necessary.
- **Technical Advisory Committee** – The Technical Advisory Committee would review and oversee the development of technical guidance and watershed mapping and planning efforts; assist the Education and Outreach Committee to advocate for community adoption of technical standards and plans; review project prioritizations; and provide technical assistance to other Committees (along with Staff). The Committee would meet monthly or as needed.
- **Education and Outreach Committee** – This Committee would oversee the development and implementation of public awareness information; work to educate elected officials and the public about SMAB activities; work with other Committees to educate elected officials and the public and obtain feedback on their initiatives. Would meet monthly or as needed.
- **Recreation and Economic Development Committee** – Would oversee the development of proactive, multiple-benefit projects to catalyze economic development and provide recreational opportunities. Would meet regularly with county and city economic development and parks and recreation officials and others, such as Visioneering Wichita Economic Development and Recreation Alliances, to plan and consider projects. Would

review the economic development and recreational potential of capital improvements submitted for funding. Would meet quarterly or as needed.

## Program Staff

Dedicated staff will be required to effectively and efficiently address the many responsibilities of a full-scale Program. Staff would administer the Program on a daily basis with SMAB guidance and County Commission approval. As proposed in this Plan, staff will manage approved projects and conduct public awareness and education functions, and will provide staff support to the SMAB. Staff will also prepare program budgets, review capital improvements for funding and administer reimbursements, and draft policy and administrative recommendations for review and approval by the SMAB and County Commission.

Until a dedicated funding source becomes available, staff positions would be paid for from the General Fund. When possible, a Program Planner should be hired to begin laying the groundwork for an expanded program. A particular emphasis would be applying for outside funding as described in the next section. However, this Strategic Business Plan assumes that until permanent staff are hired, County staff will obtain limited organizational and strategic planning support, as well as technical assistance, through outside contracting.

## Recommended Staff Structure

The first dedicated staff member would be a **Program Planner** to oversee the daily operations and coordinate the many near-term tasks and activities, under the supervision of the Deputy Director of Public Works until a Program Manager is retained as discussed below. A successful Program Planner would have a broad background in watershed and community planning, public involvement, and public finance. The Program Planner would:

- Conduct strategic planning for the Program and for specific projects and initiatives, and committee operations.
- Provide administrative support for the SMAB and its committees.
- Apply for grants and funding from other local, state, and Federal sources.
- Support the public awareness campaign, providing logistical support and helping facilitate and execute the awareness strategy (described under separate cover).
- Oversee watershed studies and other special projects as directed.
- Assist the Stormwater Engineer (described below) with capital project review and floodplain management activities, particularly those related to floodplain management plans.
- Periodically review local partners' compliance with Program requirements, with assistance from the Stormwater Engineer.

Next, a **Stormwater Engineer** would be hired to oversee capital improvement project recommendations and implementation. The Stormwater Engineer would also answer to the



supervision of the Deputy Director of Public Works or Program Manger, as appropriate. He or she would also provide engineering expertise to the SMAB and its Committees. The Stormwater Engineer must have considerable experience in water resources and civil engineering, construction techniques, project finance and project management.

Specific responsibilities would include:

- Reviewing preliminary engineering studies and capital improvements funding requests.
- Assisting the Program Planner with watershed plans and studies and floodplain management plans.
- Managing detailed floodplain mapping and map revisions.
- Conducting final inspections of capital projects' adherence to Program design requirements, and periodically thereafter for proper operations and maintenance.
- Periodically reviewing local partners' compliance with general Program requirements, with the Program Planner's assistance.

Finally, when fully funded and operational, a dedicated **Program Manager** would oversee the overall program operations, ensure the Program is aligned with its goals and objectives, and supervise staff and budgets. The Program Manager would serve as the main liaison with SMAB and County Commission. He or she would oversee preparation of annual Program budget requests and submittal to the SMAB for review and recommendation to the County Commission for approval. He or she would also oversee periodic Strategic Business Plan updates (as described below). The Program Manager would also disburse funds for approved projects and manage the Program project and funding databases. The Program Manager must have extensive experience with public administration and public works; and should be familiar with other potentially related activities including urban planning, parks and recreation, transportation, and economic development. It is anticipated that the Deputy Director of Public Works will serve in this capacity until funding and responsibilities justify hiring a permanent Program Manager.

The Figure on the following page illustrates the proposed Program structure.

## Administrative and Operating Framework

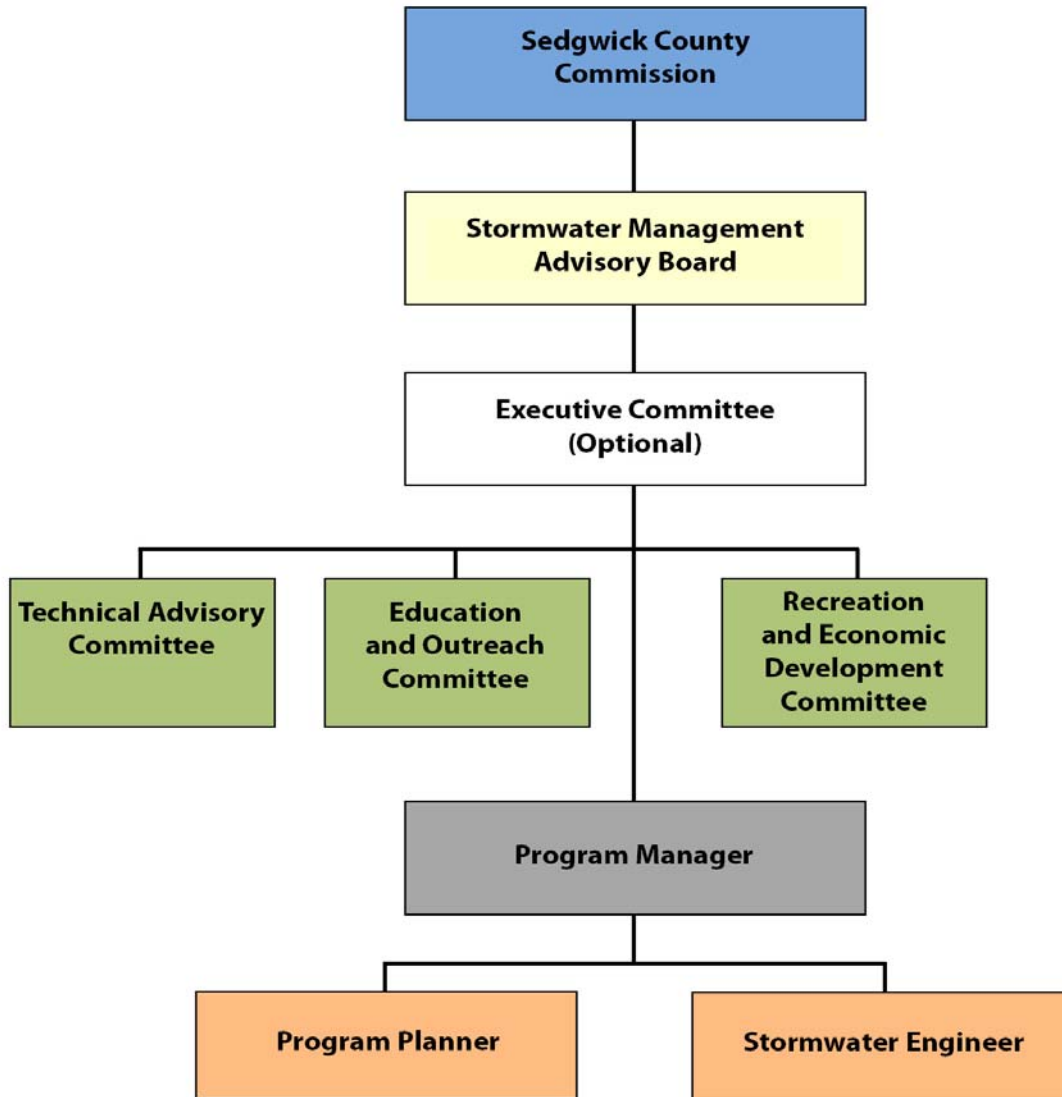
In addition to the SMAB Charter, several operational documents would be required to codify the Program functions, responsibilities, and operating procedures. In fact, the SMAB charter itself would require amendment. The operating framework is described below.

The original **SMAB Charter** does not explicitly authorize the SMAB to create an Executive Committee to delegate some of its responsibilities. A charter amendment would also be required to allow for creation of an Executive Committee, and to adopt organizational bylaws establishing quorum requirements and voting procedures for recommending capital projects to the County Commission for funding.

**Bylaws** would codify the SMAB's organizational structure, officer positions and their respective responsibilities, and general operational procedures such as meeting procedures, notice, quorum and voting requirements. **Robert's Rules of Order** would be adopted by reference to



**Figure**  
**Program Organizational Chart**





govern general meeting procedures except as specified by the bylaws. The County Commission would approve the SMAB's bylaws.

**Interlocal Agreements** would be required to facilitate intergovernmental cooperation for general and specific SMAB activities. A general or "umbrella" agreement would be signed by the County and each participating entity upon joining the SMAB, codifying the participants' responsibilities and acceptance of the Program's administration and operational procedures. It is possible that this agreement could be developed under K.S.A. 12-2901, or possibly under a new statute authorizing the Sedgwick County Program's dedicated funding source if applicable. A separate project-specific interlocal agreement would be signed by the County and participating entity(ies) for individual capital projects or watershed studies for which Program funds are provided. Currently K.S.A. 12-2908 provides this authority, but may not allow for agreements with watershed and drainage districts. It is possible that K.S.A. 12-2908 could be amended to provide this authority, or a new statute could potentially provide authority as with the umbrella agreement.

Finally, **Policies and Procedures** would guide the Program's overall operations, including, but not limited to: preliminary engineering study requirements and procedures, project funding applications, ranking and review, and recommendation for Program matching funds.

### ***Operational Processes and Procedures***

As stated above, The County Commission retains final authority to approve SMAB budgets, plans, and policies. The SMAB would oversee and approve routine operations included in the Program's approved annual budget, and would forward the Program's annual budget and project funding recommendation to the County Commission for consideration. In addition, the SMAB will provide an annual report to the County Commission, as well as a formal presentation if requested. This report would summarize the previous reporting period's activities and expenditures, and progress against Program goals and objectives. It is likely that this annual report would accompany the SMAB's recommended capital projects funding and Program budget recommendation for the subsequent Program year.

As stated previously, the SMAB will oversee the Program's overall focus and direction as well as staff operations. The SMAB will delegate specific functions and projects to committees at its discretion, as described previously. The Program Manager or staff will provide a staff report to the SMAB at its regularly scheduled meetings and at committee meetings as requested, covering Program activities and project status, expenditures and budget status, issues and accomplishments. The report format will be at the SMAB's discretion. The Program Manager or designee will also prepare a draft agenda for each SMAB meeting and committee meeting, which the SMAB chair or committee chair will approve or amend at their discretion.

If SMAB approval of specific Program activities is required, such as executing official Program work plans, technical standards, documents and studies, and expenditures, staff will place the item on the draft agenda and will request SMAB action. The SMAB may discuss, approve, or table the items at its discretion in accordance with the approved Bylaws. The Program Manager and staff will also provide information and advice to the SMAB or to the committee as requested

and directed. Finally, the Program Manager and staff will request guidance where appropriate and as directed by the SMAB for other activities, such as policy development and project issues.

## Project Prioritization

One of the SMAB's main objectives is to provide funding for stormwater management projects that public entities sponsor in Sedgwick County. An effective method of determining which projects should be funded is to rank them by priority. With this in mind, the Program would use set criteria to evaluate and prioritize all projects for capital funding. Two variations of Project Ranking Criteria (PRC) would be used to assist with project prioritization. One is for ranking watershed plan and study requests, and the other for stormwater management infrastructure projects.

The purpose of the PRC are to objectively measure potential project impacts against regional stormwater management goals and objectives, recommended technical direction and funding availability. The PRC are designed to determine which projects would provide the greatest benefits relative to one another so that Program staff, the SMAB, and the County Commission can make an informed decision and spend Program resources effectively. Additionally, the PRC are specifically designed to work with small and large projects in both urban and rural settings. When the PRC are applied, worthy projects throughout the county will be able to compete and secure funding.

The PRC are based on four primary assumptions:

- The funding may be provided for watershed plans or studies, and for infrastructure projects.
- The SMAB would fund between 50 and 75 percent of total project costs.
- The Program will establish a list of priority watersheds. Initially, the list would be based on the countywide stormwater study proposed for Year 5, which would prioritize watershed studies and develop conceptual, regional stormwater improvements. The priority watershed list would be updated as detailed watershed studies are completed, and would be based on the stormwater management needs within each watershed.
- For the Infrastructure Projects PRC, a Preliminary Engineering Study (PES) would be completed for the project. A PES submitted by a licensed engineer would answer the questions contained in the PRC and provide sufficient data from appropriate sources to validate the funding application. A plan or study completed within the five years prior to the application submittal would suffice if it answers all questions.

The following project information would be needed with each PRC:

- The name of the entity requesting SMAB funding;
- The name(s) of the watershed(s) where the project's study area is located;
- The total estimated project cost; and
- The total amount of SMAB funding being requested.



The final application would include a primary point-of-contact for as well as a statement that certifies by signature the veracity of the application and the contact's authority to submit it on behalf of the agency.

Program staff would work with applicants for funding, providing guidance on the application process and requirements, project ranking criteria, and preliminary engineering study requirements. Staff would assist the applicants as necessary and feasible, short of completing documentation or analysis that are the applicants' responsibility. Staff would review submittals for accuracy and completeness and adherence to the Program's requirements, and would provide written comments to the applicants and their consultants if applicable. Staff would request edits, clarification, amendments, or additional study if necessary and in line with the submittal requirements or scope of work. The process would include the following steps:

- The PES would be the first step in the funding application process. Municipalities or districts would submit an application describing the potential project or issue and request funding to conduct a PES. Program staff would review the requests as received and recommend to the SMAB whether or not to fund the request. This Strategic Business Plan assumes that the Program would fund 75 percent of the costs of worthy PES requests as they are received, until the annual budget allocation is exhausted. Applicants could choose to fund 100 percent of the study costs, of course.
- Once the PES is completed, the applicants would use the results to complete a PRC form and submit a formal funding application to the Program. Staff would review the PRC for completeness and accuracy. Once accepted, staff would make a funding recommendation including the percentage of Program matching funds if applicable. Over the course of each annual funding cycle, staff would collect and compile applicants' completed project ranking sheets and funding requests, and would rank and prioritize the requested projects for funding. The end of the annual application cycle would be set at such a date to allow sufficient time for staff to compile its recommendation for SMAB and County Commission review and approval. Funding would be recommended for the highest-ranking projects that available revenues will support during the funding cycle.
- The SMAB would consider staff recommendations and either approve the recommended funding requests or make changes at its discretion. If the SMAB requests changes to the prioritization it would work with Program staff to determine what projects can be funded with the available revenues. Staff would also provide assistance if revenues are insufficient to fund desired projects and the SMAB wishes to consider debt financing for a specific project.

## **Project Funding and Implementation**

Upon award the applicants would prepare designs and construct the approved projects, periodically requesting reimbursement (quarterly or monthly if staff resources permit) from the Program, up to the approved funding ceiling. Project designs would have to comply with the Storm Water Manual (SWM) or other adopted design guidance. It is not anticipated that the Stormwater Engineer would review individual project designs, he or she may conduct final inspections of capital projects' adherence to Program design requirements, and periodically



thereafter for proper operations and maintenance. The SMAB would reserve the right to review applicants' programs periodically to ensure that they are complying with adopted policies, design guidance, and the terms of their interlocal agreements with the County. The SMAB could decline to fund future requests from applicants that violate Program policies and guidance.

Unspent funds would become available for future projects during the next funding cycle. In some cases, a project funding request may be withdrawn by the applicant after approval. In such cases, the allocated Program revenue would also become available for the next funding cycle. Project funding requests that are unfulfilled would remain on the proposed CIP funding list as long as they are valid and do not change substantially, but they would still be subject to the competitive prioritization process. If a project changes significantly, the SMAB could require the applicant to revise its PRC and resubmit its funding application.

