



**AGENDA**  
CHARTER TOWNSHIP OF MERIDIAN  
PLANNING COMMISSION – REGULAR MEETING  
January 9, 2023 6:30 PM

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1. CALL MEETING TO ORDER
2. ROLL CALL
3. PUBLIC REMARKS
4. APPROVAL OF AGENDA
5. APPROVAL OF MINUTES
  - A. December 12, 2022
6. COMMUNICATIONS
  - A. Email from Lynne Page re: Text Amendment #2022-19
7. PUBLIC HEARINGS
  - A. Rezoning #23-01 – 1642 Lake Court – MW6, LLC – RB, One-Family, High-Density Residential, to RCC, Multiple-Family Residential, subject to a conditional rezoning agreement
8. UNFINISHED BUSINESS
  - A. Text Amendment #2022-19 – Recreational Marijuana
9. OTHER BUSINESS
  - A. Planning Commission Annual Report
  - B. Election of Officers
  - C. Planning Commission Liaison Assignments
10. MASTER PLAN UPDATE
  - A. Public Comment Summary to Date
11. REPORTS AND ANNOUNCEMENTS
  - A. Township Board update.
  - B. Liaison reports.
12. PROJECT UPDATES
  - A. Project Report
13. PUBLIC REMARKS
14. ADJOURNMENT

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Individuals with disabilities requiring auxiliary aids or services should contact: Director of Community Planning and Development  
Timothy R. Schmitt, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4506 - Ten Day Notice is Required.  
Meeting Location: 5151 Marsh Road, Okemos, MI 48864



**TENTATIVE PLANNING COMMISSION AGENDA**  
**January 23, 2022**

1. PUBLIC HEARINGS
  - A.
2. UNFINISHED BUSINESS
  - A. REZ #23010 (Lake Court) – MW6
3. OTHER BUSINESS
  - A. None

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Timothy R. Schmitt, 5151 Marsh Road, Okemos, MI 48864 or 517.853.4506 - Ten Day Notice is Required.  
Meeting Location: 5151 Marsh Road, Okemos, MI 48864

Providing a safe and welcoming, sustainable, prime community.



**CHARTER TOWNSHIP OF MERIDIAN  
PLANNING COMMISSION  
REGULAR MEETING MINUTES**

**DRAFT**

**December 12, 2022  
5151 Marsh Road, Okemos, MI 48864-1198  
517.853.4000, Town Hall Room, 7:00 P.M.**

**PRESENT: Chair Blumer, Vice-Chair Trezise, Commissioners McConnell, Shrewsbury, Richards, Snyder, Premoe**

**ABSENT: Commissioner Cordill**

**STAFF: Director of Community Planning & Development Timothy Schmitt, Senior Planner Brian Shorkey, Communications Manager Samantha Diehl**

**1. CALL MEETING TO ORDER**

Chair Blumer called the regular meeting to order at 7:00 pm.

**2. ROLL CALL**

Chair Blumer called the roll of the Planning Commission, Commissioner Cordill is absent, all others present.

**3. PUBLIC REMARKS**

Chair Blumer opened public remarks at 7:02 pm.

Cecelia Kramer, 4560 Oakwood Dr., Okemos, MI spoke about communications sent from Faith Lutheran Church regarding the Township's Master Plan update.

Chair Blumer closed public remarks at 7:05 pm.

**4. APPROVAL OF AGENDA**

**Vice-Chair Trezise moved to approve the agenda. Seconded by Commissioner Richards.**

VOICE VOTE: Motion approved unanimously.

**5. APPROVAL OF MINUTES**

A. October 24, 2022 Regular Meeting

**Vice-Chair Trezise moved to approve the Minutes of the October 24, 2022 Planning Commission Regular Meeting as amended. Seconded by Commissioner McConnell.**

VOICE VOTE: Motion approved unanimously.

B. November 14, 2022 Regular Meeting

**Chair Blumer moved to approve the Minutes of the November 14, 2022 Planning Commission Regular Meeting as amended. Seconded by Commissioner Snyder.**

VOICE VOTE: Motion approved unanimously.

## **6. COMMUNICATIONS**

- A. Email from Rick Mason Re: TA #2022-19
- B. Email from Marc Santucci Re: TA #2022-19
- C. Letter from Dave Ledebuhr Re: TA #2022-19
- D. Letter from Faith Lutheran Church Re: 2022 Master Plan

## **7. PUBLIC HEARINGS**

- A. TA #2022 – 19 – Recreational Marijuana

Director Schmitt outlined TA #2022 – 19 – Recreational Marijuana for public hearing. He explained staff's plan is to strike medical from the current Ordinance, utilize the existing overlay districts and eliminate two districts, one along Towner Rd., and the other along Dawn Ave.

Chair Blumer opened the public hearing at 7:11 pm.

Mark Santucci, 5909 Blythefield Dr., East Lansing, MI spoke about his property as it relates to this Ordinance.

Joan Wierzba, 1268 Harbor Cut, Okemos, MI spoke about her concerns with the sale and advertising of recreational marijuana in the township.

Lynn Page, 3912 Raleigh Dr., Okemos, MI spoke about her concerns with recreational marijuana sales in the township.

Vice-Chair Trezise asked about district four being restricted to only service dispensaries.

Director Schmitt replied the Ordinance has only been written for dispensaries and staff does not see a market for any other type of marijuana facility in the township.

Bob Baldori, 217 Mount Hope Rd., Okemos, MI spoke in support of recreational marijuana.

Chair Blumer closed the public hearing at 7:45 pm

**Chair Blumer called a straw vote on TA #2022 – 19 – Recreational Marijuana.**

Commissioner Shrewsbury noted in the draft Ordinance on page one, section E(1) the word "zoned" should remain before "C-1, C-2 or C-3".

STRAW VOTE: YEAS: Chair Blumer, Vice-Chair Trezise, Commissioners McConnell, Shrewsbury, Snyder

NAYS: Commissioner Richards

ABSTAIN: Commissioner Premoe

RESULTS: 5-1-1

## **8. UNFINISHED BUSINESS**

### A. SUP #22101 – MSU to Lake Lansing Connector Trail, Phase 1

Senior Planner Shorkey outlined SUP #22102 – MSU to Lake Lansing Connector Trail, Phase 1.

Chair Blumer asked how the path is handled where it crosses Grand River Ave.

Senior Planner Shorkey replied there is a signaled crossing at the Park Lake Rd. intersection requiring either a single crossing or a triple crossing.

**Commissioner McConnell moved to approve Special Use Permit #22101 – MSU to Lake Lansing Connector Trail, Phase 1. Seconded by Commissioner Richards.**

ROLL CALL VOTE: YEAS: Vice-Chair Trezise, Commissioners Shrewsbury, Richards, Snyder, Premoe, McConnell, Chair Blumer

NAYS: None

MOTION CARRIED: 7-0

### B. SUP #22111 – Douglas J Floodplain

Senior Planner Shorkey outlined SUP #22111 – Douglas J Floodplain.

**Commissioner Shrewsbury moved to approve SUP #22111 – Douglas J Floodplain. Seconded by Commissioner Snyder.**

ROLL CALL VOTE: YEAS: Commissioners Premoe, Richards, Snyder, McConnell, Vice-Chair Trezise, Chair Blumer, Commissioner Shrewsbury

NAYS: None

MOTION CARRIED: 7-0

## **9. OTHER BUSINESS-NONE**

## **10. MASTER PLAN UPDATE**

A. Housing

Director Schmitt provided a Master Plan Update on housing for discussion.

The Planning Commission and Director Schmitt discussed creative ways to address high costs of rent using internal processes and examples from East Lansing projects.

