DOES GROWTH "PAY FOR ITSELF" THROUGH INCREASED REVENUES OR DECREASED COSTS PER PERSON? An Analysis of the City of Colorado Springs, 1980-2000

Prepared by the Center for Colorado Policy Studies
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Executive Summary

Population growth usually results in the need for more residential and commercial development, which often requires more public infrastructure. This is particularly true when new development occurs in outlying areas not previously served. However, along with new requirements for spending, population growth generates new sources of public revenue.

Whether or not growth "pays for itself"' depends on whether revenues per person rise more rapidly than costs per person. The revenue side of the equation depends on 1) whether average income levels rise with more population and 2) how effectively the tax structure results in local government revenue growth when income grows. The cost side of the equation depends on 1) whether there are "economies of scale" that cause existing resources to be used more efficiently with more population or 2) "density efficiencies" that come from lower costs of providing a given level of service to more compact forms of development.

If more compact development patterns do lead to more efficient use of public sector dollars this can have important consequences for Colorado Springs and the entire Pikes Peak region. A recent report predicts that by 2010 El Paso County will surpass Denver County as the most populous in the state. Local population, approximately 375,000 in Colorado Springs and 541, 000 in El Paso County as of mid 2002, is projected to grow to over 700,000 in El Paso County by 2020.[1] If new development pays its own way the region is more likely to avoid a choice of raising taxes on existing residents or accepting degraded levels of infrastructure and service provision to stay within budget.

To help provide information useful in answering questions about resulting costs and revenues this study examined the relationship between population growth, density in growth patterns and per capita expenditures on city services for residents of the city of Colorado Springs. While population growth is often believed to improve the city tax base, density of development is cited as altering per capita costs of municipal services. We examined changes in population size, density of development, and per capita expenditures on roads, public safety, and water while controlling for changes in price levels over time.

A. Key Findings:

- *Between 1980 and 2000, both population and developed land increased rapidly within the city of Colorado Springs*. Total developed land area increased by 32% while population grew by 68%. As a result, there was an increase in density -- population per square mile of developed land -- of almost 27% during the last two decades as further detailed below in Section C (2).

- *In some expenditure categories,, Colorado Springs' experience of the relationship between density and per capita expenditure mirrored that of other communities around the nation. Previous research shows a direct relationship between increased density and lower per capita expenditures on roads in other cities. Spending on police and fire protection, in contrast, tends to stay relatively constant on a real per capita basis regardless of density of development*

    - Locally, real per capita spending on roads and traffic engineering fell substantially between 1980 and 2000. While few indicators of transportation quality were available over the period, commute time to work increased and a substantial infrastructure backlog was reported at the end of the period. Therefore it is likely that some of the reduction in spending was made possible due to increased density efficiencies and some to underinvestment in infrastructure.

[1] Pikes Peak Area Council of Governments, Press release of September 9, 2003.

- Real per capita police and fire operating expenditures were relatively constant in Colorado Springs, in line with previous research across the nation on public safety spending patterns which show little relationship to density. However, infrastructure investments in public safety rose from 1980-2000 in real per capita terms. Public safety performance indicators show a mixed picture in the data available in the appendices.

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- *While studies in other areas have shown lower per capita spending on water with increased density, this pattern was not evident for Colorado Springs.* There was a small increase in water infrastructure investment expenditures per person, along with increases in water rates above the rate of inflation during most of the period. This is probably due to the need for increased development of Western slope water sources as population grows, in contrast to the more limited capital development needs in areas with greater rainfall.

- *Total city expenditures declined on a real per capita basis after adjustment for inflation and population.* For 1980-2000, there was a decline of 7% per resident after adjusting for price changes[2]. The city tax base increased, but not as fast as population increased. Note that the ½ cent tax for capital improvements existed only from the mid-1980's to the mid-1990's and does not affect a comparison of 1980 vs. 2000.

  The city adjusted to falling revenues per capita during the last two decades by increasing the public safety share of the budget substantially and decreasing the share for roads, drainage and traffic engineering. [3] This enabled public safety expenditures to stay relatively constant on a real per capita basis despite falling revenues.

Figure 1a

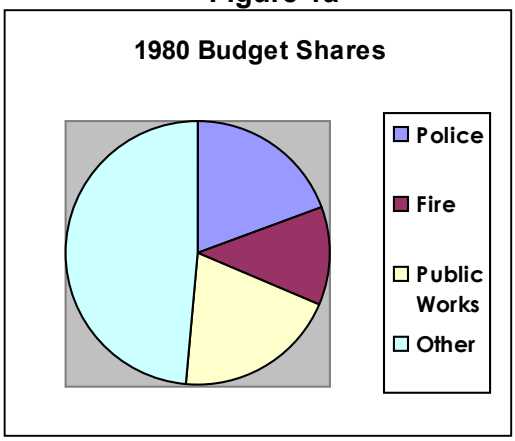
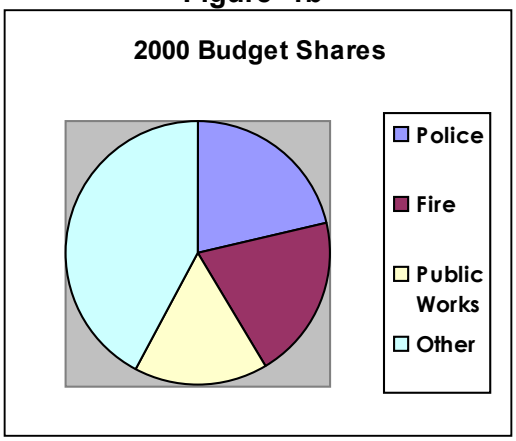


Figure 1b



B. Summary of Recommendations for Research and Public Policy Discussion:

- Further research on cost and land use patterns for portions of El Paso County outside the city limits
- An analysis of any differences in costs of services to the nine city planning zones
- Use of performance indicators which are consistent across time by all major city departments
- Further emphasis on financial incentives and permitting processes that encourage contiguous development so as to minimize public infrastructure costs
- Continued development agreements with the private sector regarding capital improvements and/or the expansion of impact fees to areas beyond utilities
- Increased coordination between jurisdictions in the region on development issues
- An exploration of the impact of potential changes in tax policy and public fees, including methods of paying for services such as utilities, emergency services, and schools

[2] See Appendix A for greater detail
[3] See Appendix B for greater detail

II. Introduction and Methodology

This study focuses on the residents and land area of the city of Colorado Springs and city spending in key areas that are potentially sensitive to development patterns. We analyze spending on police, fire, and non-transit related public works (roads and traffic engineering) and water, which have all been studied for sensitivity to density of development in other parts of the U. S. We control for changes in population and inflation so as to examine the effects of changes in density and/or city size on spending per resident for public safety (police and fire) , public works (roads, drainage and traffic engineering) and water services to the citizens of Colorado Springs.

A. Time Period and Data Sources

We examine changes during the period 1980-2000, which includes the downturn of the late 1980s, the boom of the 1990s and the first year of the 2000-2002 drought, but not the recent economic downturn.

Data was provided by the city of Colorado Springs budget office, planning department, various operating departments and Colorado Springs Utilities. The Pikes Peak Area Council of Governments also provided data from the Census of Transportation and its transportation planning models. The deflator for government expenditures is from the U. S. Department of Commerce's Bureau of Economic Analysis. Population numbers are from the decennial census of population.

B. Controlling for Inflation and Population Growth

In order to isolate the effect of density on spending on city services, we adjusted all expenditures for population and for changes in the overall price level deflator[4]. All figures have been stated in current (year 2001) prices and per capita terms.