### **Annual Reporting and Strategic Business Plan Updates**

Program staff will prepare the draft Program annual report and budget request for SMAB review and approval, and submittal to the County Commission. Staff will also prepare and assist with the annual presentation to the County Commission as directed.

This Strategic Business Plan is a living document and should be updated regularly as the Program progresses and as conditions change. At a minimum, staff should prepare updates every 5 years, or when conditions change significantly enough to alter the fundamental assumptions or provisions of this Plan. It is recommended that staff prepare a rolling, 5-year budget forecast each year as part of the annual report. The SMAB would review Strategic Business Plan updates with committee or other outside assistance as appropriate, and will recommend adoption by the County Commission when complete.

## **Appendix C**

### **Example Policies, Resolutions, Bylaws and Practices**

- 1. Johnson County Stormwater Management Advisory Council (SMAC) Bylaws**
- 2. SMAC Policy**
- 3. SMAC General Interlocal Agreement**
- 4. SMAC Design Interlocal Agreement**
- 5. SMAC Construction Interlocal Agreement**

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# Johnson County, Kansas Stormwater Management Advisory Council Bylaws

Adopted: September 18, 2003

## Article I - Name

The name of this organization shall be Johnson County Stormwater Management Advisory Council (SMAC).

## Article II - Purpose

The purpose of SMAC shall be to review recommendations of the Stormwater Management Program (Program), to advise the Board of County Commissioners (Board), and to coordinate the efforts on stormwater management issues and projects resulting from the implementation of the 1/10 cent sales tax for stormwater management and flood damage mitigation.

## Article III - Membership

**Section 1.** SMAC shall be composed of participating (voting) members and ex officio (non-voting) members.

**Section 2.** Each City or other governmental entity which is, and remains, a signatory to the Stormwater Management and Flood Control Interlocal Agreement, shall appoint one representative to serve as the participating voting member of SMAC. Additionally, each City has the option to appoint an alternate voting member who shall represent the City at SMAC meetings in the event that the voting member cannot attend. No other individual may vote for the City except the voting member or the alternate voting member. The qualifications for membership and the manner of appointment shall be at the sole discretion of the City's governing body. No person may be appointed as a voting member or an alternate voting member if participation in SMAC would create a direct conflict of interest as determined by the Executive Committee. The City shall notify the Program Manager in writing of appointments to SMAC.

**Section 3.** In order to ensure coordination of stormwater management throughout the greater Kansas City metropolitan area, the governing bodies of Douglas, and Miami Counties in Kansas; Jackson and Cass Counties in Missouri; Kansas City, Missouri, the Unified Government of Kansas City, Kansas/Wyandotte County; and the Mid-America Regional Council shall each be invited to nominate a representative from their jurisdictions to serve as an ex officio member to SMAC. The Board of County Commissioners will be informed of the ex officio members. The Board may designate and/or request additional ex officio members at its discretion.

**Section 4.** Voting and alternate voting members of SMAC shall be appointed by their governing body and shall serve until the governing body provides the Program Manager, in writing, the name of the members' replacement.

## Article IV - Responsibilities

**Section 1.** It shall be the duty and responsibility of SMAC to:

- a. Review and/or recommend to the Board such studies as it deems advisable to evaluate stormwater management needs throughout Johnson County and within any watershed of the County.
- b. Monitor, update, and recommend to the Board funding participation policies and guidelines for the sharing of the costs between the Cities and the Program for engineering and construction of stormwater management projects.

- c. Present reports to the Board regarding the status of stormwater management needs and practices in Johnson County, and recommending ways to improve stormwater management throughout the County and the metropolitan area.
- d. Monitor, update, and recommend to the Board criteria for prioritizing stormwater management projects and for coordinating of projects among the various jurisdictions.
- e. Provide suggestions and recommendations to the Board on improvements and land use planning guidelines that are needed or may be advisable to protect the citizens of the County from injury or damage caused by stormwater.

**Section 2.** Annually, SMAC shall review and recommend an annual budget and program to the Board.

**Section 3.** SMAC shall provide such other reports, recommendations, and advice as may be requested by the Board.

#### **Article V - Powers and Authorities**

SMAC shall be an advisory body only and shall not have any power or authority to bind any City, the County, or any other governmental entity; nor to contract, to sue or be sued, or to incur debt or other obligations; nor to hire or retain any employees or services. All authorities and powers of decisions and actions for administration of the Program and for the expenditure of funds from the stormwater management fund shall vest and remain with the Board.

#### **Article VI - Meetings**

**Section 1.** SMAC shall meet as a whole not less often than quarterly unless there is no business to be conducted as determined by the Chair and the Program Manager, and shall meet at any reasonable time upon request of the Board. Special meetings may be called by the Chair, or upon petition of a majority of the participating members of SMAC upon two days' prior written notice.

**Section 2.** Attendance by a majority of cities' participating or alternate voting member shall constitute a quorum, and minutes shall be kept of each meeting.

**Section 3.** Each City with an identified participating member shall have only one vote.

**Section 4.** Any participating member of SMAC who has unexcused absences from three consecutive meetings of SMAC can be construed as voluntarily resigning from SMAC. The offending member may be so advised, and the City represented may be requested to make a substitute appointment.

#### **Article VII - Committees**

**Section 1.** SMAC shall include participating members representing each of the major watersheds within Johnson County.

The Cities will be grouped into three river basins as follows:

- Kansas River Basin – Bonner Springs, DeSoto, Lake Quivira, Lenexa, Merriam, Mission, Olathe, Overland Park, Shawnee, Unincorporated Johnson County.
- Blue River Basin – Fairway, Leawood, Mission, Mission Hills, Mission Woods, Olathe, Overland Park, Prairie Village, Roeland Park, Unincorporated Johnson County, Westwood, Westwood Hills.
- Marais des Cygnes River Basin - Edgerton, Gardner, Spring Hill, Unincorporated Johnson County.



**Section 2.** An Executive Committee composed of seven participating voting members shall be elected each year. Of that total, three members shall be representatives from the Kansas River Basin, three from the Blue River Basin, and one from the Marais des Cygnes River Basin. No City shall have more than one representative on the Executive Committee. Nominations and elections shall be by SMAC as a whole. The Executive Committee members shall be elected at the first SMAC meeting of each calendar year.

Terms on the Executive Committee shall be for one year, and individuals shall be eligible for reappointment. In the event of a vacancy on the Executive Committee, SMAC as a whole shall elect a new committee member.

**Article VIII - Officers**

The officers of SMAC shall be a Chair and a Vice Chair, will make up two of the members on the Executive Committee, and will be elected by the members of the SMAC from among their own ranks at the first meeting of the calendar year. The Chair and Vice Chair may not represent municipalities located entirely within the same river basin. The officers shall serve one year terms or until their respective successors are qualified, and no individual shall serve as either Chair or Vice Chair for more than two consecutive terms.

**Article IX - Amendments**

These bylaws may be amended at any meeting of the SMAC by a two-thirds vote of the members present, provided that the amendment has been presented in writing and is included in the notice announcing the meeting at which the amendment is to be voted on.

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# Johnson County, Kansas Stormwater Management Program Policy

Adopted: September 18, 2003

## I. General Provisions

### **101: General Statement of Purpose**

This policy, adopted by the Board of County Commissioners (Board) for the County Stormwater Management Program (Program), is intended to promote interlocal cooperation in stormwater management activities between the County Government and the Cities. This policy establishes a structure through which the County Government may provide financial and other assistance to the Cities and the County for planning, design, and construction of stormwater management projects to provide an adequate, safe, and integrated stormwater management system throughout the County and the neighboring communities.

Pursuant to Resolution No. 76-90, the Board created a Stormwater Management Advisory Council (SMAC) to identify and recommend projects to be funded by the Program. The Board encourages, to the extent practical, review, analysis, design, and construction of stormwater management projects. Annually, Program staff shall prepare and present to SMAC the subsequent fiscal year's program and budget for the Board's consideration in accordance with the Program's Administrative Procedures. This annual program will be the basis for funding allocations.

### **102: Application of Policy**

This Policy shall be effective and shall apply from the date of its adoption to all actions of the Board which relate to the expenditure of funds from the Stormwater Management and Flood Control Fund for the planning or review, analysis, design, and construction of stormwater management projects and facilities.

Nothing contained in this Policy shall affect any interlocal agreement or authorization of expenditures that were approved and effective prior to the adoption of this Policy.

### **103: Board Responsibilities**

Annually, the Program staff will prepare, present to SMAC, and recommend for the Board's consideration the subsequent fiscal year's program and budget in accordance with the Program's Administrative Procedures. The Board shall review, modify, and adopt the annual program to guide the subsequent fiscal year's expenditures; define the terms, conditions, and qualifications of all interlocal agreements; and establish and authorize policies for the Program.

The County Manager, under the direction and supervision of the Board, shall be responsible for establishing Administrative Procedures for the County's Public Works Department to ensure, to the extent practical, consistent administration of the Program.

### **104: Policy Review, Revision, and Authority**

The Board shall review the Program's Policy and Administrative Procedures and may change or supplement the policy or procedures as necessary. This Policy is adopted pursuant to the authority of the Board of County Commissioners under K.S.A. 19-101 and other statutory provisions.

## **II. Project Eligibility**

### **201: Eligible Participants**

Any City located within Johnson County, having signed the Stormwater Management and Flood Control Interlocal Agreement, is eligible to participate with the Program. The County shall be eligible for funding of projects which are in the unincorporated areas of the county. The Program can fully fund projects which are associated with regional stormwater management activities and efforts.

### **202. Eligible Projects**

Projects must be included in the annual Program budget to be eligible for funding. Cities and the County must submit information necessary to determine project scope and costs as provided in the Administrative Procedures.

## **III. Funding Provisions**

### **301: Funding Sources**

It is the policy of the Board to establish and maintain the Program on a "pay-as-you-go" cash basis, without the use of debt financing. Without limiting the Board's authority to establish alternative or supplementary funding mechanisms, annual cash funding for the Program shall be provided through the levy of a County-wide, one-tenth of one percent sales tax to support Stormwater Management and Flood Control as provided by Resolution No. 38-90. The Program's annual authorized expenditure shall not be more than the amount of revenue estimated to be derived from the County-wide sales tax, the associated compensating use tax, and all interest derived from the investment of stormwater management funds; any grants, contributions or fees associated with the Program; and any unused balance from prior years' annual program.

Funding for the Program will be contingent upon an annual budget appropriation by the Board, and all appropriations or authorization of expenditures shall be strictly contingent on the availability of funds to the County.

### **302: Funding Participation**

The Board may provide financial assistance for eligible Stormwater Management Program projects, through interlocal agreements, for a percentage of the local share of estimated project costs. The participation percentage may be any amount but, in general, shall be seventy-five percent (75%) for stormwater management projects and ninety percent (90%) for detailed studies. The eligible local share of such costs shall be defined in the Administrative Procedures.

In an effort to maintain flexibility in implementing projects and to avoid overburdening the Board with requests for changes to projects, the Stormwater Management Program shall have the authority to fund change orders to projects in an amount not to exceed \$100,000 total project cost, or 10% of the total project cost, whichever is greater. Any change order in excess of this amount must be approved by the express action of the Board.

In no event shall the Program be obligated to pay any amount which exceeds the authorized expenditure or budget appropriation or for which funds are not available to the County.

### **303: Use of Funds and Unexpended Funds**

Funding provided for a stormwater management project through an Interlocal Agreement shall be used to finance the study, planning, design, and construction of that specific project and for no other purpose. Any funds allocated for a project through an Interlocal Agreement but which are not expended for eligible project costs shall accrue and be

credited for the benefit of the County and no City shall have any entitlement to the use or reappropriation of such unexpended funds.

#### **IV. Administrative Provisions**

##### **401: Program Administration**

The Stormwater Management Program shall be managed by the Program Manager who shall be appointed by the Director of Infrastructure and Transportation. The Manager will administer the Program in accordance with all applicable policies, procedures, and directives of the Board.

The Program Manager shall submit reports to the Board, when requested, concerning the status of all ongoing projects and the projected revenues and expenditures under the Program, and shall meet with the Stormwater Management Advisory Council to receive that body's recommendations for the subsequent year's Program and annual budget.

##### **402: Standards and Specifications**

The minimum standards and specifications to be used for the analysis, design, and construction of Program-funded projects shall be those developed by the Kansas City Metropolitan Chapter of the American Public Works Association (APWA Standards) and adopted by the Program. Standards adopted by the Program shall take precedence over the current APWA Standards.

##### **403: Interlocal Agreements**

Interlocal Agreements between the Board and the participating cities, in the standard form and with the contents to be established by the Administrative Procedures, shall be executed for all projects funded by the Program. The Program shall not participate in the funding of any project with a City for which an appropriate agreement has not been executed.

The Chairman of the Board of County Commissioners is authorized to execute Interlocal Agreements on behalf of the Board, without separate action or approval of the Board, for any approved project included in the annual program. All executed Interlocal Agreements shall be filed with the Board and recorded in the Board's official Minutes and Journal.

##### **404: Indemnification and Hold Harmless**

The City administering any projects approved and authorized under the Program shall be designated the Project Administrator and shall agree to indemnify and hold the County and its officials and agents harmless for and from any cost, expense, or liability not expressly agreed to by the County, or which result from acts or omissions of the City, its contractors, or agents or from compliance with this Policy or the Administrative Procedures.

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AMENDED AND RESTATED AGREEMENT RELATING TO STORM WATER  
MANAGEMENT AND FLOOD CONTROL

This Amended and Restated Agreement (“Agreement”) is entered into by and between the Board of County Commissioners of Johnson County, Kansas (“County”) and the undersigned City (“City”) as of April 01, 2002.

RECITALS

A. Pursuant to K.S.A. 19-3311, the County and the City have entered into an interlocal agreement (“Interlocal Agreement”) relating to the planning, construction, maintenance, and management of stormwater and flood control facilities and improvements.

B. The County has levied, and intends to continue to levy, a county-wide retailers’ sales tax in the amount of one-tenth of one percent for the purpose of paying for the cost of stormwater management and flood control projects.

C. The County and the City desire to express their continuing commitment to joint and cooperative efforts to alleviate flooding, stormwater runoff, streamway protection, pollution prevention, and other environmental concerns, including applicable state and federal regulations and mandates.

D. The County and the City hereby amend and restate their Interlocal Agreement as set forth below with the intent that the Interlocal Agreement shall continue in full force and effect as modified by this Agreement.

AGREEMENT

1. PURPOSE. The purpose of this Agreement is to establish a program for the purposes of (i) conducting or obtaining studies, assessments, updates and engineering services to identify, evaluate, and recommend stormwater and flood control facilities, improvements, activities, and projects; (ii) planning, constructing, maintaining, and managing stormwater improvements; and (iii) implementing projects, activities, and practices consistent with, more stringent than, or for compliance with state or federal stormwater management, streamway protection, pollution prevention (including both surface and subsurface water), and other similar environmental regulations, including Phase II of the National Pollutant Discharge Elimination System (NPDES) which shall be financed by the county-wide retailers' sales tax levied in accordance with K.S.A. 19-3311. Nothing herein contained shall prevent either party hereto

from planning, constructing, maintaining or managing stormwater or flood control facilities under the provisions of any other law, statute, ordinance or resolution.

2. FINANCING. The program established by this Agreement will be financed by the levying of a county-wide one tenth of one percent retailers' sales tax. The administration and collection of this tax shall be in accordance with K.S.A. 12-187 through K.S.A. 12-197 inclusive and K.S.A. 19-3311. Pursuant to the provisions of K.S.A. 19-3311, the Johnson County Treasurer shall maintain a Stormwater Management and Flood Control Fund (“SMFC Fund”). Expenditures from the SMFC Fund shall be at the direction of the Board of County Commissioners of Johnson County, Kansas, for the purposes set forth in this Agreement. Nothing contained herein shall prevent nor limit the County or any city, whether a party to this agreement, from using any other funds or funding source to provide financing required or contemplated by this Agreement.

