SUMMIT ECONOMICS LLC

WHITE PAPER EXPLORING POTENTIAL SOLUTIONS TO REGIONAL STORMWATER CHALLENGES

Prepared for
Fountain Creek Watershed Flood Control and Greenway District,
Colorado Springs Utilities, El Paso County,
Pikes Peak Regional Water Authority

By:
Mike Anderson, Senior Partner
Tom Binnings, Senior Partner
Paul Rochette, Senior Partner

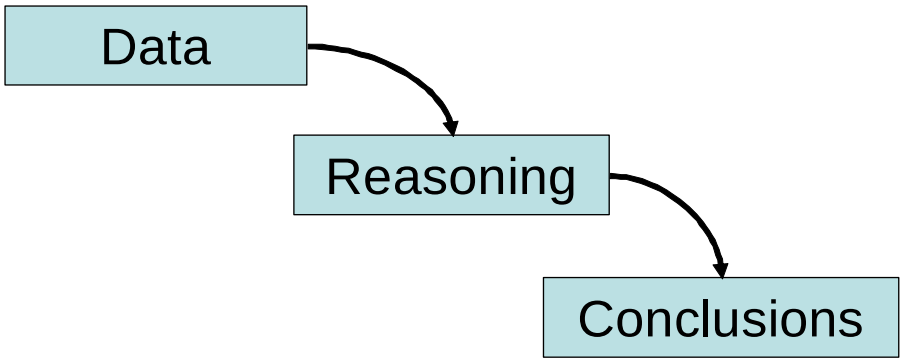
June, 2012

Summit Economics, LLC

Peer into the future before it becomes the present

Tucker Hart Adams
Mike Anderson
Dave Bamberger
Tom Binnings
Paul Rochette
www.summiteconomics.com

Applied Economics



- Empirical Research
- Computer Modeling
- Rigorous Analysis

Contents

EXECUTIVE SUMMARY

Introduction

This white paper considers stormwater challenges and opportunities facing the Fountain Creek Watershed (FCW). The study is sponsored by the Fountain Creek Flood Control and Recreation District (FCWD) and is funded by several local governments and utilities including: El Paso County, the Pikes Peak Regional Water Authority, and Colorado Springs Utilities.

The purpose of the white paper is to 1) elaborate on the challenges and opportunities related to stormwater needs of the FCW, 2) propose alternative funding and organizational mechanisms for addressing stormwater needs, and 3) recommend a process for the FCW community to move forward in addressing the challenges and opportunities.

The methodology used in researching the issue and potential solutions included both primary and secondary research over the course of a year. Technical and citizen advisory groups to the FCWD were consulted as were over 20 community leaders, both elected and non-elected, and subject matter experts. Extensive literature was reviewed from national sources to determine how other U.S. and Colorado communities have approached the stormwater challenge.

Definitions

A watershed encompasses all land and waterways such as streams, creeks, rivers and lakes that drain into a common water source. Stormwater is rain or snow that falls onto surfaces and flows either directly into natural waterways, or through drainage systems such as curbs, gutters, and inlets into storm sewers, detention ponds and channels – eventually discharging into waterways. In El Paso County, all municipalities, with the exception of some towns in its eastern areas, drain stormwater into the Fountain Creek Watershed (FCW). In Pueblo County, stormwater along the mostly undeveloped I-25 corridor and the northern portion of the City of Pueblo also drain into the FCW.

Stormwater and its effects can be a liability to communities. It can cause flooding and erosion, and therefore can threaten public safety and property. Stormwater can alter and threaten natural ecosystems and, over time, can transport pollutants. The population growth and urbanization of the FCW have intensified these negative effects of stormwater over the past century. But stormwater can also be an asset to communities. It is water, after all, which is the basic necessity of life and human civilization. A healthy watershed can also serve as a preserve of nature and as a recreational asset.

The Funding Problem

Although the establishment and use of stormwater utilities has increased dramatically over the last fifteen years, growing by over two-thirds to a total of 500 utilities, the most prevalent source of stormwater management funding by local governments throughout the U.S. continues to be through the appropriation of general tax revenues. Without a dedicated funding source, stormwater services and projects have historically struggled to compete effectively against other, often higher-profile and better understood local govern-

ment services during budgeting. Once stormwater flows from neighborhood streets it is typically out of sight and out of mind. This lack of awareness results in a lack of vocal constituencies and stormwater being out of mind when annual budgets are drafted. In the FCWD, the City of Pueblo and the City of Manitou Springs have separate dedicated revenue sources (enterprises) for the funding of stormwater management services and projects, while the City of Fountain, the City of Colorado Springs, the Town of Monument, El Paso County, and Pueblo County rely on the appropriation of general tax revenues.

The FCW has accumulated a backlog of unfunded stormwater management needs partially because of inadequate appropriation of general tax revenues by municipalities and counties. A portion of the backlog also stems from the cumulative effect of a number of other trends and factors that generally go unnoticed like aging infrastructure, annexations of developed areas having inadequate/deficient drainage systems, and increased stormwater management requirements resulting from EPA regulations.

The Fundamental Problem

Stormwater is underfunded and under-valued due to a lack of awareness of the opportunities, consequences, and obligations associated with managing stormwater in the Fountain Creek Watershed which are fivefold:

1. **The Opportunity** to create a unique regional recreation asset
2. **The Consequence** of not protecting capital assets placed in watershed corridors from relatively minor flood events
3. **The Obligation** to protect the health, safety and property of residents
4. **The Obligation** of the Watershed Ethic – the Golden Rule
5. **The Obligation** to continuously meet federal, state, and local requirements, including 1041 Permit commitments

New Paradigms and Funding Approaches

In many communities where stormwater management has been implemented, the protection of recreation assets and/or the impact of major flood events are often driving factors. Converting Fountain Creek and its tributaries into a regional recreational asset could sustain a long-term elevated awareness of the important role the region's waterways could play in the community's quality of life. Such a rebranding of the waterways could generate an appreciative attitude to preserve and maintain the watershed as a recreation asset.

In the spirit of the new paradigm which looks at stormwater management as a potential community asset and an unfunded liability, new funding approaches are also more possible. Both broader private-sector participation and cost sharing with other public programs are emerging trends in stormwater management funding. Most successful stormwater programs are supported by a blended source of funds, and many are supported by multi-jurisdictional funding.

Considerations in Developing Funding Options

In developing possible solutions to the FCW stormwater funding problem, it is important to identify and estimate the funding needs throughout the watershed. It is also critical to assess the community's willingness to pay to control stormwater runoff, and in particular how much, to whom, and through what funding mechanisms. The two other major considerations are a review of all possible funding mechanisms, and a review of existing and potential organizational structures to provide stormwater services and projects.

The Backlog of Unfunded Stormwater Needs

According to information provided by the FCWD and the cities and counties within it, the FCW has an estimated total of $834.3 M of unfunded infrastructure replacement and capital improvement needs. Furthermore, the FCW has an estimated $12.8 M of unfunded annual needs. Construction cost estimates are always imperfect, but these figures represent the best information currently available and are a good starting point for consideration.

Value Proposition – Tolerable Funding Levels

As governments serve and represent their electorate, a comparison of the amount of resources Front Range local governments allocate to stormwater management is one measure of a community's willingness to pay for stormwater management. In the ten largest Front Range municipalities, the average annual 2011 per capita funding for stormwater needs was $52.11, though it was $4.63 for Colorado Springs and $25.81 for Pueblo. Such stormwater funding data is not available for Colorado counties, though one study reported the annual per capita funding as $4.04 in 2007 for El Paso County. Another benchmark is the former Colorado Springs Stormwater Enterprise (SWENT), which generated in 2009 annual per capita funding of $36.11. A third benchmark is derived from the average residential bill for 17 of the different stormwater enterprises in Colorado, which reports in 2006 average per capita funding of $52.17.

To achieve these ranges of per capita funding in El Paso County an equivalent mill levy of about 3.6 to 5.8 mills would be required, or an equivalent sales tax of about 0.3% to 0.5%. Likewise, they would raise in El Paso County total annual revenue of about $22 M to $36 M. These are rough estimates meant to illustrate potential funding levels. The total backlog of unfunded stormwater needs in FCW is itself a daunting figure, but this estimated range of tolerable annual funding levels illustrates that the backlog can very well be addressed over the course of 20 to 30 years.

Funding Mechanisms

Many mechanisms for raising funds or cost-avoidance for the FCW stormwater funding needs are available for consideration. A total of 17 primary, secondary, and "outside the box" funding mechanisms for raising revenue or cost avoidance should be considered:

Primary**:** general revenue appropriations; property taxes; sales and use taxes; stormwater user (service) fees; bonding for capital improvements

Secondary: special assessment/fees on water and wastewater utilities; system development charges (capitalization recovery fees); special assessment districts; in-lieu of construction fees; impact fees; federal and state funding opportunities (grants, loans); recreation user fees

"Outside the box": environmental tax shifting ("pay-to-pave" tax or fee); market-based approach ("cap and trade" system); development incentives for low-impact development; tax credits/rebates and installation financing; awards and recognition programs.

The 17 funding mechanisms were rated against these standards: political acceptance, equitability, feasibility, difficulty to administer, legal defensibility, ability to raise sufficient funds, and if it is a dedicated or competitive source. Taking only those funding mechanisms which rated well across the criteria *and* would have the capacity and potential to generate a substantial revenue stream to address the backlog, these four funding mechanisms remain: property tax, sales tax, general revenue appropriations, and stormwater fees.
This evaluation of course does not preclude any single or hybrid package of funding mechanisms from actually being achieved. For example, a package of funding mechanisms with high political acceptance but low funding impact could build momentum for these mechanisms that generate substantial revenue. Another possibility would be the initial use of certain funding mechanisms with the phased implementation of additional mechanisms over time.

Organizational Structures

Many existing or potential organizational structures can implement and administer the stormwater funding source(s) within the FCW. The identification and selection of the best organizational structure are a critical piece of any solution. Federal and State requirements and regulations place the responsibility of providing stormwater management services on local governments. 73 different types of local government entities are allowable under the Colorado constitution and statutes, and 9 are authorized to provide some or all of the elements of a fully functioning stormwater management system. Of these 9, and excluding metropolitan districts, drainage districts, conservancy districts, and special improvement districts because of inapplicability to the diverse land uses of the FCW or exceptional impracticality, the 5 existing or potential organizational structures are: municipalities, counties, regional service authority, urban drainage and flood control district, and regional stormwater authority. Accepting responsibility to adequately fund stormwater management creates a cost to be borne by the community in one fashion or another whether it be higher taxes, fees, or the opportunity cost of receiving fewer or lower quality alternative public services.