**11. REPORTS AND ANNOUNCEMENTS**

A. Township Board Update

Director Schmitt reported the Township Board has held its initial review of the Grand Reserve Project and will be up for final review December 13<sup>th</sup>. The Board adopted the zoning ordinance amendment to eliminate the RAA Zoning district and rezoned the seven properties that fell into that category. The Brownfield plan for “American House” as well as “Ordinance 2022 – 15 Daycare Regulation Updates” will be before the Township Board for discussion on December 13<sup>th</sup>.

B. Liaison Reports-NONE

Commissioner Premoe

- The Zoning Board of Appeals will need to have a new member appointed with Commissioner Premoe’s resignation

Chair Blumer

- The Downtown Development Authority did not meet in December

**12. PROJECT UPDATES**

A. Project Updates - NONE

**13. PUBLIC REMARKS**

Chair Blumer opened Public Remarks at 8:11 PM.

Commissioner Premoe expressed his appreciation for being a member of the Planning Commission for the last five years. He noted the Planning Commission has granted far more exceptions than denials meaning Ordinances may not be appropriate or the commission may be too lenient. He spoke of the increasing diversity of Meridian Township and the Planning Commission should be a more diverse commission to reflect that.

Mark Santucci, 5909 Blythefield Dr., East Lansing, MI spoke about middle income housing unintentionally becoming high income housing and the effect legalizing recreational marijuana will have on the black market.

Bob Baldori, 217 Mount Hope Rd., Okemos, MI asked about the opening of Okemos Rd., and spoke in support of recreational marijuana sales.

Chair Blumer closed Public Remarks at 8:22 PM.

**14. ADJOURNMENT**

**Chair Blumer moved to adjourn.**

VOICE VOTE: Motion approved unanimously.

Chair Blumer adjourned the regular meeting at 8:23 pm.

**From:** [Lynne Page](#)  
**To:** [Planning Commission \(DG\)](#)  
**Cc:** [Board](#); [Tim Schmitt](#)  
**Subject:** 2022-19-Recreational Marijuana Zoning Ordinance  
**Date:** Monday, December 12, 2022 6:16:32 PM  
**Attachments:** [RMHIDTA Marijuana Report 2021.pdf](#)  
[Alcohol is No Longer the Most Abused Drug by American Children.pdf](#)  
[Clinical Toxicology Pediatric Marijuana Poisoning 12.05.22.pdf](#)

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**Meridian Township Planning Commission Meeting 12.12.22**  
**Agenda Item #7-A: Public Hearing**  
**Re: 2022-19 – Recreational Marijuana Ordinance**

December 12, 2022

To the Planning Commission:

1. The marijuana ballot question decided by voters on in the 2022 August Primary Election result did not ask whether residents wanted to opt in for recreational marijuana dispensaries, but only whether to ban recreational pot businesses altogether. As almost 25% of voting precincts could not be recounted, the official "No" result prevailed by a reduced margin of 6 votes. The election results reflect residents' deep division on this issue. Michigan's MRTMA law identifies several recreational marijuana businesses, including grower, processor, secure transporter, and safety compliance facilities, in addition to retail facilities. Other communities have opted in for recreational marijuana facilities without allowing retail dispensaries.
2. The health, safety, and welfare of the community is paramount in any land use decision. Using the medical marijuana zoning overlay districts as a template for commercial recreational marijuana development is excessive and could potentially double the number and location of marijuana businesses in the township if both medical and recreational establishments are permitted. Based on recent legal developments in other municipalities, it is reasonable and necessary to rescind the current medical marijuana zoning and non-zoning ordinances to avoid inundating the Township with an excessive number of marijuana businesses.
3. Recreational marijuana businesses should be restricted to a central location near the center of the Township to serve residents safely. I am particularly opposed to the Marijuana Overlay District#5, located at the I-96 gateway to our community on both sides of the Jolly/Okemos intersection because of its close proximity to Hiawatha Elementary School, Okemos High School, and Chippewa Middle School.

Marijuana commerce in our township will impact children. Studies of poison control data published by reputable science journals such as *Clinical Toxicology* (<https://www.tandfonline.com/doi/full/10.1080/15563650.2022.2120818>) document that while pediatric alcohol exposure is decreasing, cannabis poisoning is of children is a significant public health problem.

*"U.S. Poison Centers reported greater than 330,000 misuse and abuse exposure cases and 450 deaths over 20 years for school-aged children and adolescents, demonstrating a substantial ongoing health impact on this*

*vulnerable population. The substances most commonly misused/abused reflect widely available substances such as over-the-counter medications, household products and pharmaceuticals commonly prescribed to youth. Differences in age and sex were evident, with males and adolescents more likely to abuse and misuse substances. Although alcohol exposure cases have been slowly decreasing, marijuana exposure cases, especially those involving non-combustible products such as edibles and vaping products, are increasing. This trend has been most apparent in recent years in the wake of legalization and decriminalization in US cannabis laws and future research is needed to better understand how legal cannabis laws may be contributing to these trends."*

4. The *Recreational Marijuana Benefit Fact Sheet* received by Staff as correspondence from "outside groups" should not have been appended to Director Schmidt's signed memo. The memo contains unsubstantiated, subjective opinions and outdated information presented as "facts".

In my opinion, the issues of public health and public safety associated with the commercialization of recreational marijuana are more important than any unrealized potential economic benefit. Here is some additional data to consider excerpted from the Rocky Mountain High Intensity Drug Trafficking Area report for 2021 (<https://www.rmhidta.org/publications?pgid=khxvk038-6a0e2823-f0e2-4f73-b236-34dfc9e4952d>):

## **Executive Summary**

The Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) program has published annual reports every year since 2013 tracking the impact of legalizing recreational marijuana in Colorado. The purpose is to provide data and information so that policy makers and citizens can make informed decisions on the issue of marijuana legalization.

### **Section I: Traffic Fatalities & Impaired Driving**

- Since recreational marijuana was legalized in 2013, traffic deaths where drivers tested positive for marijuana **increased 138%** while all Colorado traffic deaths **increased 29%**.
- Since recreational marijuana was legalized, traffic deaths involving drivers who tested positive for marijuana **more than doubled** from 55 in 2013 to 131 people killed in 2020.
- Since recreational marijuana was legalized, the percentage of all Colorado traffic deaths involving drivers who tested positive for marijuana **increased from 11% in 2013 to 20% in 2020**.

### **Section II: Marijuana Use**

Since recreational marijuana was legalized in 2013:

- Past month marijuana use for ages 12 and older **increased 26%** and is **61% higher** than the national average, currently ranked **3rd** in the nation.
- Past month adult marijuana use (ages 18 and older) **increased 20%** and is **62% higher** than the national average, currently ranked **3rd** in the nation.
- Past month college age marijuana (ages 18-25) use **increased 10%** and is **53% higher** than the national average, currently ranked **3rd** in the nation.

- Past month youth marijuana (ages 12-17) use **decreased 22%** and is **39% higher** than the national average, currently ranked **7th** in the nation.

### **Section III: Public Health**

- Marijuana *only* exposures **increased 185%** from 2013 when recreational marijuana was legalized compared to 2020.
- The percent of suicide incidents in which toxicology results were positive for marijuana has **increased** from **14%** in 2013 to **29%** in 2020.

### **Section IV: Black Market**

- RMHIDTA Colorado Drug Task Forces (10) conducted **294 investigations** of black-market marijuana in Colorado resulting in **168** felony arrests
- Seizures of marijuana reported to the El Paso Intelligence Center (EPIC) in Colorado **increased 48%** from an average of 174 parcels (2009-2012) when marijuana was commercialized to an average of 257 parcels (2013-2020) during the time recreational marijuana become legalized.

