

Analysis current as of 26 May 2020.

Executive Summary

Findings:

Allowing retail marijuana sales in Colorado Springs has the potential to generate an estimated \$8.4 million to \$17.7 million in additional tax revenue in 2021, depending on the local tax applied to RMJ by the City.¹ The estimated five-year total of additional tax revenue is \$43.7 million to \$98.2 million. After 2025, the additional tax revenue is expected to increase by about 4% annually, in line with forecasted growth of the RMJ market.

The estimated tax revenue is based upon the following assumptions should Colorado Springs allow retail marijuana stores.

1. Retail marijuana stores begin operating on 1 January 2021. Should stores begin operating at a later date, the revenue estimates will need to be shifted as well. For example, should stores begin operating on 1 July 2021, then estimates would need to be shifted by six months. The key conclusions of this study will remain unchanged.
2. Retail marijuana sales in Colorado Springs in 2021 are estimated at \$126.1 million to \$136.8 million, increasing to \$158.7 million to \$172.0 million in 2025.² After 2025, retail sales are expected to increase by about 4% annually.
3. Retail marijuana sales in Colorado Springs will arise primarily from
 - a. Retail sales shifting from Manitou Springs to Colorado Springs.
 - b. Retail sales shifting from Pueblo and, to a lesser degree, from the Denver area and other parts of Colorado to Colorado Springs.
 - c. A gradual shift from medical marijuana sales in Colorado Springs to retail marijuana sales in Colorado Springs so that the medical/retail split in Colorado Springs resembles that in Denver.
4. Additional revenue for Colorado Springs will come from the following:
 - a. Local Colorado Springs tax on Retail Marijuana (RMJ) that will be between 4% and 12%.
 - b. Collection of the city sales tax of 3.12% on retail marijuana.
 - c. A share of the State of Colorado “special” sales tax consistent with current law (a city gets 10% of the 15% tax collection).³

¹ The lower estimate of additional tax revenue for 2021, and for the years 2021-2025, is based on a local tax rate of 4%. The higher estimates arise from a local tax of 12%. For local tax rates between 4% and 12%, possible to estimate by interpolation.

² RMJ sales and the local tax rate are inversely related so the higher sales figure is associated with the lower (4% local tax rate) and *vice versa*.

³ There is also a State of Colorado Excise Tax of 15% on wholesale marijuana. This is excluded from this study since to the degree this tax is passed on to the ultimate consumer of the marijuana in the retail price, it would then be included in the local and state sales taxes and in the state share returned to a locality.

5. The economic effects of the COVID-19 pandemic will diminish by the end of 2020 and an economic recovery will begin in 2021, with the economy will be “back on track” in about two years. If economic recovery is delayed and median incomes fall, then regression analysis indicates sales of retail marijuana will fall, which would likely decrease expected tax revenue. The magnitude of a such a decline is uncertain given the unprecedented economic impact of COVID-19 at the time of this analysis.

Exclusions:

This particular study does not address the following:

1. Indirect benefit of additional economic activity arising from retail marijuana sales in Colorado Springs. A study by the UCCS Economic Forum cited a study which estimated that each \$1 of retail marijuana sales generated \$2.40 of total economic activity.⁴
2. The effect on employment from allowing retail marijuana stores. This effect is heavily dependent on the market structure once Colorado Springs allows retail stores. At this time, it is uncertain the mix among retail and medical stores (will they be the same?), and whether there will be many smaller retail stores or fewer larger stores. These outcomes, some depending on market forces and some on governmental actions, likely will affect the employment effects of retail marijuana stores. A study by the UCCS Economic Forum cited on study which indicated that one direct job in the marijuana industry led to 0.43 other jobs.
3. License fees. The impact on city revenues from license fees depends on the number of stores and the mix between medical and retail stores.
4. Indirect effects from allowing retail marijuana stores. There is no attempt to quantify the effects of retail marijuana stores on public safety and other non-economic aspects of life Colorado Springs.

⁴ <http://www.uccseconomicforum.com/publications/By-the-Numbers-Jul-21.pdf>

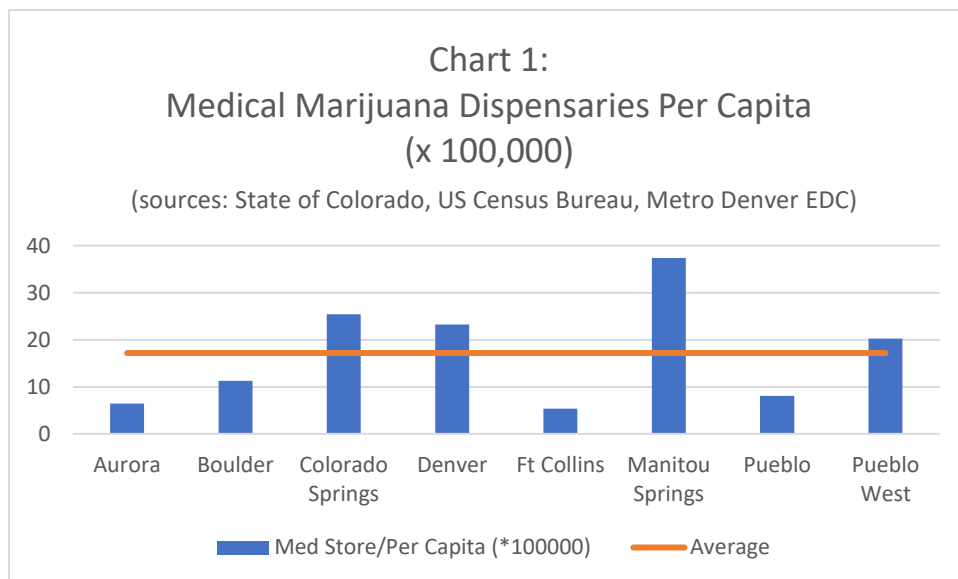
Background

Marijuana in the State of Colorado is no longer a novelty with medical marijuana being available for more than a decade and retail marijuana use legal for more than five years.⁵ The City of Colorado Springs allows medical marijuana with 122 licenses available, although the number of medical stores is a little lower at about 112.⁶ However, the City of Colorado Springs, acting under provisions of the State of Colorado Constitution Amendment 64, prohibits the sale of recreational marijuana within its city limits.^{7,8}

Retail marijuana stores exist in areas adjacent and relatively close to Colorado Springs. There are two retail stores in Manitou Springs, 25 in Pueblo, 13 in Pueblo West. A little farther away, Denver has 183 retail stores and Aurora has 24.⁹

Potential Retail Market Opportunities:

1. Existing Medical Marijuana Market



As illustrated by Chart 1, Colorado Springs has an above-average level of medical marijuana dispensaries per capita and has the largest number of these facilities among any of the comparable areas along the

⁵ The term “Retail Marijuana” is used on the official State of Colorado website (www.colorado.gov) so this term will be used to cover non-medical marijuana sales to consumers. “Retail,” can be considered as equivalent to “recreational,” or “adult,” or other terms that may be used to describe non-medical sales of marijuana.

