

Communicating Budget Funding Solutions with Top Level and Elected Officials to Maintain Pavement Preservation Programs

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ABSTRACT

The value of implementing a pavement preservation program for municipal infrastructure systems is well documented. From a roadway supervisor for a rural county to the Chief Engineer of a State Department of Transportation, all agree that pavement preservation activities are the most effective use of limited budgetary dollars to maintain roadway serviceability. However, top level decision makers are generally not well informed of the extreme benefits of preservation programs. In times of government fiscal crisis and revenue shortfalls, these programs funds can be significantly reduced, temporarily suspended or reallocated. Pavement Preservation Program Managers need to inform the top level decision makers of the key importance of these programs and offer realistic solutions to their fiscal/budget crisis. One funding solution available is a program prioritization analysis. Input is gathered from municipal staff, leaders, and most importantly, the citizens, to rank government programs in order of importance and then split into Priority Tiers (e.g., top 25%, next 25%, etc.). Program budgets can then be realistically addressed. Instead of across the board budget cuts to all programs, lower Tier programs should be impacted before Tier 1 and 2 programs (Transportation services are typically listed in Tier 1). This paper will highlight a case study of how Jefferson County, Colorado, performed a county-wide Program Prioritization analysis in 2008 and addressed their projected budget shortfall with respect to their transportation needs and spending.

KEYWORDS

Pavement Preservation, Budget Funding Solutions, Communication

INTRODUCTION

Spend a dime today or a dollar tomorrow. No truer words are spoken when addressing maintenance issues and long term serviceability of the public roadway system. A pavement preservation program is a cost effective approach to maintaining our existing roadway infrastructure. City Public Works staff, County Road & Bridge staff, and State Department of Transportation staff all know the benefits of properly funding, implementing and maintaining a pavement preservation program. However, authorization of pavement preservation program budgets can sometimes prove to be the most difficult aspect of the program to implement. Typically, the program budget must be first approved by a Finance Director or Accounting Department, then forwarded to the City Manager before being presented to a group of elected officials (e.g., City Council, County Commissioners or the State Budget Committee) for final approval. In general, the people who control the overall effectiveness of a pavement preservation program by

determining the budget, have no technical expertise or experience relating to pavements, and in turn, can make poor uninformed decisions, significantly impacting the service and performance of the pavement infrastructure system. Poor decisions made at the top level can significantly set back a municipal transportation department by putting the program in a budget hole, making it virtually impossible for the roadway staff to improve the current condition of the system, but also to even maintain the current pavement condition.

With budget shortfalls and across the board budget cuts becoming common place, the ability to communicate the importance of certain government funded programs and funding for roads and bridges is becoming more important. Across the board cuts is one of the easiest ways for governments and municipalities to control their budgets when revenues that are coming in are not as high they were forecasted for the current fiscal year. The impacts of doing across the board budget cuts may have a detrimental effect on the long term performance of public infrastructures, including roads and bridges.

During this time of fiscal uncertainty, communicating to government leaders about the importance of pavement preservation is critical to ensure the public has access to safe and efficient roads today as well as in the future. The ability to communicate the importance of pavement preservation programs is tied to the measurable results of the pavement preservation program. Appropriate budgeting and implementation of a pavement preservation program helps ensure that roads are maintained today to avoid the costly expense of having to reconstruct into the future. The pavement preservation measures taken today help ensure that the public continues to have access to safe and efficient roads today and in the future.

This paper will define a pavement preservation program, summarize funding challenges experienced by state and local municipalities and provide guidelines for communicating the importance of pavement preservation programs to top level decision makers and the public.

DEFINITION OF PAVEMENT PRESERVATION

The U.S. Department of Transportation Federal Highway Administration published a Memorandum (2005) defining Pavement Preservation as follows;

“Pavement preservation represents a proactive approach in maintaining our existing highways. With timely preservation we can provide the traveling public with improved safety and mobility, reduced congestion, and smoother, longer lasting pavements.