### **Section V: Societal Impact**

- Marijuana tax revenue represents approximately **0.98%** of Colorado's FY 2020 budget.
- **66%** of local jurisdictions in Colorado have banned medical and recreational marijuana businesses.

I have attached PDF copies of the documents referenced in this letter. Thank you for considering my input.

Sincerely,  
Lynne Page  
3912 Raleigh Drive  
Okemos, MI 48864

# Alcohol Is No Longer The Most Abused Drug by American Children

HEALTH 09 December 2022 By DAVID NIELD



(Jesús Rodríguez/Unsplash)

The youth of America are abusing booze less and weed more, according to a new study that looked at two decades of data on teens and school-aged children who wound up seeking medical care after taking various substances.

Adolescent cannabis abuse has increased by a whopping 245 percent in the US since 2000, the new research finds, with a particularly dramatic rise occurring in just the past few years.

At the same time, rates of alcohol abuse have declined among those aged between 6 and 18 years. Back in 2000, alcohol was in the top spot on the rather worrying list compiled from a US national poisons database, which records information on calls to poison helplines. Now, it sits in third place.

There has been a wave of cannabis decriminalization in the US in recent years: recreational use is now legal in 19 states. While this is only for adults, the researchers say it has made the drug more widely available and changed public perceptions towards it.

"Ethanol abuse cases exceeded the number of marijuana cases every year from 2000 until 2013," [says](#) emergency physician and medical toxicologist Adrienne Hughes, from the Oregon Health and Science University. "Since 2014, marijuana exposure cases have

exceeded ethanol cases every year, and by a greater amount each year than the prior."

In total, 338,727 cases of intentional misuse and abuse of medicines and illicit and recreational drugs amongst school-aged children were reported between 2000 and 2020. Of these cases, nearly 60 percent involved males, while more than 80 percent occurred in young people aged from 13 to 18.

Almost a third of the cases on file resulted in "worse than minor clinical outcomes" and the data shows 0.1 percent of cases (450 young people) were fatal. Deaths were mostly down to opioid abuse, as well as being more common in males and in older teens aged between 16 and 18.

When it comes to weed in particular, the stats suggest the rise in availability of foods containing cannabis products has played a significant role, with average monthly call rates for edibles increasing more than those for other forms of marijuana use, like smoking.

"These edible and vaping products are often marketed in ways that are attractive to young people, and they are considered more discrete and convenient," [says Hughes](#).

"Compared to smoking cannabis, which typically results in an immediate high, intoxication from edible forms of marijuana usually takes several hours, which may lead some individuals to consume greater amounts and experience unexpected and unpredictable highs."

Of the other drugs mentioned in the study, dextromethorphan (found in cough medicine) was actually the most reported substance misused or abused between 2001 and 2016 – though reported cases peaked in 2006 and has been on the decline ever since.

The misuse of over-the-counter medicines, which are more widely available and easier to access than illicit substances, remains a problem for young people, the researchers report. High levels of oral antihistamine misuse were also recorded across the study period. Intentional misuse and abuse of substances was also significantly less common in children than adolescents.

As with any field of science, the more detailed the data the more targeted the response to it can be. Health professionals and government officials can use the stats to fight to lower substance abuse and misuse among younger people, and to understand the consequences of decisions like the widespread legalization of cannabis use.

"Earlier initiation of substance use is an important predictor of developing a substance use disorder later in life," write Hughes and colleagues in their [published paper](#).

"As such, clinicians who care for children and adolescents should be well-informed about emerging and shifting patterns of drug abuse and misuse to offer early identification and intervention for problematic substance use."

The research has been published in [Clinical Toxicology](#).



# THE LEGALIZATION OF MARIJUANA IN COLORADO: *THE IMPACT*

**Volume 8**  
**September 2021**

Rocky Mountain High Intensity  
Drug Trafficking Area

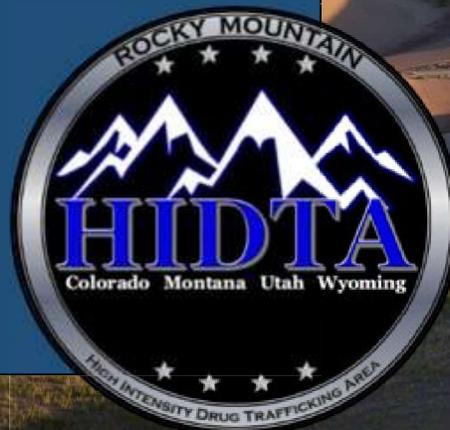


Photo: Collin Riley

REPORT AVAILABLE AT:  
[www.RMHIDTA.org](http://www.RMHIDTA.org)

**PREPARED BY THE ROCKY MOUNTAIN HIDTA  
INVESTIGATIVE SUPPORT CENTER  
SEPTEMBER 2021**

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# Executive Summary

The Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) program has published annual reports every year since 2013 tracking the impact of legalizing recreational marijuana in Colorado. The purpose is to provide data and information so that policy makers and citizens can make informed decisions on the issue of marijuana legalization.

## Section I: Traffic Fatalities & Impaired Driving

- Since recreational marijuana was legalized in 2013, traffic deaths where drivers tested positive for marijuana **increased 138%** while all Colorado traffic deaths **increased 29%**.
- Since recreational marijuana was legalized, traffic deaths involving drivers who tested positive for marijuana **more than doubled** from 55 in 2013 to 131 people killed in 2020.
- Since recreational marijuana was legalized, the percentage of all Colorado traffic deaths involving drivers who tested positive for marijuana **increased from 11% in 2013 to 20%** in 2020.

## Section II: Marijuana Use

Since recreational marijuana was legalized in 2013:

- Past month marijuana use for ages 12 and older **increased 26%** and is **61% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month adult marijuana use (ages 18 and older) **increased 20%** and is **62% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month college age marijuana (ages 18-25) use **increased 10%** and is **53% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month youth marijuana (ages 12-17) use **decreased 22%** and is **39% higher** than the national average, currently ranked **7<sup>th</sup>** in the nation.

### Section III: Public Health

- Marijuana *only* exposures **increased 185%** from 2013 when recreational marijuana was legalized compared to 2020.
- Treatment for marijuana use for all ages **decreased 34%** from 2013 to 2020.
- The percent of suicide incidents in which toxicology results were positive for marijuana has **increased** from **14%** in 2013 to **29%** in 2020.

### Section IV: Black Market

- RMHIDTA Colorado Drug Task Forces (10) conducted **294 investigations** of black-market marijuana in Colorado resulting in:
  - **168** felony arrests
  - **5.54** tons of marijuana seized
  - **86,502** marijuana plants seized
  - **21** different states the marijuana was destined
- Seizures of marijuana reported to the El Paso Intelligence Center (EPIC) in Colorado **increased 48%** from an average of 174 parcels (2009-2012) when marijuana was commercialized to an average of 257 parcels (2013-2020) during the time recreational marijuana become legalized.

### Section V: Societal Impact

- Marijuana tax revenue represent approximately **0.98%** of Colorado's FY 2020 budget.
- **66%** of local jurisdictions in Colorado have banned medical and recreational marijuana businesses.

# Introduction

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## Purpose

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The purpose of this annual report is to document the impact of the legalization of marijuana for medical and recreational use in Colorado. Colorado serves as an experimental lab for the nation to determine the impact of legalizing marijuana. This is an important opportunity to gather and examine meaningful data and identify trends. Citizens and policymakers nationwide may want to delay any decisions on this important issue until there is sufficient and accurate data to make informed decisions. Readers are encouraged to review previous volumes of this report for a comprehensive understanding of the topic. These reports were prepared to identify data and trends related to the legalization of marijuana so that informed decisions can be made regarding this issue.