C. Measuring Density – The Level of Population Relative to the Quantity of Developed Land

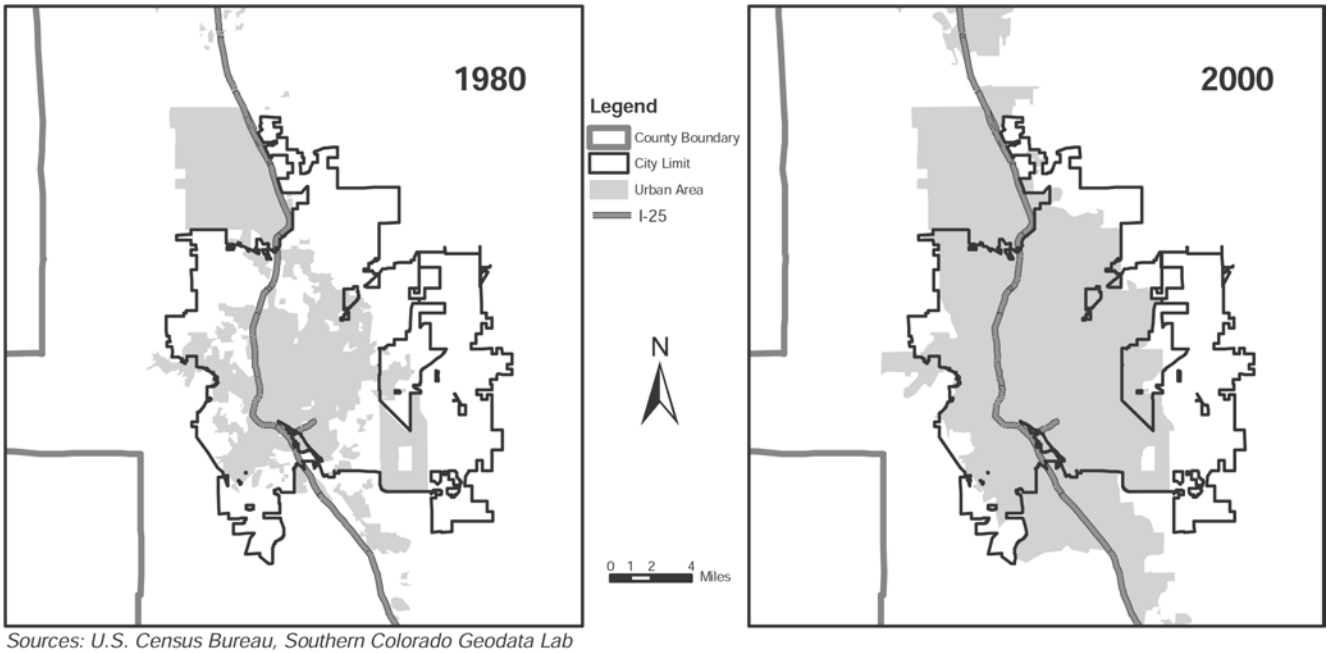
1. Changes in Density of Development in the Greater Colorado Springs Metropolitan Area

The National Resources Inventory on urban and built-up land is conducted for major metropolitan areas by the U. S. Department of Agriculture every five years. Land is categorized as "built up" if it is residential, industrial, commercial, or institutional. This includes cemeteries, airports, railroad yards, golf courses, sanitary landfills, sewage treatment plants, water control structures and spillways, parks and vacant land parcels of less than ten acres within urban areas, and highways within urban areas. Between 1982 and 1997, population in the greater Colorado Springs metropolitan area grew by 44.7% while the urbanized land area grew by 72%.[5] As a result, density (the ratio of population to developed land) in the greater Colorado Springs Metropolitan area declined 15.9% (results of the 2002 survey are not available at this time) [6] Note that the conversion of previously rural land into large residential lots plots yields lower population per *developed* acre despite their being more total population living in the area.

[4] The GDP deflator for government services accounts for price increases in the labor, resource and capital costs of all levels of government in the United States, in contrast to the CPI focus on food, housing, and other consumer needs.
[5] The Census definition of an urbanized area is at least 50,000 people and a minimum of 1000 persons per square mile.
[6] Ewing, Reid, Rolf Pendall and Don Chen, "Measuring Sprawl and Its Impact", Center on Urban and Metropolitan Policy, Brookings Institution, July 2001.

Figures 2a and 2b. show the urbanized land area of Colorado Springs and El Paso County in 1980 and in 2000. The urbanized areas (including Manitou Springs, Monument, Palmer Lake, Fountain, and the Air Force Academy) are shown in gray with the black line indicating current city of Colorado Springs boundaries. There are rural areas within the city limits, particularly in the east and urbanized areas outside the city limits.[7]

Figure 2a **Colorado Springs and El Paso County** **Figure 2b**



Sources: U.S. Census Bureau, Southern Colorado Geodata Lab

2. Changes in Density of Development within the City of Colorado Springs

The Colorado Springs planning department has tracked total acreage of developed land annually since 1997[8], but earlier information is available for 1981.[9] Their definition of developed vs. undeveloped land is similar to that used for the metropolitan statistical area., the primary difference being that no open space or vacant land is included as developed, while the national survey includes parks and vacant land of less than ten acres if they are within an urbanized area. The planning department uses permit data and geographic information system maps (GIS) along with county assessor reports on type of land use to calculate total acreage of developed land.

Density is measured as population per acre (or mile) of developed land. Between 1981 and 2000, the average number of residents per acre within the city limits increased from 5.06 to 6.42, according to city data, showing an increase in density of almost 27% as developed land was used more intensively. This may have been due to smaller residential lots for new homes, more apartment buildings or other changes in commercial or residential development. Translated into population per square mile of developed land this represents a change from 3,264 in 1980 to 4,096 in 2000.

[7] The Census defines an urbanized area as one with at least 50,000 in population and an average density of 1000 persons per square mile.
[8] This information is available under the Comprehensive Plan heading on the city of Colorado Springs website at www.springsgov.com.
[9] City of Colorado Springs Planning Department document , 1981.

However, despite a trend of increased density within the city, Colorado Springs is still highly auto-oriented and low density in its development. By comparison, truly urban metropolitan areas like Miami, Boston, Chicago and San Francisco have 10,000-15,000 people per square mile.[10] Whether or not we have achieved a critical level at which the density begins to allow efficiencies in transportation and other areas of spending is an open question.

3. Comparing the two measures

While the data is collected in different ways, the definition of developed vs. undeveloped land is quite similar in the two measures and the movement in opposite directions is quite substantial. Based on the data showing increased density within the city limits (where a large proportion of metropolitan area residents live) we can conclude that the decline in density in portions of the MSA outside the city limits must have been quite high to yield a net decline of 15.9% for the entire area when there was a 26.88% increase in density within the city limits.

D. Controlling for Other Effects on Capital and Service Expenditures

1. Increases in service quality can be one explanation for increased real per capita expenditures. If road mileage (or quality) increases faster than population, this can increase per capita expenditures on roads. On the other hand, declines in service quality represent a "cost" to citizens not measured in tax dollars. Increased traffic congestion or potholes can cause citizens to incur the private costs of automobile repairs or lost time in traffic even if they do not pay additional tax dollars. Performance indicators, such as response time or road quality, can be used to assess the meaning of increases or decreases in spending. However, there have been frequent changes in the measures each department uses to assess its performance and data has not been retained over the years in many cases. Appendix F presents some of the limited information available.

2. Water is provided by Colorado Springs Utilities, which is owned by the city but operates as a separate, self-funded enterprise. Household usage of water has risen steadily over time with increases in personal income and expansion of development into areas which require more frequent watering due to lower quality soils and less shade. Water usage also fluctuates considerably in response to weather conditions and was unusually high in the year 2000 due to the onset of drought like conditions.

3. A third effect which could cause per capita costs to rise would be more rapid inflation in city government or water department expenditures than is shown by the GDP deflator for government prices, a weighted average of price increases for goods purchased by agencies of federal, state and local governments across the nation. From Appendix G, water prices did increase at a rate above inflation in many of the years covered here, reflecting the need to cover debt service costs when bonds were sold to finance capital construction.