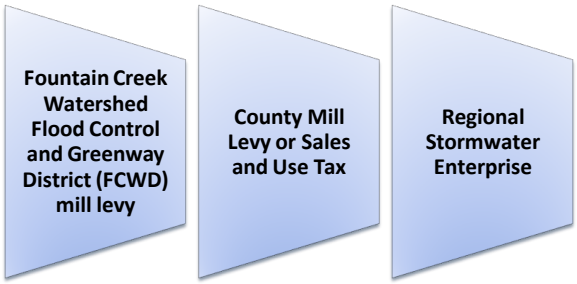
Utilizing the municipal structural approach would, in essence, be a continuation of the status quo. However, the City of Colorado Springs can relocate the management, operation and revenue raising responsibilities for stormwater management to Colorado Springs Utilities (CSU). CSU has tremendous organizational capacity to accept the operational aspects of stormwater management and would likely be able to provide services at a lower marginal cost given the economies of scale and existing technical capabilities it already has in place. Yet, the establishment of a new stormwater utility fee added to CSU customers' monthly utility bill and/or an increase in existing water or wastewater rates will likely be required under such a scenario. Existing covenants on CSU's revenue bonds and requirements of the City Charter appear to create a legal need to establish such rates. However, any new stormwater fee or utility rate increases to recover the costs of making an additional contribution to stormwater management would likely be viewed by ratepayers as a "back door" tax.

Since the FCW encompasses El Paso and Pueblo Counties, they could both assume a larger role in the funding of stormwater management in their respective county. A regional service authority is an alternative to counties, though the process for creating one is quite complex and cumbersome. The existing FCWD is an Urban Drainage and Flood Control District, and the FCWD could assume a role in its watershed that is similar to the role the Urban Drainage and Flood Control District fulfills in the Denver metropolitan area. The FCWD would actually be fulfilling the role envisioned in its enabling legislation. A regional stormwater authority can be

created under a regional intergovernmental agreement (IGA), amongst some or all local governments in the FCW. It could act as a sort of regional stormwater enterprise.

Three Funding Scenarios for Consideration

Three funding scenarios thus emerge which address the FCW in a regional manner, which address the backlog of unfunded needs with sufficient revenues, and would be frameworks to address the issue *with* the consent, assent, and support of the electorate:



Any mill levy or sales and use tax will require direct voter approval. Any IGA will require the coordination and approval of numerous elected officials representing the citizens of the FCW region. This is a challenge, and an opportunity to engage the public in reframing the FCW as a regional asset.

Pursuing the Public Process Challenge and Goal

Inaction is the loss of self-determination. The consequences of inaction regarding stormwater funding in the FCW may include regulatory enforcement, litigation, further deterioration of public infrastructure and the natural environment, continued risks to property and public safety, and the continued opportunity loss of potential recreational assets. These consequences of inaction, should inaction prevail, may result in unnecessary conflict between citizens, between interest groups, and between communities.

The public process goal is to achieve strong support of the FCW residents and organizations in order to adequately fund capital investment, repairs, maintenance, and administration of the watershed. In order to motivate the FCW community to act, they must perceive value in stormwater management and its potential to be a local and regional asset. Generally, if perceptions change, attitude adjustments follow along with value associations. This requires the solicitation of constituents at all levels of support and confronting people's mental models of stormwater and watersheds, which are likely to be only moderately developed as opposed to ingrained and intractable.

Public Process Lessons and Strategy

Numerous natural constituents do or potentially could support and, to varying extents, understand stormwater management in the FCW. Anyone who bears the cost of stormwater damage is a natural constituent. Developers and the business community should understand the economic development consequences of not living up to the 1041 permit. Those who support nature and recreation are potential constituents, as are those who just simply believe addressing the stormwater funding challenge "is the right thing to do."

Past voter approved taxes in El Paso County and Colorado Springs, like TOPS, SCIP, PSST, and PPRTA, all went through an extensive citizen-led dialogue, education and deliberation process before going to ballot. They

had strong support from a wide spectrum of the business community, and they had champions for the cause. They communicated, and the electorate understood, how the money was going to be used.

All governmental jurisdictions of El Paso County need to commence a public process to organize and identify private sector champions. Additional marketing research needs to assess the community's actual perceptions and attitudes. An integrated Capital Improvement Plan needs to address stormwater from whole system, best practices, and life cycle perspectives. An aggressive education process needs to occur where the community actually experiences the waterways.

While the temptation is to simply solve the immediate problem as expeditiously as possible, slowing down the tempo of action in order to plan and to get broad public understanding is likely to lead to a much more sustainable solution given the political culture of much of the watershed. This may require buying time through a strong showing of good faith. The best demonstration of intent is through incremental steps, transparent processes, and collaborative deliberation.

A Call to Action

While El Paso County and Colorado Springs clearly have a unique political culture, to conclude the community would never support the little known watershed nor the challenges and obligations presented by stormwater runoff, is erroneous. The 2009 passage of Proposition 300 in itself does not support such a conclusion. One way or another the watershed ethic will prevail – either through collaborative, shared efforts or through *force majeure* where an external force exerts itself on the community. There are numerous viable options on the table to create reliable revenue streams to preserve and enhance the FCW through stormwater management and investment. The leadership exists to champion the cause. Embrace the political culture of the region, and focus on the 75% of the active voters and 85% of all potential voters who will at least consider the prospect of watershed preservation and enhancement.

Perhaps the most crucial element in pursuing the challenge is reminding ourselves of the watershed ethic whereby upstream and downstream stakeholders respect one another's private and common interests associated with the watershed and accept the responsibilities of such an ethic. With such respect comes collaboration and the ability to engage in self-determination of watershed governance.

PREAMBLE

When private or community interests access a public resource for which there is no single ownership control or responsibility, a tragedy of the commons often ensues. This is especially true when there is high demand for the public or common resource such as parks or fisheries and funding levels are inadequate to maintain the common property. The creeks, rivers, and lakes of watersheds represent the commons utilized by many private interests and communities. As urban areas have grown dramatically over the last century, the threat to the commons has intensified.

The threat to the commons can be mitigated at a relatively low price. If ignored, the price tag grows and the threat will ultimately manifest into a tragedy. In the case of waterways, the tragedy can include unnecessary loss of life, property, and ecosystems. Downstream interests often bear a disproportionate share of the cost under such circumstances.

As a result of this challenge, a watershed ethic is evolving concurrently with emerging conflicts among stakeholders who use the commons. The ethic mimics the golden rule. Perhaps the greatest tragedy of the commons from ignoring the watershed ethic is the resulting social mistrust, manifest conflict, and reliance upon courts, legislators, and regulators to arbitrate and enforce the ethic. Surely in the long-run this is a more costly approach than community collaboration, deliberation, and acceptance of responsibility. More civil and collaborative approaches to challenges might even find great opportunities emerge that go beyond simply abiding by the ethic.

This is where the Fountain Creek Watershed community stands today.

Summit Economics, LLC, May, 2012

INTRODUCTION

This white paper considers stormwater challenges and opportunities facing the Fountain Creek Watershed (FCW). The study is sponsored by the Fountain Creek Watershed Flood Control and Greenway District (FCWD) and is funded by several local governments and utilities including: El Paso County, the Pikes Peak Regional Water Authority (PPRWA), and Colorado Springs Utilities.

The purpose of the white paper is to 1) elaborate on the challenges and opportunities surrounding stormwater in the FCW, 2) propose alternative funding and organizational mechanisms for addressing stormwater needs, and 3) recommend a process for the FCW community to move forward in addressing the challenges and opportunities.

The white paper is primarily an economic report on the facts surrounding stormwater and the Fountain Creek Watershed. It endeavors to highlight all possible funding and organizational alternatives to more effectively and sustainably address watershed challenges. We sought input from many leaders and technical experts throughout the watershed. The white paper concludes with a recommended public process based upon Summit Economics':

- Research of successful efforts to develop stormwater initiatives nationwide and statewide;
- Expertise in strategic analysis, marketing research, and process design;
- Long-term knowledge of the political-economic cultures of all the Fountain Creek Watershed communities.

Summit Economics, LLC represents this white paper to be an objective recitation of facts and independent analysis, conclusions, and recommendations. As residents of the watershed, Summit's Partners hope this document will further deliberation among the stakeholders for the entire FCW to meet the challenges.

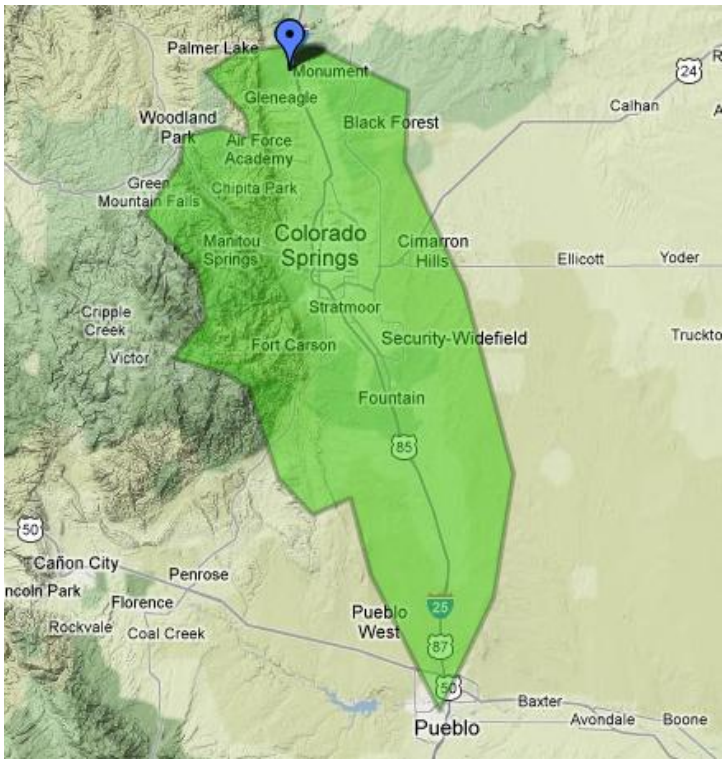
The Watershed & Stormwater

A watershed encompasses all land and waterways such as streams, creeks, rivers and lakes that drain into a common water source – Fountain Creek in this case. Technically a watershed can be as small as a single drainage basin such as Cottonwood Creek or as large as an entire river system such as the Arkansas River. The relevant definition is determined by the political, economic and geographic area for which a study is targeted.