## Background

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It is important to note that, for purposes of the debate on legalizing marijuana in Colorado, there are three distinct timeframes to consider: the early medical marijuana era (2000-2008), the medical marijuana commercialization era (2009–current) and the recreational marijuana era (2013–current).

- **2000 – 2008, Early Medical Marijuana Era:** In November 2000, Colorado voters passed Amendment 20 which permitted a qualifying patient, and/or caregiver of a patient, to possess up to 2 ounces of marijuana and grow 6 marijuana plants for medical purposes. During that time there were between 1,000 and 4,800 medical marijuana cardholders and no known dispensaries operating in the state.
- **2009 – Current, Medical Marijuana Commercialization Era:** Beginning in 2009 due to a number of events, marijuana became de facto legalized through the commercialization of the medical marijuana industry. By the end of 2012, there were over 100,000 medical marijuana cardholders and 500 licensed dispensaries operating in Colorado. There were also licensed cultivation operations and edible manufacturers.
- **2013 – Current, Recreational Marijuana Legalization Era:** In November 2012, Colorado voters passed Constitutional Amendment 64 which legalized marijuana for recreational purposes for anyone over the age of 21. The amendment also allowed for licensed marijuana retail stores, cultivation operations and edible manufacturers. Retail marijuana businesses became operational January 1, 2014.

**NOTE:**

Data, if available, will compare post-2009 when medical marijuana became commercialized and after 2013 when recreational marijuana became legalized.

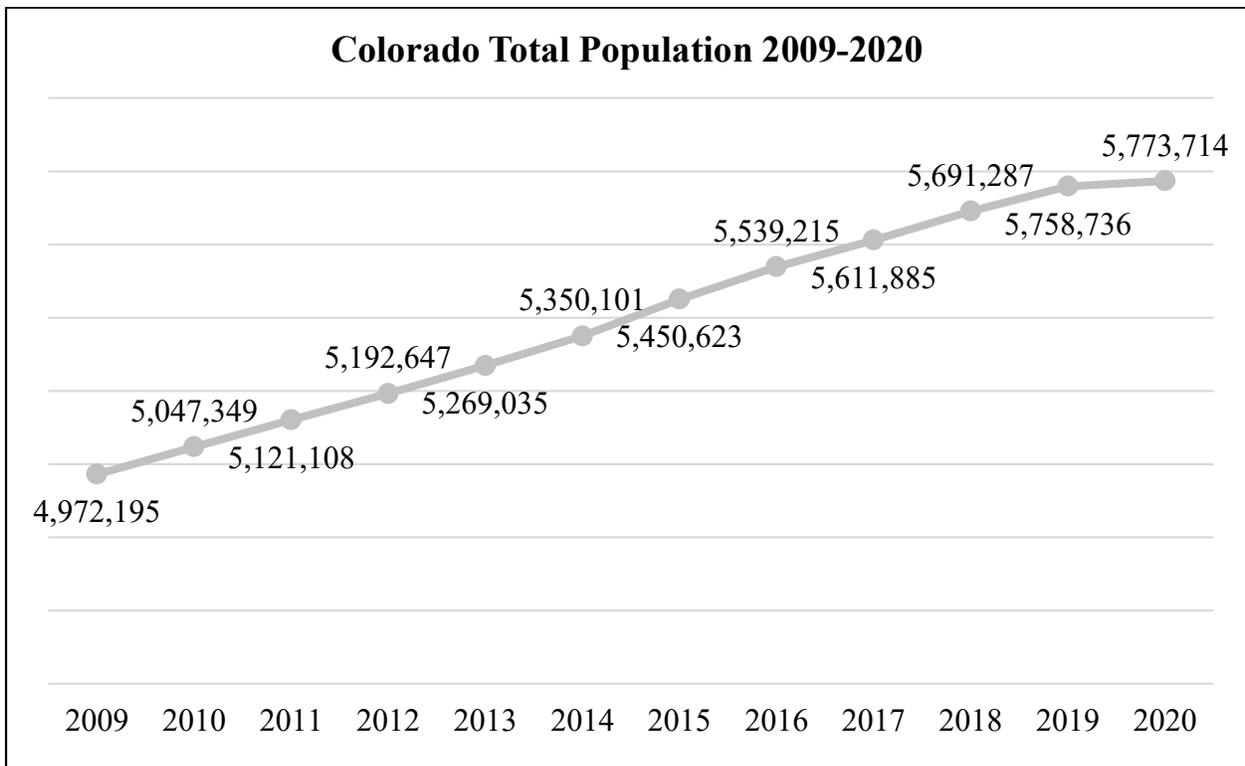
Multi-year comparisons are generally better indicators of trends. One-year fluctuations do not necessarily reflect a new trend.

Percentage comparisons may be rounded to the nearest whole number.

Percent changes found within graphs were calculated and added by RMHIDTA.

This report will cite datasets with terms such as “marijuana-related” or “tested positive for marijuana.” That does not necessarily prove that marijuana was the cause of the incident.

Throughout this report, rate per 100,000 is included to proportionately analyze various statistics. Below is Colorado’s total population from 2009 to 2020 for reference:



# Section I: Traffic Fatalities & Impaired Driving

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## Some Findings

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- Since recreational marijuana was legalized in 2013, traffic deaths where drivers tested positive for marijuana **increased 138%** while all Colorado traffic deaths **increased 29%**.
- Since recreational marijuana was legalized, traffic deaths involving drivers who tested positive for marijuana **more than doubled** from 55 in 2013 to 131 people killed in 2020.
- Since recreational marijuana was legalized, the percentage of all Colorado traffic deaths involving drivers who tested positive for marijuana **increased from 11% in 2013 to 20%** in 2020.

## Definitions by Rocky Mountain HIDTA

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**Driving Under the Influence of Drugs (DUI/D):** This term includes an individual under the influence of alcohol, marijuana, or other drugs along with any This is an important measurement since the driver’s ability to operate a vehicle was sufficiently impaired that it brought his or her driving to the attention of law enforcement. The erratic driving and the subsequent evidence that the subject was under the influence of marijuana helps confirm the causation factor.

**Marijuana-Related:** Also called “marijuana mentions,” is any time marijuana shows up in the toxicology report. It could be marijuana only or marijuana with other drugs and/or alcohol.

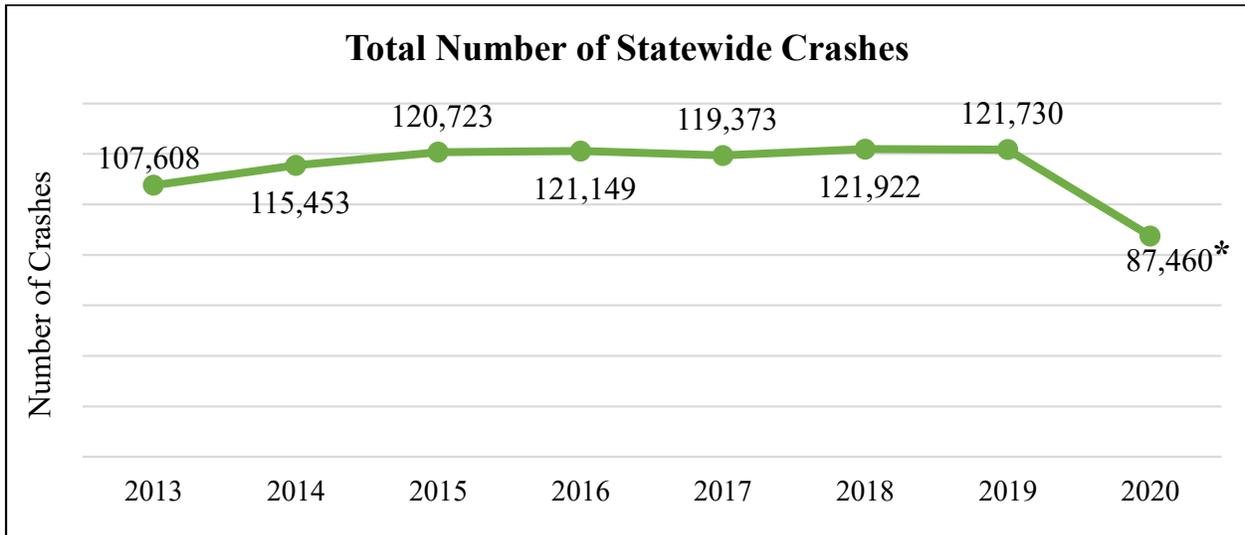
**Marijuana Only:** When toxicology results show marijuana and no other drugs or alcohol.