III. Municipal Service Expenditures, Population Growth and Population Density

Below we track how real per capita spending for water, public works, and public safety in Colorado Springs altered with changes in population and density and compare this to the results in several national studies.

[10] U. S. Census Bureau, based on 1998 area data. Note that this data is for metropolitan areas and not for municipalities.

A. National Research on Density and Service Costs

Several fiscal impact studies in the U. S. have found capital costs for infrastructure to be substantially higher when development is less compact. Roads were on average 25% more expensive, utilities 15% higher, and school capital costs 5-7% more.[11] A simulation model of the effect of varying development patterns on public water and sewer costs of residential development found most costs attributable to internal tract infrastructure and dependent primarily on lot size.

When developers install and pay for these lines during construction (as they have in recent years in Colorado Springs) or pay variable system development charges/impact fees this prevents shifting from the users of the more expensive services to the general public. However, external infrastructure costs (outside the development itself) are 7% of all costs for the most compact development patterns and 37% in the most dispersed ones. The authors of the study conclude that "if average cost pricing for water and sewer services is used to recover costs, users in less compact spatial patterns will pay less than their true cost of service, while users in more compact patterns will pay more" [12] in both internal and external costs.

On the other hand, fire and police protection costs appear to be relatively insensitive nationally to spatial patterns.[13] As long as municipalities are willing to lower expected response times for police and fire calls to more difficult to reach developments (on hillsides, down winding lanes, in canyons, etc.) they can stay within the same average cost structure.

B. Operating Expenses in Colorado Springs as Density Increased

As city population grew by 68% in the last few decades, the average amount of land used by each person decreased by almost 27%. Real per capita spending declined for public works, stayed relatively stable for public safety, and rose for water. The first two findings are consistent with national research. The latter is influenced by the onset of drought in the end year, as well as by development patterns.

Per capita real expenditures for non-transit public works fell by almost half. This measure includes spending on roads, drainage, and traffic engineering. The decline is consistent with national studies indicating cost efficiencies in public works as development becomes denser. However, part of the decline in spending per capita locally may have been due to budget limitations rather than gains in efficiency. Since real per capita general fund revenues to the city fell by 7% between 1980 and 2000 (Appendix A) maintaining real per capita spending on police and fire required cutting in other areas, including public works.

Very limited information on road quality or congestion is available over the twenty year period, but Census data on longer average travel time to work[14] support a public perception that congestion and travel conditions have worsened during the period. However, with no other data available on road or traffic quality it is unclear how much of the decline in spending was due to development efficiencies and how much represents quality declines caused primarily by budget limitations. In addition, spending on roads and other public works by developers is not included here and would make capital spending costs higher than shown if they were included in total spending.

[11] Real Estate Research Corporation, *The Costs of Sprawl*, 1974.
[12] Speir, Cameron and Kurt Stephenson. 2002. "Does Sprawl Cost Us All?: Isolating the Effects of Housing Patterns on Public Water and Sewer Costs," *American Planning Association Journal* 68:1, p 56-70.
[13] Burchell, R. W. and Listokin, D. 1995. *Land, Infrastructure, Housing Costs and Fiscal Impacts Associated with Growth.* Cambridge, Massachusetts: Lincoln Institute of Land Policy.
[14] A widely used measure in quality of life studies, based on U. S. census survey data.

TABLE 1.
REAL PER CAPITA OPERATING EXPENDITURES, 1980-2000

Year	1980	1990	2000	Change 1980-2000	% Chg 1980-2000
City Population	215,150	281,140	360,890	+145,830	+ 68%
Total Acreage Developed Land	42,546 acres		56,191 acres	+13,465	+32%
Average Density in persons	5.06 per acre		6.42 per acre	+1.32	+26.88%
Per Capita Real Cost of Police	$151.38	$154.48	$155.68	+ $4.30	+2.8%
Per Capita Real Cost of Fire	$94.26	$93.40	$91.57	- $2.69	- 2.8%
Per Capita Real Public Works	$96.23	$87.67	$49.00	- $47.22	- 49%
Per Capita Real Cost: Water	$117.09	$138.31	$154.47	+$37.38	+32%

Real per capita expenditures on police rose by 2.8%, while for fire they fell by 2.8%. These small changes are consistent with prior studies showing little effect of density on police and fire protection expenditures. However, the data on infrastructure investments in our next section tell a somewhat different story, increasing over the period. For the fire department, response time and number of fire personnel per capita were available only for the latter part of the period and showed declines. The number of police per capita were higher at the end of the period than the beginning, while clearance rates on motor vehicle thefts and index crimes showed some variation but no clear trend .

Real per capita expenditures on water rose 32%, a combination of a 22% increase in per capita water usage with rate increases. Approximately a third of the higher per capita expenditures on water were due to higher water rates, while two thirds was due to higher usage per customer. While average lot size and the number of persons per household declined over the period, higher usage also reflects the onset of drought in the year 2000 along with the expansion of development into areas with poorer soil conditions, according to the Colorado Springs Utilities Water Department. Rates charged for water have also risen faster over the last two decades than the average rate of inflation for government as measured by the GDP deflator for government services. [15] These reflect interest charges on bonds sold for new pumping stations and more sophisticated water billing systems [16]

C. Capital Spending on Infrastructure in Colorado Springs as Density Increased

Capital expenditures are most important in the public works and utilities areas. Unlike operating expenditures, they can change substantially from year to year, often dependent on the availability of federal grants, bond approvals, or fluctuations in tax revenues due to changing economic conditions. To smooth fluctuations from year to year and deal with a frequent lag between population growth and capital spending[17], we computed a "five year forward" total of capital expenditures each service category. For example, capital expenditures for 1980-1984 are associated with population levels for 1980, while those for 1985-1989 are associated with the population level of 1985. Expenditures for 2003 and 2004 are city budget estimates.

Capital expenditures include all those made by the city of Colorado Springs for these service categories (whether funded by tax revenues, bonds, certificates of participation or intergovernmental grants) but none made directly by developers or by state or federal government .

[15] See Appendix G for detail of water rates from Colorado Springs utilities.
[16] Conversation with Mike Worley, Water Department, April 2003.
[17] Infrastructure costs which must be made in advance of development, such as internal roads and sewer systems, are generally paid for by the developer. New schools, neighborhood parks, expansion of arterial roads, addition of new traffic lights, etc. generally occur several years later in response to the pressures of new population according to sources in city planning and budgeting interviewed for this study.

This is important to note, as revenue sharing dollars from the federal government declined sharply in the early 1980's and have continued to decline. In addition, there was a much greater reliance on developers for the building of new roads and bridges in the 1990's than in earlier periods.. No dollar estimates of these non city-financed portions of city infrastructure are available.

Real per capita infrastructure investments for police and fire increased 49% and 124% (prior to voter approval of a 4/10 cent sales tax for public safety) rather than remaining constant, as the national literature predicts. The limited performance indicators available over the entire period (Appendix F) for public safety do not appear to explain the increase in expenditures.

Real per capita infrastructure investments on public works are projected to be 2% lower for 2000-2004 than for 1980-1984. Unfortunately, assessing this small decline is difficult since no real quality indicators for transportation are available across the period. In addition, though Colorado Springs increased its density by almost 27% development patterns are still far from compact and may not have reached a level of density that would yield transportation savings.

Average travel time to work, the only consistent indicator available across the period, increased by 28% from 17.5 to 22.5 minutes over the twenty year period.[18] A recently reported city of Colorado Springs infrastructure backlog of $70.5 million[19] is detailed in Appendix E. The backlog represents about $200 per resident, compared to projected spending of $274 per capita in 2000-2004.[20] But without comparable backlog estimates for prior years, it is difficult to know how much s due to revenue constraints such as the phase out of the CIP (capital improvement program) tax[21] rather than lower need for spending due to increased density of development. Note that when comparing spending in 2000 to spending in 1980, neither of those period includes a tax targeted to capital improvements, although one did exist from the mid-1980's to the mid-1990's.