Stormwater is rain or snow that falls onto surfaces and flows either directly into natural waterways, or through drainage systems such as curbs, gutters, and inlets into storm sewers, detention ponds and channels -- eventually discharging into waterways. The hydrology, or water flow, of a watershed is dictated by its soils and amount and timing of precipitation. Erosion is the most common outcome in nature and is typically accelerated when watersheds are urbanized due to storm system design to transport stormwater expeditiously out of neighborhoods and into natural waterways. Over long periods of time riparian ecosystem equi-

libriums develop within watersheds partially as a result of the area's hydrology. Because urban stormwater is untreated, it creates potential challenges to riparian ecosystems in addition to increasing erosion.

With some exceptions, stormwater impacts from human settlement have only become a significant issue in the last century. Substantial population growth, greater urban densities, greater development of impervious surfaces within cities to accommodate advances in transportation technologies, and dedicated, separate stormwater sewer systems combined to dramatically increase the amount of stormwater flow into waterways within watersheds. In a more natural state, stormwater was more readily absorbed into soils and found underground reservoirs or channels and then tricked into streams, rivers, and lakes at much slower rates. Now, the vast majority of the stormwater quickly deposits into the waterways. Storm events in urbanized areas, even relatively minor events, can overwhelm the watershed. Major storm events, by pre-urban standards, have heightened effects. The combination of faster runoff and greater watershed volumes significantly increase risk to life and property.



FOUNTAIN CREEK WATERSHED, EL PASO AND PUEBLO COUNTIES

Fountain Creek Watershed

As shown in the adjacent map, all municipalities in El Paso County deposit stormwater into the Fountain Creek Watershed; with the exception of towns in the eastern areas of the County. The watershed also serves all of the military installations in the County.

From the City of Fountain to the incorporated area of Pueblo, the watershed is largely undeveloped. However, it's anticipated that Pueblo will generally grow north along the I-25 corridor in the coming decades and thus stormwater runoff in Pueblo County will increasingly become an issue as well.

The FCW is evolving towards a new hydrographic and ecosystem equilibrium as the old natural equilibrium has increasingly been disrupted. As stated in the "General Information" section of the FCWD's webpage, current conditions, concerns, and factors impacting the watershed include:

- *Flooding and erosion have accelerated the loss of aquatic and wetland habitats, contributed to the loss of hundreds of acres of productive farmland, and caused the foundations of roads and homes to crumble.*

- *Creeks within the Fountain Creek Watershed contribute about 15% of the drinking water for Colorado Springs and are a source of irrigation for over 100 farms and ranches.*
- *85% of Colorado Springs' water is pumped from west of the Continental Divide, and after use, this water is treated and discharged into Fountain Creek.*
- *Over 90% of Pueblo's 100-year floodplain is developed and includes residential, commercial, industrial and public properties.*
- *Parts of Pueblo's downtown business district lie directly within the historic floodplain of Fountain Creek.*
- *Pueblo's flooding history includes devastating floods in 1921, 1935 and 1965.*
- *The mean annual flow of Fountain Creek has risen from a historical average of approximately 60 cubic feet per second (cfs) to greater than 230 cfs.*
- *While flow associated with extreme flood events has not statistically changed, there are increasing trends in both low and high streamflow records.*[1]

One unique aspect to the Fountain Creek watershed is that the solution is not as easy as reusing water from the creek or capturing stormwater in rain barrels, cisterns, or even small reservoirs to take the flow rates back to more natural conditions before urbanization occurred. Stormwater discharge into the creek is complicated by western United States' water law based upon the doctrine of prior appropriation. Because water has flowed down the creek historically, downstream farmers and ranchers in the lower Arkansas River Valley have prior claims to the actual stormwater and El Paso County residents are not entitled to capture it to use for lawn irrigation – an action that could help mitigate stormwater runoff. To complicate matters even more, the increased creek flows, while detrimental in some ways to the watershed, have also altered the agricultural economy below the confluence of the Arkansas River and Fountain Creek by providing more water to junior water rights owners who previously could access water only in wet years. This positive consequence of greater water flows creates a predicament where future curtailment of flow would hinder the economy of agricultural households and businesses that have come to rely on the greater flows. A symbiotic relationship of sorts has emerged between the agricultural community and the development of El Paso County whereby junior rights gain water and senior right can enter into water exchanges with Colorado Springs Utilities gaining better management of the timing of their water flows.

Symptoms of the Funding Problem

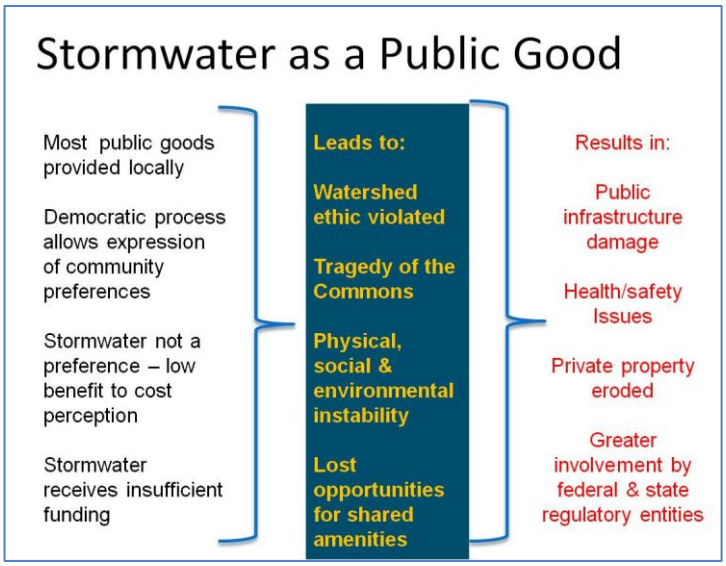
Although the establishment and use of stormwater utilities has increased dramatically over the last fifteen years (growing by over two-thirds to a total of 500 utilities) the most prevalent source of stormwater management funding by local governments throughout the U.S. continues to be through the appropriation of general tax revenues. That is also the case for a majority of the municipalities and counties within the Fountain Creek Watershed. Of the seven municipalities and counties having Municipal separate Storm Sewer systems (MS4s) within the watershed area, only the City of Pueblo and the City of Manitou Springs have separate dedicated revenue sources (enterprises) for the funding of stormwater management services and projects.

[1] http://www.fountain-crk.org/general-information.html
*

CURRENT SOURCES OF FUNDING FOR STORMWATER MANAGEMENT

	City of Colo Sprgs	El Paso County	City of Fountain	City of Manitou Springs	Town of Monument	City of Pueblo	Pueblo County
NPDES permit program	Gen fund/Ent	Gen Fund	Gen Fund	Enterprise	Gen Fund	Enterprise	Gen Fund
Maint of existing storm sewer/flood control facilities	Gen fund	Road & Bridge	Gen fund	Enterprise	Gen Fund/Impact Fee Fund	Enterprise	Road & Bridge
Repair and replacement of existing storm sewer/flood control facilities	none	none	none	Enterprise	Gen Fund/Impact Fee Fund	Enterprise	Road & Bridge
Drainage and flood control regulations	Gen fund/Ent	Gen fund	Gen fund	Enterprise	Gen fund	Enterprise	Gen Fund
Regional flood control facilities (constr & maint)	none	none	none	none	none	none	none
Const of new storm sewer/flood control facilities for new development	Developer & Basin Fee	Developer & Basin Fee	Developer & Basin Fee	Developer	Developer & Impact Fee	Developer	Developer

This heavy reliance on the appropriation of general tax revenues to fund stormwater management has been problematic as depicted in the following cause and effect diagram.



As evidenced by a burgeoning backlog of necessary stormwater and flood control needs in the FCW, stormwater management has historically struggled to compete effectively against other local government service needs. Once the stormwater flows from neighborhood streets it is typically out of sight AND out of mind. The lack of awareness creates a lack of vocal constituencies and therefore is typically out of mind when annual budgets are drafted as it competes against other more visible and higher profile basic government services (police, fire, parks, and roadway maintenance).

These problems exist on a national basis. Proper stormwater spending and management by communities was uncommon and is only recently being addressed in many cases around the nation. The lack of overall preference placed on stormwater funding leads to the emergence of numerous problems and lost opportunities as shown in the dark middle box and presented in the Preamble of this white paper. The results (shown in the right hand column) are unavoidable over time given underfunding.

The backlog of stormwater management needs in the Fountain Creek Watershed as a result of several decades of underfunding is considerable and growing. As more fully described later in this paper, the magnitude of the funding needs appear to be daunting at $834 million for infrastructure projects and ongoing annual maintenance, repair and planning needs at almost $13 million.

Nevertheless, the growing backlog of unfunded stormwater management needs in the Fountain Creek Watershed is not solely due to the inadequate appropriation of general tax revenues by municipalities and counties. A portion of the funding problem stems from the cumulative effect of a number of other trends and factors that generally go unnoticed. Those factors and untimely trends include:

- Increased stormwater management requirements resulting from EPA stormwater regulations
- Annexations of developed areas having inadequate/deficient drainage systems
- Life-cycle replacement
- Out-dated drainage basin fee systems for drainage infrastructure supporting new development
- Existing infrastructure designed many years ago without benefit of modern engineering techniques

For a more detailed description of these trends see Appendix A.

Need for Additional Funding Sources for Stormwater Management

In all likelihood, general revenue appropriations, at some level, will continue to be a part of the funding of stormwater management in the region. It is assumed that all local governments in the Fountain Creek Watershed will continue to seek additional efficiencies in their operations that will allow some reallocation of existing resources towards stormwater management. Also, it is hoped that those governmental entities will have the fiscal discipline to earmark for stormwater management at least a share of any future incremental revenues. But, given the magnitude of the backlog of stormwater management funding needs in the Watershed, it appears the costs that will have to be incurred by local governments far exceed their capacity to absorb into existing budgets. Addressing an estimated backlog of over $834 million of stormwater infrastructure replacement and maintenance projects through general revenue appropriations, while responding to ever increasing federal and state stormwater requirements, would require a massive restructuring of existing municipal and county budgets. Those budgets, however, are already stretched razor thin by the longest and deepest economic downturn since the Great Depression.

Based on the overall conditions in the FCW, both physical and fiscal, it is necessary to look at various alternative funding mechanisms for stormwater and select the best approach given the political, fiscal, and economic circumstances within the Watershed. A combination of new funding sources and the continued use general revenue appropriations will be required to reliably generate the required level of revenue and resources for a fully functioning stormwater system throughout the Watershed.