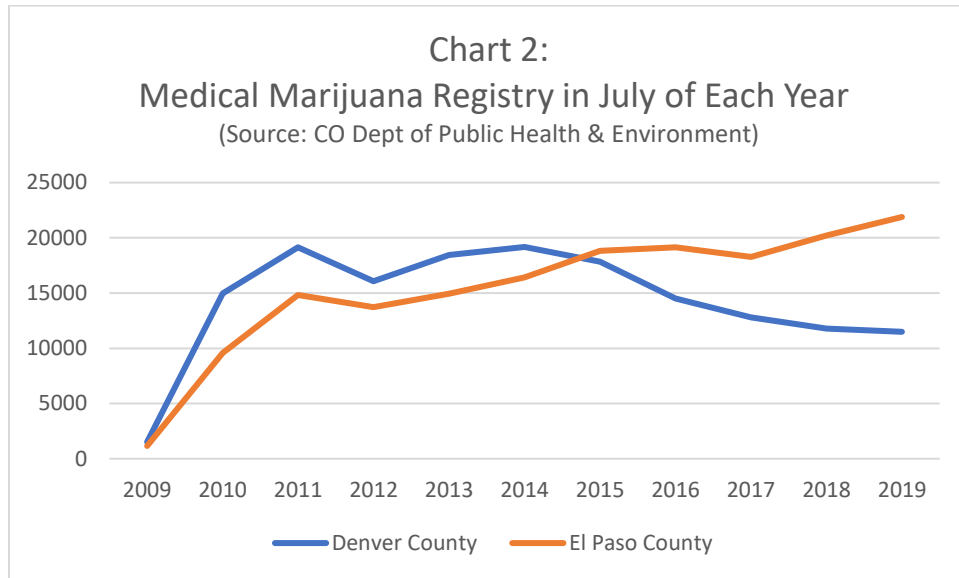
⁶ Available Licenses Source: <https://www.colorado.gov/pacific/enforcement/med-licensed-facilities>, date of information: 1 May 2020. Number of stores operating: Industry source.

⁷ Colorado Constitution Amendment 64.

⁸ Source: <https://coloradosprings.gov/page/marijuana-licensing>; City of Colorado Springs Ordinance 13-47.

⁹ Source: <https://www.colorado.gov/pacific/enforcement/med-licensed-facilities>, date of information: 1 May 2020.

Front Range. (Manitou Springs has a far lower population than other areas on the chart and has two medical marijuana locations; the same two retail stores.)



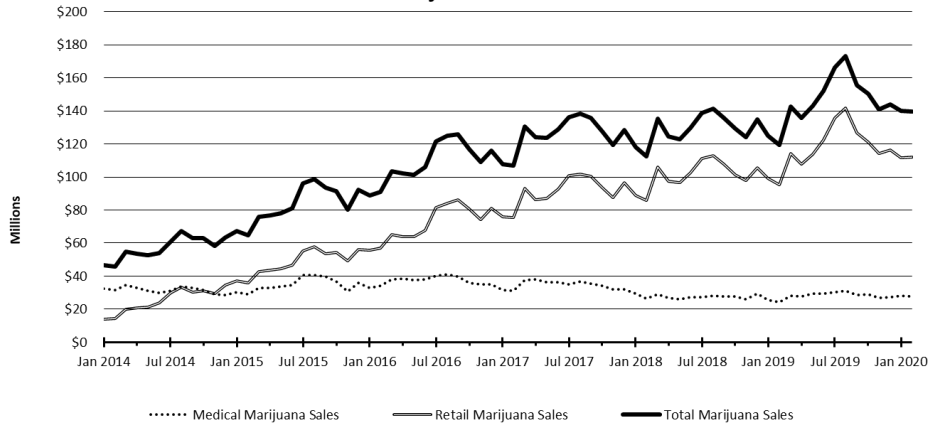
As illustrated by Chart 2, El Paso County,¹⁰ in contrast to Denver County,¹¹ has seen an increase in registered medical marijuana clients since retail marijuana was legalized.

This is also in contrast to the overall Colorado experience where, even accounting for Colorado Springs, medical marijuana sales have been essentially flat since the legalization of retail marijuana sales in 2014. Statewide, marijuana sales growth is driven by retail sales.

¹⁰ The City of Colorado Springs represents approximately 67% of the population of El Paso County (Source: Colorado Springs Chamber of Commerce & EDC)

¹¹ Denver County and the City of Denver are equivalent.

Chart 3: State of Colorado Marijuana Sales



Source: Retail Marijuana sales as reported on the Retail Marijuana Sales Tax Returns and Medical Marijuana Sales as reported on the State Retail Sales Tax Return (DR 100).
 Prepared by: Colorado Department of Revenue, Office of Research and Analysis, dor_or@state.co.us
 Publish date: April 2020

Chart 4: What If: Potential El Paso County "Shifters" from Medical -- ~ 54% from start of legalization