The data show real per capita investments in water system infrastructure slightly higher (2.3%) for the current period than they were in the early 1980's when the city of Colorado Springs had a much lower density. This is in contrast to the findings in earlier national studies that water and drainage system costs per capita generally decline when density increases. The difference is probably due to the need for major water project developments in this area vs. areas with greater rainfall and proximity to lakes and rivers.

TABLE 2
INFRASTRUCTURE INVESTMENT (FIVE YEAR FORWARD)
Per capita, Year 2001$

Year	1980	1990	2000	Change	% Chg
City Population	215,150	281,140	360,890	+145,830	+68%
Total Acreage Developed Land	42,546 acres		56,191 acres	+13,465	+32%
Average Density in persons	5.06 per acre		6.42 per acre	+1.32	+26.88%
Capital Expenses: Police	$27.67	$52.18	$41.19	+$13.52	+49%
Capital Expenses :Fire	$25.73	$23.02	$57.56	+$31.83	+124%
Capital Exp: Public Works	$280.14	$329.46	$274.34	-$5.81	-2%
Capital Expenses: Water	$716.71	$627.02	$733.06	+16.35	+2.3%

[18] U. S. Census Bureau, provided by Pikes Peak Area Council of Governments

[19] Comprised of streets (60%), drainage and sewer improvements (26%), traffic signals (9.2%), sidewalks and pedestrian ramps (1 ½%) and trails and bikeways (1 ½%). General Accounting Standards Board (GASB) Rule 34 for local governments recently required local governments to include backlog detail in their financial reports. Comparison data for earlier years is forthcoming.

[20] Eliminating the backlog would require a 73% increase in public works spending for a five year period.

[21] A ½ cent sales tax today would yield between $25-30 million per year today, depending on retail sales and housing strength.

IV. Summary of Results

A. The Net Effect of Population Growth and Density on Expenditures

Within the city of Colorado Springs, rapid population growth has been accommodated by patterns of development that involve more intensive use of land and therefore higher measures of density. This may have contributed to lower real per capita spending on traffic engineering and roads in both operating and capital expenditures. The operating expenditures of providing police and fire protection to each resident stayed relatively constant over the period, but infrastructure investments for police and fire rose significantly in real per capita terms.

Available quality indicators suggest relatively constant service levels for public safety. In the area of public works there are no consistent quality indicators available across the period although limited evidence and public perception suggest quality declines.

At the same time, greater density of development did not reduce per capita expenditures on water as it has in many communities. These rose over the last two decades, with a third of this higher expenditure per resident due to higher charges for water, and the remaining two thirds a result of greater usage per household.. There was a small increase in inflation-adjusted water infrastructure investments per capita from the early 1980's to the current period although they were higher in the mid-1980's than at either the beginning or end of the period.[22] Note that more dense development can lower some external costs shifted to all utility rate payers (major water lines, etc.) but will not affect the cost of new pumping stations or the development of new water sources.

B. "Growth Dividends?"

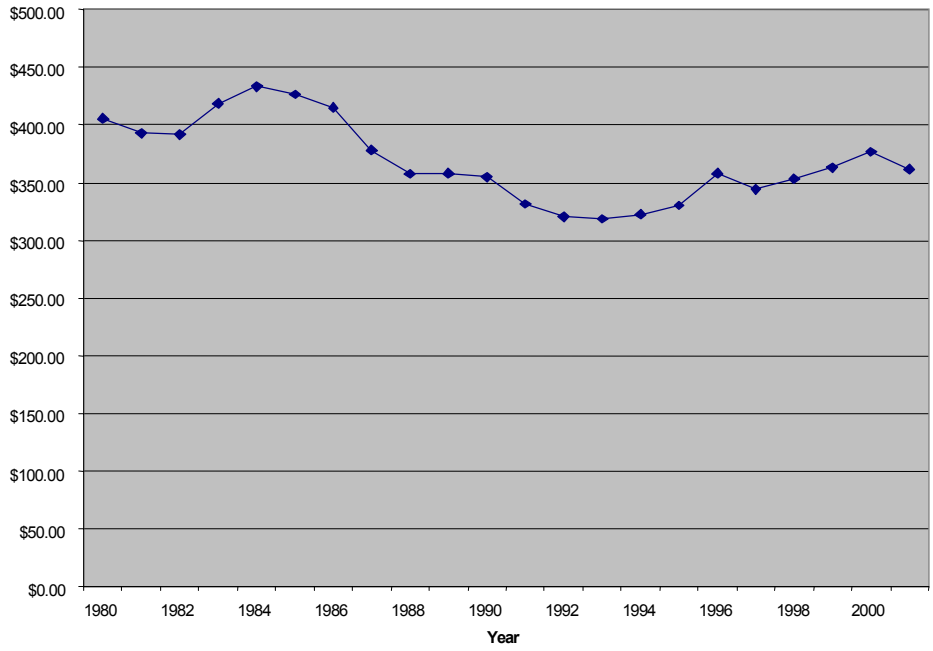
Population growth can create a fiscal dividend for local government if it contributes to lower service expenditures per person. This may happen through changing development patterns where increased density lowers the per capita cost of public works or utility infrastructure while quality is held constant. It may also happen if population growth brings a city to a more efficient size for operations through economies of scale.

In Colorado, a fiscal dividend to government can only come from more efficiency on the spending side and cannot result from increased revenues per capita. This is because TABOR [23] requires that taxes be cut or excess revenues be refunded when growth in revenues exceeds the cap of population growth plus the increase in the Denver-Boulder CPI. If revenue growth exceeds population growth plus inflation it will not be expendable without a special vote of the people. From Figure 3, below, real revenues per capita were 7% lower in 2000 than in 1980, despite strong economic growth during parts of the period.[24]

However, if a local government can continue to provide the same level and quality of services while spending less per person there is a "growth dividend" realized by individual taxpayers. The national research on spending per capita and density indicate the possibility of savings from changes in development patterns. Unfortunately, without a history of reliable performance indicators for the city of Colorado Springs it is difficult to ascertain whether service levels and quality have declined, remained stable, or increased. Given the relatively low density of Colorado Springs today, even the 26.88% increase seen in the last two decades may not have brought the city to a level where it actually experiences cost efficiencies due to density of development.

[22] See Appendix D for greater detail.
[23] 1991 amendments to the City Charter and 1992 amendment to the Colorado constitution
[24] See Appendix for data and further explanation.

Figure 3. REAL PER CAPITA GENERAL FUND REVENUES
CITY OF COLORADO SPRINGS, 1980-2001



V. Recommendations for Further Research and Policy Discussion:

A. Further research should include the following:

1. A study of population growth, density, and cost patterns for the portions of El Paso County outside the city limits, particularly the urbanized portions of the county that make up the metropolitan statistical area, to better understand their effect on both county and city service costs per resident. Non-residents of the city also contribute to the need for additional roads and traffic engineering along with the taxes they pay on goods purchased within the city.

2. A study of the relative size of costs (or expenditures) due to non-residents vs. average taxes paid to the city by non-residents.

3. An analysis of any differences in the cost of providing services to the nine planning zones. Is water usage per household higher in some geographic areas than others? Do police and fire costs rise in less dense or more difficult to reach areas? City data could help to determine the answers to these questions if collected on a planning zone basis. If substantial cost differences are present this could be used in future planning and fee assessment decisions.