...The distinctive characteristics of pavement preservation activities are that they restore the function of the existing system and extend its service life, not increase its capacity or strength.

An effective pavement preservation program will address pavements while they are still in good condition and before the onset of serious damage. By applying a cost-effective treatment at the right time, the pavement is restored almost to its original condition.

A Pavement Preservation program consists of three components: preventive maintenance, minor rehabilitation (non structural), and some routine maintenance activities.

..., Preventive maintenance is a strategy of extending the service life by applying cost-effective treatments to the surface or near surface of structurally sound pavements.

Minor rehabilitation consists of non-structural enhancements made to the existing pavement sections to eliminate age-related, top-down surface cracking that develop in flexible pavements due to environmental exposure.

Routine maintenance consists of day-to-day activities that are scheduled by maintenance personnel to maintain and preserve the condition of the highway system at a satisfactory level of service.”

PAVEMENT MANAGEMENT FUNDING CHALLENGES

In times of economic downturn, city, county and state budgets are faced with significant budget shortfalls in tax revenue due to decreasing property taxes, decreasing personal income taxes and reduced sales taxes. A summary of the top state projected budget shortfalls for 2009 are presented in Table 1.

Table 1. 2009 Projected State Budget Gaps

California	\$22.2 billion
Florida	\$5.1 billion
Arizona	\$2 billion
Nevada	\$1.2 billion
Rhode Island	\$430 million

Based on projected state tax revenues, 31 states will face a minor or major budget shortfall for 2009 which could total upwards of \$53.4 billion. Budget shortfall data for cities and counties across the United States face similar situations. Select city and county budget shortfalls are presented in Tables 2 and 3.

Table 2. 2009 Projected City Budget Gaps

City of Chicago	\$420 million
City of Houston	\$84 million
City of Denver	\$56 million
City of Seattle	\$19 million
City of Miami	\$10 million

Table 3. 2009 Projected County Budget Gaps

Fairfax County, Washington	\$220 million
Dallas County, Texas	\$58 million
Mercer County, New Jersey	\$43 million
Summit County, Ohio	\$13.5 million
Dane County, Wisconsin	\$6 million

With the significant budget gaps in these operating budgets, all areas of service are being impacted, including, education, public safety and transportation. Budgets for

Departments of Transportation (State), Public Works Departments (Cities), and Road & Bridge Departments (County level) have seen overall reductions in transportation budgets (operational and a capital funds) which includes the available dollars for their pavement preservation programs. These funding reductions have resulted in specific challenges associated with determining which government programs to fund.

City and County of Denver, Colorado Challenges

The City and County of Denver maintains approximately 1,900 centerline miles of roadway. As part of the Pavement Management Program, annual pavement condition data is collected, summarized, and presented in an “Annual 6-Year Plan for Pavement Management Summary” (Kennedy, Hager and Williams 2009). The 6 Year Plan is used to establish operational budgets (salaries, fleet, and overhead) and capital budgets (project funds) for the Public Works Street Division.

Analysis of the plan indicates that the City and County of Denver needed a capital budget of approximately \$15 million dollars in 2009 to maintain the condition of the existing infrastructure. The allocated capital budget for 2009 was \$12.8 million, consisting of \$7 million from the Public Works budget and an additional \$5.8 million from a recently passed Mill Levy in 2007, resulting in a budget shortfall of 15%.

Pat Kennedy, P.E., Denver Engineering Street Maintenance Manager stated, “We make an effort to inform our City Council about the importance of preventative maintenance. However, with the turnover of Council members every two years, it becomes a battle to keep them educated. The recent Mill Levy that was passed a few years ago will help because those dollars are targeted specifically for transportation needs. However, the Mill Levy is tied to property taxes and with the down market and deflated property values right now, the additional revenues for the Mill Levy are significantly reduced. We expect the Mill Levy contribution to be even less next year (2010) because the property taxes are collected arrears”.