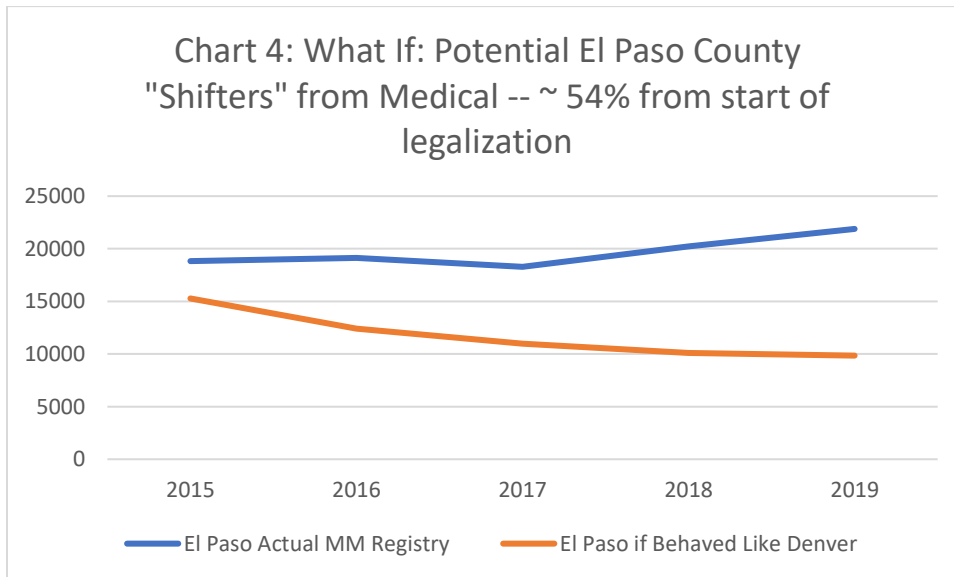


Chart 4 illustrates a “What if” analysis of how the number of El Paso County registered medical marijuana holders would have declined since the legalization of retail marijuana if (a) behavior in El Paso County (which is mostly Colorado Springs) had mirrored that in Denver and (b) Retail marijuana was as widely available in El Paso County as in the Denver area. The conclusion is that the number of medical marijuana holders would have declined by approximately 54% and these shifters, based on statewide and Denver data, would likely become retail marijuana consumers.

2. Retail Marijuana Sales in Areas Near Colorado Springs

Retail marijuana stores exist near Colorado Springs. There are two retail stores in Manitou Springs, 25 in Pueblo, 13 in Pueblo West. Farther away from Colorado Springs, Denver has 183 retail stores and Aurora has 24.

While it uncertain how many potential customers for retail marijuana sales in Colorado Springs use these outlets, the proximity and availability of these alternatives imply a significant leakage of sales and thus tax revenues to these other localities.

**Table 1—
Driving Distances in miles (km) from Colorado Springs to Cities with Retail Marijuana Stores
(source: Google Maps) / Driving Time in Minutes**

	Manitou Springs Town Office Building	Pueblo City Hall	Pueblo West Metropolitan District	Denver City Hall	Aurora City Hall
Colorado Springs City Hall	6 (10) / 12	44 (71) / 41	44 (71) / 43	71 (114) / 69	68 (109) / 67
Colorado Springs North Side (Chapel Hills Mall)	15 (24) / 22	53 (86) / 51	53 (85) / 54	63 (101) / 64	60 (96) / 62
Colorado Springs Airport	16 (26) / 23	43 (69) / 41	42 (68) / 43	82 (132) / 81	79 (127) / 79

FYI: From Chapel Hills Mall to Colorado Springs Airport: 22 miles (35 km) / 27 minutes

As Table 1 indicates, many Colorado Springs residents have shorter distances and travel times to purchase retail marijuana in other localities than they may have to travel to destinations within Colorado Springs. Additionally, Colorado Springs residents commuting or visiting the Denver area or resort locations like Aspen, Dillon, and several others, can also purchase retail marijuana.¹²

Manitou Springs, given its proximity to Colorado Springs, is likely the main retail marijuana destination for many potential customers for Colorado Springs-based retail marijuana stores. While data on retail marijuana sales in Manitou Springs is not available, it is possible to estimate the sales using publicly available information.¹³ The former Mayor of Manitou Springs, Ken Jaray, was quoted as saying the town

¹² Approximately 2500 people live in El Paso County and work in Pueblo County and approximately 4000 people live in El Paso County and work in the Denver Metropolitan Area.

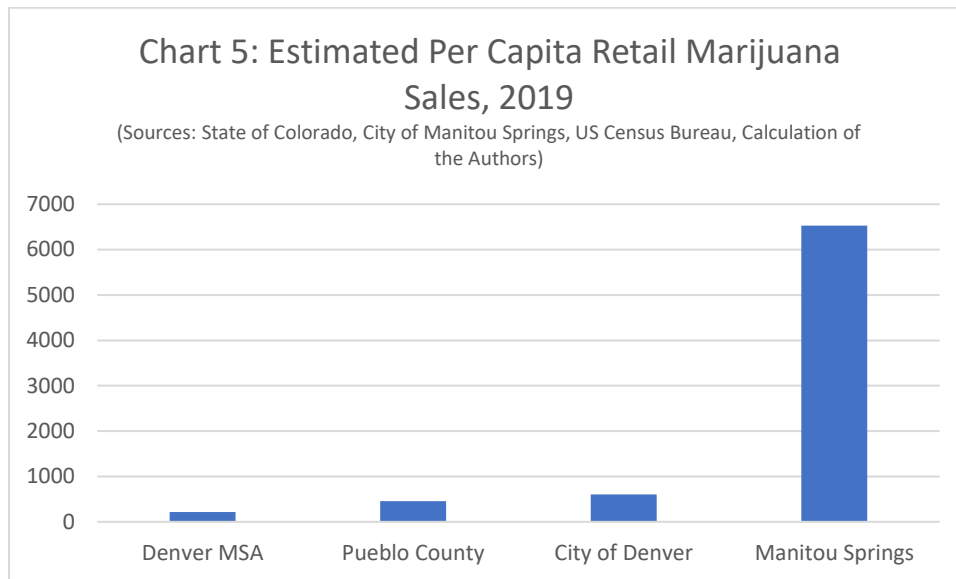
https://coloradospringschamberedc.com/wp-content/uploads/2016/10/Quick_Facts_11-19.pdf

¹³ 4 Per §39-21-113(4), C.R.S., data from these counties must be NR in order to protect the confidentiality of the individual taxpayers. It is the Department's practice to release aggregated data only when there are at least three taxpayers in a given category and none of them represents more than 80% of the total. (Source: www.Colorado.gov)

gets about half of its sales tax revenue from marijuana.¹⁴ Using that information, the tax rate data¹⁵, and the Manitou Springs budget^{16, 17}, the estimated retail marijuana sales in 2019:

- \$35,000,000

On a per capita basis, using information from the US Census Bureau for population, estimated marijuana revenues for Manitou Springs, and data on retail marijuana sales in Denver, the potential scale of the “leakage” of sales into Manitou Springs is clear. While not all the “excess” sales in Manitou Springs come from those who potentially would purchase retail marijuana in Colorado Springs, it is like an overwhelming majority does. For the purposes of the results reported in this study, the factor is 85%.