3. DESIGN OF PROJECTS AND DETERMINATION OF PRIORITIES.

The parties acknowledge that the implementation of the County’s Stormwater Management Program has been, and will continue to be, coordinated through the Stormwater Management Advisory Council and that funds derived from the sales tax authorized under K.S.A. 19-3311 have been used to develop and implement a county-wide comprehensive stormwater management and flood control plan, designed and implemented on a storm drainage basin-by-basin basis within the major watersheds located in Johnson County. The Stormwater Management Program has emphasized the prudent and efficient expenditure of project funds to correct storm drainage problems and plan for future stormwater management needs in accordance with adopted County policies and professional engineering standards and practices. The parties agree that all future program expenditures for these purposes shall be undertaken in accordance with the County’s Stormwater Management Program Policies and Procedures and in accordance with the terms and conditions of any written agreement between the parties. The Stormwater Management Advisory Council shall continue in its important advisory role in assisting with determining Program priorities and project selection in connection with the County’s annual allocation of the SMFC Fund.



4. ACQUISITION, HOLDING AND DISPOSITION OF PROPERTY.

- a. Funds in the Stormwater Management and Flood Control Fund shall be expended only by the County. No other party shall have the power or authority to encumber, draw upon, appropriate or otherwise exercise control or dominion over this fund.
- b. Real Estate: Any interest in real estate including, but not limited to, fee title, right-of-way, easement, or lease within the corporate boundaries of the City shall be acquired and held in the name of the City or, if in an unincorporated area, in the name of the County. No real property shall be acquired or held jointly by parties to this agreement. It is the intent of the parties hereto that any real property interest acquired or held in the name of the County pursuant to this agreement shall pass and be conveyed by law or, if necessary, by separate agreement to the City if and when such real property interests are within an area subsequently annexed into the corporate boundaries of the City.
- c. Personal Property: Each party hereto shall acquire, retain and dispose of personal property which might be required to carry out this Agreement in its individual name free of any claim or interference by the other except as may be provided in a contract subsequently entered into pursuant to this Agreement.

5. ADMINISTRATION.

- a. The County shall administer and distribute funds in the Stormwater Management and Flood Control Fund in accordance with the Stormwater Management Program Policy. The County, with the assistance of the Stormwater Management Advisory Council, shall determine which projects shall be wholly or partly funded by the SMFC Fund.
- b. Any project financed in whole or in part by the Stormwater Management and Flood Control Fund shall be administered in accordance with the parties' agreement entered into for such project.
- c. The parties agree that the Stormwater Management Advisory Council shall continue to serve for the purpose of providing advice, consultation, communication, and coordination, as directed by the County, for projects under consideration or administration pursuant to this Agreement. The membership of

the Advisory Council shall be composed of one member appointed or designated by the County and one member from each municipality that has entered into an interlocal agreement with the County as contemplated by K.S.A. 19-3311.

6. NO LEGAL ENTITY CREATED. This Agreement creates no separate or independent legal entity.

7. DURATION. This Agreement shall be and remain in effect until terminated by either party or upon the adoption, by a unanimous vote of the Board of County Commissioners, of a Resolution terminating the Agreement or rescinding the authorized sales tax under K.S.A. 19-3311. Termination of this Agreement shall not affect any agreements between the County and any other city or county that has been entered into for the same purpose.

8. PLACING AGREEMENT IN FORCE. This Agreement shall be effective as of the date first above written upon its execution by the County and the City.

BOARD OF COUNTY COMMISSIONERS  
OF JOHNSON COUNTY, KANSAS

\_\_\_\_\_  
Susie Wolf, Chairman

ATTEST:

\_\_\_\_\_  
John A. Bartolac  
County Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
Robert Ford  
Assistant County Counselor

City of \_\_\_\_\_, Kansas

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM:

\_\_\_\_\_  
City Attorney

**Agreement between  
Johnson County and the City of «City\_»  
For Design of a Stormwater Management Project known as  
«Project\_Name»  
«Project\_ID»**

This agreement is entered into by and between the Board of County Commissioners of Johnson County, Kansas (the "County") and the City of «City\_» (the "City") pursuant to K.S.A. 12-2908.

**Recitals**

1. Pursuant to K.S.A. 19-3311, by Resolution No. 38-90, the County has established a county-wide retailer's sales tax for the purpose of providing funds for stormwater management projects, and by Resolution No. 76-90, created a Stormwater Management Advisory Council to identify and recommend projects for inclusion in the Stormwater Management Program.
2. The County has established a Stormwater Management and Flood Control Fund for the purpose of funding Stormwater Management Program projects.
3. The County, by Resolution No. 66-92, as modified by Resolution No. 034-94, adopted the Johnson County Stormwater Management Policy and the Administrative Procedures for the Johnson County Stormwater Management Program ("Policy and Procedures") to promote interlocal cooperation between the County and the participating municipalities in stormwater management activities.
4. The County has established a Five-Year Master Plan consisting of a list of proposed stormwater management projects that meet the established criteria for funding from the Stormwater Management and Flood Control Fund. The County, upon the recommendation of the Stormwater Management Advisory Council, has selected certain projects from the Five Year Master Plan to be included in the County's Project Priority List which contemplates the timely design and construction of those selected projects.
5. In accordance with the Policy and Procedures, the City has requested that the County participate in the funding for the design of the stormwater management project identified as «Project\_Name» (the "Project Design"), which Project is on the County's Project Priority List, and the County is willing to provide such funding upon the terms and conditions set forth in this agreement.

## Agreement

In and for the consideration of the mutual covenants contained in this agreement and the mutual benefits to be derived from the Project, the City and the County agree as follows:

1. **Policy and Procedures.** The City acknowledges receipt of the Policy and Procedures. The City and County agree that the Project Design shall be undertaken, designed, and administered in accordance with the terms and provisions of the Policy and Procedures provided, however, in the event a conflict exists between any provision of the Policy and Procedures and any provision of this agreement, the terms and conditions of this agreement shall control.
2. **Design Costs.** The parties acknowledge and agree that this agreement only obligates the parties to proceed with design of the Project. For budget and accounting purposes, the estimated cost of the Project Design is «Dollar\_Words» («Dollar\_Figure»).
3. **Engineering and Design Services.** The City shall be responsible for the selection of qualified engineering professionals to provide engineering services for the design of the Project. The City may provide engineering services, in whole or in part, for the Project Design utilizing qualified City personnel. The City agrees to provide to the County for review the identity and the qualifications of engineering professionals and City personnel under consideration by the City prior to entering into any binding contract for engineering services and prior to permitting any City personnel to perform engineering services relating to the Project Design. The County shall have the right, but not the obligation, to comment upon the qualifications or suitability of the engineering professionals and City personnel. Upon the request of the County Engineer, the City agrees to provide additional information or clarification, if available, regarding the qualifications of the engineering professionals or City personnel.

It shall be the City's duty and obligation to select only qualified engineering professionals and to permit only qualified City personnel to perform Project Design related services. The parties agree that the County has no obligation to comment upon, evaluate, or object to the qualifications of any engineering professional or City personnel and the County's failure to do so shall not be deemed an approval of the engineering professional or the City personnel. In the event the County Engineer determines that the City's selection of an engineering professional or City personnel is not in the best interests of the Project, the County Engineer may request the City to reconsider its selection. Upon such request, the City shall either select a different engineering professional or City personnel, as the case may be, or shall seek a reconsideration by the County Engineer. In the event the City and the County cannot agree upon the selection, either party may terminate this agreement upon fifteen days notice to the other, and from and after the date of such termination, neither party shall have any further duties or obligations under this agreement.

Within sixty days from the date of the termination of this agreement as provided in this Paragraph, the City shall provide the County with a final accounting of Project Design costs and the County's share of such costs whereupon the County shall reimburse the City as provided in

this agreement subject to any limitations on reimbursement set forth in the Policy and Procedures and this agreement.

4. **Estimated Project Cost.** The parties acknowledge and agree that the County Stormwater Management Program has established an estimated total design cost of the Project of «Dollar\_Words» («Dollar\_Figure») based upon engineering and design assumptions that the Preliminary Study may or may not confirm. The parties shall, upon the completion of the Preliminary Study, analyze and consider the proposed scope and conceptual design of the Project as set forth in the Preliminary Study. If the parties cannot agree upon the scope or conceptual design of the Project, then either party may terminate this agreement upon fifteen days notice to the other. Upon such termination, the City shall be reimbursed by the County for costs and expenses incurred in connection with the Preliminary Study subject to the limitations set forth in the Policy and Procedures and in this agreement.
5. **Option to Terminate.** In the event the Preliminary Study reveals that the estimated cost of Project Design exceeds either City or County expectations, the City and the County each shall have the option of terminating this agreement as set forth in this Paragraph.

The City agrees to notify the County whether it desires to terminate this agreement within thirty days following the delivery of the Preliminary Study to the County. Within thirty days after the City gives its notice of intent to terminate this agreement to the County, the County may, at its option, elect to contribute a higher percentage of the estimated Project Design costs sufficient to allow the Project Design to continue, in which event this agreement shall not terminate but shall continue in full force and effect except that the County's obligation for Project Design costs shall be increased accordingly.

Within forty-five days after the date the Preliminary Study is received by the County, the County agrees to either:

- A. Notify the City of the County's intent to terminate this agreement and re-prioritize the Project, or;
- B. Authorize the City to proceed with the preparation of the "Preliminary Project Plans and Specifications" (as defined in this agreement).

Within thirty days after the County gives its notice of intent to terminate this agreement to the City, the City may, at its option, elect to contribute a higher percentage of the estimated Project Design sufficient to allow the Project Design to continue, in which event this agreement shall not terminate but shall continue in full force and effect except that the City's obligation for Project costs shall be increased accordingly. If the City does not elect to participate in a higher percentage of the estimated Project Design costs, this agreement shall automatically terminate on the thirty-first day following the date on which the County gave its notice of intent to terminate this agreement.

Within sixty days from the date of the termination of this agreement as provided in this Paragraph, the City shall provide the County with a final accounting of Project Design costs and the County's share of such costs whereupon the County shall reimburse the City subject to the limitations set forth in the Policy and Procedures and in this agreement.

Upon the termination of this agreement as provided in this Paragraph, the Project shall be re-prioritized according to the Policy and Procedures.

6. **Notice to Affected Municipalities.** The City shall contact all upstream and downstream municipalities that possibly may be adversely affected by the Project and shall inform such municipalities of the nature and scope of the Project. The City shall notify the County of any objection to the Project that is received by the City from any upstream or downstream municipality. The City agrees that it shall provide the upstream and downstream municipalities with an opportunity to review and comment upon the Preliminary Study prior to submitting the Preliminary Study to the County. The City shall keep the municipalities informed during the design, planning, and construction phases of the Project.
  
7. **Project Plans and Specifications.** Within \_\_\_\_ days following the County's notice to proceed with the preparation of "Preliminary Plans and Specifications" (as defined below), the City shall provide the County with a copy of the preliminary plans and specifications for the Project which shall include, without limitation, all proposed and draft engineering and construction documents, plans, drawings, construction schedules, cost estimates, and bid and contract documents ("Preliminary Plans and Specifications"). The County may, at its option, provide written comments and suggestions to the City regarding the proposed Preliminary Plans and Specifications and shall do so, if at all, within forty-five days from the date of receipt by the County of the Preliminary Plans and Specifications. Any comment, suggestion, approval, or disapproval by the County with respect to the Preliminary Plans and Specifications, or any portion thereof, shall be for the sole benefit of the City for its use and consideration in preparing its "Final Plans and Specifications" for the Project which shall include, without limitation, all final engineering and construction documents, plans, drawings, construction schedules, cost estimates, and bid and contract documents. It is expressly understood and agreed that the County's approval or disapproval of the Preliminary or Final Plans and Specifications shall not be considered, nor argued by the City in any court or proceeding, as a representation or warranty that the Plans and Specifications comply with or meet engineering or design principles or criteria or any applicable law.

The City shall submit its Final Plans and Specifications to the County for review within \_\_\_ days from the expiration of the forty-five day Preliminary Plans and Specifications review period. It is acknowledged and agreed by the parties that the County's role, and the purpose of the County's review, is to satisfy itself, to the extent practical, that the Project, as designed, is likely to meet the stormwater control desired and contemplated by Stormwater Management Program. As part of the County's review of the Preliminary and Final Plans and Specifications provided for in this agreement, the City agrees to and shall submit to the County for review a copy of the proposed construction contract or contracts for the Project.

In the event the City and the County cannot agree upon the Preliminary or the Final Plans and Specifications, either party may terminate this agreement upon fifteen days notice to the other and from and after the date of such termination neither party shall have any further duties or obligations under this agreement. In the event of such termination, the City shall be entitled to reimbursement for actual costs and expenses incurred in the preparation of the Preliminary Study and the Preliminary and Final Plans and Specifications, subject to any limitations on reimbursement contained in the Policy and Procedures or this agreement.

8. **Administration of Project.** It is acknowledged and agreed that the City shall enter into all contracts relating to the Project Design in its own name and not as the agent of the County. The City agrees to be solely responsible for the administration of all contracts for the Project Design. Any contract disputes shall be resolved by the City at the City's sole cost and expense.

The City shall require adequate indemnity covenants and evidence of insurance from engineering service providers for loss or damage to life or property arising out of the engineering service provider's negligent acts or omissions. The required insurance coverage and limits shall be established by the City but shall not, in any event, be less than \$1,000,000 professional liability coverage for engineering service providers. The City may, in the exercise of its reasonable judgment, permit any insurance policy required by this agreement to contain a reasonable and customary deductible or co-insurance provision.

9. **County Contribution Toward Project Costs.** The County shall reimburse the City from the Stormwater Management and Flood Control Fund for expenditures made by the City for the Project Design as follows:

Not more than once each calendar month, the City shall submit to the County a request for payment, invoice, or statement satisfactory in form and content to the County Engineer detailing total Project Design costs and expenses, in line-item detail, for the preceding calendar month ("Payment Request") and for year-to-date.

The City's Payment Request shall list, by category, those particular expenditures that are reimbursable according to the Policy and Procedures. The City represents and warrants that each Payment Request shall seek reimbursement for only those expenditures that the City determines, in good faith, to be reimbursable by the County. The County Engineer may require the City to supplement the Payment Request as needed to satisfy the County Engineer, at his discretion, that the Payment Request accurately reflects properly reimbursable costs and expenses.

The County agrees to make payment to the City within thirty days following the County Engineer's approval and acceptance of a properly documented Payment Request in an amount equal to seventy-five percent (75%) of the Payment Request.

10. **Limitation of Liability.** To the extent permitted by law and subject to the maximum liability and immunity provisions of the Kansas Tort Claims Act, the City agrees to indemnify and hold the County, its officials, and agents harmless from any cost, expense, or liability not expressly agreed to by the County which result from the negligent acts or omissions of the City or its employees or which result from the City's compliance with the Policy and Procedures.

11. ***Only if the City has proposed a Project design that contemplates a deviation from the American Public Works Association (APWA) specifications contained in Section 5600 Storm Drainage Systems and Facilities, shall the following provisions apply:***

A. The City represents that it has determined that APWA Section 5600 specifications are not feasible, are impractical, or cannot be met without an expenditure of funds that, in the City's opinion, significantly exceeds the anticipated Project benefit.