City of Fort Collins, Colorado Challenges

The City of Fort Collins maintains approximately 470 centerline miles of roadway in their network and resurfaces 25 of those miles under their annual Street Overlay Project. In 2009, the Overlay and Sealcoat Program budget was reduced by \$2 million due to revenue shortfalls. The City staff has proposed to continue the \$2 million reduction into the 2010 budget.

The 2009 budget currently has \$7 million and the city’s pavement has received a ‘B’ grade for overall network performance. According to Erika Keeton, the city’s Pavement Management Program Manager, the operating budget for the Overlay and Sealcoat Program would need to be increased to \$14 million annually to maintain the current 2009 conditions. If funding for the program is kept at \$7 million annually for an extended period, the cost to the city to repair the pavement network could total \$26 million over a ten year period.

JEFFERSON COUNTY, COLORADO CASE STUDY

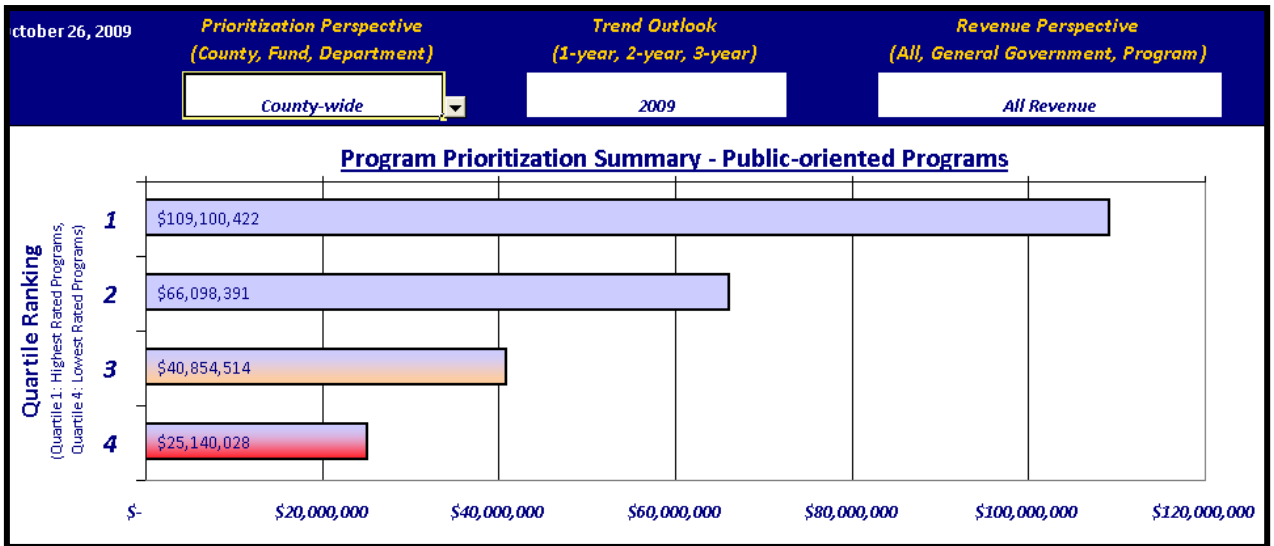
In 2006, Jefferson County, a bedroom community to the City of Denver, Colorado, projected a \$12 million budget shortfall in the general fund (Fabian, Collins, and Johnson, 2008). At that time, governments were starting to realize that budget shortfalls were becoming more common place and that the County's priorities needed to be addressed in order to have a balanced budget. In 2009, the reality is that more government entities are experiencing budget shortages rather than surplus funds to finance public programs, including funds for pavement preservation. Jefferson County addressed their budget shortfall with a forward thinking approach to prioritizing county services.

Instead of implementing across the board budget cuts in 2006, Jefferson County enacted a prioritization program to evaluate which County programs and services best reflected Jefferson County's mission and goals.

The prioritization program consisted of three steps: 1) Getting the right results, 2) Getting the right definitions, and 3) Getting the right valuations (Fabian, Collins, and Johnson, 2008). With a budget shortfall of \$12million, Jefferson County knew that those three steps were critical to determining how to make their budgets work with the funds that were available.