Consequently, this leads to an equally large disparity in per capita retail marijuana tax revenue between the two municipalities.

Estimation methodology

The estimated revenue for Colorado Springs if the city allowed retail marijuana stores is subject to several key assumptions, but these assumptions are based on empirical data obtained primarily from the State of Colorado official website, www.colorado.gov, other official government sources (primarily from city government websites) and then analyzed by the authors of the study.

There are also two estimation methodologies:

¹⁴ <https://krdo.com/news/2019/10/08/mayor-says-manitou-springs-is-too-reliant-on-cannabis-money/>

¹⁵ Sales tax rate: 3.6% (<https://www.avalara.com/taxrates/en/state-rates/colorado/cities/manitou-springs.html>); Retail marijuana tax rate: 6% (https://www.coloradopolitics.com/news/manitou-springs-is-considering-raising-recreational-pot-taxes-here-s/article_44f36348-f689-5059-8572-9f5028af6bcf.html)

¹⁶ <https://www.manitouspringsgov.com/ArchiveCenter/ViewFile/Item/108>

¹⁷ Page 118 of the 2020 Manitou Springs budget details the sales tax revenue the city obtained from 1997 through 2018. While marijuana-generated revenue is not broken out specifically, sales tax revenue more than doubled from 2014 to 2018 (\$2.6 M to \$6.2 M).

1. Comparing actual and estimated retail and medical marijuana sales and tax revenue data in the State of Colorado and municipalities over the past decade to predict potential retail marijuana tax revenue for the City of Colorado Springs.
2. Using actual and estimated sales, tax, and demographic data and regression analysis to predict potential retail marijuana tax revenue for the City of Colorado Springs.

Key Facts, Assumptions, and Implications:

- Retail marijuana stores begin operating on 1 January 2021. Should stores begin operating at a later date, the revenue estimates will need to be shifted as well. For example, should stores begin operating on 1 July 2021, then estimates would need to be shifted by six months. The key conclusions of this study will remain unchanged.
- Marijuana, medical and retail, is no longer a novelty in Colorado nor in Colorado Springs.
 - **Implication:** Allowing retail marijuana stores in Colorado Springs will not cause a significant increase in the likelihood an adult (≥ 21 years of age) will use marijuana. This is different the situation when retail marijuana stores entered the market in 2014.
- The marijuana market in Colorado is “maturing” and thus the growth rate for retail marijuana will at a lower level than in the past few years and (b) the medical marijuana market will remain relatively flat is sales and thus represent a declining share of overall sales.
 - The City of Denver in its 2020 budget projects sales growth of 4% per year from 2020-2024 in retail marijuana sales due to increased competition from other areas inside and outside the State of Colorado.¹⁸ Factors:
 - (a) Declines in prices from having stores in Colorado Springs which would erode the Manitou Springs oligopoly on El Paso County retail marijuana sales.¹⁹ (*Ceteris Paribus*²⁰: negative for sales tax revenue)
 - (b) Changes in behavior as people enter the market as new users, increase usage or switch from medical marijuana use. (*Ceteris Paribus*: positive for sales tax revenue)
 - (c) Increases in population which is roughly 1% per year. (*Ceteris Paribus*: positive for sales tax revenue)

¹⁸

<https://www.denvergov.org/content/dam/denvergov/Portals/344/documents/Budget/2020/2020BudgetVolume1.pdf>, page 288.

¹⁹ <https://www.cpr.org/2019/01/22/manitou-is-a-marijuana-oasis-in-the-el-paso-county-desert-should-they-add-more-stores/>

²⁰ *Ceteris paribus* means “all other things equal” and thus isolates each factor’s probable effects. For example, a decline in prices by itself would lead a decline in tax revenue, (Factor a). The overall effect could be either positive or negative depending on whether the ceteris paribus decline in prices (Factor a) is offset by an increase in the quantity demanded as the price falls (Factor b).

- **Implication:** Since the retail marijuana market is “maturing” and Colorado Springs residents have had the ability to buy retail marijuana from other localities, allowing retail marijuana stores in Colorado Springs will lead a steady but not spectacular rise to tax revenue that was experienced in the first few post-legalization years in localities like Manitou Springs.
- As illustrated in Chart 5, the majority of retail sales (estimated \$35,000,000 in 2020) in Manitou Springs are almost certainly made to non-Manitou Springs residents.
 - 2019 Ratio of per capita sales Manitou Springs to Ratio of per capita sales Denver MSA: 27:1.
 - **Implication:** Vast majority of retail sales from Manitou Springs are not to Manitou Springs residents. Given the proximity of Colorado Springs to Manitou Springs and the share of the population in El Paso that lives in Colorado Springs (~ 67%), most of the sales are going to Colorado Springs residents. For the purpose of this study, the estimate is 85%.
- Similarly, for Pueblo
 - 2019 Ratio of per capita sales Pueblo County to Ratio of per capita sales Denver MSA: 2:1.
 - **Implication:** Likely half of sales in Pueblo County are going to non-Pueblo County residents, including those living in Colorado Springs. For the purpose of this study, the estimate is 50% to account for sales in Pueblo County and those other Colorado Springs residents who buy retail marijuana in the Denver area or other parts of the state.

Overall Implication: A key potential source of tax revenue for the City of Colorado Springs to bring into the city sales that currently “leak” out to other areas.

- Colorado Springs will experience a similar gradual, but pronounced, shift from medical marijuana to retail marijuana as was experienced in the Denver area and other parts of Colorado.
 - Estimated 2020 medical marijuana sales in Colorado Springs: \$100,000,000²¹
 - The adjustment process will take several years as market conditions and preferences change. Using data from Chart 4:

²¹ Sources: Comments from Mayor Suthers: https://www.southbendtribune.com/news/marijuana/colorado-city-just-says-no-to-marijuana-michigan-cities-may-face-the-same-decision/article_5b293e5b-5f99-59f5-afdf-f9c8a149a475.html, Colorado Springs Sales Tax Rate, and comments local Colorado Springs business people.