- B. The City represents that, based upon its own analysis, the APWA Section 5600 specifications set forth on the attached Exhibit \_\_\_\_\_ are not feasible, are impractical, or cannot be met without an expenditure of funds that significantly exceeds the anticipated Project benefit.
- C. The City acknowledges and agrees that the costs of "flood proofing" any structure within the Project area shall not be a reimbursable expense under the Stormwater Management Program but shall be borne solely by the City. "Flood proofing," for purposes of this section, means any method by which a structure's windows, doors, or other openings are covered or sealed in an effort to prevent flood water entering the structure through such openings.
- D. The City acknowledges that it has, in its sole and absolute discretion, determined to deviate from APWA Section 5600 specifications by approving a Project design that may result in seven inches or more of water flooding over a street or roadway during a 100 year storm event. The City hereby represents that:
- E. The City has concluded that the relevant APWA Section 5600 specifications are not feasible, are impractical, or cannot be met without an expenditure of funds that, in the City's opinion, significantly exceeds the anticipated benefit.
- F. The City agrees to and shall develop an emergency plan to protect life and property at the anticipated flooded crossing point during a 100-year storm or other high-water event.
- G. The City represents that it has endeavored to advise its citizens in and near the Project area of the City's proposed deviation from APWA Section 5600 specifications and its alternative plans to protect life and property at the flooded crossing point during a 100 year storm or other high-water event.
- H. The City agrees to and shall take appropriate measures to protect the public at low-water crossings, which are allowed to exist as part of the City's Project.
- I. The City acknowledges that it is deviating from the APWA Section 5600 specifications upon its discretion based upon its own investigation, analysis, and risk assessment and without reliance upon SMAC or the Board of County Commissioners, or their respective employees or agents. To the extent permitted by law and subject to the maximum liability provisions of the Kansas Tort Claims Act the City expressly agrees to and shall hold SMAC and the Board of County Commissioners, and their respective employees and agents, harmless from any property loss, property damage, personal injury, or death arising out of the construction of the Project.

The City also agrees that not withstanding any assistance, advice, technical consulting, or engineering services provided by SMAC or the Board of County Commissioners, or the failure to provide any such assistance, advice, technical consulting, or engineering services, the City shall bear the sole and absolute responsibility for the Project's design, construction, maintenance, and repair.

12. **Notice Addresses.** Any notice required or permitted by this agreement shall be deemed properly given upon deposit in the U.S. mail, postage prepaid and addressed as follows:

13.

**If to the County:**

**If to the City:**



Kent L. Lage, P.E.  
Urban Services Manager  
Johnson County Public Works  
1800 West 56 Highway  
Olathe, Kansas 66061

«Contact»  
«Title»  
City of «City\_»  
«Address»  
«City\_State\_Zip»

In addition, any notice required or permitted by this agreement may be sent by telecopier or hand delivered and shall be deemed properly given upon actual receipt by the addressee.

13. **Effective Date.** Regardless of the date(s) the parties execute the agreement, the effective date of this agreement shall be \_\_\_\_\_ provided the agreement has been fully executed by both parties.

**Board of County Commissioners  
of Johnson County, Kansas**

**City of «City\_»**

\_\_\_\_\_  
Annabeth Surbaugh, Chairman

\_\_\_\_\_  
«Mayor»

Attest:

Attest:

\_\_\_\_\_  
Casey Joe Carl  
Clerk of the Board

\_\_\_\_\_  
City Clerk

Approved as to Form

Approved as to Form:

\_\_\_\_\_  
Robert A. Ford  
Assistant County Counselor

\_\_\_\_\_  
City Attorney

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**Agreement between  
Johnson County and the City of «City\_»  
For Construction of a Stormwater Management Project known as  
«Project\_name»  
«Project\_id»**

This agreement is entered into by and between the Board of County Commissioners of Johnson County, Kansas (the "County") and the City of «City» (the "City") pursuant to K.S.A. 12-2908.

**Recitals**

1. Pursuant to K.S.A. 19-3311, by Resolution No. 38-90, the County has established a county-wide retailer's sales tax for the purpose of providing funds for stormwater management projects, and by Resolution No. 76-90, created a Stormwater Management Advisory Council to identify and recommend projects for inclusion in the Stormwater Management Program.
2. The County has established a Stormwater Management and Flood Control Fund for the purpose of funding Stormwater Management Program projects.
3. The County, by Resolution No. 66-92, as modified by Resolution No. 034-94, adopted the Johnson County Stormwater Management Policy and the Administrative Procedures for the Johnson County Stormwater Management Program ("Policy and Procedures") to promote interlocal cooperation between the County and the participating municipalities in stormwater management activities.
4. The County has established a Five-Year Master Plan consisting of a list of proposed stormwater management projects that meet the established criteria for funding from the Stormwater Management and Flood Control Fund. The County, upon the recommendation of the Stormwater Management Advisory Council, has selected certain projects from the Five Year Master Plan to be included in the County's Project Priority List which contemplates the timely design and construction of those selected projects.
5. In accordance with the Policy and Procedures, the City has requested that the County participate in the funding for the construction of the stormwater management project identified as «Project\_name» (the "Project"), which Project is on the County's Project Priority List, and the County is willing to provide such funding upon the terms and conditions set forth in this agreement.

# Agreement

In and for the consideration of the mutual covenants contained in this agreement and the mutual benefits to be derived from the Project, the City and the County agree as follows:

1. **Policy and Procedures.** The City acknowledges receipt of the Policy and Procedures. The City and County agree that the Project shall be undertaken, constructed, and administered in accordance with the terms and provisions of the Policy and Procedures provided, however, in the event a conflict exists between any provision of the Policy and Procedures and any provision of this agreement, the terms and conditions of this agreement shall control.
2. **Estimated Project Cost.** The parties acknowledge and agree that this agreement obligates the parties to proceed with the construction phase of the Project. For budget and accounting purposes, the total project cost including the design engineering, estimated construction engineering and construction costs of the construction phase of the Project is «Dollar\_words» («Dollar\_figures\_») based upon engineering and design assumptions which the construction contract bid prices and construction inspection contract prices may or may not confirm.
3. **Option to Terminate.** Upon receiving construction bids for the Project, the City shall determine the total engineering and construction costs for the construction phase of the Project based upon contract bid amounts. Within seven days of the construction contract bid date, the City shall notify the County, in writing, of the total engineering and construction costs for the construction phase of the Project. In the event total estimated construction engineering and construction costs for the construction phase of the Project exceed the Stormwater Management Program's estimated construction phase cost of the Project, the City and the County each shall have the option of terminating this agreement as set forth in this Paragraph.

The City agrees to notify the County whether it desires to terminate this agreement within thirty days following the bid date of the contract. Within thirty days after the City gives its notice of intent to terminate this agreement to the County, the County may, at its option, elect to contribute additional funds to the Project in an amount sufficient to cover any and all additional expenditures over and above the design and estimated construction cost of «Dollar\_words» («Dollar\_figures\_») in which event this agreement shall not terminate but shall continue in full force and effect except that the County's obligation for Project costs shall be increased accordingly.

Should the total engineering and construction costs for the construction phase of the Project exceed the amount of this agreement, the County agrees to either:

- A. Notify the City of the County's intent to terminate this agreement and re-prioritize the Project within thirty days of the receipt of the notification of total engineering and construction costs for the construction phase of the Project, or;
- B. Authorize the City to proceed with the construction of the project.

Within thirty days after the County gives its notice of intent to terminate this agreement to the City, the City may, at its option, elect to contribute additional funds to the Project in an amount sufficient to cover any and all additional expenditures over and above the amount of this agreement in which event this agreement shall not terminate but shall continue in full force and effect except that the City's obligation for the Project costs shall be increased accordingly.

Within sixty days from the date of the termination of this agreement as provided in this Paragraph, the City shall provide the County with a final accounting of Project costs and the County's share of such costs whereupon the County shall reimburse the City subject to the limitations set forth in the Policy and Procedures and in this agreement.

Upon the termination of this agreement as provided in this Paragraph, the Project shall be re-prioritized according to the Policy and Procedures.

- 4. **Project Construction.** The City agrees to select a responsible and qualified contractor or contractors to undertake and complete the construction of the Project according to the Final Plans and Specifications ("Project Contractor"). The parties agree that it shall be the City's obligation to comply with and, to extent reasonably practical, to require the Project Contractor comply with, all applicable laws and regulations governing public contracts, including all applicable non-discrimination laws and regulations.
- 5. **Administration of Project.** It is acknowledged and agreed that the City shall enter into all contracts relating to the Project in its own name and not as the agent of the County. The City agrees to be solely responsible for the administration of all construction and other contracts for the Project. Any contract disputes shall be resolved by the City at the City's sole cost and expense.

The City shall be responsible for requiring adequate performance and payment bonds for the Project from the Project Contractor. The City shall discharge and satisfy any mechanic's or materialman's lien that encumbers the Project and the costs thereof shall not be considered a reimbursable cost under this agreement. Notwithstanding the foregoing, costs and expenses, including reasonable attorneys' fees, incurred by the City to enforce a contract of indemnity under a performance or payment bond shall be reimbursable, subject to any limitations on reimbursement set forth in the Policy and Procedures or this agreement.

The City shall require adequate indemnity covenants and evidence of insurance from contractors and engineering service providers for loss or damage to life or property arising out of the contractor's or engineering service provider's negligent acts or omissions. The required insurance coverage and limits shall be established by the City but shall not, in any event, be less than \$2,000,000 on a per occurrence basis for general liability coverage for the general contractor and \$1,000,000 professional liability coverage for engineering service providers. The City may, in the exercise of its reasonable judgment, permit any insurance policy required by this agreement to contain a reasonable and customary deductible or co-insurance provision.

The City shall submit to the Finance Director, upon execution of this agreement, a monthly projection of cash flow expenditures for the Project, in substantially the form set out in Exhibit B attached hereto.

6. **County Contribution Toward Project Costs.** The County shall reimburse the City from the Stormwater Management and Flood Control Fund for expenditures made by the City for the Project as follows:

Not more than once each calendar month, the City shall submit to the County a request for payment, invoice, or statement satisfactory in form and content to the County Stormwater Engineer detailing total Project costs and expenses, in line-item detail, for the preceding calendar month ("Payment Request") and for year-to-date.

The City's Payment Request shall list, by category, those particular expenditures that are reimbursable according to the Policy and Procedures. The City represents and warrants that each Payment Request shall seek reimbursement for only those expenditures that the City determines, in good faith, to be reimbursable by the County. The County Stormwater Engineer may require the City to supplement the Payment Request as needed to satisfy the County Stormwater Engineer, at his discretion, that the Payment Request accurately reflects properly reimbursable costs and expenses.

The County agrees to make payment to the City within thirty days following the County Stormwater Engineer's approval and acceptance of a properly documented Payment Request in an amount equal to seventy-five percent (75%) of the Payment Request.

Within sixty days from the date of the completion of the Project, the City shall provide the County with a final accounting of Project costs and the County's share of such costs, whereupon the County shall make a final reimbursement to the City as provided in this agreement. For purposes of this agreement, the Project shall be deemed complete on the earliest date upon which any of the following events occur:

- A. The City notifies the County that the Project is complete, subject to usual and customary "punch list" items.
- B. The Project architect or construction engineer issues to the City a certificate of substantial completion for the Project.

C. The date the County Stormwater Engineer certifies, in good faith, that the Project is substantially complete following an inspection of the Project by the County Stormwater Engineer who shall be accompanied by a City representative.

7. **Limitation of Liability.** To the extent permitted by law and subject to the maximum liability and immunity provisions of the Kansas Tort Claims Act, the City agrees to indemnify and hold the County, its officials, and agents harmless from any cost, expense, or liability not expressly agreed to by the County which result from the negligent acts or omissions of the City or its employees or which result from the City's compliance with the Policy and Procedures.

In addition, the City shall, and hereby agrees to, insert as a special provision of its contract with the Project Contractor chosen to undertake the Project construction as contemplated by this Agreement the following paragraphs:

The Project Contractor shall defend, indemnify and save the Board of County Commissioners of Johnson County, Kansas and the City harmless from and against all liability for damages, costs, and expenses arising out of any claim, suit, action or otherwise for injuries and/or damages sustained to persons or property by reason of the negligence or other actionable fault of the Project Contractor, his or her sub-contractors, agents or employees in the performance of this contract.

The Board of County Commissioners of Johnson County, Kansas shall be named as an additional insured on all policies of insurance issued to the Project Contractor and required by the terms of his/her agreement with the City.

8. ***Only if the City has proposed a Project design that contemplates a deviation from the American Public Works Association (APWA) specifications contained in Section 5600 Storm Drainage Systems and Facilities, shall the following provisions apply:***
- A. The City represents that it has determined that APWA Section 5600 specifications are not feasible, are impractical, or cannot be met without an expenditure of funds that, in the City's opinion, significantly exceeds the anticipated Project benefit.
- B. The City represents that, based upon its own analysis, the APWA Section 5600 specifications set forth on the attached Exhibit \_\_\_\_\_ are not feasible, are impractical, or cannot be met without an expenditure of funds that significantly exceeds the anticipated Project benefit.
- C. The City acknowledges and agrees that the costs of "flood proofing" any structure within the Project area shall not be a reimbursable expense under the Stormwater Management Program but shall be borne solely by the City. "Flood proofing," for purposes of this section, means any method by which a structure's windows, doors, or other openings are covered or sealed in an effort to prevent flood water entering the structure through such openings.
- D. The City acknowledges that it has, in its sole and absolute discretion, determined to deviate from APWA Section 5600 specifications by approving a Project design that may result in

seven inches or more of water flooding over a street or roadway during a 100 year storm event. The City hereby represents that:

- E. The City has concluded that the relevant APWA Section 5600 specifications are not feasible, are impractical, or cannot be met without an expenditure of funds that, in the City's opinion, significantly exceeds the anticipated benefit.
- F. The City agrees to and shall develop an emergency plan to protect life and property at the anticipated flooded crossing point during a 100-year storm or other high-water event.
- G. The City represents that it has endeavored to advise its citizens in and near the Project area of the City's proposed deviation from APWA Section 5600 specifications and its alternative plans to protect life and property at the flooded crossing point during a 100 year storm or other high-water event.
- H. The City agrees to and shall take appropriate measures to protect the public at low-water crossings, which are allowed to exist as part of the City's Project.
- I. The City acknowledges that it is deviating from the APWA Section 5600 specifications upon its discretion based upon its own investigation, analysis, and risk assessment and without reliance upon SMAC or the Board of County Commissioners, or their respective employees or agents. To the extent permitted by law and subject to the maximum liability provisions of the Kansas Tort Claims Act the City expressly agrees to and shall hold SMAC and the Board of County Commissioners, and their respective employees and agents, harmless from any property loss, property damage, personal injury, or death arising out of the construction of the Project.

The City also agrees that not withstanding any assistance, advice, technical consulting, or engineering services provided by SMAC or the Board of County Commissioners, or the failure to provide any such assistance, advice, technical consulting, or engineering services, the City shall bear the sole and absolute responsibility for the Project's design, construction, maintenance, and repair.

- 9. **Notice Addresses.** Any notice required or permitted by this agreement shall be deemed properly given upon deposit in the U.S. mail, postage prepaid and addressed as follows:

**If to the County:**

Kent L. Lage, P.E.  
Urban Services Manager  
Johnson County Public Works  
1800 West 56 Highway  
Olathe, Kansas 66061

**If to the City:**

«Contact»  
«Title»  
City of «City»  
«Address»  
«City\_state\_zip»

In addition, any notice required or permitted by this agreement may be sent by telecopier or hand delivered and shall be deemed properly given upon actual receipt by the addressee.



10. **Effective Date.** Regardless of the date(s) the parties execute the agreement, the effective date of this agreement shall be \_\_\_\_\_ provided the agreement has been fully executed by both parties.

**Board of County Commissioners  
Of Johnson County, Kansas**

**City of «City»**

\_\_\_\_\_  
Annabeth Surbaugh, Chairman

\_\_\_\_\_  
«mayor», Mayor

Attest:

Attest:

\_\_\_\_\_  
Casey Joe Carl  
Clerk of the Board

\_\_\_\_\_  
City Clerk

Approved as to Form

Approved as to Form:

\_\_\_\_\_  
Robert A. Ford  
Assistant County Counselor

\_\_\_\_\_  
City Attorney

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## Appendix D

### Potential Funding Sources and Budget

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# Potential Funding Sources and Budget

## Introduction

There was agreement among SMAB members that the current level of funding is a barrier to program implementation and effectiveness. There was also agreement that the lack of a dedicated revenue source severely hampers the County's ability to initiate watershed planning or capital improvement projects for stormwater management. The **Governance Framework** reviewed four primary revenue sources for funding capital projects: sales tax, property tax, special assessment and equivalent residential unit (ERU) fee. A property tax of approximately 1.5 mills was recommended at that time. The SMAB recognizes that a viable program which addresses the various identified issues may require several revenue sources, and these are likely to change over the course of the program.