The Fundamental Challenge

Why does stormwater end up with such a low community preference?

Stormwater is underfunded and under-valued due to a lack of awareness of the opportunities, consequences, and obligations associated with stormwater management in the Fountain Creek Watershed which are five-fold:

1. **The Opportunity** to create a unique regional recreation asset
2. **The Consequence** of not protecting capital assets placed in watershed corridors from relatively minor flood events
3. **The Obligation** to protect the health, safety and property of residents
4. **The Obligation** of the Watershed Ethic
5. **The Obligation** to continuously meet federal, state, and local requirements, including 1041 Permit commitments

While most of these five aspects are fairly obvious, the opportunity to create a unique regional asset is an emerging vision worthy of elaboration. Converting the Fountain Creek and its tributaries into a regional recreational asset could sustain a long-term elevated awareness of the important role the region's waterways could play in the community's quality of life. Such a rebranding of the waterways could generate an appreciative attitude to preserve and maintain the watershed as a recreation asset. In many communities where stormwater management has been fully funded and implemented, the protection of recreation assets is a driving factor.

New Paradigms and Funding Approaches

The current stormwater funding challenges in the Fountain Creek Watershed offer a moment of opportunity to be seized by considering funding approaches that are more in alignment with a new paradigm in stormwater management that has emerged in many parts of the nation.

In its *Guidance for Municipal Stormwater Funding*, the National Association of Flood and Stormwater Management Agencies (NAFSMA) succinctly describes that new paradigm:

> *Originally stormwater systems were built just for conveyance, but stormwater is now a component of a comprehensive integrated urban water resource, environmental enhancement, and recreation services system. Contemporary stormwater management is a multi-dimensional function which includes quantity and quality considerations, multiple-use facilities, riparian corridors, recreation, wetland preservation and creation, and groundwater discharge.*

This new paradigm will require different approaches to funding a fully functioning stormwater management system. NAFSMA identifies four growing trends in funding practices toward:

- Blended Funding - The most successful stormwater programs are supported by several sources of funding including general appropriations, utility service fees, dedicated taxes, system development charges, Federal and state grants/loans, bonding.
- Multi-jurisdictional funding – Stormwater runoff doesn't conform to municipal or other jurisdictional boundaries. Solving upstream and downstream problems often requires the funding of a common solution among various jurisdictions.
- Cost-sharing with other Public Programs – Scarce dollars available for stormwater are being increasingly leveraged by local governments through a natural broadening of the scope of stormwater management to include parks, greenways and trails along creeks as well as environmental protection and habitat preservation.
- Broader Private-Sector Participation – The private sector already contributes heavily towards the construction and maintenance of local drainage and flood control systems throughout the U.S. The trend of private-sector participation has expanded to include cooperative arrangements between public entities and the private-sector in which stormwater infrastructure and requirements are being integrated with other private sector objectives including: greenway corridors, golf courses, ballfields, and riverwalks. Cooperative arrangements with developers and other private-sector entities that allow for the operation and maintenance of stormwater facilities are also becoming increasingly common in other communities.

Any solutions to the massive stormwater funding needs within the Fountain Creek Watershed will have to embrace these new practices. It is doubtful there is a singular source of funding of the magnitude necessary to address all the funding needs while also being at a rate of tax or fee that can be tolerated by taxpayers and/or ratepayers within the region. Additionally, the heightened scarcity of resources will require the additional efficiencies offered by multi-jurisdictional cooperation, cost-sharing with other programs/services and broader public-private cooperation.

Many elected officials within the watershed have long discussed the need for a regional solution for stormwater management. The benefits of a regional approach are several:

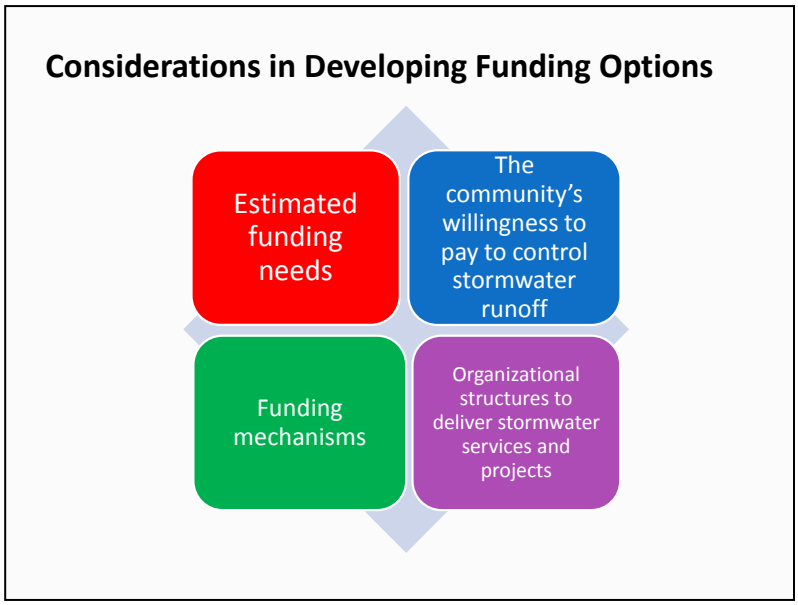
- ✓ Ensures the watershed ethic is followed with no 'free-riders"
- ✓ Achieves economies of scale in the provision of stormwater services
- ✓ Pursues a comprehensive approach to stormwater system design which promotes efficiency and effectiveness
- ✓ Contributes to regional cooperation

Yet, a regional approach will require intergovernmental cooperation and the relinquishment of some local control by existing governmental entities. Though most important, a regional approach will require dedicated revenue streams. Annual appropriations by member governmental entities, as evidenced by past experience, are not a reliable funding source.

A significant step in the direction towards regionalization was the formation of the FCWD in 2009 whose mission is to turn the Fountain Creek watershed into a regional asset by working to create a healthy waterway with appropriate erosion, sedimentation, and flooding that supports diverse economic, environmental, and recreational interests. The FCWD has begun to provide stormwater and flood control services through its various successful demonstration projects in Fountain Creek. As a regional district, however, the FCWD has broad powers and authority to serve a larger role in providing stormwater runoff and flood control services on a regional basis.

CONSIDERATIONS IN DEVELOPING ALTERNATIVES

In considering the different options for funding stormwater management in the FCW, estimated funding needs were compared with the community's willingness to pay. Data related to funding needs were collected for each of the seven municipalities and counties having Municipal Separate Storm Sewer systems (MS4s) within the watershed area. Funding needs of the FCWD were also examined. This process involved review and analysis of annual budget documents, multi-year capital improvement plans, and previous studies/analyses. Interviews with stormwater management employees of some local governmental entities were also necessary.



Willingness to pay was estimated from a variety of sources including what Colorado Springs residents paid under the City of Colorado Springs' Stormwater Enterprise (SWENT) that was shut down in 2010. Amounts paid for stormwater management in other Colorado Front Range communities as well as average amounts paid through separate stormwater enterprises throughout the state and nation were also used as rough benchmarks of acceptable taxpayer/ratepayer burdens.

The other two major considerations in developing funding options included a review of all possible funding mechanisms that might apply in this case as well as a review of alternative organizational structures used to deliver stormwater services and projects. Both of these efforts involved extensive literature reviews and interviews.

The Backlog of Unfunded Stormwater Needs

In an attempt to quantify the extent and magnitude of the stormwater funding problem in the Fountain Creek Watershed, estimates of unfunded stormwater management needs were collected for each of the seven municipalities and counties having Municipal Separate Storm Sewer systems (MS4s) within the watershed area. Funding needs of the FCW were also examined. A summary of the funding needs is presented in the table below.

SUMMARY OF UNFUNDED STORMWATER MANAGEMENT NEEDS			
Entity	Population (in 000s)	Estimated Unfunded Needs ($M)	
		Infrastructure Replacement and Capital Improvements	Annual Ongoing Needs
El Paso County	**627**		
Colorado Springs	**419**	**$498.2 1/**	**$6.0 2/**
Unincorporated EPC	**167**	**$47.5 3/**	**$1.7**
Fountain	**26**	**$50.0**	**$0.3**
Monument	**6**	**$3.8**	**$0.0**
Manitou Springs	**5**	**$3.6**	**$0.0**
Pueblo County	**159**		
City of Pueblo	**107**	**$85.1 4/**	**$0.0**
Unincorporated Pueblo County	**52**	**undetermined**	**undetermined**
Fountain Creek Watershed District	**787**	**$146.2 5/**	**$4.8 6/**
	TOTAL	**$834.3**	**$12.8**

1/ $86,328,410 classified at "high priority"

2/ Only includes unfunded maintenance and MS4 permit requirements.

3/ From 2007 Stormwater Funding Project Feasibility Report; $17,752,000 classified at "high priority"
NOTE: While all of the projects are within the unincorporated area of El Paso County, only a portion are within the Fountain Creek Watershed.

4/ Includes $3.2 million of unfunded needs in 5-year CIP Plan plus an estimated $81.9 million of projects identified through a 2007 master basin study. **NOTE:** While all of the projects are within the City of Pueblo, only a portion are within the Fountain Creek Watershed.

5/ Includes $96.2M of demonstration projects (south of Colorado Springs) plus assumption of $100M of additional needs. Amount is net of $50M to be paid by CSU.

6/ Assumes annual maintenance of $3M plus $1.8M for planning/engineering/inspections/administration.

Source: Budget documents, CIP plans, and special reports of various municipalities and counties.

It is important to realize this tally of needs is only a rough estimate. All of the information was gathered from jurisdictions and was not verified by Summit Economics as part of this white paper as it requires specialized engineering knowledge beyond the scope of this white paper. In the process of collecting the data, it became apparent that a large portion of the estimates are in need of updating. Construction cost estimates and the mix/prioritization of projects all are in need of review and update. Additionally, it is unclear as to whether the project needs lists of each governmental entity have been coordinated on a watershed basis to eliminate duplication and ensure the most efficient engineering solutions to stormwater runoff problems. It should also be realized that these numbers merely represent a snapshot of current needs and do not reflect additional life-cycle replacement needs that will come due in future years and add to the estimated backlog of needs. Nevertheless, the above represents the best data available at the present time and serves as a basis for our analysis.