The first two steps of the prioritization process consisted of defining the County's mission and goals. The mission and goals were developed using measurable and achievable definitions for their goals. Two critical components of the first two steps are that the results must be measurable by tangible outcomes (i.e. smooth roads) and the definitions are clearly defined by measurable items (i.e. flow of transportation over a period of time). The third step, involves identifying each program, service and project needing funding and its measurable influence on the mission and goals identified during step one. Input and participation from internal stakeholders such as council members and government leadership and external stakeholders like the public, were involved during the prioritization process.

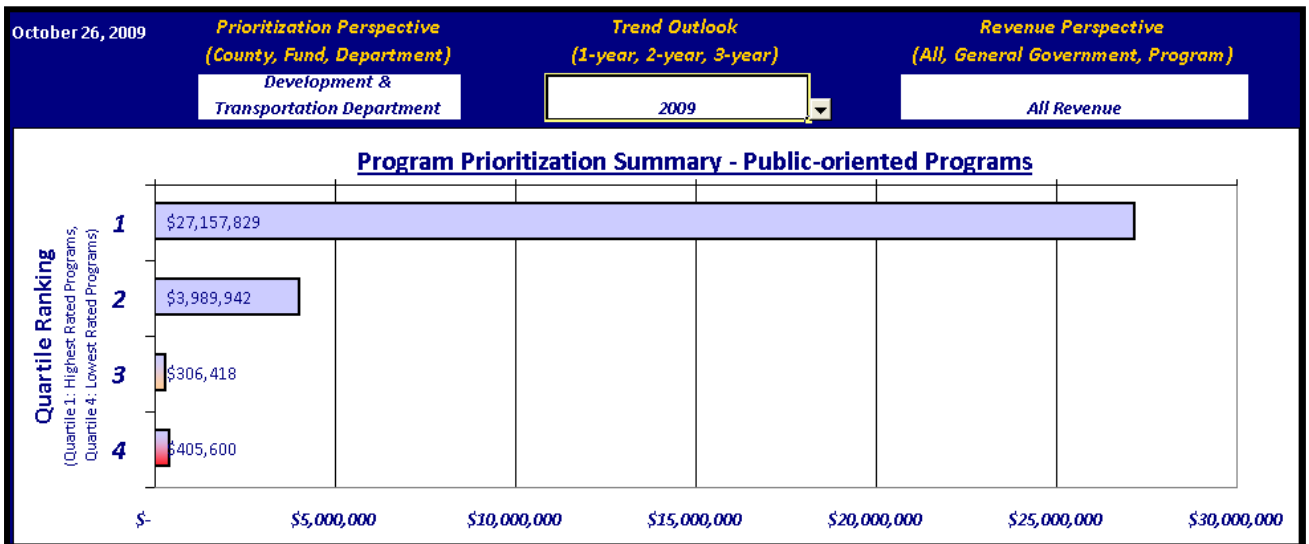
As a result of the prioritization process, Jefferson County's programs and services were ranked numerically from the highest priority to the lowest priority based on the specific program's influence on the mission and goals determined in step 1. After ranking the programs, the programs were further divided into Priority Tier Levels (e.g., top 25%, next 25%, etc.). At this point, the cost to run the programs in each Tier was totaled and graphed in order to see the County's spending profile. An example of a spending profile for all County programs is presented in Figure 1.



**Figure 1 -Prioritization-driven Resource Allocation:
Total County-Wide Spending Profile**

Once Jefferson County determined their spending profile, their program budgets could realistically be addressed. Instead of across the board budget cuts to all programs, the Tier 3 and 4 budgets were impacted before the Tier 1 and 2 programs.

As presented in Figure 2, the majority of the Development and Transportation programs typically fall within Tier 1. Since the majority of the Development and Transportation programs fall within Tier 1, during difficult economic times the Development and Transportation programs should be least impacted by budget cuts.