The program will require dedicated staff and resources to accomplish the tasks included in the SMAB charter and the goals and objectives outlined herein. During the capacity building phase (Years 1 and 2) the program will expand its core functions to accomplish more of the tasks described in the SMAB charter, while laying the groundwork for larger-scale planning and capital improvement projects. During Years 3 to 6 the program will begin implementing multiple-benefit projects and funding high-priority, cost-effective capital projects identified during Years 1 and 2. Projects will be dependent on securing dedicated revenue.

Potential funding sources are discussed in the following sections.

## Source of Funds

### Discussion

Until a dedicated revenue source is secured, Program functions will continue to be financed from the County's General Fund. This Strategic Business Plan assumes this will be the case through 2013. However, it will not be possible to accomplish the program described in this Plan without substantial additional revenue. In its charter, the SMAB is tasked with identifying and recommending a dedicated, local source to fund stormwater management needs across the County. Local revenue should fund Tier I through Tier III functions to ensure consistency and local control. Other outside sources could supplement local revenues and fund special projects as previously described.

### Recommendations

**General Fund** – The General Fund provides revenues for current capacity building activities, and will continue to be the main funding mechanism until a dedicated revenue source becomes effective. Although not anticipated in this Strategic Business Plan, future General Fund allocations could supplement the program budget, fund new or unanticipated activities, or free up additional dedicated funds for capital improvements.



**Sales or Property Tax** - Through its review and discussions, the SMAB determined that either a dedicated sales or property tax would be appropriate to fund the activities described in this section. Either option would provide local control of Program budgets and consistent funding levels, avoiding drastic swings in annual budgets (and related staffing and projects) that programs which rely on general fund allocations or grants typically experience. A combination of both sales and property taxes could also be enacted or phased in over time, based on a percentage split or on specific program activities as desired. This approach would spread the Program costs across different constituencies. General Fund appropriations could fund special projects or unanticipated needs the Program budget on an as-needed basis.

The business and citizen survey results indicate that the public prefers a sales tax to fund the Program's activities. The citizen survey is provided under separate cover. The Program should pursue this funding source initially, but may need to fall back on a different revenue source or sources if a funding initiative is unsuccessful, if funding requests are phased in over time, or if future conditions change.

**Private Foundations and Not-for-Profit Organizations** - While likely not a major Program funding source, private foundations and not-for-profit organizations may have funding for multiple-benefit projects and activities. Some foundations predominantly fund civic efforts such as initiatives that benefit disadvantaged communities, provide education, or deliver recreational benefits, for example. Environmental or conservation groups may provide funds for open space protection, habitat restoration, or water quality improvements. These organizations should be contacted regularly, as foundation and not-for-profit priorities shift periodically.

**State and Federal Funds** - State and federal funding sources are limited and are generally very competitive. Matching funds from local sources are usually required under these programs, and many require substantial time and effort for administration and reporting. For these reasons, this Strategic Business Plan does not recommend funding core Program functions with state and federal revenues. However, under the right conditions state and federal programs could supplement Program implementation, providing technical assistance and program management in addition to monetary support for special projects or other activities not included in the core Program. The following, additional observations are offered for the SMAB's consideration in developing a federal and non-federal funding program:

- Review and understand the application, funding, administration and reporting requirements when determining whether to pursue a funding or assistance program.
- Recognize that non-local programs will provide a minor portion of the Program's overall revenue package.
- Designate grants or other assistance to specific elements of a project or program, and be flexible if assistance is not provided.
- Remember that federal or non-local funds in any amount add to Program revenues. The non-local funds on a project may not total a high percentage of the cost, but a grant or earmark may free up local funds for enhancements or even to fund another urgent need.
- Use multi-year authorization bills for projects and programs (e.g. Commerce, U.S. Environmental Protection Agency, Department of Transportation, Housing and Urban Development, U.S. Army Corps of Engineers, U.S. Department of Agriculture).
- Use the annual President's Budget for projects and programs where appropriate.



- Consider lobbying for specialized federal legislation addressing countywide stormwater challenges.

State and federal program funding levels and eligibility requirements should be surveyed annually as programs and funding levels change from year to year. Some potential funding programs are listed below, grouped by the type of special projects or multiple-benefit initiatives to which they might apply. They are not listed in order of applicability or potential value.

### General Project Funding

- Community Development Block Grant (CDBG) - The U.S. Department of Housing and Urban Development (HUD) administers the federal Community Development Block Grant (CDBG) program. Funding under the CDBG program is allocated by formula to "general purpose units of government," based upon population. Relatively populous cities and counties are CDBG "entitlement" communities, which receive their allocations directly from HUD. Kansas entitlement communities are Kansas City, Wichita, Topeka, Lawrence, Leavenworth, Manhattan, Overland Park, and Johnson County. Less populous communities are considered "non-entitlement" communities. HUD allocates non-entitlement CDBG funding to state governments, which in Kansas is disbursed through the Department of Commerce (KDOC). Kansas receives an annual allocation of approximately \$17 million in CDBG non-entitlement funds.

CDBG funding may be used for a broad variety of activities that improve the viability of communities. However, all funded projects must meet one of three national objectives:

- Benefit low- and moderate-income individuals
- Removal/prevention of slum or blight conditions
- Resolve an immediate threat to health or safety created by severe disaster.

With the exception of the City of Wichita, every local unit of government, including Sedgwick County, is eligible to apply for CDBG funding through KDOC's Annual Competitive Grant program. Stormwater management infrastructure projects may qualify for funding through this program's Community Facilities category, which disburses 15% – 30% of the annual allocation (\$2.55 – \$5.1 million). The funding ceiling for Community Facilities grants is \$2,000 per beneficiary with a maximum of \$400,000 per grant. Recipients must provide a minimum match of 25%. More information on CDBG non-entitlement grant programs is available on the KDOC website at [www.kansascommerce.com](http://www.kansascommerce.com).

- Earmarks - Some cities and regions have successfully lobbied for specific projects or "earmarks" through existing federal programs. Most communities receive earmarks in the \$150,000 to \$3.5 million range, with the majority of projects falling below \$1 million. Water resource-related earmarks have been obtained from the following sources:
  - EPA State and Tribal Assistance Grants
  - EPA Environmental Programs and Management
  - USACE General Investigations
  - USACE Construction General program

- USACE General Provisions and Civil, Operations and Maintenance
- USDA
- HUD Community Development Fund
- HUD Economic Development Initiative
- HUD Neighborhood Initiative

### Flood Risk Management and Mitigation

- USACE projects are authorized in the Water Resources Development Act (WRDA). Stormwater projects per se are not authorized through WRDA. However, flood control and prevention projects significantly reduce stormwater management capital construction needs. In addition, receiving Corps money each year helps free up some funding for other water-related efforts. Localities submit proposals to USACE, which are reviewed for eligibility. There is no cost ceiling, but funding is based on availability. A 25-percent local match is required.
- Federal Emergency Management Agency (FEMA) Hazard Mitigation Assistance (HMA) grant programs provide funding for eligible mitigation activities that reduce disaster losses and protect life and property from future disaster damages. The HMA grant programs provide funding opportunities for pre- and post-disaster mitigation. While the statutory origins of the programs differ, all share the common goal of reducing the risk of loss of life and property due to natural hazards. Currently, FEMA administers the following HMA grant programs:
  - Hazard Mitigation Grant Program (HMGP): HMGP assists in implementing long-term hazard mitigation measures following Presidential disaster declarations. Funding is available to implement projects in accordance with state, tribal, and local priorities. State funding allocations vary depending on the disaster declaration and available funds. Sub-applications by communities must be consistent with the state's Hazard Mitigation Plan. FEMA can fund up to 75% of the eligible costs of each project. The 25% match, which can be cash and in-kind sources, cannot be met with other federal funds with one exception. Funding provided to States under the CDBG can be used to meet the non-federal share requirement.
  - Pre-Disaster Mitigation (PDM): PDM provides funds on an annual basis for hazard mitigation planning and the implementation of mitigation projects prior to a disaster. The goal of the PDM program is to reduce overall risk to the population and structures, while reducing reliance on federal funding from actual disaster declarations. PDM grants are competitive; the Kansas Division of Emergency Management reviews applications and recommends projects to FEMA for consideration. Funding is restricted to a maximum of \$800,000 federal share for planning applications for new plans and \$400,000 for plan updates. Funding is restricted to a maximum of \$3 million in federal funds for mitigation projects. 2010 grants ranged from several thousand dollars to \$3 million. No Kansas projects were funded in 2010.



- Flood Mitigation Assistance (FMA): FMA provides funds on an annual basis so that measures can be taken to reduce or eliminate risk of flood damage to buildings insured under the National Flood Insurance Program (NFIP). FMA grants are subject to funding availability, and no community may receive more than \$3.3 million over 5 years. A 25-percent local match is required, and may be reduced to 10 percent for repetitive loss areas. Kansas received \$180,000 in 2010.
- Repetitive Flood Claims (RFC): RFC provides funds on an annual basis to reduce the risk of flood damage to individual properties insured under the NFIP that have had one or more claim payments for flood damages. RFC provides up to 100 percent federal funding for projects up to \$1 million in communities that are unable to meet the FMA match requirements, subject to funding availability.
- Severe Repetitive Loss (SRL): SRL provides funds on an annual basis to reduce the risk of flood damage to residential structures insured under the NFIP that are qualified as severe repetitive loss structures. SRL provides up to 90 percent federal funding for eligible projects up to \$150,000, subject to funding availability.
- National Levee Rehabilitation, Improvement & Flood Mitigation Fund (Proposed) – The National Committee on Levee Safety (NCLS) recommended an inventory and inspection of all the nation's levees in order to quantify the nation's risk exposure and focus priorities for future funding. As part of this recommendation, NCLS recommends that Congress establish a fund to rehabilitate, improve, remove, or replace levees as well as nonstructural measures to maximize risk reduction. Congress is currently drafting legislation to create this fund, but passage is uncertain at this time. The program would be competitive, with a 35-percent local match as currently envisioned.

### Water Quality

- Clean Water State Revolving Fund (CWSRF) - Within EPA's annual funding is an allocation for the CWSRF. This money goes to states and is the largest source of water project funding within the federal government. It is a revolving loan fund, with a limited grants component. There is a waiting list of projects in every state, and even in states where the legislatures have been able to add funds to the federal allocation the backlogs are significant. In addition, local entities are often able to bond against revenues and get lower or equal interest rates, thus avoiding the onerous federal regulations connected to the CWSRF. At least 50 percent of cities surveyed late in 2006 reported that CWSRF is no longer their first funding choice for projects. The CWSRF provided more than \$5 billion annually in recent years to fund water quality protection projects for wastewater treatment, nonpoint source pollution control, and watershed and estuary management. Nationally, interest rates for CWSRF loans average 2.3 percent. In 2009, Kansas funded \$48 million in mostly wastewater-related projects (including federal stimulus money), with project costs as high as \$6.5 million. Kansas provided 75 or 100 percent principal forgiveness for "green infrastructure" projects funded with federal stimulus money.
- The Kansas Department of Health and Environment Watershed Management Section administers the EPA Section 319 Grant Program which provides funding on a competitive basis for a variety of water quality and watershed related projects. Section 319 funds

are competitively awarded, with a 40-percent match requirement. In the past projects could be eligible for up to \$150,000 subject to funding availability. The current Clean Water Neighbors grant provides a maximum of \$20,000. The Local Environmental Protection Program (LEPP) provides funding to local units of government for environmental protection programs. Sedgwick County Codes Enforcement received \$89,500 in LEPP funds 2010, with a 30-percent match requirement (40 is the maximum for funding greater than \$123,000).

- Kansas Watershed Restoration And Protection Strategy (WRAPS) – State Water Plan fund provides partial funding to local sponsors for WRAPS development, assessment, planning and implementation projects to supplement other available funding sources. Projects are funded on a priority basis considering state and local interests and project history. Grants typically range from \$25,000 to \$200,000. Communities apply for grants through the Kansas Department of Health and Environment. Sedgwick County and the City of Wichita have received funds through the WRAPS program to help residents identify and fix water quality problems in the Lower Arkansas River Watershed.

### Natural Resource Preservation

- USACE - Continuing Authorities Programs (Planning Assistance to States [PAS]; Sections 14, 205, 206, and 1135 Programs) provide matching funds for projects sponsored by local governments and groups. Technical assistance is also provided under these programs. The counties and cities should identify specific restoration projects within the priority regional corridors and approach the Corps as “local sponsors” to develop project scopes and work plans. These programs are not competitive but are subject to available funding. Communities must provide a local funding match of 25 to 35 percent depending on the program, but the Corps may fund 100 percent of some planning activities. Maximum project costs range from \$500,000 for the PAS program, to \$7 million for the Section 205 Small Flood Control Projects Program.
- EPA - Specific programs can be used to help fund green infrastructure projects through loans and grants. Local matching funds are required. The counties should work with EPA to identify applicable funding programs and match the available resources to specific implementation activities.
- Federal Highway Administration (FHWA) – The federal transportation law (SAFETEA-LU) provides some incentives for alternate transportation facilities such as bike and pedestrian paths as standalone projects and stormwater runoff mitigation related to highway projects. The transportation enhancement program may fund mitigation of damage to natural resources. These grants subject to funding availability, and are capped at \$500,000.
- USDA - The Natural Resource and Conservation Service (NRCS) supports farmers and property owners in land management through technical and monetary assistance. Other financial incentives for proper land management are available, such as the programs for soil erosion prevention, riparian corridor protection, and crop rotation. The County should coordinate with the Conservation District to identify opportunities within priority regional corridors and to educate landowners about these programs. Counties and cities

may also use local funds to pay all or part of the required landowner match to leverage these programs. Specific programs include:

- The Conservation Reserve Program (CRP), which encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filter strips, or riparian buffers. Farmers receive annual rental payments based on the agriculture rental value of the land, and may receive cost-share assistance for up to 50 percent of the participant's costs in establishing approved conservation practices. Participants enroll in CRP contracts for 10 to 15 years.
- Environmental Quality Incentive Program (EQIP), which provides financial incentives to producers to promote agricultural production and environmental quality as compatible goals and optimize environmental benefits. The overall payment limitation is reduced to \$300,000 per person or legal entity over a 6-year period. The Secretary of Agriculture may raise the limitation to \$450,000 for projects of special environmental significance.
- U.S. Fish and Wildlife Service - Provide technical support to other agencies and communities on restoration projects involving habitat of threatened or endangered species. Individual counties or cities may request technical assistance for priority regional corridors.

#### Natural Resource Preservation and Recreation

- Recreational Trails Program (RTP) – provides modest funds to the states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. These funds may be used to plan, acquire easements, construct trails, and restore and maintain trails and trail corridors. Communities must contact the Kansas Department of Wildlife and Parks to determine available funding levels and apply for assistance. The grant program provides an 80/20 match, on a reimbursement basis, for eligible recreational trail and trail-related projects. Projects may be funded up to \$100,000, subject to funding eligibility.
- Land and Water Conservation Fund – provides modest funds (up to \$100,000) with a 50-percent local match requirements. Communities apply to the Kansas Department of Wildlife and Parks for these funds. LWCF funds are provided for the acquisition of parks, open space, forests, and wilderness areas. The LWCF program is a 50% matching, reimbursing federal assistance program. Local applicants may submit one application per year for L&WCF assistance up to a maximum of 10% of the total state allocation; however, Kansas received no funding for local projects in 2010.
- National Park Service, Rivers, Trails and Conservation Assistance – provide technical assistance to local communities to plan and implement projects related to rivers and trails. Individual counties or cities may request technical assistance for priority regional corridors.