The magnitude of the funding needs appear to be daunting at over $834 million for infrastructure projects and ongoing annual maintenance, repair and planning needs of almost $13 million. Yet, it should be recognized that it has taken over 40 years for the problem to balloon to its current level and it will likely take many

years of funding to reduce the cumulative cost of the needs. For example, if the cost of the unfunded stormwater infrastructure projects of municipalities and counties are assumed to be addressed over a period of 25 years, the magnitude of the annual amounts necessary to be raised to address the problem are more comprehensible and achievable, albeit still challenging. Annual funding of $46.2 million would be required over the 25 year period to address all the current capital improvement and ongoing maintenance needs of all the entities in El Paso and Pueblo Counties. Annual funding needs of local governments in El Paso County alone total about $32.1 million.

Value Proposition – Tolerable Funding Levels

One measure of the willingness of citizens to pay for stormwater management is a comparison of the amount of resources local governments are allocating to stormwater management. The table below provides such a comparison for ten of the largest municipalities in Colorado. Annual funding per capita for those front-range municipalities in 2011 averaged $52.11. Colorado Springs had the lowest level of annual funding at just $4.63 per capita. The City of Pueblo provided the second lowest level of funding at $25.81 per capita. Without Colorado Springs in the mix, average annual funding per capita was at $57.38. Unfortunately, similar data for El Paso and Pueblo counties was not available due to the accounting structure of their budgets. However, a 2007 stormwater study for El Paso County estimated per capita spending in that year to be at approximately $4.04.

What Communities are Paying for Stormwater Management

Front-Range Municipalities

Entity	2010 Population	Municipal/Utility Funding	Denver Urban Drainage District	Total Annual Funding	Annual Funding Per Capita
Denver	605,722	$25,568,800	$6,927,041	$32,495,841	$53.65
Colorado Springs	419,353	$1,941,400 1/	n/a	$1,941,400	$4.63
Aurora	327,020	$17,800,000	$1,747,104	$19,547,104	$59.77
Fort Collins	144,417	$14,229,352	n/a	$14,229,352	$98.53
Lakewood	143,208	$3,850,024	$1,037,980	$4,888,004	$34.13
Pueblo	106,739	$2,755,000	n/a	$2,755,000	$25.81
Arvada	106,643	$9,016,908	$649,886	$9,666,794	$90.65
Westminster	106,459	$2,128,000	$711,434	$2,839,434	$26.67
Boulder	97,948	$6,435,755	$1,605,991	$8,041,746	$82.10
Greeley	93,287	$4,211,679	n/a	$4,211,679	$45.15
				Average	$52.11
				Median	$49.40
			without Colo Sprgs	Average	$57.38
				Median	$53.65

1/ Cost of MS4 Permit. 2012 budget includes $414,431 contribution from General Fund with balance covered by one-time remaining funds in City's Stormwater Enterprise. Contingency funds for emergency repairs/maintenance (up to $1.4 million) are available in City Streets Division budget. Per capita funding is $7.97 when those emergency funds are included.

Granted, this comparison is not exactly "apples-to-apples" due to differences in community characteristics including: topography, climate, density and mix of land uses, hydrology, and age of infrastructure. Yet, it provides a practical snapshot of the level of service and relative importance placed on stormwater management by the citizens of other Colorado front-range communities.

The average amount paid for stormwater management in other Colorado Front Range communities was used as one point of reference in measuring the willingness of citizens to pay for stormwater management. What Colorado Springs residents paid under the City of Colorado Springs' former Stormwater Enterprise (SWENT) as well as average amounts paid through stormwater enterprises throughout the state and nation were also used as rough benchmarks of acceptable taxpayer/ratepayer burdens.

3 BENCHMARKS FOR COMPARISON

	El Paso County 2010 Population	El Paso County 2010 Hshlds	Annual Funding per/capita	Annual Rev Generated	Monthly Storm Fee Equiv. Cost/Res. Hshld.	Mill Levy equivalency	Sales Tax Equivalency
Front-Range Mun. Average of $57.38/capita	**627,096**	**237,851**	**$ 57.38**	**$ 35,982,768**	**$ 5.35**	**5.808**	**0.510%**
C.S. SWENT Equivalency	**627,096**	**237,851**	**$ 36.11**	**$ 22,645,322**	**$ 3.17**	**3.655**	**0.321%**
Colo Stormwater Enterprises - Average Bill	**627,096**	**237,851**	**$ 52.17**	**$ 32,717,847**	**$ 4.58**	**5.281**	**0.464%**

Applying the Front-Range municipal average per capita spending of $57.38 to the estimated population of El Paso County yields approximately $36 million annually for stormwater management. If that amount was generated through the use of stormwater enterprise fees and assuming non-residential land uses contribute about 58% of the total funding, the average monthly cost per residential household (single-family and multi-family) would be about $5.35. If a property tax was used as the means of generating the requisite amount of funding, a mill levy of 5.808 mills would be necessary. Similarly, if a countywide sales tax was the preferred means, a sales tax of just over a half cent per dollar of sales would be necessary.

The former Colorado Springs Stormwater Enterprise (SWENT) was used as another point of reference. The enterprise, only within the City of Colorado Springs, generated funding of $36.11 per capita in its last year of operation in 2009. That level of funding would raise $22.6 million per year if applied to all of El Paso County. A third benchmark examined was the average monthly bill paid by residential customers in 17 stormwater enterprises in Colorado. While this data is from a 2006 survey, the data still provide a useful comparison. With residential households paying about $4.58 per month, and assuming non-residential uses contribute about 58 percent of the total funding, annual funding of $32.7 million would be raised in El Paso County.

Finally, it is estimated that there are more than 500 stormwater utilities now in operation across the country. According to the EPA, the average monthly fee for a single family home is $3.67, with some communities charging as little at $.67 per month, while others charge more than $13 per month per single family home.

While the tolerable level of funding for households will vary from community to community based upon incomes, total tax burden, the perceived value of waterway preservation (including recreational attributes), one must also consider tolerances among the different non-residential users. For purposes of the analysis above, it was assumed that non-residential users contribute about 58% of any stormwater enterprise fees paid. That is the same proportion of total fee revenue actually paid to SWENT by non-residential users. Nationally the non-residential share appears to range from 40% to 70% of the total. The shared total price is especially relevant when some sectors like churches are attuned to paying little or no taxes, yet can be significant generators of stormwater due to large areas of impervious areas that are designed to meet parking and attendance capacities one day a week.

Potential Funding Mechanisms

Stormwater management is typically funded by local governments through a combination of primary and secondary methods. Primary methods have the capacity and flexibility to provide funding for the bulk of the stormwater program. Secondary funding methods are used to enhance equity and simplicity, as well as generate incremental funding. The secondary methods typically have conditions and limitations (legal, practical, political) restricting their use to funding specially targeted components of a stormwater management system.

Primary Methods

- **General revenue appropriations**
- **Property Taxes**
- **Sales and Use Taxes**
- **Stormwater user (service) fees**
- **Bonding for capital improvements**

Secondary Methods

- **Special assessment/fee on water & wastewater Utilities**
- **System Development charges (capitalization recovery fees)**
- **Special assessment districts**
- **In-lieu of construction fees**
- **Impact fees**
- **Federal and state funding opportunities (grants, loans)**
- **Recreation user fees**

A candidate list of funding options for consideration in addressing the stormwater funding needs in the Fountain Creek Watershed was developed including a number of primary methods and several secondary methods. These candidate lists were developed as a result of research of typical funding methods employed by local governments along with an examination of new trends in stormwater funding throughout the nation. The funding options were then compared to current Colorado statutory and constitutional requirements/limitations and pared down as necessary. The primary and secondary methods are listed in the tables above.

As mentioned previously, many of the factors and circumstances cited earlier in this report as contributing to the stormwater funding challenges in the Fountain Creek Watershed are not unique to this region, or to Colorado. The national trends have all combined to spawn a wave of creativity in addressing stormwater needs.

The new approaches involve less direct governmental participation and intervention and a movement away from the use of large publicly owned/operated/maintained stormwater facilities and solutions. Rather, they are methods that utilize market forces, encourage individual accountability and actions to mitigate storm-water run-off, and provide incentives/disincentives to encourage changes in behavior and practices.

From the perspective of local government, many of these approaches are best described as "cost avoidance" in that they can serve as a means of helping achieve regional water quality and flood control goals by reducing the need for stormwater management services provided by local governments. The "outside the box" or emerging methods include:

- Environmental tax shifting ("Pay to Pave" tax or fee)
- Market-based approach - "Cap and Trade" system
- Development incentives for Low Impact Development (LID)
- Tax Credits/Rebates and installation financing
- Awards and recognition programs

In addition to the emerging methods, policy makers should be cognizant of broader emerging trends in public/private initiatives whereby the public sector establishes desirable outcomes rather than prescriptive regulations. Such an approach holds promise in achieving objectives at a lower total societal cost as the private sector will pursue innovative cost saving approaches to achieving the desired end. An outcome based approach does require greater collaborative efforts on the front-end, but the payoff can be substantial as new, more efficient and effective solutions are always possible instead of long-standing, inflexible design requirements. Some public infrastructure design requirements from the past are now resulting in unintended consequences by rapidly channeling stormwater into waterways and actually represent a significant part of the stormwater and watershed infrastructure replacement cost. Given stormwater management is a relatively new public good at the local level, policy makers should anticipate innovation. For instance, redevelopment of old neighborhoods that have become economically obsolete can embrace higher density development and more green areas for water retention as well as recreation.

For a complete description of funding mechanisms see Appendix B.

Funding Equity

An important consideration in the evaluation of the various funding mechanisms for stormwater management is whether they are equitable. In other words, are the benefits accruing to those who pay? Each of the funding mechanisms considered in this analysis have different levels of equity associated with them. While tax equity is a much debated topic, in the case of stormwater management, equity is pretty straightforward. An equitable solution is one where everyone pays their proportionate share of the total cost based upon how much they contribute to the problem.

The national pursuit of stormwater enterprises charging land owners a "fee" based upon impervious surface exemplifies efforts of economists and engineers to equitably allocate the cost of stormwater management. Unfortunately, it represents a new approach that most property owners are totally unfamiliar with. Hence, equity must be weighed against simplicity and clarity. It is certainly simpler to levy incremental taxes or reallocate funds from the general fund to pay for the public good. But such approaches can be far less equitable.

For instance, if viewed from the perspective of cost recovery, a property tax is not the most equitable approach to recovering stormwater management costs. A property tax dedicated to stormwater would not be paid by governmental properties, schools, colleges and universities, and certain non-profit agencies and businesses. Additionally, property taxes are based on assessed property value. The amount of stormwater runoff created by an individual property is not necessarily related to the assessed value of the property. For example, some land uses including parking lots, warehouses, discount retail stores and other properties may have very large amounts of impervious surface that greatly impact stormwater runoff. Yet, these uses having relatively low assessed values would likely not be paying their fair share.