- First year share shifts to retail from estimated 2020 medical: 53%
 - Second year shift to retail from estimated 2020 medical: 58%
 - Third year shift to retail from estimated 2020 medical: 63%
 - Fourth year shift to retail from estimated 2020 medical: 68%
 - Stabilizes at 75% of estimated 2020 medical but retail sales grow at 4% annually as described above.
 - **Implications:**
 - Shift from medical to retail represents a revenue opportunity for Colorado Springs due to differing tax laws and rates.
 - Revenue increases will gradually phase in over a four-year period.
- Since tax revenue depends on the total sales and the applicable tax rates...
 - Colorado Springs will apply a local tax on RMJ between 4% and 12%.
 - Colorado Springs city sales tax of 3.12% will apply to retail marijuana.
 - Colorado Springs will receive its distribution from the State of Colorado 15% “Special Sales Tax” on retail marijuana (10% of the revenue collected in the city from the “special sales tax.” = 1.5% of retail sales).
 - The City of Colorado Springs currently collects license fees on medical marijuana stores and will collect a license fee on retail marijuana stores. License fees are supposed to match the cost the City incurs to monitor businesses and enforce relevant laws and regulations.
 - Current medical marijuana license fee: \$7500 per store.
 - Estimated retail marijuana license fee: \$7500 per store
 - The total number of marijuana stores in Colorado Springs (remaining medical + authorized retail) after retail sales are allowed is unknown.
 - **Implication:** The estimated revenue in this report for Colorado Springs will focus on tax revenue and not on license fees. Revenue from license fees can increase or decrease depending on the market structure after retail stores enter the market and on decisions made by the City of Colorado Springs on license fees. And, to the extent license fees are matched to costs incurred to monitor businesses and enforce relevant laws and regulations, it is a net zero on the City’s fiscal situation.
 - The COVID-19 pandemic will be over or under control by the end of 2020, an economic recovery will be underway in 2021, and the economy will be roughly “back on track” within two years.

- **Implication:** The national, regional, and local economies will avoid persistent negative income effects from the COVID-19 pandemic. If the economy remains in a recession, then it is likely that realized tax revenue will be less than that estimated in this study.

Conclusions: There are two key opportunities for retail marijuana tax revenue for the City of Colorado Springs.

- **Bringing sales “home” from other jurisdictions.**
- **Shift of sales from lower-taxed medical marijuana to higher-taxed retail marijuana.**

Calculations and Results:

The formula for calculating the change in revenue for the City of Colorado Springs:

Change in Tax Revenue =

(+) (Sales brought in from other jurisdictions) * (% sales tax rate + % local marijuana tax rate + % state share)

(+) (Sales shifted from medical stores to retail stores) * (% sales tax rate + % special marijuana tax rate + % state share)

(-) (Sales shifted from medical stores to retail stores) * (% sales tax rate)

Results

The forecast results of sales and tax revenue are presented below along with several charts.

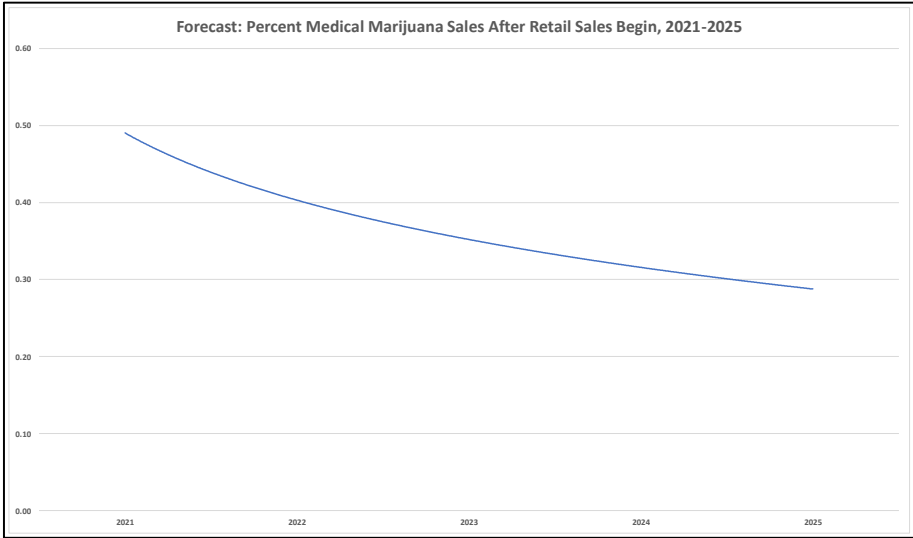
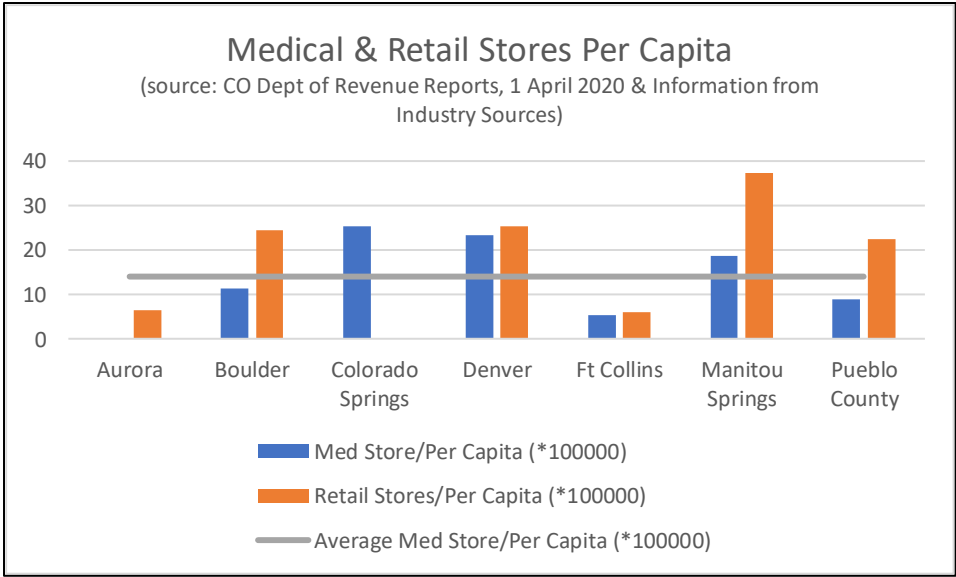
	4% local RATE		8% local RATE		12% local RATE	
	Retail Sales (\$ millions)	Additional Tax Revenues (\$ millions)	Retail Sales (\$ millions)	Additional Tax Revenues (\$ millions)	Retail Sales (\$ millions)	Additional Tax Revenues (\$ millions)
2021	136.8	8.4	131.5	13.2	126.2	17.7
2022	144.9	8.5	140.6	14.0	134.6	18.7
2023	153.5	8.7	148.0	14.5	141.6	19.6
2024	160.0	8.9	155.3	15.0	148.6	20.5
2025	170.9	9.2	165.8	15.7	158.7	21.7
Total	765.1	43.7	741.2	72.4	709.6	98.2