4. Analysis of changes in performance indicators for all major city departments. Continuity of collection and definition of these indicators is essential to an accurate assessment of whether city services are costing less (or more) due to changes in efficiency or changes in quality. For example, under the new GASB rules for local government accounting, the city will continue to develop infrastructure backlog estimates annually. Tracking and analysis of these estimates will be one important indicator of quality change.

B. Public Policy Discussions should include the following:

1. The continuation and expansion of financial incentives and permitting processes that encourage development within existing areas of the metropolitan region so as to minimize public infrastructure costs

2. Further use of development agreements with the private sector concerning capital improvements and/or the expansion of impact fees beyond the area of utilities

3. Changes in tax policy and public fees that address new methods of paying for services, including utilities, emergency services and schools

4. Increased coordination regarding development between jurisdictions in the region, especially between of Colorado Springs and El Paso County.

Appendix A- **Real Per Capita Revenues: City of Colorado Springs, 1980-2000**

Per capita city expenditures increased by less than the rate of inflation[25] over the past two decades, due to a decline of over 7% in real per capita general fund dollars[26] The data below show this trend even before local and statewide tax limitation initiatives were passed. Annual inflation adjusted tax revenue per capita *declined* more often than it *increased* during the two decades. Between 1980 and 1991 (the year Colorado Springs voters passed the local version of TABOR) real per capita revenues fell 18%. The long boom of the 1990's produced some turn around, with six years in which revenues increased (vs. three years of increase in the 1980's). From 1991 to 2000, real per capita revenues increased 13% but were lower than in the early 1980's.

Colorado Springs General Fund Tax Revenue

Year	General Fund	GDP Deflator Index	Adjusted for GDP Deflator Index	Population	Tax Revenue Per Capita	$ Change	% Change from 1980
1980	$33,900,161	0.389	$87,248,873	215,150	$405.53		
1981	$38,203,157	0.430	$88,924,971	226,230	$393.07	-$12.45	
1982	$42,035,942	0.467	$90,058,781	229,770	$391.95	-$1.12	
1983	$48,892,503	0.493	$99,091,170	236,760	$418.53	$26.58	
1984	$55,160,563	0.528	$104,530,491	241,270	$433.25	$14.72	
1985	$61,159,243	0.562	$108,771,522	254,995	$426.56	-$6.69	
1986	$64,392,726	0.584	$110,212,111	265,446	$415.20	-$11.37	
1987	$62,990,240	0.609	$103,405,886	273,500	$378.08	-$37.11	
1988	$63,872,392	0.635	$100,511,271	281,008	$357.68	-$20.40	
1989	$66,417,011	0.662	$100,365,507	280,254	$358.12	$0.44	
1990	$69,019,243	0.692	$99,810,546	281,140	$355.02	-$3.10	
1991	$68,999,268	0.732	$94,267,168	284,490	$331.35	-$23.67	
1992	$72,117,255	0.761	$94,713,045	295,454	$320.57	-$10.79	
1993	$76,960,975	0.789	$97,541,120	306,363	$318.38	-$2.18	
1994	$82,971,199	0.815	$101,842,734	315,704	$322.59	$4.21	
1995	$90,453,606	0.841	$107,573,411	325,605	$330.38	$7.79	
1996	$102,645,973	0.864	$118,754,206	331,616	$358.11	$27.73	
1997	$103,461,077	0.889	$116,405,282	338,016	$344.38	-$13.73	
1998	$110,931,933	0.911	$121,826,422	344,719	$353.41	$9.03	
1999	$119,361,794	0.938	$127,265,492	350,181	$363.43	$10.02	
2000	$131,290,950	0.965	$135,992,801	360,890	$376.83	$13.40	-7.08%

(1) Taxes include General Property Tax, Sales and Use Taxes, Specific ownership taxes, Occupational Liquor taxes, and Gross receipts business taxes (Admissions tax).

Heavy reliance on sales taxes, applied to purchases of goods but not to purchases of services, has contributed to the decline. As our economy becomes more service oriented, the share of income spent on taxable goods falls. In addition, the share of city revenues from property taxes has fallen from 15.3 to 8.9% over the past two decades[27] and tax incentives to business have reduced the importance of commercial and industrial property in the tax base. These factors, in combination, have

[25] Measured by the GDP deflator for government spending

[26] General fund revenues are primarily property and sales taxes. They do not include targeted sales taxes such as the 1/10 cent Trails and Open Space tax or revenues from developer payments in lieu of park land, etc.

[27] Despite rising property values, the Gallagher and TABOR amendments have reduced the importance of property taxes. Gallagher (1982) cut the residential assessment rate in half in two decades. TABOR's revenue limit resulted in several mill levy cuts to keep total revenues within the prescribed limit. In strong economic times, revenues grow by more than inflation plus population growth and must be either refunded to citizens or cut in advance to conform to the limit.

caused real per capita tax revenues to the city of Colorado Springs to remain below the levels of the early 1980's even in some years of good economic growth.

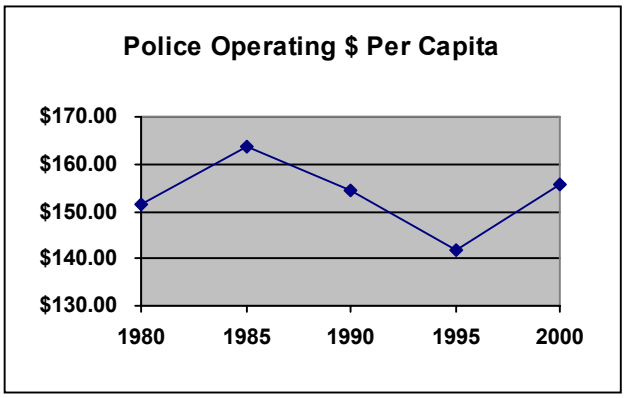
Appendix B - **Shares in City of Colorado Springs Budget, 1980-2000**

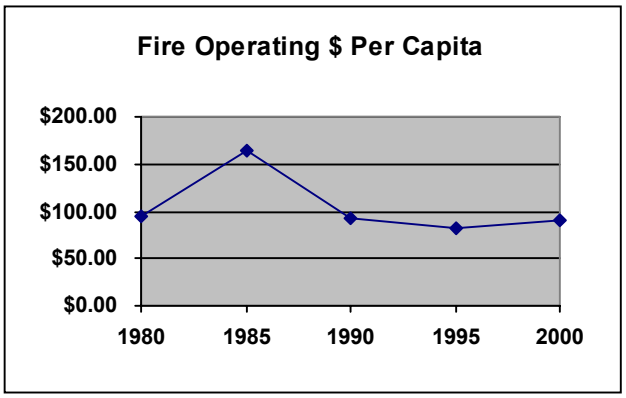
	1980	**% Share**
Total Budget	$53,688,283	100.00%
Police	$10,427,340	19.42%
Fire	$ 6,384,769	11.89%
Public Works	$10,807,453	20.13%
Other	$26,068,721	48.56%
	1990	
Total Budget	$111,140,477	100.00%
Police	$32,612,482	29.34%
Fire	$19,195,695	17.27%
Public Works	$27,780,337	25.00%
Other	$31,551,963	28.39%
	2000	
Total Budget	$185,806,484	100.00%
Police	$56,332,313	30.32%
Fire	$32,735,774	17.62%
Public Works	$27,213,026	14.65%
Other	$69,525,371	37.42%

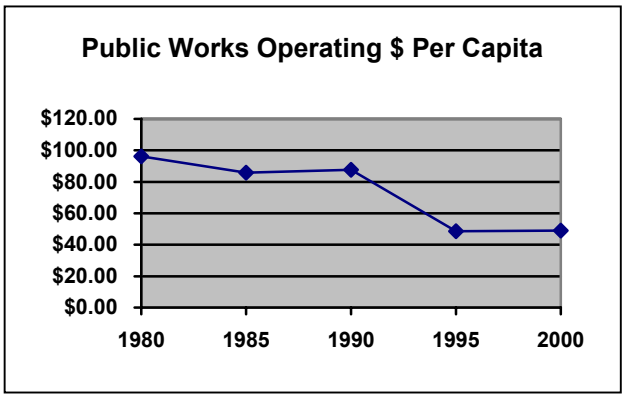
Source: Colorado Springs City Budget Office