Sales and use taxes are the largest revenue generator for municipalities and counties in Colorado and are typically viewed by taxpayers as being fair and equitable. Yet, there is very little nexus between the level of taxable consumption and sales taxes paid by a household and the amount of stormwater runoff it creates. Additionally, the use of sales taxes to fund stormwater management may actually serve to shift a disproportionate share of the burden of paying for stormwater management onto households and away from the owners of non-residential properties that generate a large share of stormwater runoff.

Stormwater utility fees also offer a more equitable system for raising revenues by basing fees on actual runoff impact, rather than property value, household consumption or water usage. Under a stormwater utility fee system, governments, non-profits, and other tax-exempt entities that contribute to stormwater runoff are generally treated like all other properties. Further, stormwater utility fees have the potential to positively affect behaviors, especially when fees are based on impervious surfaces or a system of credits are put into the system that reward property owners that implement on-site measures to reduce their stormwater runoff.

Yet, in designing stormwater fees, equity must also be weighed against simplicity and clarity. A stormwater utility fee rate structure might be highly equitable in terms of assigning costs according to service demands, yet still be deficient politically if it is too complex for the public to grasp the linkage between service, costs, and charges. Simpler rate structures are preferred as they are typically less expensive and burdensome to administer and usually result in a higher level of customer acceptance. But care must be exercised in the design of the structure to ensure it can meet established legal standards for the definition of utility fees.

Assessing the Viability of Funding Mechanisms

Whenever an effort is made to develop new financing concepts for a function as complex as stormwater management, there needs to be some basis established for evaluating and judging the appropriateness of the various options under consideration. The American Public Works Association's (APWA) seminal training manual "Designing and Implementing an Effective Stormwater Management Program" included a set of criteria that it utilized in evaluating the viability and effectiveness of the use of general tax revenues as compared to use of a stormwater utility. Those seven factors, listed in the adjacent table, are still timely and applicable for use in evaluating the various funding options identified for consideration in funding stormwater management within the Fountain Creek Watershed. All of the factors were given equal weight when assessing which funding mechanisms are most desirable. For a detailed description of the criteria or factors used for assessment, along with the scoring methodology, see Appendix C.

KEY FACTORS IN ASSESSING THE VIABILITY OF FUNDING MECHANISMS FOR STORMWATER MANAGEMENT

1. What is the political acceptance of the funding method?
2. Is it equitable? Are the benefits accruing to those who pay?
3. Is it feasible to implement?
4. Is it relatively easy to administer?
5. Is it legally defensible?
6. Can it generate sufficient funds to get the job done?
7. Will it provide a dedicated source of funds or will others be competing for the same dollars?

There are five funding options that rate very well against the evaluation criteria: Property Taxes, Sales Taxes, Bonding, Federal/State grants, and Recreation Fees. Of those five, only Property Taxes, Sales Taxes, and Bonding have the capacity to generate funding large enough to make a serious dent in the backlog of stormwater management needs in the Watershed. While those three have high funding capacity, they each have low political acceptance and equity. The remaining two (Federal/State grants and Recreation fees) have high political acceptance but low funding capacity.

That dichotomy is also generally evident when all of the 17 funding options are considered. Among the seven funding options having a high political acceptance, six have low funding capacity. This can be seen in the following table summarizing the evaluations prepared for each of the 17 funding options.

SUMMARY OF EVALUATION OF POTENTIAL FUNDING SOURCES

	Evaluation						
Funding Source	Political acceptance	Equity	Feasibility	Easy to Administer	Legal Structure	Funding Level	Dedicated to Program
General Revenue Approp.	H	M	H	H	H	M	L
Property Taxes	L	L	H	H	H	H	H
Sales Taxes	M	L	H	H	H	H	H
Stormwater Fees	L	H	H	M	M	H	H
Bonding	L	M	H	H	H	H	H
System Dev. Charges	H	H	M	M	H	L	H
Special Assess Districts	M	H	L	L	M	L	H
In-lieu of Const. Fees	H	H	M	M	H	L	H
Impact Fees	M	H	M	L	M	L	H
Fed/State Grants	H	H	H	M	H	L	H
Rec. User Fees	H	H	H	M	H	L	H
Special Assess/Fee on Water Util.	L	M	H	H	M	M	H
Pay to Pave Tax or Fee	M	H	M	M	M	L	H
Cap and Trade system	M	H	L	L	M	L	H
Dev. Incentives	H	H	M	M	M	L	H
Tax Credits/Rebates	H	H	M	M	H	L	H
Awards & Recognition Program	H	H	M	M	H	L	H

Note: "H" = High; "M" = Medium; "L" = Low

Funding options having the lowest combined ratings included special assessment districts, a Cap and Trade system, and impact fees. As noted previously, each of the seven evaluation criteria in this analysis has been assigned equal weight. Giving heavier weight to any category, for example political acceptance, could easily result in an outcome and conclusions very different from those discussed above. This exercise is somewhat subjective. However, it does provide additional insight and understanding of each of the funding options and their relative strengths and weaknesses.

The above table also offers some perspectives on hybrid funding strategies that might be developed. For example, could those funding options having a high level of political acceptance but low funding capacities by themselves be combined, or blended into a package of funding options? Or, alternatively, could a small property tax mill levy be combined with that same package of funding options to offer a package that would have appeal to voters and possess the capability to substantially fund stormwater?

Taking the analysis further, the list of potential funding sources was narrowed down to include funding sources that rated well against the seven criteria, and have the capacity to generate revenue sufficient to make a serious dent in the backlog of stormwater needs in the FCW. This analysis produces four viable funding mechanisms: property tax, sales tax, general revenue appropriations, and stormwater fees. Of these, none have high political acceptance due to expressed political preferences among the electorate. It has been several decades since a property tax increase has passed, except at the school district level. The stormwater fee approach was rejected by the Colorado Springs City Council in 2009, and the general fund approach does not advance the cause beyond its current status unless the various governmental entities change their priorities or are forced to by outside regulatory agencies or the courts. Only sales tax increases have a history of voter approval in the region, albeit with sunset provisions whereby the tax ceases after a defined period of time unless extended by the electorate.

The bottom line is any significant funding mechanism must involve extensive community education and deliberation to dramatically increase awareness and gain the public support necessary to become a sustainable solution.

Local Preferences

As part of the research conducted for this study effort, a total of 20 community leaders and technical experts were interviewed. Additionally, two focus group sessions were conducted with the Technical Advisory Committee and the Citizens Advisory Group of the FCWD. There was strong consensus regarding the following:

- A comprehensive regional solution is preferred;
- All jurisdictions MUST participate on a reasonable basis – no free riders allowed;
- A simpler and cheaper to administer approach is preferred;
- Solutions should create incentives & promote innovation;
- Strong community support, and probably a vote of the people, is required regardless of the funding approach utilized;
- Meeting federal, state, and local mandates and commitments such as the 1041 permit associated with the Southern Delivery System are of primary importance

For a complete summary of input received through the interviews and focus groups see Appendix D.

Organizational Structures

The identification and selection of the best mix of funding sources is important in addressing the stormwater funding challenges within the Fountain Creek Watershed. But the identification and selection of the best organizational structure to implement and administer those funding sources is also a critical piece of any solution. Considerations of operational efficiency, legal limitations and constraints, political control, and the achievement of larger goals such as regionalization of stormwater management are just some of the many factors in selecting the optimum organizational structure.

Stormwater management services are usually provided directly by municipalities and counties or under their umbrella as a standalone stormwater utility or as a part of an existing water/wastewater utility enterprise. As a public good, storm drainage and flood control have, since colonial times, traditionally been the responsibility of local governments. Federal and state MS4 (Municipal Separate Storm Sewer Systems) permit requirements and regulations have also served to solidify the role of municipalities and counties in providing stormwater management services. An MS4, by definition, is a stormwater runoff conveyance system owned by a state, city, town, village or other public entity that discharges to waterways. The U.S. Clean Water Act requires the operator of an MS4 to obtain an NPDES permit. However, that doesn't prevent the owners of such conveyance systems from transferring ownership or delegating management responsibility of the system to other entities like a special district or regional stormwater entity.

There are seventeen MS4s within the watershed that maintain NPDES permits. These range from El Paso and Pueblo Counties, to cities, metro districts and even school districts and universities. In addition to these local governmental entities, the FCWD has begun to provide stormwater and flood control services through its various demonstration projects in Fountain Creek. As a regional district, however, the FCWD has broad powers and authority to serve a much larger role in providing stormwater runoff and flood control services on a regional basis.

Regional solutions to stormwater management, however, are not the norm in much of Colorado with two notable exceptions in the Denver metropolitan area. Those exceptions being: 1) the Urban Drainage and Flood Control District (UDFCD) that encompasses 7 counties and 32 incorporated cities and towns; and 2) The Southeast Metro Stormwater Authority (SEMSWA). Both of these approaches have gained national recognition and attention -- UDFCD for its long running success and regional cooperation for over 40 years, and for creativity in the case of SEMSWA. Both are successful regional models for providing stormwater infrastructure and maintenance and contain many characteristics and practices worthy of consideration in designing a regional structure within the Fountain Creek Watershed. A description of how each is structured and operates is presented in Appendix E.

In total there are 73 different kinds of local governmental entities allowable under the Colorado constitution and statutes. A total of 9 are authorized to provide some or all of the elements of a fully functioning stormwater management system. These include:

- Counties
- Municipalities (cities, towns)
- Metropolitan Districts
- Drainage Districts
- Special Improvement Districts
- Urban Drainage and Flood Control Districts
- Conservancy Districts (flood control)
- Authorities (intergovernmental contract)
- Regional Service Authorities

These 9 types of local governments are the universe of candidates that can be considered to implement and administer the funding options previously identified.

After a review of the authorizing statutes for each of the nine candidate structures, four of the candidate entities were dismissed from further consideration. First, the use of metropolitan districts was ruled out due to statutory requirements governing their formation. Specifically, the authorizing county or city must make a series of definitive findings regarding the need and sufficiency of the services to be provided by the district. It is not likely possible that the board of the authorizing local government will be able to make those findings given that stormwater management services are already being provided by local governments within the likely boundaries of such a district. Drainage districts were ruled out as they appear to be only applicable to agricultural land uses. Similarly, conservancy districts for the purpose of flood control were also removed from further consideration because they also are only applicable to agriculture. Special improvement districts

were eliminated from consideration given that they only allow the use of special assessments as a means of revenue generation. Special assessments are only practicable in relatively localized or specific applications.