**Fatalities:** Any death resulting from a traffic crash involving a motor vehicle.

**Drivers:** An occupant who is in physical control of a transport vehicle. For an out-of-control vehicle, an occupant who was in control until control was lost.

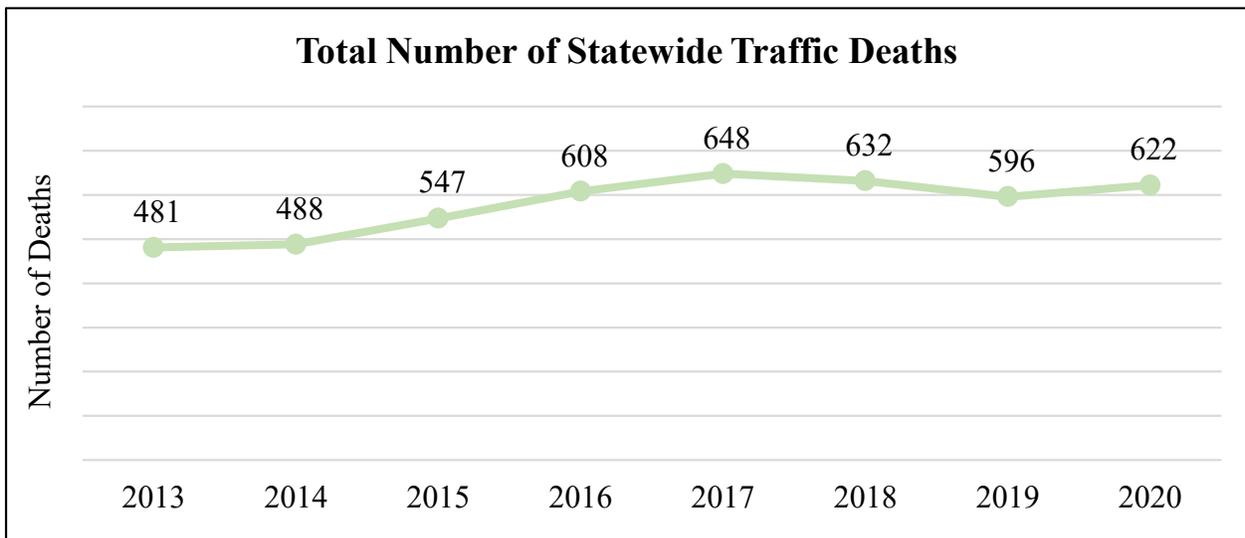
**Operators:** Anyone in control of their own movements such as a driver, pedestrian, or bicyclist.

## Traffic Fatalities



SOURCE: Colorado Department of Transportation (CDOT)

**\*NOTE:** Colorado Governor Polis reported a 60% reduction in vehicle traffic in March 2020 based on automatic traffic reporters. Reference: Finley, B. (2020, April 5). *Colorado sees "significant declines" in air pollution as coronavirus ramps down driving, industrial activity.* The Denver Post.



SOURCE: CDOT 2013-2020

- In 2020, there were a total of 622 traffic deaths. Of which:
  - 402 were drivers
  - 112 were passengers
  - 93 were pedestrians
  - 15 were bicyclists

SOURCE: National Highway Traffic Safety Administration (NHTSA), Fatality Analysis Reporting System (FARS), 2009-2011 and CDOT 2012-2020

## Traffic Deaths Related to Marijuana When a DRIVER Tested Positive for Marijuana

Crash Year	Total Statewide Fatalities	Fatalities with <u>Drivers</u> Testing Positive for Marijuana	Percentage Total Fatalities
2013	481	55	11.4%
2014	488	75	15.4%
2015	547	98	17.9%
2016	608	125	20.6%
2017	648	138	21.3%
2018	632	115	18.2%
2019	596	127	21.3%
2020	622	131	20.1%

**NOTE:** Due to changes in reporting, data from before 2013 was not included.

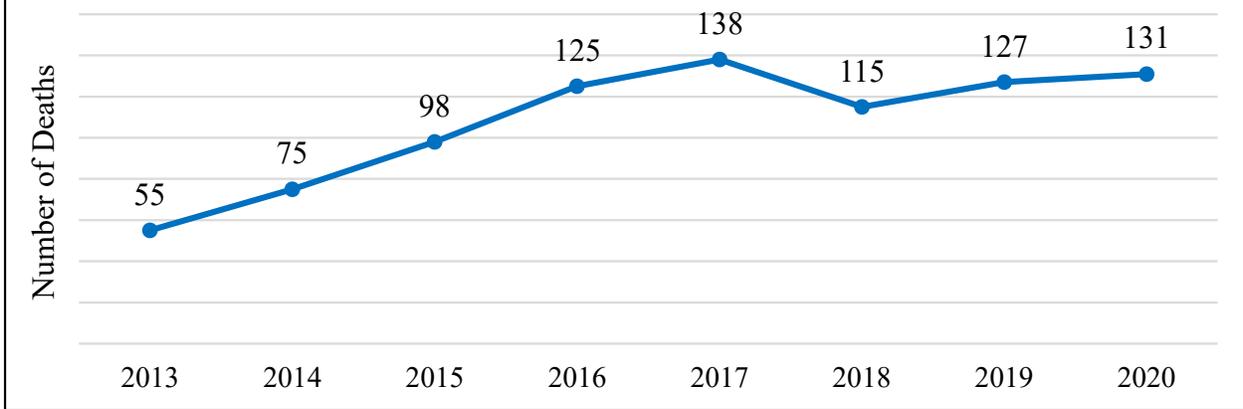
- In 2020, 131 marijuana-related traffic deaths:
  - 104 were drivers
  - 21 were passengers
  - 4 were pedestrians
  - 2 was a bicyclist

SOURCE: CDOT 2013-2020

**NOTE:** In 2020, 49% of drivers' blood was tested after being involved in a fatal crash.

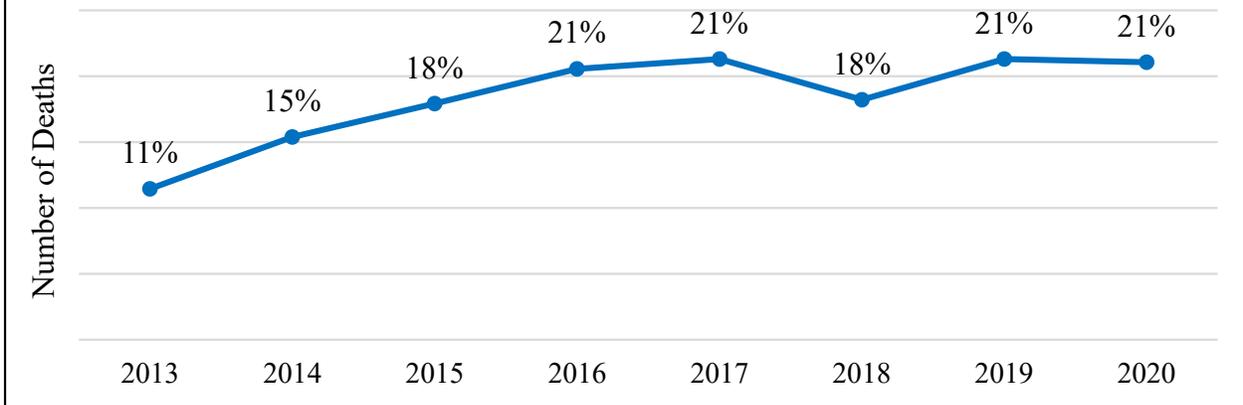
- In 2020, of the 120 drivers in fatal wrecks who tested positive for marijuana use, 117 were found to have Delta 9 tetrahydrocannabinol or THC, the psychoactive ingredient in marijuana, in their blood. This would indicate use within hours according to state data. Of those, 69% were over 5 nanograms per milliliter, the state permissible inference level for driving.
  - Similar to findings from the August 2017 article by David Migoya, "Exclusive: Traffic fatalities linked to marijuana are up sharply in Colorado. Is legalization to blame?" *The Denver Post*.