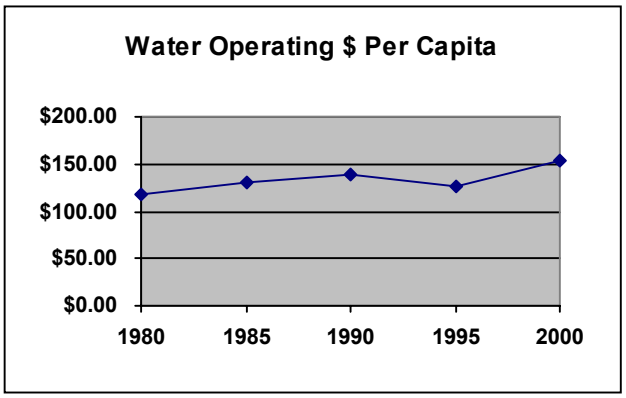
Appendix C - **Operating Expenses for City of Colorado Springs**

	1980	1985	1990	1995	2000
Police	$32,568,724	$41,764,730	$43,431,698	$46,098,591	$56,182,454
Fire	$20,279,809	$41,764,730	$26,257,475	$26,692,143	$33,046,822
Public Works	$20,703,087	$21,902,221	$24,648,243	$15,855,464	$17,684,981
Water	$25,192,007	$33,349,146	$38,883,282	$41,071,524	$55,746,523
Total City Population	215,150	254,995	281,140	325,605	360,890
Cost of Services per Person when adjusted for GDP index factor					
	1980	**1985**	**1990**	**1995**	**2000**
Operating Police	$151.38	$163.79	$154.48	$141.58	$155.68
Operating Fire	$94.26	$163.79	$93.40	$81.98	$91.57
Operating Public Works	$96.23	$85.89	$87.67	$48.70	$49.00
Operating Water	$117.09	$130.78	$138.31	$126.14	$154.47





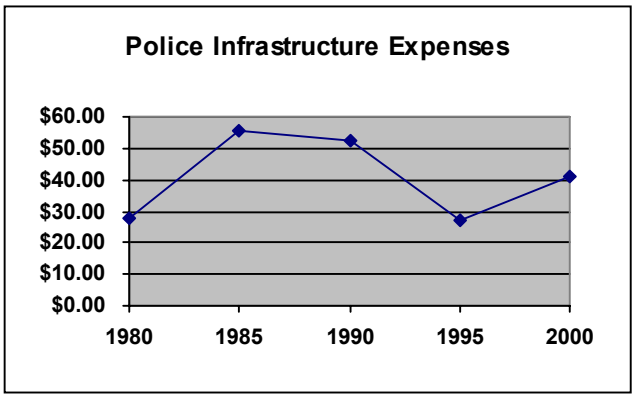


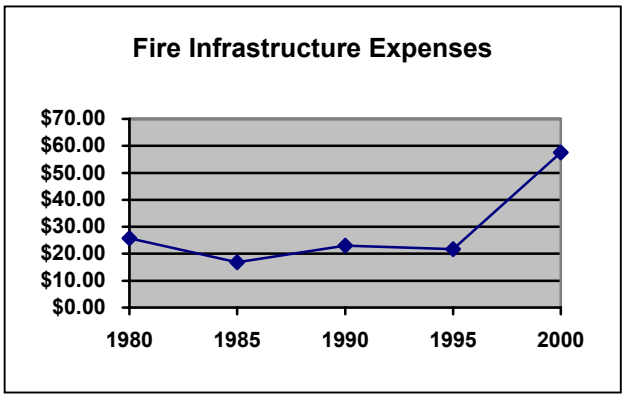


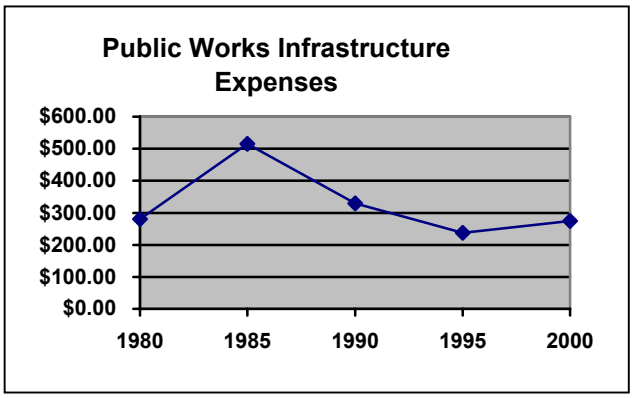
(1) Population data found in the *Community Profile* of Colorado Springs City Budget.
(2) Police, Fire, and Public Works data found in the *Colorado Springs Budget Office-File Copies*
(3) Utilities data found in *Department of Utilities Annual Report, City of Colorado Springs*

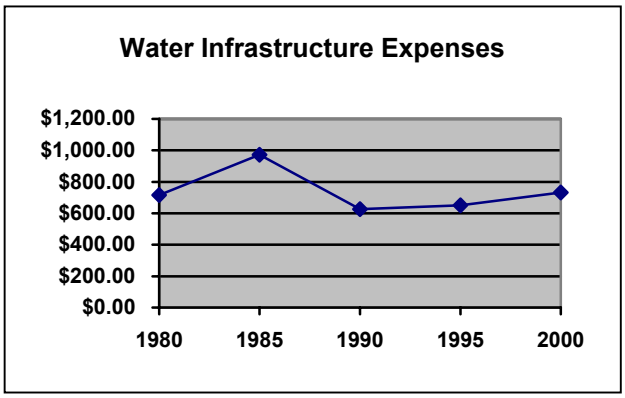
Appendix D - **Infrastructure Expenses for City of Colorado Springs**

	1980	1985	1990	1995	2000
Police (year plus next four years)	$5,952,178	$14,175,037	$14,669,254	$8,868,956	$14,864,858
Fire (year plus next four years)	$5,536,105	$4,289,356	$6,472,002	$7,060,028	$20,774,296
Public Works (year plus next four years)	$60,273,162	$131,463,958	$92,625,013	$77,328,532	$99,005,950
Water (year plus next four years)	$154,200,621	$248,117,350	$176,279,268	$212,103,785	$264,554,705
Total City Population	215,150	254,995	281,140	325,605	360,890
Cost of Services per Person when adjusted for GDP index factor					
	1980	**1985**	**1990**	**1995**	**2000**
Infrastructure Police	$27.67	$55.59	$52.18	$27.24	$41.19
Infrastructure Fire	$25.73	$16.82	$23.02	$21.68	$57.56
Infrastructure Public Works	$280.14	$515.56	$329.46	$237.49	$274.34
Infrastructure Water	$716.71	$973.03	$627.02	$651.41	$733.06