This leaves five local governmental entity types for further consideration.

- Municipalities: Responsibility for all stormwater management services could stay with each individual municipality in the watershed.
- Counties: Each of the two counties in the watershed could assume a larger role in the funding of stormwater management in their respective county.
- Regional Service Authority (RSA): An alternative to counties assuming a larger leadership and accountability role in stormwater management would be the formation of an RSA for stormwater management. The boundaries of an RSA must include, at a minimum, all the territory of at least one county and can include additional counties so long as each county has some contiguity with another county within the authority. Yet, the process for forming an RSA is quite complex and cumbersome.
- Urban Drainage and Flood Control Districts: The FCWD is in this category and is already in place and operating. The FCWD could assume a role in its watershed that is similar to the role the UDFCD fulfills in the Denver metropolitan area. Under this alternative, the FCWD would actually be fulfilling the role envisioned in the enabling legislation for the District.
- Regional stormwater authority: Such an authority could be created through the adoption of an authorizing IGA by all, or some of the MS4 local governments in the region. Under the IGA, the member local governments would essentially be delegating some or all of their stormwater management duties and responsibilities to the authority. The authority could operate like a stormwater enterprise by collecting stormwater service fees.

See Appendix F for a more detailed description of each governmental entity.

There is one other alternative organization structure for the provision of stormwater management services and infrastructure. That alternative would be to relocate the management, operation and revenue raising responsibilities for stormwater management from the City of Colorado Springs to Colorado Springs Utilities (CSU). On the surface, such an organizational shift may seem to be straightforward and desirable. CSU has tremendous organizational capacity to accept the operational aspects of stormwater management and would likely be able to provide services at a lower marginal cost given the economies of scale and existing technical capabilities it already has in place. The primary problem organizationally with this alternative is that it is not regional in nature. CSU would simply be replacing the City's general municipal government in providing municipal stormwater management services.

While each of the six organizational structures described above could accomplish the basic goal of delivering stormwater management services within the Fountain Creek Watershed, there does not appear to be an optimal structure. Each has its strengths and weaknesses. If a regional solution to the stormwater funding problem takes precedence, then the municipal and CSU options should be removed from the table unless coordinated with other regional structures. If ease of establishing the organizational structure is considered a priority, then the RSA option should be dropped from consideration given the complex and cumbersome

statutory process for their formation. That leaves three candidate organizational structures able to assume responsibility for providing stormwater management services on a regional basis:

- ✓ **FCWD**
- ✓ **Counties**
- ✓ **Regional Stormwater Authority**

INTEGRATED FUNDING OPTIONS

The three organizational structures/entities having the capability of providing stormwater management services and infrastructure on a regional basis were compared against the various funding mechanisms they are able to implement under current Colorado statute. As presented below, the resultant matrix shows that counties have the ability to implement the full range of funding mechanisms considered in this analysis. It is noteworthy that counties can impose, with voter approval, either a property tax or a sales tax dedicated to stormwater management. They can also form stormwater enterprises and collect stormwater fees and charges.

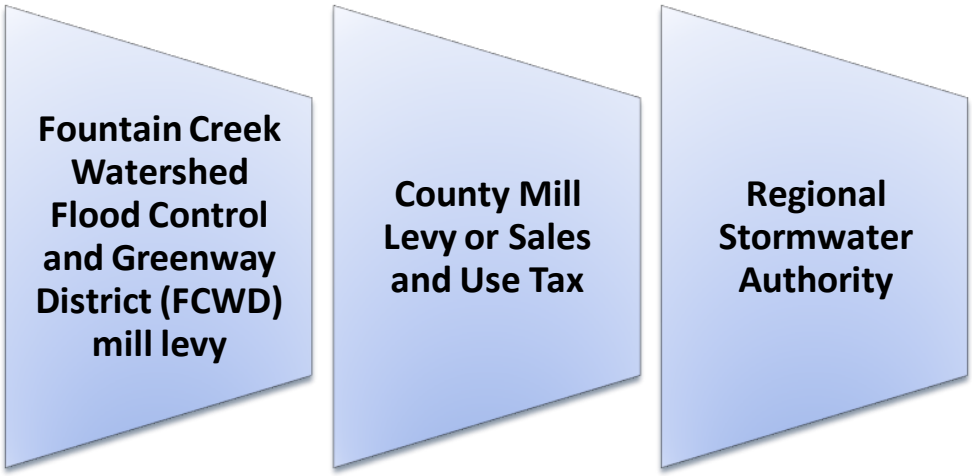
Urban drainage and flood control districts, like the FCWD, can impose a property tax, with voter approval, but have no legal authority to impose a sales tax. They also have the legal authority to collect stormwater fees, but only within the watershed management area of the district. They also have statutory authority to implement only some of the secondary and "out of the box" funding sources considered in this analysis. Those include special assessment districts, impact fees, Federal and state grants/loans, recreation fees, and awards and recognition programs.

Except taxes, the funding mechanisms that can be implemented through a regional stormwater authority are only limited to those that can be imposed by the authorizing local governmental entities and specified in the authorizing IGA. Local governments cannot delegate or transfer their rights to impose taxes through an IGA. The authority could operate like a stormwater enterprise by collecting stormwater service fees as well as system development and in-lieu of construction fees from new development.

ENTITY	FUNDING MECHANISMS					
	Property Tax	Sales Tax	General Revenue Approp.	Stormwater Fees	Secondary Revenue sources	"Out of the Box" Sources
Urban Drainage and Flood Control Districts	YES	NO	YES	PARTIAL	PARTIAL	PARTIAL
Counties	YES	YES	YES	YES	YES	YES
Regional Stormwater Authorities	NO	NO	YES	YES	YES	YES

Three Funding Scenarios (General Options for Consideration)

As a result of the analysis described above, three general approaches for addressing the stormwater funding challenges are offered for consideration and discussion. Each of the three options offers a regional approach to stormwater management and appears to have the capacity to generate revenue sufficient to address the backlog of stormwater needs within the watershed. The options are:



These three options are offered as merely a starting point for a broad community discussion and dialogue regarding potential solutions to stormwater funding in the Fountain Creek Watershed.

Each of the three funding scenarios, purely by chance, has a primary funding source different from the other two. The FCWD option is funded through a property tax. The County funding option could be either a sales tax or a property tax, although the sales tax would be clearly the preferable of the two given voter preferences in the region. While the regional stormwater authority option is essentially a stormwater enterprise funded through a user fee. These funding scenarios provide a broad breadth of options that should serve to stimulate a useful and productive community dialogue.

For further discussion of the alternatives, along with some possible permutations, see Appendix G.

Municipal Options for Funding Stormwater

Given that roughly two-thirds of the estimated backlog of unfunded stormwater management needs in the Fountain Creek Watershed is attributable to the City of Colorado Springs, some funding alternatives available to that municipality were also developed. Those alternatives are described in Appendix H. It should be noted, however, that none of the municipal options described in that Appendix do anything to further the goal of regionalization of stormwater management except when paired with other regional funding options.

PURSUING THE CHALLENGE

The three funding scenarios described in the previous section are offered as general approaches for addressing the stormwater funding challenges being faced by local governments in the Fountain Creek Watershed. They are offered as a foundation, or jumping off point, for further community dialogue, discussion, and deliberation for decision-making regarding the best approach to address the backlog of stormwater infrastructure and maintenance needs accumulated over the last four decades.

Regardless of the approach ultimately chosen, it must gain the support of the electorate in order to generate the substantial funding needed to meet the challenge on an ongoing basis. Whether from taxes or fees, the general funding parameters which appear acceptable along the Colorado Front Range and throughout the nation are based on pricing of $2.50 to $5.00 per household per month with the funds generated from households totaling between 30% and 60% of the total funding necessary. The balance of the funds must come from pricing to the commercial, non-profit, and public sectors, along with user fees, grants, and other means. These prices translate into roughly 3 to 7 mills in property tax or .5% to .6% increase in sales taxes depending upon the mix of funding used.

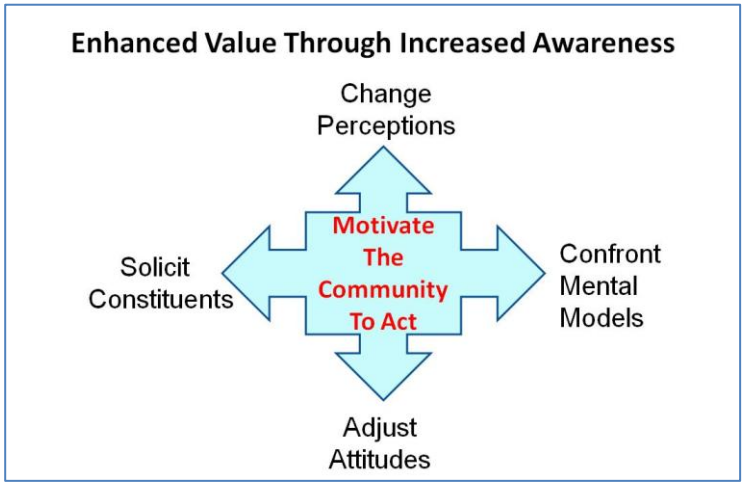
Choosing to do nothing or refusing to act represents the current state of affairs in El Paso County. A continuation of this direction will lead to growing jurisdictional conflicts both within the County and between County public jurisdictions and State and Federal agencies. At some point in time what is now an emerging conflict will become manifest through regulatory enforcement and/or litigation. In addition, continued deterioration of public infrastructure within the waterways will lead to more costly repairs and replacements down the road and will discourage new investments in recreational amenities if the investments will be vulnerable to the first flood event.

A good way to think of the Fountain Creek Watershed is as an unfunded liability. Without funding the liability simply grows. How fast will the liability grow is one question, as is the actual size of the current liability. Based upon current estimates it appears the current liability is manageable if funding begins. Perhaps the best way to think of the FCW is as an asset to be developed. The vision of a grand regional recreational asset with trails, riparian wildlife refuges, and even water sports such as canoeing, kayaking, and tubing has significant long-term appeal.

The Goal

The ultimate goal is to achieve strong support of the Fountain Creek Watershed residents and organizations in order to adequately fund capital investment, repairs, maintenance, and administration of the watershed. The community must be motivated to act. In essence they must perceive greater value in order to pay the price. This is achievable through greater awareness of the issues.

This goal requires changing perceptions of many citizens. Generally, if perceptions change, attitude adjustments follow along with value associations. This requires the solicitation of constituents at all levels of support and confronting people's mental models of stormwater and watersheds, which are likely to be only moderately developed as opposed to ingrained and intractable.