### Traffic Deaths Related to Marijuana when a DRIVER Tested Positive for Marijuana



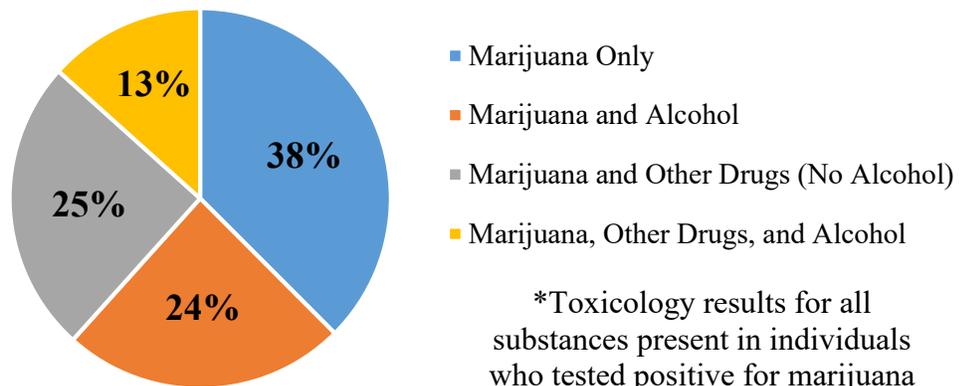
SOURCE: CDOT 2013-2020

### Percent of All Traffic Deaths That Were Marijuana-Related where a DRIVER Tested Positive for Marijuana



SOURCE: CDOT 2013-2020

### Drug Combinations for DRIVERS Involved in Fatal Crashes who Tested Positive for Marijuana\* (2020)



SOURCE: CDOT 2013-2020

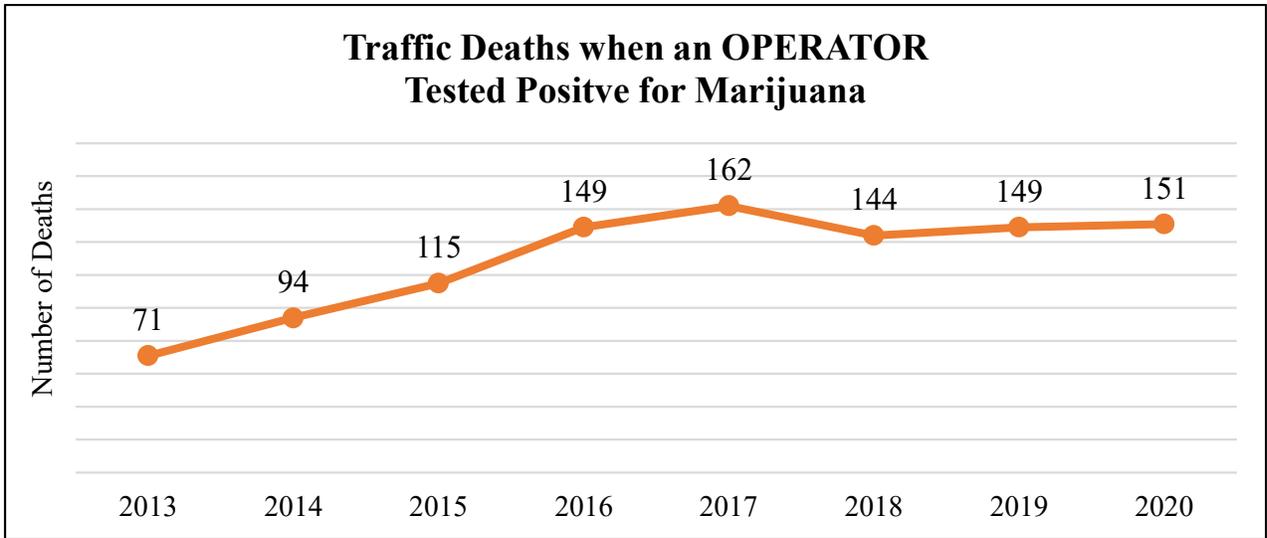
**Traffic Deaths Related to Marijuana  
Where an OPERATOR Tested Positive for Marijuana**

<b>Crash Year</b>	<b>Total Statewide Fatalities</b>	<b>Fatalities with <u>Operators</u> Testing Positive for Marijuana</b>	<b>Percentage Total Fatalities</b>
<b>2013</b>	481	71	14.8%
<b>2014</b>	488	94	19.3%
<b>2015</b>	547	115	21.0%
<b>2016</b>	608	149	24.5%
<b>2017</b>	648	162	25.0%
<b>2018</b>	632	144	23.0%
<b>2019</b>	596	149	25.0%
<b>2020</b>	622	151	24.3%

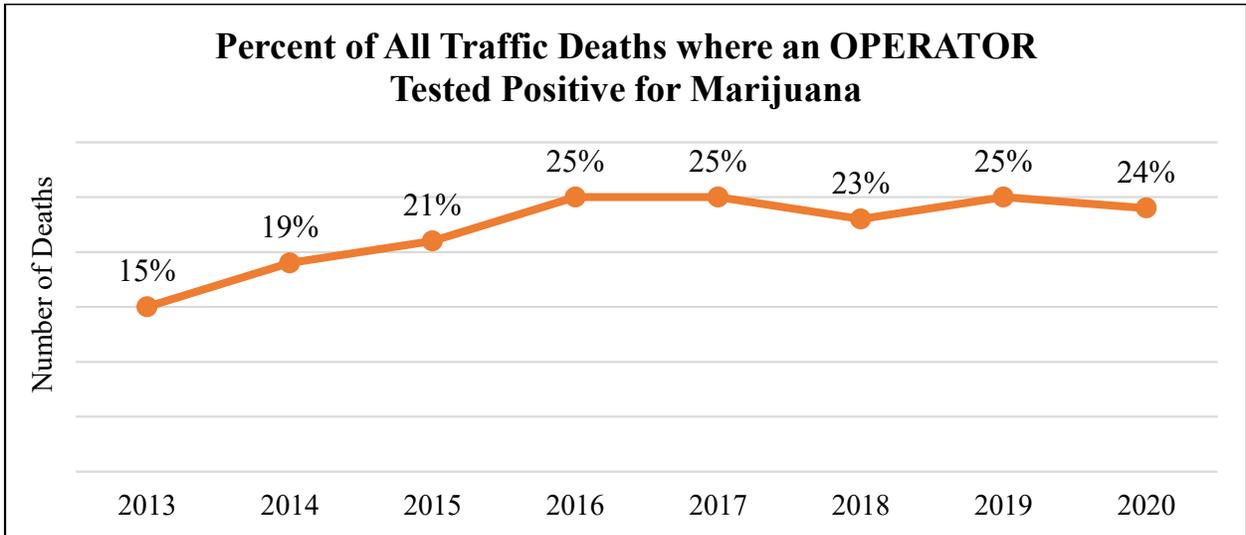
- Of the 151 marijuana-related traffic deaths:
  - 104 were drivers
  - 22 were pedestrians
  - 21 were passengers
  - 4 were bicyclists