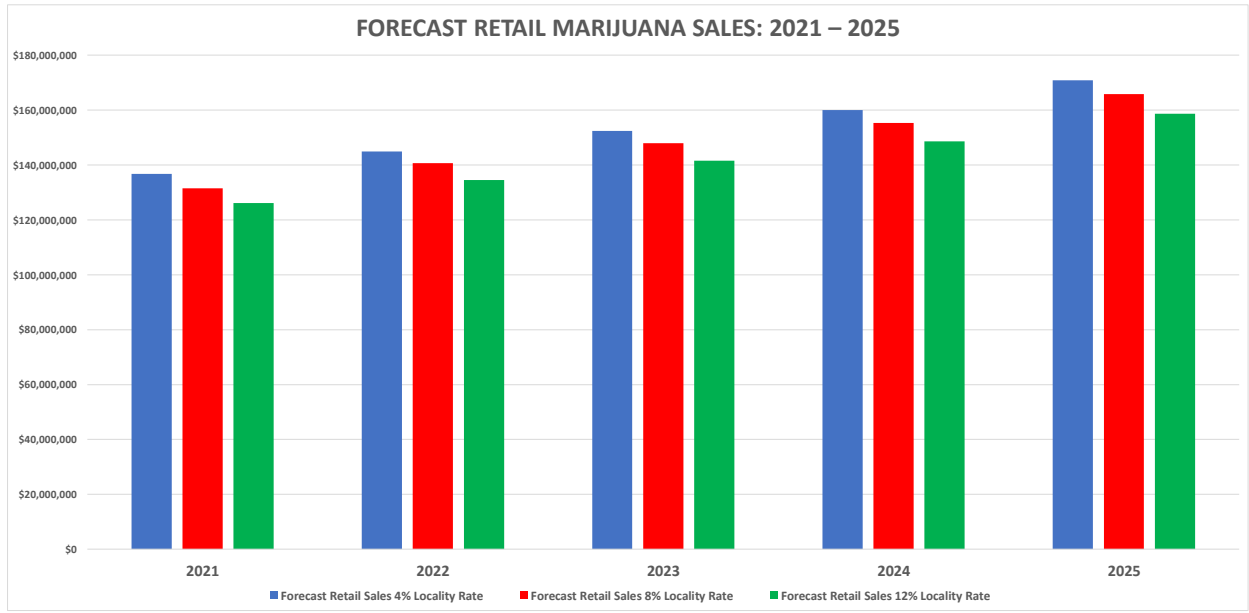
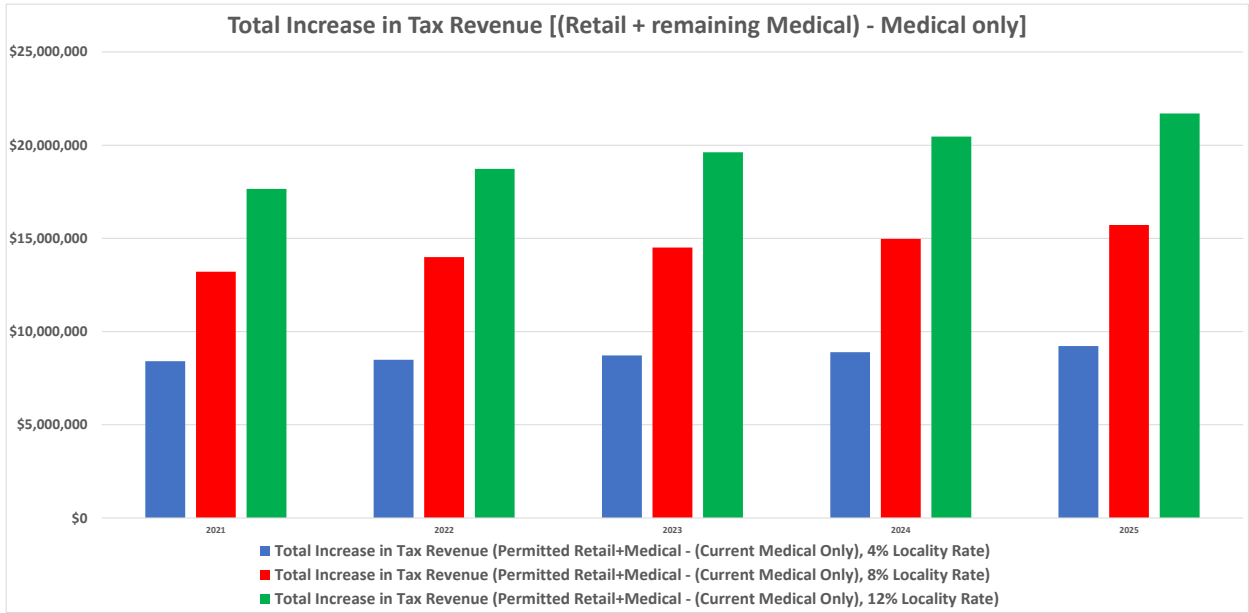
Forecast RMJ Sales @ 4% Local Tax				
Year	Shift from Medical	Shift from Manitou	Pueblo, Denver, etc	TOTAL
2021	\$60,117,175	\$33,667,480	\$43,025,136	\$136,809,790
2022	\$64,800,158	\$36,360,878	\$44,746,141	\$145,907,177
2023	\$68,468,203	\$38,542,531	\$46,535,987	\$153,546,720
2024	\$72,665,256	\$40,084,232	\$48,397,426	\$161,146,915
2025	\$80,011,131	\$41,687,602	\$50,333,323	\$172,032,056
TOTAL	\$346,061,922	\$190,342,723	\$233,038,013	\$769,442,658