Based upon interviews conducted with community public and private officials it is very clear that strong support is required and the need for a community vote appears desirable, and is probably a requirement given many of the funding options involve either taxation or "back door taxation" through higher fees charged by public enterprises such as water utilities and districts. A successful election campaign with a strong margin of victory will be the ultimate barometer of success.

Within this framework there are four dimensions for meeting the challenge:

1. Turn what is viewed as a liability that has to be paid for into an asset worthy of investment and maintenance. The long-term creation of a regional recreational amenity is worthy of consideration under this dimension. To the degree that the vision of a recreational amenity assists in furthering the cause, any recreational investment is not sustainable without basic flood control investment and repairs and maintenance.

2. There is a watershed ethic which mandates upstream and downstream communities work together to provide a safe and healthy watershed. The reluctance of many communities throughout the United States to implement the watershed ethic, regardless of the reason, is likely to continue, leading to heightened enforcement efforts by the EPA – either directly or channeled through State governments. The community needs to decide whether it wants to address the issue on its terms or the EPA's terms.

3. In return for securing fresh water to better assure the future supply to El Paso County communities and to support growth, Colorado Springs and other SDS partners committed to certain stormwater management standards.

4. Failure to address stormwater needs results in high safety and infrastructure costs. Flood events can result in significant property damage to bridges, pipelines, roads, embankments, and other infrastructure or property, as well as pose a risk of personal injury, or in extreme cases, death.

Stakeholders & Constituents

There is significant support for active stormwater management among a broad base of leaders in the FCW. They understand the fundamental challenge. In addition there are numerous natural constituents who should identify with the challenge. These range from those entities such as the Air Force Academy who directly bear the cost of inaction to groups such as Trout Unlimited. Developers, metro districts currently reliant on ground water, and the business community in general who intuitively understand the economic cost of water shortages all have vested interests in achieving the goal. Some people will also support managing stormwater and maintaining the watershed simply because "it's the right thing to do". With a reasonable goal and a broad base of support that simply needs greater awareness, moving forward to change perceptions and attitudes among the electorate in general is clearly achievable through a well designed and implemented public process.

Natural Constituents

- Downstream Cost Bearers
- Riparian Ecosystem Advocates
- Recreationalists
- Drought Intolerants
- Aquifer Drinkers
- Streambed Investors
- Moralists
- Contract Committers
- Land Transformers
- Job Creators

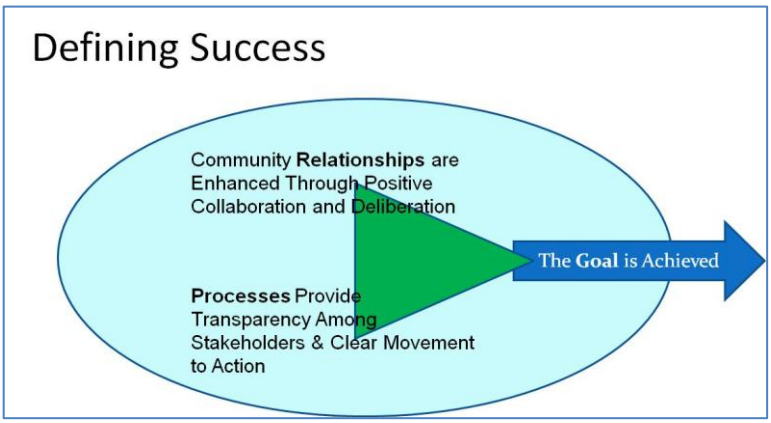
Public Process – A Communications Exercise

Public Process seeks the input and guidance of the public to improve the design and implementation of important projects. The form it takes depends upon the objectives of the leadership in crafting and implementing projects, processes, products, and programs. In this sense, a public process can be thought of as a communications program that seeks to gather and disseminate information, as well as inform, persuade and influence the public

When the private sector undertakes market research to improve a product launch, it is essentially engaging in a form of public process where public input is sought to assure that the right product is offered, the promotional campaign is effective, prices are set to maximize long run profitability, and the product is offered where and when the consumer wants it. Similarly with public goods, politicians and staff may engage in town hall meetings to seek public input concerning the services needed, and in some cases seek extensive public input and education to better inform decision makers of what product, price, promotion and distribution strategy will be most effective. In other cases only a limited amount of input is needed and the focus is on informing the public of the existence of the service.

Ideally the public process depends upon the project's goals and the information flow required between the stakeholders and leadership. In reality the ideal is often distorted by other leadership and stakeholder agendas and by an ad-hoc process that is typically poorly planned and implemented. Even when the process is planned, the adage "be careful what you ask for" is relevant as the opportunity exists for stakeholders to provide input that will impact expectations, perceptions and attitudes in ways that may not maximize the chances of success for overall objective.

Given that effective communication is the key element to influencing expectations, perceptions, and attitudes; the communication effort is critical in establishing effective long-term, continuous relationships between Stakeholders and Leaders.



In the case of developing a stormwater mechanism for the Fountain Creek watershed, the public process needs to pay heed to lessons learned from the past. Given the false start of the Colorado Springs SWENT, one might even view a well designed and implemented process as being a trust building exercise for the future of the community's political and leadership systems. In this sense, even if the process falls somewhat short of achieving the ultimate stormwater goal, it can still be highly successful in enhancing community trust as part of laying a foundation in the community for what appears to be a growing trend towards participatory as opposed to representative democracy. Lessons have been learned from both the successes of some funding efforts in the Pikes Peak Region, as well as failures in the region. This White paper draws from those lessons, and are incorporated into the recommendations. Additionally, the experience of other communities in addressing stormwater is also valuable, and has also been included in this White paper.

The strategy and tactics outlined in the following pages are based upon a review of both the successes and failures in prior El Paso County initiatives to increase taxes for specific purposes, as well as from interviews with other communities who managed to get electoral support for stormwater initiatives.

Lessons from the Past

In November, 2009, the Colorado Springs electorate passed Proposition 300 which the proponents claimed required the City to eliminate the Storm Water Enterprise (SWENT). While many felt the need to close SWENT was legally debatable based upon the ballot language, the City Council concluded such closure was the intent of the proposition which had become popularly known as the proposition to kill "The Rain Tax". Many proponents felt SWENT was a "back door" tax created by the City Council and funded through fees in order to avoid going to the electorate for vote on a tax increase to fund stormwater management and mitigation.

While Proposition 300 appeared to be a referendum against "The Rain Tax", assuming its passage means majority support for stormwater and watershed management is unattainable in El Paso County could be a fallacy. The proposition passed by a margin of 55% for to 45% against. Furthermore, it passed in an environment marked by the worst national recession since the Great Depression as well as an initiative to increase property taxes put on the ballot by City Council to compensate for declining sales tax revenues due to the recession. When the unavoidable macro-economic times are combined with the public's frustration over a relatively

complex fee system based on the square feet of impervious surface, questions regarding how money was being spent, and the lack of a thorough public education process (and possibly even a vote), the demise of SWENT might have been anticipated in a fiscally conservative community.

There have also been successes in public process from which important lessons can be learned. What might have happened under different circumstances such as normal economic times, an understandable issue, and a simple pricing or taxing scheme? A review of the last four taxes passed by the electorate can provide insight into the prospects for support if the process used is different.

The table below lists the last four significant tax increases passed in Colorado Springs or El Paso County. All of them are sales taxes with sunset provisions. Before being put on the ballot, all of the initiatives went through an extensive citizen-led dialogue, education and deliberation process. There was strong support from a wide spectrum of the business community and the initiatives had champions for the cause. The major lesson that should be learned is that tax increases in El Paso County require an extensive and patient education and empowerment process. It appears one must "go slow to go fast". In other words, efforts to run to the ballot without the electorate having a clear understanding of how their money will be spent is likely to meet rejection.

Past Successes - TOPS, SCIP, PSST, PPRTA

- ☑Citizen empowerment
- ☑Citizen-driven – Politician Supported
- ☑Coordinated bottom-up and top-down community deliberation process
- ☑Establishment of a core constituency and coalition (TOPS and PPRTA)
- ☑Support from all business groups
- ☑High profile "champions" of the cause
- ☑Unanimous support of key stakeholders
- ☑Local design/contracting industry support (financial and technical)
- ☑Community dialogue, education and deliberation process is complete before moving forward with any ballot question

A detailed Public Process Strategy is presented in Appendix I. It concludes with a specific set of recommended steps to proceed.

In conclusion, we end this Whitepaper with a statement that hopefully will inspire and lead the community and its leadership to move forward to address this critical need: A Call to Action

Call to Action

Now is the time for residents of the FCW, especially Citizens of El Paso County, to clarify and demonstrate their values as a community. While El Paso County and Colorado Springs clearly have a unique political culture, to conclude the community would never support the little known watershed nor the challenges and obligations presented by stormwater runoff, is erroneous. The 2009 passage of Proposition 300 in itself does not support such a conclusion. Given the overall circumstances of the national economy, the new approaches associated with stormwater fees, and the overall process from which the SWENT emerged from 2006 to 2009, the 55% support for Proposition 300 should surprise no one. A battle was lost. Lessons should be learned as the community regroups to push the initiative forward towards an inevitable goal. One way or another the watershed ethic will prevail – either through collaborative, shared efforts or through *force majeure* where an external force exerts itself on the community. A community that prides itself on self-determination, efficient and effective government, and public safety and health should not allow circumstances to rule the day.

There are numerous viable options on the table to create reliable revenue streams to preserve and enhance the Fountain Creek Watershed through stormwater management and investment. This White Paper has highlighted three general regional approaches. To be successful in such an endeavor requires leadership from the public and private sectors, which the research for this White Paper found to exist across the political spectrum.

Focus on the 75% of the active voters and 85% of all potential voters who will at least consider the prospect of watershed preservation and enhancement. Being successful in elevating the community's awareness of the watershed and the challenges presented by stormwater requires embracing the political culture of El Paso County as well as community engagement through an aggressive education program with the specific waterways. Such engagement is necessary to gain a greater awareness of the likely consequences of no action and the opportunities offered by well maintained waterways and watershed infrastructure.

Perhaps the most crucial element in pursuing the challenge is reminding ourselves of the watershed ethic whereby upstream and downstream stakeholders respect one another's private and common interests associated with the watershed and accept the responsibilities of such an ethic. With such respect comes collaboration and the ability to engage in self-determination of watershed governance.

This is the challenge we must aggressively pursue.