## Budget

Currently the County Commission has approved \$200,000 in annual funding for the Program, and this business plan assumes a similar funding level for FY 2012 and 2013. However, additional funding in FY 2012 or 2013 would significantly improve the Program's effectiveness. For example, the additional investment could allow for more public awareness activities, or for the addition of staff to seek outside funding and to begin building the administrative and policy framework for expanded operations. It is recommended that the Program request at least \$300,000 in both 2012 and 2013 for this reason and adjust the planned activities accordingly if successful.

Table 1 on the following page outlines the proposed budget for the first three years of the implementation phase and for the Program's first year of operation at full capacity, which is assumed to be 2015. The proposed budget for 2012 would support education for a public finance initiative, and continued coordination and administrative support. During 2013, funding would transition to more general education and technical assistance, and continued Program coordination and administrative support. The proposed budget assumes that dedicated revenue will become available beginning in 2014, which will begin to fund staff increases and preliminary planning projects.

The proposed annual budget for 2016 to 2024 would be similar to the proposed budget for 2015. The budget allocates \$400,000 per year for Tier I activities, and \$1.7 million for Tier II activities, including additional staff, planning, and flood risk management. The proposed Tier II budget assumes that three watershed studies would be completed annually at a typical cost of \$300,000 to \$500,000 each, with an average cost of \$350,000. A dedicated Program Manager is budgeted in the Tier III along with matching funds for Preliminary Engineering Studies (PES). The remainder of the annual revenue would be allocated for capital expenditures. By 2024 watershed all 30 watershed studies should be completed and the Tier III (capital) budget could be increased proportionally during the subsequent 10 years. Actual funding amounts in any given year could vary by Tier and by activity depending on specific priorities and available revenue during any given budget year.

Currently, the best estimate of countywide, long-term stormwater funding needs (including Tier I and II activities and anticipated capital projects) is \$236 million. See Appendix A for details. In addition, flood control levee evaluations revealed an estimated \$38 million in needed upgrades to maintain the county levees' certification, and would bring the total, anticipated capital needs to \$286 million. The proposed annual budget of \$10.1 million (in 2015 dollars) is proposed to address this anticipated backlog over a 20-year time frame. This funding level equates to a 0.375 percent Sales Tax or 2.08 Mill Property Tax according future revenue estimates for 2015 by the Sedgwick County Division of Finance.

Based on current home prices, the owner of a median-value home would pay about \$30 per year (or \$2.50 per month) if the Program were funded by property taxes. Trust for Public Land found in its 2007 of study of open space ballot initiatives that measures which cost \$30 per household per year were consistently approved by the voters. The Citizen Survey indicated that 44% of Sedgwick County homeowners would be willing to pay at least \$2.50 per month or \$30.00 per year to fund the Program, and 75% would be willing to pay at least \$1.00 per month. This survey information should be updated as the Public Awareness Program is implemented.

This estimate is for budgeting purposes only, and is based on information voluntarily provided by some, but not all, of the county's municipalities and watershed or drainage districts. Few of the



**Table 1**  
**Stormwater Management Program Implementation Budget**

Base Level Funding	\$200,000	\$200,000	\$300,000	\$400,000
Tier 1 – Core Functions	2012	2013	2014	2015
<b>Program Administration/Staff</b>				
1. Program Administration/Watershed Planner (2014-15)	\$25,000	\$25,000	\$100,000	\$100,000
2. Operations and Administration Expenses			\$25,000	\$50,000
<b>Coordination and Technical Assistance</b>				
3. Facilitate Regional Stormwater Coordination	\$25,000	\$25,000	\$50,000	\$50,000
4. Provide Technical Assistance & Guidance			\$25,000	\$100,000
<b>Public Awareness Strategy</b>				
5. Finance and Outreach Campaign	\$150,000			
6. Stormwater Education		\$150,000	\$100,000	\$100,000
Tier 2 – Watershed Planning	2012	2013	2014	2015
<b>Staff</b>				
7. Stormwater Engineer				\$150,000
<b>Stormwater Activities</b>				
8. Watershed Master Plan Update and Pilot Study			\$1,000,000	
9. Watershed Studies & Plans				\$1,050,000
10. Floodplain Management				\$500,000
Tier 3 – Capital Improvement Funding	2012	2013	2014	2015
<b>Staff</b>				
11. Program Manager				\$200,000
<b>Stormwater Activities</b>				
12. PES & Project Funding Applications			\$300,000	\$300,000
13. Capital Funding Recommendations to Commission			\$3.3 Million	\$7.5 Million
Cumulative Tier I, II & III Funding	2012	2013	2014	2015
Tier I - Core Functions	\$200,000	\$200,000	\$300,000	\$400,000
Tier II – Watershed Planning	NA	NA	\$1.0 Million	\$1.7 Million
Tier III – Capital Improvement Funding	NA	NA	\$3.6 Million	\$8.0 Million
<b>Total</b>	<b>\$200,000</b>	<b>\$200,000</b>	<b>\$4.9 Million</b>	<b>\$10.1 Million</b>

stormwater projects were identified through watershed studies, and further investigation may reveal that many projects do not address the root causes of problems or urgent needs. Some projects will undoubtedly be eliminated from consideration, while detailed watershed studies will likely identify many other needed and beneficial stormwater management projects. Until watershed studies are completed, \$236 million is the best available cost estimate for the Program. Table 2 provides an overview of the Program’s estimated, cumulative funding over 20 years of full operation. However, if the Program funding is less than anticipated, less capital funding will be available and more than 20 years will be required.

The scenario presented in Table 2 is based on several assumptions. First, debt service is not included in the budget and should be carefully considered on a case-by-case basis. Operating on a pay-as-you-go basis will maximize project and capital expenditures. Long-range planning and budgeting for major, capital projects will be important to avoid "diluting" the value of the Program's revenue stream. Second, the 70-percent average match assumes that not all projects will be recommended for the full, 75-percent Program match. Some projects may be lower-priority or may not provide multiple benefits. In addition, sufficient revenue may not be available to fully match all project funding requests and still complete the anticipated backlog within 20 years. If revenues are less than anticipated, if some larger projects are debt-financed, or if the SMAB recommends and the County Commission approves consistently higher levels of Program match, more than 20 years may be required to complete the anticipated capital projects.

**Table 2 - Program Funding Summary**

Anticipated Program Revenues (20 Years) <sup>a</sup> :	\$ 202.0 Million
Non-Capital Expenditures:	<u>(\$ 37.5 Million)</u>
Available Capital Funds:	\$ 164.5 Million
Total Capital Program Cost:	\$ 236.0 Million
Available Capital Funds:	<u>( \$ 164.5 Million)</u>
Local Matching Funds:	\$ 71.5 Million
Average Program Match:	70% Program/30% Local Funds

Notes:

a \$10.1 Million/year; equivalent to a 0.375% Sales Tax or 2.08 Mill Property Tax (2015 Dollars).

## **Appendix E**

### **Potential Impacts on Planning & Development**

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# Potential Impacts on Planning and Development

## Introduction

The SMAB was chartered to conduct stormwater management and facilitate projects while advising the Sedgwick County Commission on stormwater management issues. A pragmatic, efficient and cost effective comprehensive Stormwater Management Program will provide measurable benefits to the Sedgwick County community. Yet, this Program will come with costs and needs. Implementing the Program will require dedicated revenue sources, additional staffing and extensive political and policy coordination. This Strategic Business plan will help guide the SMAB and Sedgwick County in weighing the costs and needs against the numerous benefits to create a viable stormwater management program.

As previously outlined, the overall countywide Program will work toward a number of goals and objectives. The Program will consist of several technical and programmatic elements. Specific elements include:

- Facilitate countywide cooperation
- Provide technical guidance and assistance
- Promote education and awareness
- Conduct watershed studies and prepare watershed plans
- Integrate stormwater management with community planning
- Establish a risk-based flood management program
- Fund capital improvements for stormwater and other community benefits

Having a clear idea of the potential economic, planning and development impacts of the Program elements and possible funding sources will help the SMAB make sound decisions on final Program recommendations. To this end, the consultant team has reviewed the impacts the Program might have if implemented according to the project recommendations.

A qualitative methodology was used in determining potential impacts. The consultant team is made up of individuals with broad planning, economic development, engineering, policy analysis and managerial experience in the public and private sectors. This experience coupled with research formed the basis of our analysis and review. The reviews of both technical recommendations and funding sources are broad examinations from the programmatic level.

This review considered the overall Program as well as specific technical elements, and lists some potential positive and negative aspects for consideration. No individual infrastructure project was reviewed. Also evaluated in this section are the potential impacts of the possible funding sources of the Stormwater Management Program.



## Benefits and Drawbacks

The benefits and drawbacks of the four technical Program recommendations in this section are included due to the central role they will play in implementing overall Program goals.

### *Cooperative Watershed Planning*

#### Benefits

- Many watersheds span city or county boundaries. Implementing watershed-based planning, without regard to corporate boundaries, allows for more comprehensive watershed management.
- Allows for shared costs and responsibilities between government agencies.
- Builds relationships that encourage cooperation between local governments and agencies to effectively handle watershed management issues.
- More efficient and effective use of stormwater funds.

#### Drawbacks

- Requires formal interlocal agreements with clearly defined roles and responsibilities.
- Requires time and effort to coordinate agreements, work processes and project specifics.
- Decision making may become more burdensome due to the need to work with multiple governing and advisory bodies.

### *Regional Infrastructure Solutions*

#### Benefits

- Potentially addresses stormwater management and quality issues for existing and new development.
- Would allow for centralized maintenance and operations of facilities.
- Minimizes onsite infrastructure needs, resulting in more developable land within a given development site or reduced development costs.
- Might provide additional opportunities for multiple benefit projects, such as regional parks and conservation areas.

#### Drawbacks

- Requires a relatively large site with strategic placement to ensure maximum benefits are realized.
- Large sites pose potential difficulties in assembling adequate property from numerous owners.
- Project costs are high due to the size of needed facilities.



- Requires substantial analysis and planning to ensure that the facilities could be funded equitably and operated efficiently.

### ***Flood Risk Management Strategy***

#### **Benefits**

- Provides the ability to assess the possible flooding extent and associated economic damages based upon storm event severity.
- Use as a decision making tool in the development approval process.
- Knowing hazard risks is a valuable tool in a comprehensive stormwater management program.
- Could help qualify the community for participation in the Federal Emergency Management Agency's (FEMA) Community Rating System (CRS).
- Could be used by emergency management personnel as a planning tool for emergency response.
- Useful for analyzing damage from other natural disasters, such as tornadoes.
- Property values could increase in areas with marginal risk.

#### **Drawbacks**

- Requires software (most likely HAZUS-MH) acquisition, training and maintenance.
- Requires staff time to implement.
- Quantifying risk could negatively affect property values in some areas where the risk is not currently understood.

### ***FEMA Community Rating System (CRS)***

#### **Benefits**

- Participation would qualify the community for flood insurance premium discounts of up to 45%.
- Insurance premium discounts increase as new stormwater management programs and policies are adopted by the community.
- Qualification for program admittance means that the community has initiated stormwater management in excess of the National Flood Insurance Program (NFIP) minimum standards.

#### **Drawbacks**

- Program participation is dependent upon minimum qualifications, including a comprehensive approach to stormwater management. This means that it would require additional investment before program discounts could be realized.



- Relatively few communities qualify for substantial discounts, indicating difficulty in obtaining improved CRS ratings (5% to 15% savings is most common).
- The program requires periodic recertification.
- Program participation requires staff training and time to administer.

## Potential Funding Source Impacts

This review of potential funding sources is limited to the likely impacts of each funding type *if implemented as a dedicated revenue source specifically for SMAB Program activities*. Sales taxes and property taxes have been identified as the most viable candidates for dedicated funding. The others included in this review, especially State and Federal grants, have limited applicability to provide supplemental Program funding or project-specific funding.

The Program anticipates funding 50% to 75% of total project costs for selected stormwater management projects. The local government agencies receiving the awards will be responsible for the remaining 25% to 50% of project costs. This is referred to as “matching funds.” Local government agencies may use a variety of funding options to provide the matching funds, which includes several of the tools included in this review. However, the impacts of those options and programs, as applicable to the provision of matching funds, are not considered in this review.

## Sales Tax

### Benefits

- Spreads the tax burden throughout the county, including to visitors from outside the area who purchase goods in Sedgwick County.
- The taxation rate could be tailored to meet prioritized needs.
- A sales tax initiative for stormwater management could be bundled with other programs, such as parks and recreation, to fund multiple benefits.

### Drawbacks

- Would require State legislative action to implement, due to taxation limits placed upon counties.
- Spreading the tax burden as mentioned above could be seen as a disincentive, since some citizens wouldn't receive direct benefits.
- The cost of goods purchased locally would increase slightly.
- Sales taxes are generally thought to be regressive. That is, they affect those with relatively low incomes more than those with higher incomes.
- Tax increases generally are not politically popular.



## **Property Tax**

### **Benefits**

- Could be implemented by the Sedgwick County Board of County Commissioners, without going to a public vote.
- Such a tax levy could be structured to benefit particular watersheds or districts and tailored to meet localized needs.
- Could be used to spread the tax burden equally between property owners throughout the County.
- A dedicated mill levy would be a reliable and stable funding source throughout the life of the program.

### **Drawbacks**

- Additional property tax rates would likely lead to marginally increased costs in doing business and increased rents, since the costs would be passed along to consumers.
- Spreading the tax burden as mentioned above could be seen in a negative light, since some citizens wouldn't receive direct benefits.
- Tax increases generally are not politically popular.

## **Special Assessments**

### **Benefits**

- Could be implemented relatively easily for new development, since they are already widely used for development financing.
- They are payable over an extended (15 – 20 year) period of time.
- Could be targeted to areas with specific needs.

### **Drawbacks**

- Would increase the costs associated with owning property within a special assessment benefit district.
- If utilized as a dedicated funding source, the entire County would need to be designated as a benefit district.
- Would be difficult to implement on existing developed areas, since they must be approved by property owners.
- Would be difficult, if not impossible, to administer at the countywide level, even if sufficient support were garnered among property owners.



## **Grants Programs with Matching Funding**

### **Benefits**

- State and federal grant programs often provide 50% - 80% of project costs, sometimes more.
- There are grant programs for both planning and infrastructure projects.

### **Drawbacks**

- State and federal grant programs are extremely competitive, restrictive to specific goals and inconsistent from year to year.
- Program revenues would be required to match the grant program funding.
- There is no such thing as free money. There are specific, sometimes burdensome, grant specification and administrative requirements.
- Grant writing and administration costs add to total project costs. It could also require additional staffing or training.
- It would be impossible to fund core stormwater management needs with grant funding. This is only a partial answer at best.

## **Fees-In-Lieu**

### **Benefits**

- Could be used to address stormwater management issues/impacts of new development.
- Payments into such a program are roughly proportional to the benefits received by a development.
- This is a commonly used method of funding regional infrastructure in some areas of the U.S.

### **Drawbacks**

- Would not address stormwater management issues with existing development.
- Would require the creation of a new funding program not currently utilized locally.
- Would likely result in increased costs for housing and commercial properties.

## **Multiple Benefit Projects**

### **Benefits**

- Stormwater management projects developed in conjunction with other project types can provide additional public benefits (i.e. parks and recreation, economic development, transportation).
- Multiple benefit projects often can minimize total project costs.



- Such projects can sometimes leverage multiple funding sources.

#### Drawbacks

- Some projects are not ideal for multiple benefit project development.
- Could potentially alter the focus and reduce the effectiveness of the project if not carefully managed.

## Conclusion

The vast majority of projects funded by the SMAB will be sponsored by Sedgwick County or other local government agencies, not private developers. Therefore, the overall Program will primarily have broad policy impacts countywide. Direct impacts on day-to-day, parcel-level development activities will be limited. However, there may be some indirect impacts to planning and development as a result of a SMAB policy or project. For example, it is the SMAB's intent to only fund projects for communities that have adopted a version of the City of Wichita/Sedgwick County Stormwater Manual. This would impact a private developer indirectly, since the local adoption of the Stormwater Manual will dictate that community's site development standards.