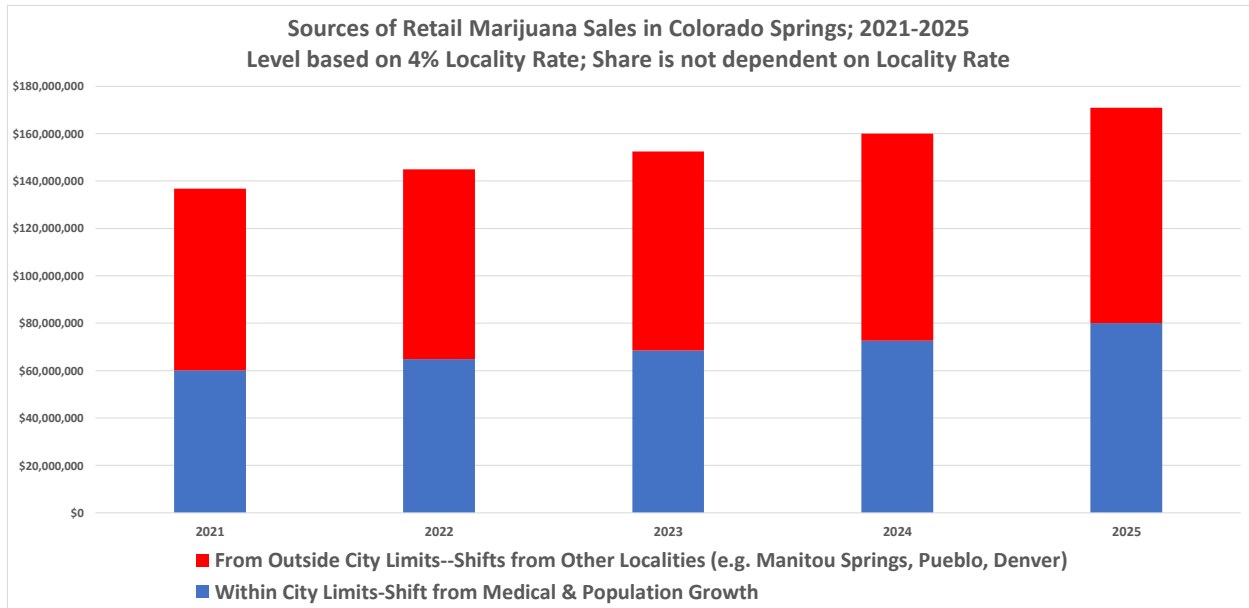
Forecast RMJ Sales @ 12% Local Tax				
Year	Shift from Medical	Shift from Manitou	Pueblo, Denver, etc	TOTAL
2021	\$55,442,433	\$31,049,480	\$39,679,480	\$126,171,393
2022	\$59,761,265	\$33,533,438	\$41,266,659	\$134,561,362
2023	\$63,144,081	\$35,545,445	\$42,917,325	\$141,606,851
2024	\$67,014,770	\$36,967,262	\$44,634,018	\$148,616,050
2025	\$73,789,426	\$38,445,953	\$46,419,379	\$158,654,758
TOTAL	\$319,151,975	\$175,541,579	\$214,916,861	\$709,610,414

Forecast RMJ Tax Revenue @ 4% Local Tax					
Year	Shift from Medical	Shift from Manitou	Pueblo, Denver, etc	TOTAL RMJ Tax Revenue	Tax Revenue (net of delta)
2021	\$ 3,524,692	\$ 2,902,137	\$ 3,708,767	\$10,135,596	\$8,478,187
2022	\$ 3,766,174	\$ 3,134,308	\$ 3,857,117	\$10,757,599	\$8,937,999
2023	\$ 3,943,084	\$ 3,322,366	\$ 4,011,402	\$11,276,852	\$9,317,978
2024	\$ 4,144,813	\$ 3,455,261	\$ 4,171,858	\$11,771,932	\$9,652,999
2025	\$ 4,563,820	\$ 3,593,471	\$ 4,338,732	\$12,496,024	\$10,162,884
	\$19,942,582	\$16,407,543	\$20,087,877	\$56,438,002	\$46,550,047

Forecast RMJ Tax Revenue @ 12% Local Tax					
Year	Shift from Medical	Shift from Manitou	Pueblo, Denver, etc	TOTAL RMJ Tax Revenue	Additional Tax Revenue (net of delta MMJ)
2021	\$ 7,557,124	\$ 5,160,424	\$ 6,594,730	\$19,312,277	\$17,654,869
2022	\$ 8,112,722	\$ 5,573,257	\$ 6,858,519	\$20,544,498	\$18,724,898
2023	\$ 8,535,671	\$ 5,907,653	\$ 7,132,859	\$21,576,184	\$19,617,309
2024	\$ 9,018,922	\$ 6,143,959	\$ 7,418,174	\$22,581,055	\$20,462,123
2025	\$ 9,930,663	\$ 6,389,717	\$ 7,714,901	\$24,035,281	\$21,702,142
	\$43,155,103	\$29,175,010	\$35,719,182	\$108,049,296	\$98,161,340







Comparison of Tax Rates on Retail Marijuana along the Front Range

Comparison of Local Tax Rates on Retail Marijuana (Sources: State of Colorado, Localities)

Municipalities	Column 2: Local RMJ Specific Tax %	Column 3: Local Sales Tax (also applied to RMJ) %	Column 4 (Column 2 + Column 3) Total RMJ Local Tax Rate (set by local authorities) %	Column 5 Total Retail Tax (Total RMJ Local Tax Rate + County (if applicable) + State) %
Aurora	5.1	3.75	8.85	24.1 (Arapahoe County) -24.5 (Adams County)
Boulder	7.36	3.86	11.22	27.21
Denver	5.5 *	4.31	9.81	24.81
Manitou Springs	6.0	3.6	9.6	25.83
Pueblo	4.0	3.7	7.7	23.7
Unweighted Average	5.59	3.84	9.44	25.17

* Denver's local Tax was capped at 15% by voters in 2013. Changing local rate up to cap requires City Council approval.