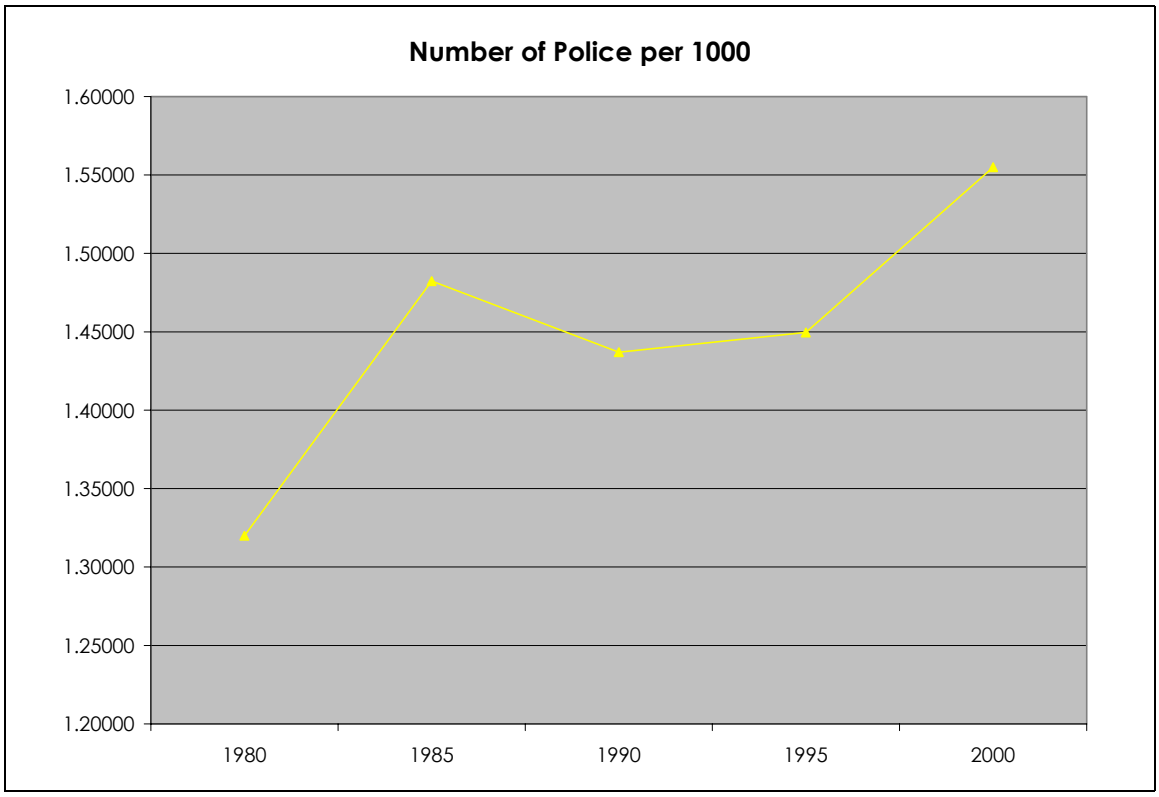
(1) Population data found in the *Community Profile* of Colorado Springs City Budget.
(2) Police, Fire, and Public Works data found in the *Colorado Springs Budget Office-File Copies*
(3) Utilities data found in *Department of Utilities Annual Report, City of Colorado Spring*

Appendix E - **Infrastructure Backlog, City of Colorado Springs, Fiscal Year 2002**

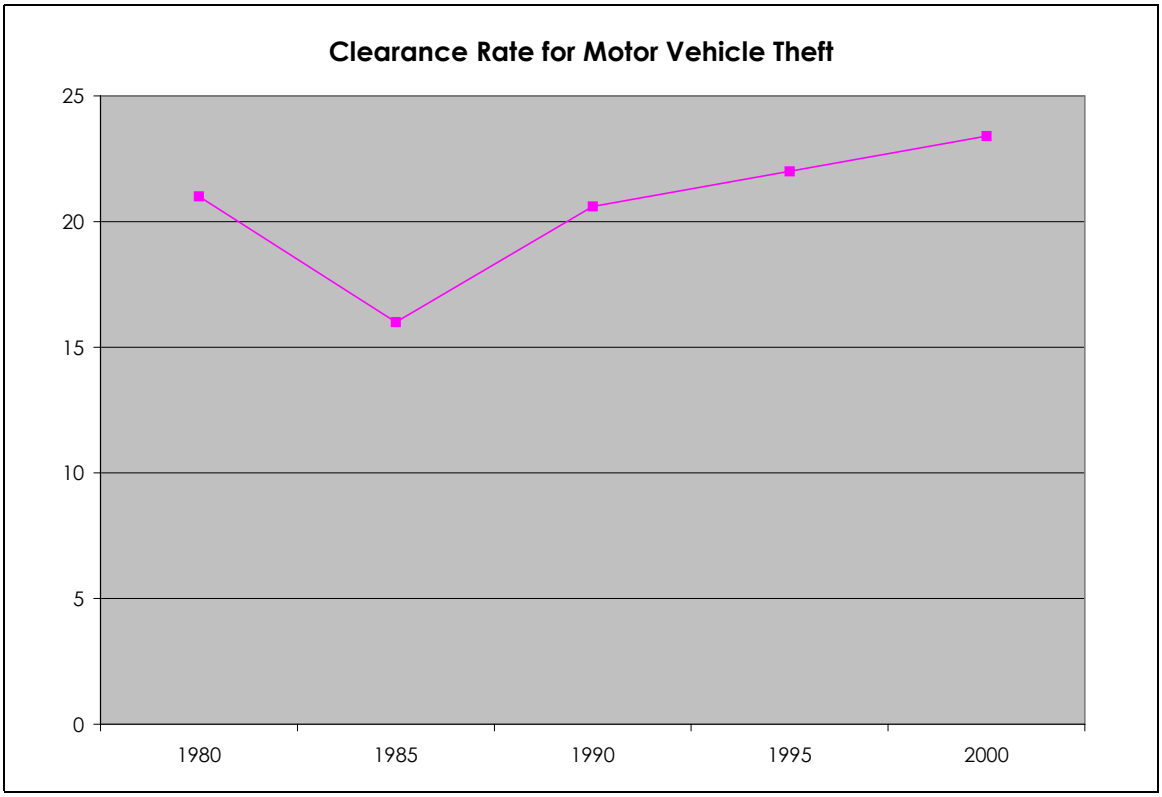
Description	Total Cost
STREETS	42,837,109.16
SIDEWALKS	114,877.00
DRAINAGE	16,629,950.32
BRIDGES	2,415,645.00
PEDESTRIAN RAMPS	996,103.00
TRAFFIC SIGNAL & EQUIP	6,481,104.00
TRAILS	990,397.00
TOTAL	**70,465,185.48**

Source: City of Colorado Springs Budget Office

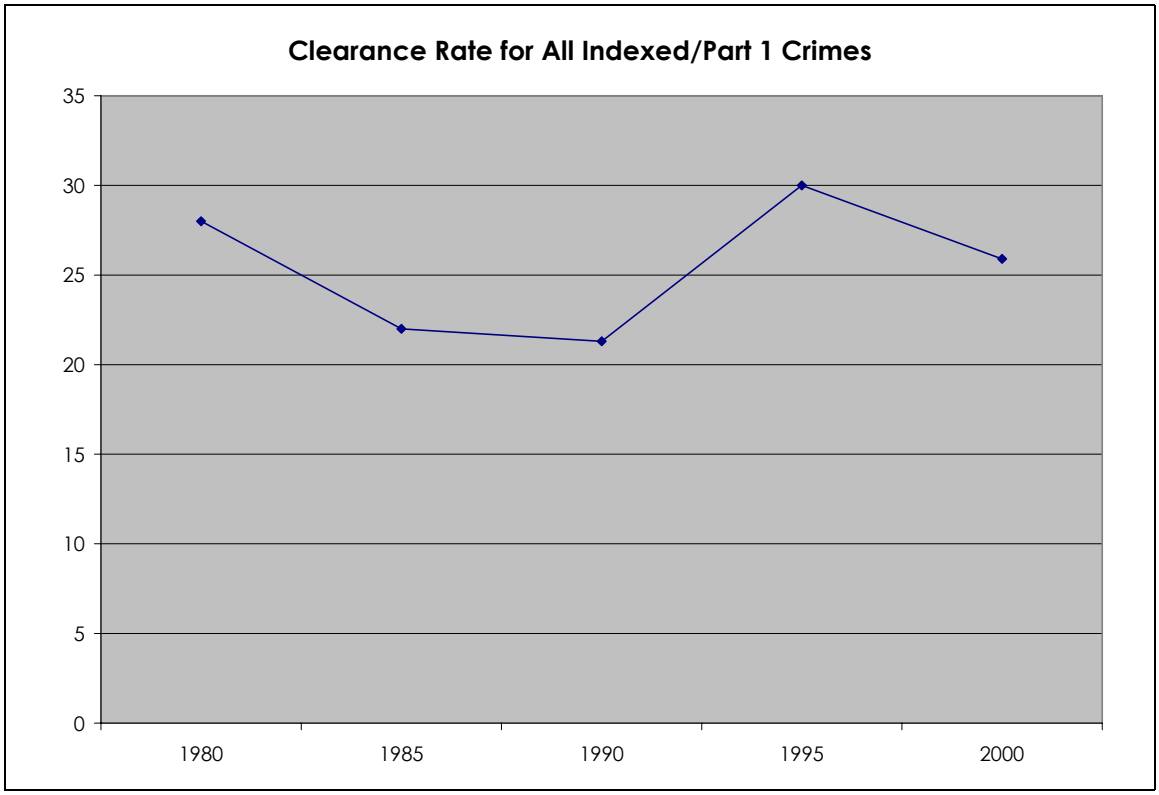
Appendix F – Performance Indicator Charts