This analysis of the potential impacts and aspects of the Stormwater Management Program outlined in the Strategic Business Plan is intended to help decision makers weigh the Program's benefits with other potential impacts. The consultant team's conclusion is that the proposed Program will provide a range of benefits for future planning and development across the County. Potential, negative impacts should be limited but must be considered as part of the evaluation.

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## **Appendix F**

# **Standard Scope of Services for Watershed Studies**

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# Standard Scope of Services for Watershed Studies

## Introduction

The scope of services for a project is the list of work tasks to be accomplished by the firm or individual conducting the study. The scope of services guides all aspects of the project approach, work processes and deliverable work products. Furthermore, it addresses the expectations of the project sponsor. This standard scope of services has been developed for several purposes, including:

- Implementing the SMAB's preferred technical focus.
- Implementing the SMAB's funding priorities.
- Ensuring SMAB-funded studies provide consistent baseline information.

Generally, the project sponsor will be Sedgwick County. However, the project sponsor could be another city, watershed district or other entity. Regardless, to ensure consistency from study to study it is recommended that other entities receiving SMAB funds for a watershed study use the standard scope of services and the City of Wichita/Sedgwick County Storm Water Manual throughout the course the study. Typically the study will be conducted by a consulting engineering and/or planning firm, but could feasibly be done in-house if the project sponsor has adequate capacity and resources.

Scope revisions may be needed occasionally to account for lessons learned from completed studies, specific project needs, updates in standards of practice or technology changes. Evolution of the scope is inevitable and tailoring is encouraged as circumstances dictate. Also, there are certain aspects of the stormwater management program that are unknown as of yet. For this reason, some flexible language was used in the scope. Specificity needs to be determined for several items prior to the scope being used for a project. Doing so will greatly improve the likelihood of consistency in deliverables from study to study. In particular, the following scope task items should be addressed:

- **Task 2.1** – The scope states that the Public Involvement Plan shall be delivered within four weeks of the Notice to Proceed. It should be determined is this is an appropriate length of time.
- **Task 3.1** – The accuracy and intervals of the topography data should be specified.
- **Task 3.3** – Horizontal and vertical accuracy requirements should be specified. Also, the extent of the system to be modeled should be determined. For example, only pipes 24-inches in diameter or greater will be modeled.
- **Task 4.1** – The actual hydraulic and hydrologic models and methodology to be used should be specified.
- **Task 4.2** – The actual water quality models and methodology to be used should be specified. Also, the basis of evaluation for BMP implementation should be determined.



Potentially, this could be National Urban Runoff Program (NURP) data or available local water quality data.

For the purposes of the standard scope of services, the following group and individual reference terms are defined:

**Consultant** – The consulting firm or team of firms contracted to complete the scope of services and prepare the watershed study.

**Project Sponsor** – The agency or entity conducting the watershed study and for whom the Consultant works. Depending upon the agency, this term will likely be replaced with the terms City, County or District in the actual contract.

**Staff** – The employees of the Project Sponsor who have been assigned to participate in the conduct of the watershed study. This includes the project manager that the Project Sponsor has assigned to the project.

**Steering Committee** – A group of high-level stakeholders who are appointed to provide guidance on the overall strategic direction of the watershed study. They do not take the place of a sponsor, but help to spread the strategic input and buy-in to a larger portion of the community. The Steering Committee is usually made up of Staff and other stakeholders.

**SMAB** – The Sedgwick County Stormwater Management Advisory Board.

## Scope of Services

### **Task 1 – Project Management**

#### **Task 1.1 Project Kickoff Meeting**

The Consultant shall schedule a Project Kickoff Meeting that should be attended by the Consultant, Staff and, if applicable, the Steering Committee.

The primary reasons for the Project Kickoff Meeting are to:

- Discuss project goals.
- Discuss project scope.
- Discuss the project schedule and determine key milestone dates.
- Establish key contacts and exchange contact information.
- Discuss other project items as deemed appropriate.

#### **Task 1.2 Progress Meetings**

The Consultant shall schedule periodic project meetings throughout the course of the study, the frequency of which shall be determined in coordination with Staff. These are informal meetings attended by the Consultant and Staff. The intent of these meetings is to provide updates on project status, progress and budget. Other project items and concerns may also be discussed. The Consultant shall distribute meeting agendas, exhibits, supporting

documents/graphics and meeting minutes according to a schedule determined in coordination with the Project Sponsor.

Additionally, the Consultant may be required to periodically attend SMAB and/or Steering Committee meetings as directed by the Project Sponsor to provide updates and coordinate with those bodies.

### **Task 1.3 Progress Reports**

The Consultant shall provide a monthly progress report to Staff. The report shall include an update on project status, progress and budget.

### **Task 1.4 Project Coordination**

The Consultant shall prepare a list of organizations, subject to Project Sponsor approval, with whom to coordinate and exchange information as required to ensure the successful conduct of the study. Such coordination may include individual or group meetings, telephone/conference calls and written correspondence as appropriate. The coordination list may include, but not be limited to:

- Appropriate city departments (planning, public works, etc.) for all cities within the study area.
- Special government districts within the study area (i.e. watershed districts, rural water districts, etc.).
- Sedgwick County Public Works Department.
- Wichita-Sedgwick County Metropolitan Area Planning Department (MAPD).
- US Army Corps of Engineers (USACE).
- Federal Emergency Management Agency (FEMA).
- Kansas Department of Health and Environment (KDHE).
- Kansas Department of Transportation (KDOT).
- Kansas Department of Agriculture - Division of Water Resources (KDWR).
- Neighborhood associations, homeowner associations, business groups, non-profit organizations and other citizen representatives as appropriate.
- Other Consultants conducting studies, planning projects and/or infrastructure projects within the study area.
- Other federal, state and local governmental/regulatory agencies as necessary.

## **Task 2 – Public Involvement**

### **Task 2.1 Public Involvement Plan**

When public involvement is included within the project scope, the Consultant shall coordinate with the Project Sponsor to develop a Public Involvement Plan

(PIP), which shall be delivered within four weeks of the issuance of the Notice to Proceed. The PIP shall outline the type, frequency, amount and approximate timing of all public and/or stakeholder involvement efforts. Public involvement efforts shall be designed to both disseminate information and receive input. Such efforts may include, but not be limited to:

- Public meetings/open houses.
- Presentations.
- Public forums.
- Governing body/commission/committee meetings.
- Civic organization meetings.
- Press releases/public notifications.
- Websites and social networking sites (i.e. Twitter, Facebook, etc.).
- Email and/or other distribution lists.
- Interviews.
- Surveys/questionnaires (online, electronic or hard copy).

#### **Task 2.2 Public Meetings**

Public meetings, regardless of meeting format, shall be structured to maintain communication and dialogue with citizens, property owners, elected/appointed officials and other interested stakeholders. They should be designed to inform citizens and gather input and guidance as set forth in the PIP. Public meetings should be conducted periodically throughout the course of the study.

The Consultant will prepare handouts, presentations, supporting graphics, maps and other displays as necessary to convey project information. Such supporting materials shall be prepared so that they can easily be understood and interpreted by meeting attendees.

The Consultant shall be responsible for organizing and facilitating the meetings, arranging for appropriate publication in local newspapers and designing/distributing/mailling meeting notices as directed by the Project Sponsor.

#### **Task 2.3 Surveys/Questionnaires**

Surveys and questionnaires used for information gathering and public involvement shall be designed for both online and paper hard copy delivery. They should be prepared so that they can easily be understood and interpreted by the general public.

When used, the Consultant shall be responsible for designing, distributing, collecting and analyzing surveys and questionnaires. A summary of results shall be prepared for distribution as directed by the Project Sponsor. A full analysis of results shall be included in the final study report.



#### Task 2.4 Project Website

Upon Project Sponsor request, the Consultant shall develop and maintain a project website for the purpose of disseminating project-related information to the general public, stakeholders, property owners, elected/appointed officials, SMAB, Staff and the Steering Committee.

The website shall be updated regularly with pertinent project information, maps, graphics, meeting agendas and minutes, surveys/questionnaires and results, and other information authorized by the Project Sponsor. The website shall include a means by which the public may submit questions, comments and other input.

### Task 3 – Data Collection

#### Task 3.1 Geographic Information System (GIS) Data

The Consultant shall obtain sufficient GIS data in ESRI-compatible format to conduct required mapping, analysis and modeling. GIS data shall be obtained from reliable, documented and verifiable sources approved by the Project Sponsor. Such data may include, but not be limited to:

- Street centerlines.
- Rights-of-way.
- Political boundaries.
- Parcel boundaries and attribute data.
- Building footprints.
- Existing and future land use.
- Zoning.
- Topography.
- Hydrography.
- Watershed boundaries.
- Water structures and stormwater infrastructure.
- Vegetation.
- Soils.
- FEMA floodplains.
- Digital imagery.

#### Task 3.2 Other Data and Documents

The Consultant shall obtain any other data and/or documents that may provide information pertinent to the study. The study shall also provide sufficient information to answer any questions on the SMAB's Project Ranking Criteria (PRC) for all proposed infrastructure improvements. This information will allow the



project sponsor to pursue SMAB funding for future stormwater infrastructure projects. Such information sources may include, but not be limited to:

- U.S. Census Bureau demographic, economic and housing data.
- SMAB funding priority/project funding information.
- SMAB/Project Sponsor stormwater management policies, design standards and regulations.
- Zoning ordinances.
- Pertinent complaint files.
- Comprehensive plans.
- Previous watershed studies and plans completed in or adjacent to the study area.
- Historic flood information.
- Flood insurance studies.
- U.S. Geological Survey (USGS) data.
- Computer model files.
- Rainfall and stream flow data.
- Water quality data.
- Field reconnaissance notes.
- Other planning studies (i.e. parks, economic development, environmental, transportation).
- Other applicable design standards.

### Task 3.3 Field Surveys

The Consultant shall conduct field surveys using standard methodology as specified by the Project Sponsor. All field surveys shall be performed by or under the direction of a Kansas Registered Land Surveyor and shall be referenced according to standards specified by the Project Sponsor. Field notes for all surveying shall be provided.

Field surveys shall collect the following data:

- Channel and bridge/culvert cross-sections at structures crossing on the main channel and principal tributaries.
- Intermediate channel cross-sections at key locations.
- Low opening and lowest adjacent grade elevations of buildings for properties along the modeled channels that are within the new floodplain boundaries as developed in this project. The Project Sponsor will provide the estimated number of buildings for budgeting purposes.





- Sizes, lengths and flowline elevations (upstream and downstream) of all conveyance infrastructure.

#### **Task 3.4 Photograph and Record Hydraulic Characteristics**

All identified structures shall be photographed and their hydraulic characteristics described and recorded. The following photographs shall be taken at each structure: looking at the upstream face, looking upstream, looking at the downstream face, looking downstream. Additionally, any unusual features (i.e. significant erosion, sedimentation, water quality issues, structural inadequacies, wetlands/environmentally sensitive areas, etc.) identified during the site visits shall be photographed. The photographs and recorded hydraulic data shall be cataloged, indexed and delivered in a format specified by the Project Sponsor, which may include GIS linking/embedding.

#### **Task 3.5 Set Permanent Benchmarks on Drainage Structures**

Permanent benchmarks shall be set on structures crossing the main channel and tributaries on section line roads. Monuments shall be set according to standards and methods specified by the Project Sponsor. All data, including mapping grade x-, y- and z-coordinates, shall also be provided in digital and paper formats per standards specified by the Project Sponsor.

### **Task 4 - Modeling**

#### **Task 4.1 Hydraulic and Hydrologic Modeling**

The Consultant shall conduct hydraulic and hydrologic modeling using the data, software and methods as specified by the Project Sponsor. This task shall involve the delineation of existing and future watershed/subarea boundaries, including onsite and offsite contributing factors for each catchment basin. Modeling shall consider soil types, slopes, impervious and pervious surface conditions and/or other variables as determined appropriate.

Modeling shall be conducted for existing conditions and future conditions based upon future land use plans adopted by the Project Sponsor. Modeling shall include, but not be limited to:

- 2-, 5-, 10-, 25-, and 100-year events.
- Other event intervals as deemed necessary, such as the 500-year event.
- 100-year floodplain limits.
- Variances from current FEMA floodplain limits.
- Current baseline flows for comparison to fully developed conditions.
- Locations of existing and potential system inadequacies.
- Impacts of the potential improvement alternatives identified in Task 5.1.

All modeling data files, input variables and results shall be organized and delivered in formats as specified by the Project Sponsor.



#### **Task 4.2 Water Quality Modeling**

The Consultant shall collaborate with Staff and appropriate regulatory agencies to select a water quality model (or models). The selected model shall be used to evaluate current and anticipated pollutant loadings and the benefit of structural and non-structural best management practice (BMP) implementation considering the watershed's current TMDLs (if applicable) and principal pollutants of concern. Integrate the EPA's "Nine Minimum Elements to be Included in a Watershed Plan" to assist in evaluating appropriate permanent BMP implementation in the study area.

### **Task 5 – Alternatives Analysis**

#### **Task 5.1 Develop Improvement Alternatives**

Using the City of Wichita/Sedgwick County Storm Water Manual as a guide, the Consultant shall develop conceptual watershed planning and engineering alternatives to address existing or future system needs. Such scenarios shall be based on future flows. Potential alternatives may include, but not be limited to:

- Land use and cover options.
- Channel improvements.
- Site-specific detention facilities.
- Regional detention facilities.
- Culvert/bridge replacements or improvements.
- Land acquisition/floodplain buyouts.
- Erosion and sediment controls.
- Levee improvements or flood proofing.
- Maintenance program development.
- Changes in zoning and/or development regulations.
- Bio-technical engineering solutions.
- System improvements for underground components.
- Floodway greenways.
- Structural and non-structural water quality BMPs.

#### **Task 5.2 Analyze and Prioritize Alternatives**

Prior to modeling the alternatives, the Consultant shall prepare and submit an Alternatives Evaluation Report. This report shall discuss the appropriateness of options, strategies and improvements at each location; identify which potential solutions should be evaluated in more detail; and discuss the potential for regional solutions in the study area. After review and acceptance of the report by Staff and the Steering Committee (if applicable), the Consultant shall model



the practical alternatives. No more than three alternatives shall be modeled per location. The Consultant shall then identify a recommended solution for each location. Prioritization shall be based upon several factors:

- Degree of stormwater management/water quality benefit.
- Cost considerations.
- Performance.
- Utility coordination.
- Property acquisition needs/costs.

### **Task 5.3 Present Alternatives**

Upon completion of the modeling, the Consultant shall present the proposed solutions at a regularly scheduled Progress Meeting and Steering Committee meeting (if applicable).

Upon acceptance of recommended solutions by Staff and/or the Steering Committee, a Recommended Solutions Report shall be prepared that includes the following minimum information for each improvement location:

- Flooding/water quality problem description.
- Significant/unusual issues.
- Study area map – existing conditions.
- Study area map – recommended solutions.
- Pictures showing existing conditions.
- Cost estimates for each recommended solution.
- Multiple demonstrable benefits.

The Consultant shall present the report recommendations to the public and/or other stakeholders upon request by the Project Sponsor. The Consultant will incorporate feedback into the Final Study Report described in Task 6.

## **Task 6 – Deliverables**

### **Task 6.1 Develop the Final Study Report**

The Consultant shall develop a final study report. The report shall present:

- Study overview.
- Completed work.
- Computer modeling results.
- Water quality modeling results.
- Discussion of the improvement alternatives.



- Identification and prioritization of recommended improvements.
- Supporting maps, figures, graphics and tables to appropriately convey findings and recommendations.

**Task 6.2 Deliver Reports, Data and Supporting Materials**

The Consultant shall prepare, organize, catalog and deliver to the Project Sponsor all project files, data and metadata. The deliverables shall be prepared and submitted in the format, manner and quantity specified by the Project Sponsor.

## **Appendix G**

### **Project Ranking Criteria**

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# Project Ranking Criteria

## Introduction

The ultimate intent of the SMAB is to provide funding for stormwater management projects sponsored by public entities in Sedgwick County. An effective method of determining which projects should be funded is to rank them by priority. With this in mind, the program will employ two sets of Project Ranking Criteria (PRC) to assist with project prioritization – one for ranking watershed plans/studies and the other for ranking stormwater management infrastructure projects.