**Figure 2 - Prioritization-driven Resource Allocation:
Development & Transportation Department**

As a result of Jefferson County’s prioritization program, snow removal was identified as the first priority because it was proven to have the greatest influence on all of the county’s results. Priority number two was Road & Bridge Infrastructure

Maintenance. Priority number three was Highway & Transportation Planning and Inspection. The last ranked county program (ranked # 70) was the cooperative horticulture education program because this program had the least amount of influence on the results identified by the Jefferson County participants.

During the prioritization process, not all of the participants agreed on the importance of the outcomes. The difference in opinions actually helped the prioritization process succeed because the developers were able to gain a better understanding of the impacts and roles of each of the government programs. (Fabian, Collins and Johnson, 2008)

At the end of this prioritization process, according to Fabian, Collins and Johnson (2008), the Jefferson County 2008 budget with a predicted budget shortfall of \$12million, was reduced by \$13.7 million without a single layoff. This was an incredibly successful process, which has led to other governments, cities and municipalities taking advantage of this prioritization process through resources provided by the International City/County Management Association (www.icma.org).

For those communicating their budgetary needs in regards to pavement preservation, this process that Jefferson County underwent is important to the pavement preservation community. Without having measurable and quantifiable results, the community and budgetary decision makers will not see the necessity of maintaining the budget. The measurable and quantifiable benefits will help communicate how a good and accurately funded pavement preservation program will result in cost effective, safe, and efficient roads for the public.

RECOMMENDATIONS ON HOW TO COMMUNICATE THE IMPORTANCE OF PAVEMENT PRESERVATION

Communicating the importance of a properly funded and maintained pavement preservation program may be the most critical component to receiving funding for a successful program. Presenting this information to the decision makers on an annual basis should be a top priority of the program manager. This information needs to be updated and presented annually for two reasons.

First, elected officials serve staggering terms, resulting in annual or bi-annual turnover. This turnover will result in a portion of the City Council or County Commissioners being uninformed as to the importance and cost effectiveness of the program.

Second, the overall status of the municipal roadway infrastructure will change and current system-wide performance data should be used to support the proposed budget requests.

Communicating with Top Level Managers and Elected Officials

Worst first vs. Best first. This is a conversation that all Public Works or Road & Bridge staff has had at one time with an elected official. An uninformed official may become outraged that the staff is spending money on maintaining a street that had just recently been repaired while another roadway that is falling apart does not receive any

maintenance. The elected official is directly accountable to his constituents and is likely feeling public pressure from the perceived misuse of limited maintenance dollars.

It is the program managers' responsibility to inform the top level decision makers that the 'best first' maintenance strategy is appropriate and point out the flaws and ineffectiveness of the 'worst first' maintenance plan. Additionally, a discussion of the significant cost effectiveness of the 'best first' program will likely influence the decision maker to acknowledge benefits of the pavement preservation program.

The program manager should request an annual meeting with the decisions makers (City Council or County Commissioners meeting) to present an overall report on the status of the existing pavement infrastructure outline the effectiveness of the pavement preservation program and justify the proposed budget request. The presentation may include;

- A summary of the makeup of the municipal roadway system, including; current budget, centerline miles to be maintained, inventory and classification of roadway segments (e.g, % of arterials, collectors, and locals).
- A brief introduction on Pavement Management Theory focusing on the cost effectiveness of 'best first' programs vs. 'worst first' programs.
- Results of pavement management analysis (e.g., Pavement Condition Index (PCI) results) and overall rating of municipal system.
- Summary of Work Program developed based on results of pavement management analysis, to include;
 - o Maintenance treatments (crack sealing, surface seal, chip seal, etc.)
 - o Minor rehabilitation (mill & overlay, hot-in-place recycle, etc.)
 - o Reconstruction (partial or full depth)

In order to be successful, the program manager must link the quantifiable and measurable results from programs such as PCI results to the goals and objectives of the municipality. Communicating what this system means to decision makers in very simple terms will help with the success rate of getting requested budgets passed or avoiding across the board budget cuts.