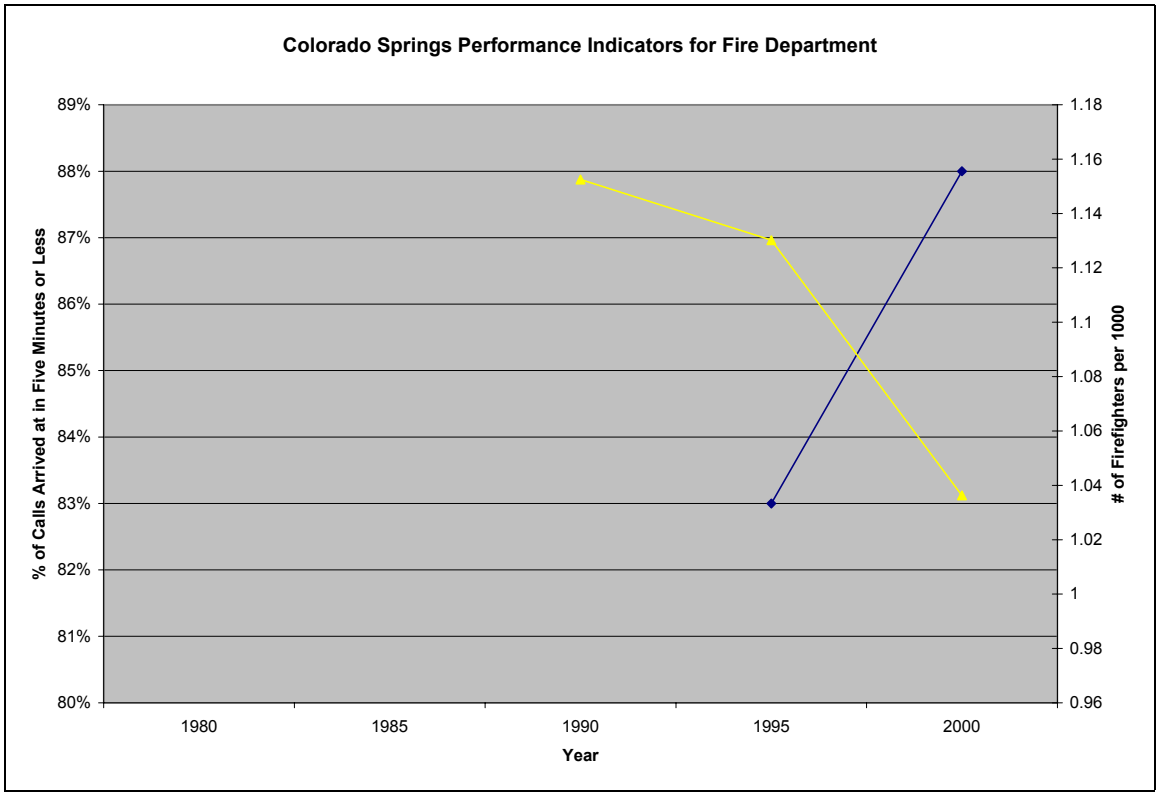
Source: Colorado Springs Police Department



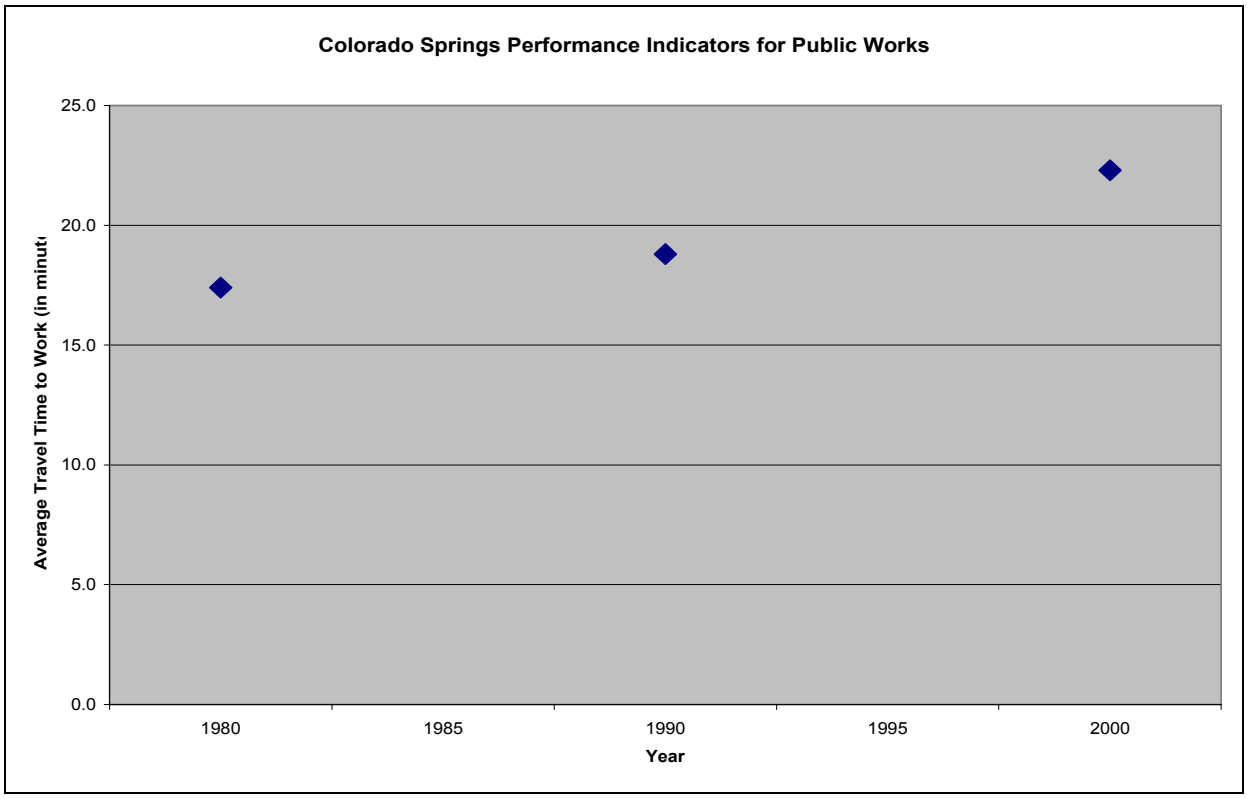
Source: Colorado Springs Police Department



Source: Colorado Springs Police Department



Source: Colorado Springs Fire Department



Source: Pikes Peak Area Council of Governments