SOURCE: CDOT 2013-2020

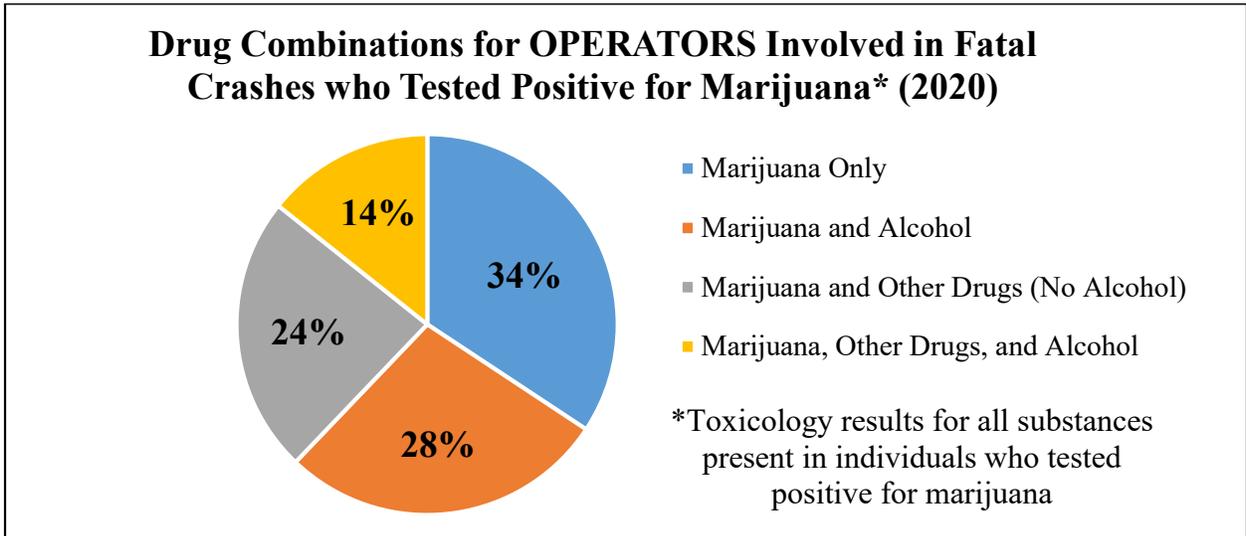
**NOTE:** In 2020, 51% of operators' blood was tested after being involved in a fatal crash.