In Ft. Collins, Colorado some proactive City Council members have suggested pulling the \$2 million dollar shortfall for the 2010 budget from the city reserves to continue to fund the Overlay and Sealcoat Program at an appropriate level, thus reducing additional future repair costs. However, other council members and Mayor Doug Hutchinson are reluctant to use the city's reserves to balance the 2010 Program budget. "I do not support going deeper into the reserves (having already used \$2 million, leaving \$5 million). Given the uncertainties of the economy, we need to keep our reserves in good shape." said Mayor Hutchinson. The Chief Financial Officer for the city, Mr. Mike Freeman, echoed the Mayor's comments stating to the city council that he does not support using \$2 million from the reserves to fund the program. This is a common mindset of top level officials and requires constant education about the tremendous cost savings with proactive and preventative budgeting for pavement preservation programs.

Communicating with the Public

The traveling public is the most vocal critic that a municipality must deal with, but at the same time, are the same people that they are serving. As many government

workers have experienced, the public often shows no restraint and will go into great detail about the perceived poor conditions of the pavement system or misuse of budget dollars. Everyone at one time or another has heard public comments about how many street maintenance workers it takes to fill in a pothole. We know these critiques are not generally valid; however, they are the public's perception and therefore must be addressed. Agencies regularly receive angry phone calls from the public voicing their concerns and the program manager and staff must inform and educate the concerned citizen.

In Ft. Collins, Colorado, the Pavement Management Program dedicates a section of their website to public comments and responses from the program manager. One of the comments from the public states "I do not understand why our street was resurfaced when there are several other city streets in much worse condition." The response from the city states;

"Part of what makes your car, your house, and your street last so long is proper maintenance. If an overlay is placed while a street is still in relatively good condition, the street will continue to function properly for many years to come. It is very important to protect the massive investment the city has in the street system, and maintain the good streets before they deteriorate beyond repair. Streets which have deteriorated so badly that they must be completely reconstructed are extremely expensive. In order to address these existing conditions, we spend approximately one half of the overlay budget on maintaining good streets (about 15 miles/year), and the other half reconstructing streets."

One of the best ways to communicate to the public is by creating a direct link from the pavement preservation program to a result that will contribute to one of the missions and goals of the government entity. Ensure that the budgetary need is specific to an outcome that is directly related to the public good. In these terms, the public will generally accept the work that the roadway staff is performing and acknowledge the benefit

SUMMARY

A pavement preservation program is the most cost effective approach for a municipality to maintain their existing roadway infrastructure system. Pavement preservation activities restore the function of the existing pavement and extend its service life, not increase its capacity or strength.

However, within a period of economic downturn and budget shortfalls from the Federal level down to the local municipality, maintaining a pavement preservation program funding presents a real challenge. Most transportation agencies are implementing across the board budget cuts for all services, regardless of the importance or relevance of the service. These budget decisions are typically implemented from the top level elected officials. Generally, these decision makers are uninformed as to the importance and cost effectiveness of pavement preservation programs.

It should be the responsibility of the program manager to inform and educate the decision makers on the status of the local roadway structure and the budget required to maintain or improve the overall system. This communication is critical in order to ensure that the public continues to have access to safe and efficient roads and infrastructure systems in their communities. Due to staggered terms of elected officials, and the

deteriorating nature of the existing pavement and infrastructure, the program manager should inform and educate the decision makers on an annual basis during a report of the pavement infrastructure.

Maintaining a budget for a pavement preservation program in times of economic downturn and budget shortfalls can be done if a prioritization audit is performed for local municipal services. The input from the public, local staff and elected officials, the municipal services can be ranked in order of need and importance. Based on the rankings of the programs, budgets during shortfalls can be more accurately addressed by maintaining top priority programs (e.g., transportation systems) and significantly reducing lower priority programs.

Communicating these issues to the elected officials and the public is critical to maintaining a successful pavement preservation program.

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