Alternative Estimation Techniques:

1. "Per Capita" approaches: Per Capita Sales Ratios x Tax Rate

- a. Using Denver: \$603 sales / per capita → COS sales in 2021 ~ \$285 million → at 10% total tax rate → \$28.5 million tax revenue²²
 - b. Using Statewide: \$303 sales / per capita → COS sales in 2021 ~ \$175 million → at 10% total tax rate → \$17.5 million tax revenue
2. Regression Analysis
- a. Estimated 2020 COS sales: \$129 million - \$156 million → at 10% total tax rate → \$12.9 million - \$15.6 million

(Reminder: Study estimated 2020 sales: \$126 million - \$137 million)

REGRESSION DETAILS:

Matrix of correlations

Variables	(1)	(2)	(3)
(1) Population	1.000		
(2) MedianAge	-0.932	1.000	
(3) MHI	-0.663	0.858	1.000

Sales Regression Models: iterating through correlated independent variables

	Sales(1): MHI	Sales(2): MedianAge	Sales(3): Population	Sales(4): No Price
Unemployment	-2229243.3** (-2.63)	-2391345.1*** (-3.38)	-2243920.2*** (-3.53)	-2352972.0** (-3.29)
PriceBud	-4648.8* (-2.41)	-4664.0** (-2.85)	-4062.4** (-2.72)	
Political	-62014453.0*** (-22.09)	-59724545.1*** (-25.35)	-36350388.3*** (-17.79)	-59750765.3*** (-24.74)
MHI	-1935.6*** (-25.60)			
MedianAge		-13518611.4*** (-33.20)		

²² This seems to be the methodology of an earlier estimate of tax revenue from RMJ.
<https://mjbizdaily.com/wp-content/uploads/2017/07/Final-CS-MJ-Economic-Study.pdf>

Population			41.27***	
			(36.06)	
y15	0	0	0	0
	(.)	(.)	(.)	(.)
y16	6078485.8***	4002871.0***	1564793.4	4282853.5***
	(5.51)	(4.23)	(1.71)	(4.59)
y17	12022902.6***	5983918.8***	1450286.4	8589529.9***
	(7.46)	(4.69)	(1.13)	(9.07)
y18	21296318.1***	6977707.4***	1508537.1	11500999.5***
	(10.16)	(4.09)	(0.93)	(15.07)
y19	27103823.7***	9489492.7***	1650946.7	14489324.1***
	(10.52)	(4.57)	(0.84)	(12.76)
_cons	165120335.5***	512476069.5***	17548061.7***	503005513.0***
	(19.55)	(31.56)	(4.65)	(33.07)
N	180	180	180	
R-sq	0.899	0.928	0.941	

t statistics in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Refined Models, Price Excluded

Sales: MHI, no Price

Sales	Coef.	St.Err.	t-value	p-value	[95% Conf Interval]	Sig
Unemployment	-2890000	1280000	-2.25	0.025	-5410000 -359000	**
Political	-60900000	6870000	-8.87	0.000	-74400000 -47300000	***

MHI	-1132.287	110.831	-10.22	0.000	-1351.023	-913.550	***
y19	13300000	1750000	7.59	0.000	9830000	16700000	***
Constant	114000000	9830000	11.64	0.000	95000000	134000000	***

Mean dependent var	12944595.615	SD dependent var	11773575.264
R-squared	0.533	Number of obs	180.000
F-test	49.971	Prob > F	0.000
Akaike crit. (AIC)	6243.979	Bayesian crit. (BIC)	6259.944

Sales: MedianAge, no Price

Sales	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Unemployment	-5000000	767000.000	-6.52	0.000	-6510000	-3480000	***
Political	-58000000	4130000	-14.03	0.000	-66100000	-49800000	***
MedianAge	-13200000	541000.000	-24.45	0.000	-14300000	-12200000	***
y19	7380000	948000.000	7.79	0.000	5510000	9250000	***
Constant	507000000	20000000	25.39	0.000	467000000	546000000	***

Mean dependent var	12944595.615	SD dependent var	11773575.264
R-squared	0.831	Number of obs	180.000
F-test	215.504	Prob > F	0.000
Akaike crit. (AIC)	6060.830	Bayesian crit. (BIC)	6076.795

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$

Forecasting

1. Best Candidate

Model	Sales(2), no price
Unemp	-5000000
PriceBud	
Political	-58000000
MHI	
MedianAge	-13200000
Population	
Y19	7380000
Constant	507000000

Colorado Springs Data

	16	17	18	19
Unemp	4.6	3.1	3.9	3.4
PriceBud	1882	1386	971	871
Political	0.5619	0.5619	0.5619	0.5619
MHI	63610	65260	67923	69970
MedAge	33.8	34	34.1	34.3
Pop	458531	456160	472688	481332
Forecast	Sales(2), no price			
2019, month	\$ 12,029,800.00			
2019 annual	\$ 144,357,600.00			
2020 annual	\$ 150,131,904.00			

2. Alternatives, price included as independent variable.

Model	Sales(1)	Sales(2)	COS			
			16	17	18	19
Unemp	-2229243.3	-2391345	Unemp 4.6	3.1	3.9	3.4

PriceBud	-4648.8	-4664	PriceBud	1882	1386	971	871
Political	-62014453	-59724545	Political	0.5619	0.5619	0.5619	0.5619
MHI	-1935.6		MHI	63610	65260	67923	69970
MedianAge		-13518611	MedAge	33.8	34	34.1	34.3
Population			Pop	458531	456160	472688	481332
Y15	0	0	Forecast	Sales(1)	Sales(2)		
Y16	6078485.8	4002871	2015				
Y17	12022902.6	5983918.8	2016				
Y18	21296318.1	6977707.4	2017				
Y19	27103823.7	9489492.7	2018				
Constant	165120336	512476070	2019 monthly	\$10,315,774	\$12,525,051		

2019	\$	\$
	10,315,774.04	12,525,051.95
2019 annual	\$ 123,789,288.47	\$ 150,300,623.38
2020 annual	\$ 128,740,860.01	\$ 156,312,648.31