The goal of the PRC is to objectively measure potential project impacts against regional stormwater management goals, recommended technical direction and funding availability. This objective measurement is intended to determine which projects provide the greatest benefits relative to one another. Additionally, the PRC is specifically designed to work with small and large projects within both urban and rural settings.

Four primary assumptions are used for the PRC:

1. The funding may be provided for plans/studies and for infrastructure projects. The funding amount for each project type could be based upon a certain percentage of available funding, an established amount, or as projects merit. The SMAB would then prioritize proposed projects within each category.
2. The SMAB has established a policy to fund a maximum of 75% of total project costs.
3. The SMAB has established a list of priority watersheds. Ideally, this list would be developed based upon the stormwater management needs within each watershed.
4. For the Infrastructure Projects PRC, it is assumed that a preliminary engineering report has been completed for the project. Such a report submitted by a licensed engineer would be geared toward answering the questions contained in the PRC and providing sufficient data from appropriate sources to validate the funding application. A plan or study completed within the five years prior to the application submittal will suffice if it answers all questions.

It should be understood that the PRC priority rankings are the starting point for determining the relative community benefits of a given project. While the rankings should generally be adhered to, there may be circumstances where certain benefits cannot be quantified by the PRC. Ultimately, it will be up to the SMAB to finalize the priority rankings taking into consideration all factors, both measurable and immeasurable.

The following sections include descriptions of how each measurement item works within each PRC framework, including the intent behind each item.

## Watershed/Sub-Watershed Plans and Studies PRC (refer to Figure 1)

It is an objective of the SMAB to eventually comprehensively study all watersheds in Sedgwick County. Funding for SMAB to conduct these plans and studies is accounted for in the business plan. There may, however, be instances where another jurisdiction would like to study a sub-watershed or an area that the SMAB has not identified as being a priority. Should the SMAB

decide to fund such studies, this set of PRC provides a tool whereby their benefits could be assessed.

### **Basic Project Information**

Some basic project information is needed before the SMAB can process an application for ranking purposes. This includes:

- The name of the entity requesting SMAB funding
- The name(s) of the watershed(s) where the project's study area is located
- The total estimated project cost
- The total amount of SMAB funding being requested

The actual application will also need to collect contact information for each project, which will be the main point of contact for the submitting agency's application. Typically, this type of application will also include some sort of statement that certifies by signature the veracity of the application and the contact's authority to submit the application on behalf of the agency.

### **Section 1**

This section collects information intended to assess project need and value to the SMAB. The descriptions of each item in this section are listed below by item number.

1. Has a comprehensive stormwater management plan/study ever been completed for this watershed/study area?

The intent of this item is to give preference to study areas that have not previously been comprehensively studied or planned. However, points may be awarded to projects that have previously been studied based upon how recently the plan/study was completed.

2. Does the project address stormwater management issues in a SMAB priority watershed?

The intent of this item is to give preference to study areas within watersheds identified by SMAB as priority watersheds.

3. Does the watershed/study area have a history of flooding that has resulted in the loss of life, significant economic loss, channel erosion or structural flooding?

The intent of this item is to give preference to projects that will address known stormwater issues that have negatively impacted the community or its infrastructure. This item can provide points to projects that are not located in SMAB priority watersheds.

4. What percent of the total estimated project cost is being requested?

The intent of this item is to provide bonus points to projects that have leveraged outside funding sources.

5. Section 1 Total Point Value

This item adds the point values for Items 1 – 4, providing a total point value for Section 1.





## Section 2

This section collects information that will assess project impacts relative to other projects that have been submitted for funding. The relative ranking for each item is determined by ranking the raw values for all projects submitted for funding from lowest to highest. The resulting numerical ranking is then used as that item's point value.

6. Total population within the watershed/study area.

The intent of this item is to provide preference for projects that impact a large population relative to other projects that have been submitted for funding.

7. Total acreage within the watershed/study area.

The intent of this item is to provide preference for projects that impact a large land area relative to other projects that have been submitted for funding.

8. Total assessed valuation within the watershed/study area.

The intent of this item is to provide preference for projects that impact the most intensely developed areas relative to other projects that have been submitted for funding.

9. Section 2 Total Point Value

This item adds the point values for Items 6 – 8, providing a total point value for Section 2.

## Section 3

This section determines the project's combined total points. The total combined point values for all projects submitted for funding are ranked from highest to lowest. Projects with the highest point totals receive priority rankings.

10. The total point value for Section 1 (Item 5) is used as input for this item.

11. The total point value for Section 2 (Item 9) is used as input for this item.

12. The sum of Items 10 – 11 is used as input for this item. This provides a combined point value for the project, which is used for ranking purposes.

## Infrastructure Projects PRC (refer to Figure 2)

Infrastructure projects are not ranked solely by a point total. Rather, the cumulative point total is divided into the amount of SMAB funding requested. This provides a rough cost to benefit ratio by which projects will be compared.

### **Basic Project Information**

Some basic project information is needed before the SMAB can process an application for ranking purposes. This includes:

- The name of the entity requesting SMAB funding
- The name(s) of the watershed(s) where the project’s study area is located
- The total estimated project cost
- The total amount of SMAB funding being requested

The actual application will also need to collect contact information for each project, which will be the main point of contact for the submitting agency’s application. Typically, this type of application will also include some sort of statement that certifies by signature the veracity of the application and the contact’s authority to submit the application on behalf of the agency.

### **Section 1**

This section collects information intended to assess project need and value to the SMAB. The descriptions of each item in this section are listed below by item number.

1. Is the project supported by a watershed/sub-watershed plan, study or other detailed analysis?  
  
The intent of this item is to give preference to projects that have been conceived or recommended as part of a detailed analysis to warrant the project’s need and assess potential project benefits.
2. Does the project address stormwater management issues in a SMAB priority watershed?  
  
The intent of this item is to give preference to projects located within watersheds identified by SMAB as priority watersheds.
3. What percent of the total estimated project cost is being requested?  
  
The intent of this item is to provide bonus points to projects that have leveraged outside funding sources.
4. Does the project include design features intended to result in measurable water quality improvement?  
  
The intent of this item is to provide bonus points to projects that have included BMPs or other measures that will quantifiably improve water quality.
5. Does the project include measures to address multiple benefits? (Select all that apply)
  - Parks/Recreation
  - Economic Development
  - Transportation
  - Habitat Protection/Mitigation
  - Other

The intent of this item is to provide bonus points to projects that have benefits for the community beyond stormwater management. These projects can often leverage multiple funding sources.

6. The project mitigates flooding issues that have historically resulted in: (Select all that apply)

- Loss of life (documented as attributable to flooding)
- Economic loss (property damage, crop destruction, etc.)
- Channel erosion
- Structural flooding
- Other

The intent of this item is to give preference to projects that may fix multiple known problems that have historically resulted in documented loss of life and/or some damage to the community.

7. Does the project reduce or eliminate flooding to land actively used for agricultural production (farming or livestock)?

The intent of this item is to provide bonus points to projects that protect valuable agricultural land. This item allows rural projects to gain points.

8. Does the project improve a hydraulic restriction resulting in a lower base flood profile?

The intent of this item is to provide bonus points to projects that provide positive upstream benefits by eliminating downstream constraints, which effectively removes property from the floodplain.

9. Does the project eliminate or lessen street flooding or overtopping issues? (Select one by roadway functional classification)

- Arterial street or greater
- Collector street
- Local street
- No street flooding issues addressed

The intent of this item is to give preference to projects that mitigate known street flooding problems based upon roadway functional classification. Street flooding can impede the free flow of people/goods and block direct property access, which results in negative economic impacts to the community. Street flooding can also limit emergency vehicle access potentially resulting in injury or death.

10. If the answer Item 9 is yes, the proposed improvement is designed to meet what level of service? (Select one)

- 100-year event or greater
- 25-year event

10-year event overtopping  
Less than a 10-year event or no on Item 9

The intent of this item is to provide bonus points to projects that address street flooding issues based upon the designed level of service.

11. Section 1 Total Point Value

This item adds the point values for Items 1 – 10, providing a total point value for Section 1.

## Section 2

This section collects information that will assess project impacts relative to other projects that have been submitted for funding. The relative ranking for each item is determined by ranking the raw values for all projects submitted for funding from lowest to highest. The resulting numerical ranking is then used as that item's point value.

12. Total population within the watershed/study area.

The intent of this item is to provide preference for projects that impact a large population relative to other projects that have been submitted for funding.

13. Total acreage within the watershed/study area.

The intent of this item is to provide preference for projects that impact a large land area relative to other projects that have been submitted for funding.

14. Total assessed valuation within the watershed/study area.

The intent of this item is to provide preference for projects that impact the most intensely developed areas relative to other projects that have been submitted for funding.

15. Section 2 Total Point Value

This item adds the point values for Items 12 – 14, providing a total point value for Section 2.

## Section 3

This section determines the project's combined total points. The total combined point value for the project will be used to calculate the adjusted project point total.

16. The total point value for Section 1 (Item 11) is used as input for this item.

17. The total point value for Section 2 (Item 15) is used as input for this item.

18. The sum of Items 16 – 17 is used as input for this item. This provides a combined point value for the project, which is used in determining the cost to benefit ratio.



#### **Section 4**

19. Determine the adjusted project points.

This item divides the SMAB funding request amount by the combined total points (Item 18). The result is a cost to benefit ratio that is used as the adjusted project point total. The adjusted project points for all projects submitted are then ranked from lowest to highest. Projects with the lowest cost to benefit ratio receive priority rankings. In other words, projects that yield the lowest cost per point are preferred.

# Figure 1 – Watershed/Sub-Watershed Plans and Studies PRC

Project Name: \_\_\_\_\_

Project Sponsor: \_\_\_\_\_

Watershed Name: \_\_\_\_\_

Total Estimated Project Cost: \$ \_\_\_\_\_ (round to nearest dollar)

SMAB Funding Request Amount: \$ \_\_\_\_\_ (round to nearest dollar)

## Section 1

Item #	Criteria	Possible Points	Point Value
1)	Has a comprehensive stormwater management plan/study ever been completed for this watershed/study area?  No Yes      If yes, how recently? < 10 years ago 10 - 20 years ago > 20 years ago	5   1 3 4	
	Enter the correct point value	→	
2)	Does the project address stormwater management issues in a SMAB priority watershed?  No Yes	0 5	
	Enter the correct point value	→	
3)	Does the watershed/study area have a history of flooding that has resulted in the loss of life, significant economic loss, channel erosion or structural flooding?  No Yes	0 5	
	Enter the correct point value	→	
4)	What percent of the total estimated project cost is being requested?  65% - 75% 50% - 65% < 50%	1 3 5	
	Enter the correct point value	→	
5)	Section 1 Total Point Value (Add point values for Items 1 - 4)	→	



**Section 2**

Item #	Criteria	Raw Value	Point Value
6)	Total population within the watershed/study area:		
7)	Total acreage within the watershed/study area:		
8)	Total assessed valuation within the watershed/study area (per County Assessor):		
9)	Section 2 Total Point Value (Add point values for Items 6 - 8)	→	

**Note:**

The Section 2 point values are determined by ranking the project's raw value for each criteria from lowest to highest within all applications received for the funding cycle.

**Example:**

	<u>Raw Value</u>	<u>Point Value</u>
Project A population	4,000	1
Project B population	20,000	3
Project C population	7,000	2

**Section 3**

Item #	Criteria		Totals
10)	Total Points Section 1 (Item 5)	→	
11)	Total Points Section 2 (Item 9)	→	
12)	Combined Total Points	→	

**Ranking Explanation**

Final project rankings for the funding cycle are determined by ranking the combined total points for each project from highest to lowest.

**Example:**

	<u>Total Points</u>	<u>Project Rank</u>
Project A Combined Total Points	14	2
Project B Combined Total Points	9	3
Project C Combined Total Points	18	1



## Figure 2 - Infrastructure Projects PRC

Project Name: \_\_\_\_\_

Project Sponsor: \_\_\_\_\_

Watershed Name: \_\_\_\_\_

Total Estimated Project Cost: \$ \_\_\_\_\_ (round to nearest dollar)

SMAB Funding Request Amount: \$ \_\_\_\_\_ (round to nearest dollar)

Section 1			
Item #	Criteria	Possible Points	Point Value
1)	Is the project supported by a watershed/sub-watershed plan, study or other detailed analysis?  Yes No  Enter the correct point value	  5 0  →	     0
2)	Does the project address stormwater issues in a SMAB priority watershed?  Yes No  Enter the correct point value	  5 0  →	     0
3)	What percent of the total estimated project cost is being requested?  < 50% 50% - 65% 65% - 75%  Enter the correct point value	  5 3 1  →	     0
4)	Does the project include design features intended to result in measurable water quality improvement?  Yes No  Enter the correct point value	  5 0  →	     0
5)	Does the project include measures to address multiple benefits? (Select all that apply)  Parks/Recreation Economic Development Transportation Habitat Protection/Mitigation Other: _____  Enter total of all point values claimed for Item 5	  2 2 2 2 2  →	          0



Section 1 continued

Item #	Criteria	Possible Points	Point Value
6)	<p>The project mitigates flooding issues that have historically resulted in: (Select all that apply)</p> <p>Loss of life (documented as attributable to flooding)                      Economic loss (property damage, crop destruction, etc.)                      Channel erosion                      Structural flooding                      Other: _____</p> <p>Enter total of all point values claimed for Item 6</p>	<p>5 per death                      2 per event</p> <p>2                      2                      2</p> <p>→</p>	<p>0</p>
7)	<p>Does the project reduce or eliminate flooding to land actively used for agricultural production (farming or livestock)?</p> <p>Yes                      No</p> <p>Enter the correct point value</p>	<p>5                      0</p> <p>→</p>	<p>0</p>
8)	<p>Does the project improve a hydraulic restriction resulting in a lower base flood profile?</p> <p>Yes                      No</p> <p>Enter the correct point value</p>	<p>5                      0</p> <p>→</p>	<p>0</p>
9)	<p>Does the project eliminate or lessen street flooding or overtopping issues? (Select one by roadway functional classification)</p> <p>Arterial street or greater                      Collector street                      Local street                      No street flooding issues addressed</p> <p>Enter the correct point value</p>	<p>3                      2                      1                      0</p> <p>→</p>	<p>0</p>
10)	<p>If answer for Item 9 is yes, the proposed improvement is designed to meet what level of service? (Select one)</p> <p>100-year event or greater                      25-year event                      10-year event                      Less than a 10-year event or no on Item 9</p> <p>Enter the correct point value</p>	<p>3                      2                      1                      0</p> <p>→</p>	<p>0</p>
11)	<p>Section 1 Total Point Value (Add point values for Items 1 - 10)</p>	<p>→</p>	<p>0</p>



**Section 2**

Item #	Criteria	Raw Value	Point Value
12)	Total population impacted by the project:		
13)	Total acreage impacted by the project:		
14)	Total assessed valuation impacted by the project (per County Assessor):		
15)	Section 2 Total Point Value (Add point values for Items 12 - 14)	→	0

**Note:**

The Section 2 point values are determined by ranking the project's raw value for each criteria from lowest to highest within all applications received for the funding cycle.

**Example:**

	Raw Value	Point Value
Project A population	27	1
Project B population	1,250	3
Project C population	438	2

**Section 3**

Item #	Criteria		Totals
16)	Total Points Section 1 (Item 11)	→	0
17)	Total Points Section 2 (Item 15)	→	0
18)	Combined Total Points	→	0

**Section 4**

Adjusted Project Points

19) Adjusted project points =  
 SMAB Funding Request Amount/Combined Total Points →

**Ranking Explanation**

Final project rankings for the funding cycle are determined by ranking the adjusted project points for each project from lowest to highest.

**Example:**

	Adjusted Points	Project Rank
Project A Adjusted Project Points	12,500	2
Project B Adjusted Project Points	6,000	1
Project C Adjusted Project Points	29,300	3