SOURCE: CDOT 2013-2020



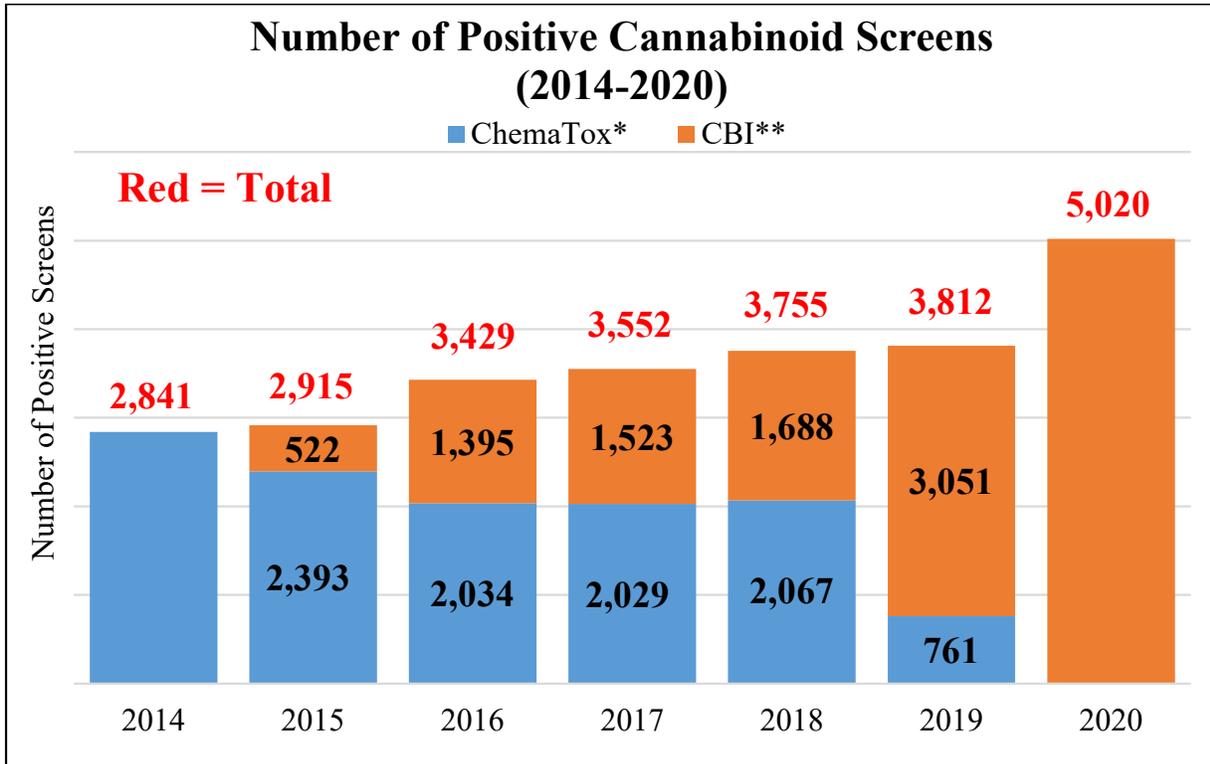
SOURCE: CDOT 2013-2020



SOURCE: CDOT 2013-2020

## Impaired Driving

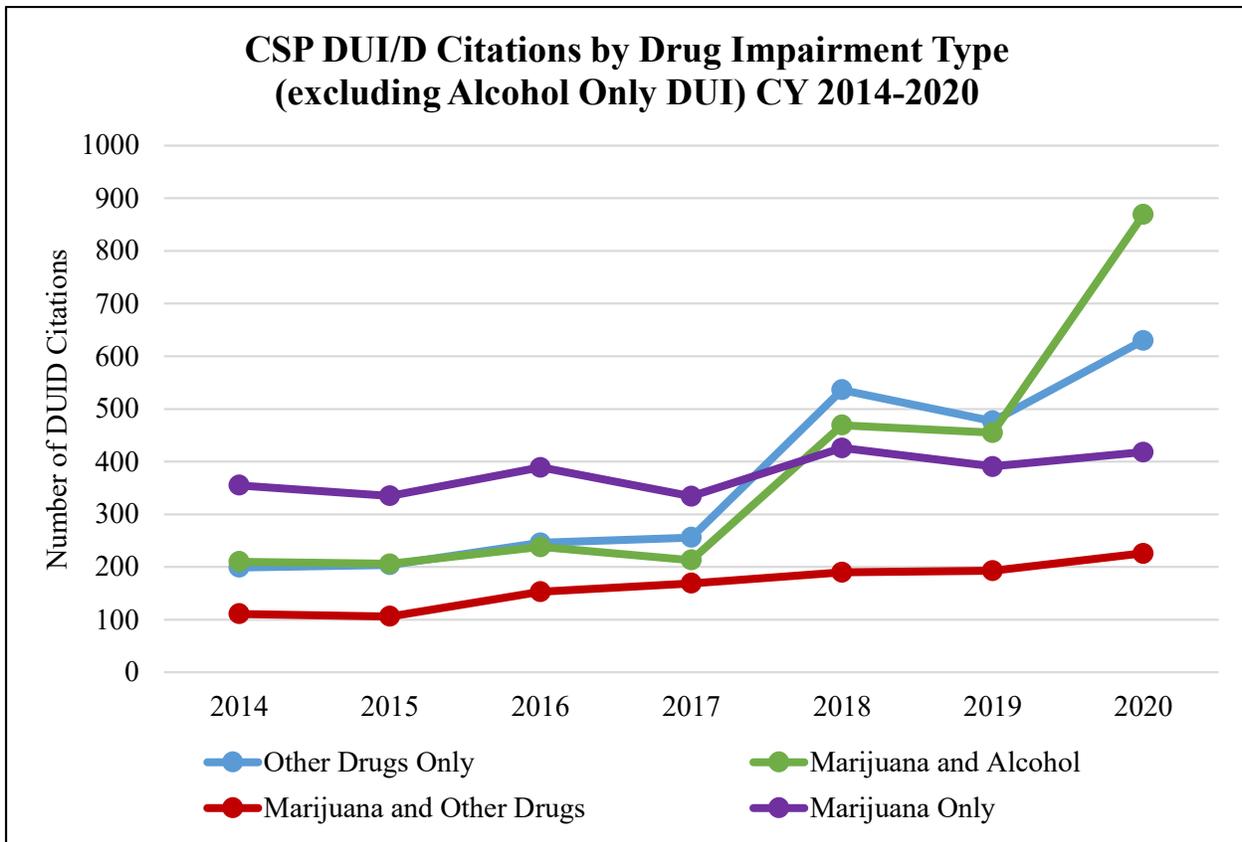
When a driver is arrested for impaired driving related to alcohol (usually 0.08 or higher blood alcohol content), typically tests for other drugs (including marijuana) are not requested since there is no additional punishment if the test comes back positive.



SOURCE: Colorado Bureau of Investigation and ChemaTox

**\*NOTE:** ChemaTox discontinued testing July 2019.

**\*\*NOTE:** The Colorado Bureau of Investigation began toxicology operations July 1, 2015, and became the sole agency in the state to conduct toxicology reports July 1, 2019. The vast majority of the screens are DUID submissions from Colorado law enforcement.



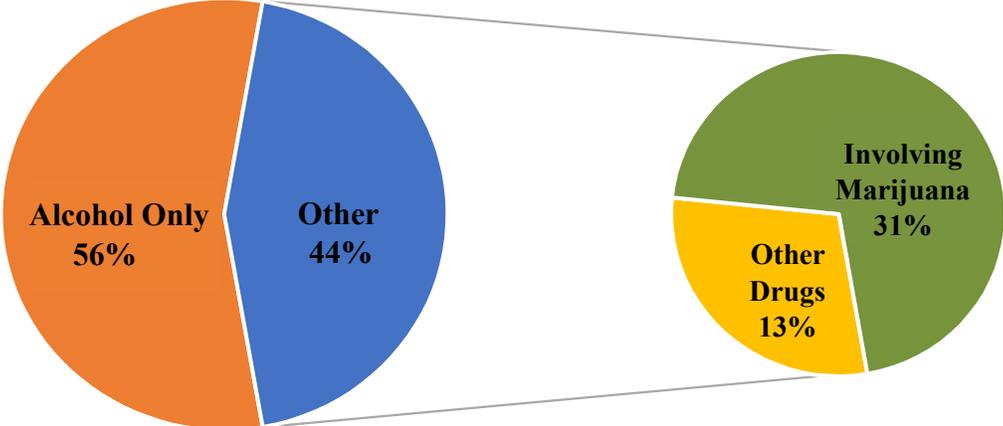
SOURCE: CSP RDW; only displaying data available as of 07/23/2021

DUI/D Citations by Drug Impairment Type							
	2014	2015	2016	2017	2018	2019	2020
<b>Other Drugs</b>	199	204	246	256	536	477	630
<b>Marijuana and Alcohol</b>	210	206	238	213	469	455	869
<b>Marijuana and Other Controlled Substances</b>	111	106	153	169	190	193	226
<b>Marijuana Only</b>	355	335	389	334	426	391	418
<b>Alcohol Only</b>	4,620	3,948	3,528	3,817	3,541	3,727	2,674
<b>Total Marijuana Involved Citations</b>	<b>676</b>	<b>647</b>	<b>780</b>	<b>716</b>	<b>1,085</b>	<b>1,039</b>	<b>1,513</b>
<b>Total DUI/D Citations</b>	<b>5,495</b>	<b>4,799</b>	<b>4,554</b>	<b>4,789</b>	<b>5,162</b>	<b>5,245</b>	<b>4,817</b>

SOURCE: CSP RDW; only displaying data available as of 07/23/2021

**NOTE:** “Citations in the Colorado State Patrol (CSP) Reporting Data Warehouse (RDW) are defined as one per involved person when the involved person has at least one charge as denoted in the RDW (excluding oral and written warnings), that occurred during a traffic stop unique on date, time, location road, mile point round, and driver’s license number. Impaired (DUI/D) citations were identified in the CSP RDW by the following common codes: 753, 754, 755, 765, 785, 800, 801, 802, 805, 806, 807, 808, 809, 810, 812, 813, 814, 815, 820, 821, or MPC.”  
-Colorado State Patrol

### Colorado State Patrol DUI/D Citations CY 2020



SOURCE: CSP RDW; only displaying data available as of 07/23/20210

## Impaired Driving Information

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### THC Positive Drivers Involved in Fatal Crashes in Washington

In Washington, the AAA Foundation for Traffic Safety studied fatal crashes from 2008 to 2017 to determine the impact of the legalization of recreational marijuana. The percentage of drivers involved in a fatal crash was 88% from 2008 to 2017 compared to only 29% of drivers involved in non-fatal crashes. Of the fatal crashes, an average of 8.8% of drivers were THC-positive from 2008 to 2012. Then after recreational marijuana was legalized, the average increased to 18% of drivers testing positive for THC from 2013 to 2017. The highest level was reached in 2017 with 21% of drivers testing positive for THC that were involved in a fatal crash.

Source: Tefft, B.C. & Arnold, L.S. (2020). *Cannabis Use Among Drivers in Fatal Crashes in Washington State Before and After Legalization* (Research Brief). Washington, D.C.: AAA Foundation for Traffic Safety.

### Analysis of the Impact of Recreational Marijuana Legalization on Traffic Fatalities in Colorado and Washington

In 2019, researchers examined the impact of recreational marijuana legalization on traffic fatalities in Washington and Colorado. Fatality Analysis Reporting System (FARS) from 2000 to 2016 was analyzed to compare fatal crashes where at least the driver tested positive for marijuana with the alcohol related cases. The initial findings were that marijuana-related deaths increased in Washington and Colorado compared to the rest of the country after marijuana was legalized in these two states in 2012. The rate of increase was significantly faster than the other states as well. In their final analysis, the authors were unable to determine whether the legalization of recreational marijuana alone led to the large increase in traffic fatalities in the two states.

Their conclusion states that in Colorado, “the amount of marijuana sold in recreational stores [grew] dramatically, [...] from 36,031 pounds in 2014 to 102,871 pounds in 2016. However, it is difficult to discern how much of this growth in legal recreational weed came at the expense of sales in black market or medical marijuana. Indeed, recreational marijuana can be viewed as a close substitute to black market or medical marijuana, with differences in price, quality, and ease of access. The relatively small effects we estimate are consistent with crowding-out, and could explain why we do not observe spillover effects on alcohol-related traffic accidents as other studies have found (Anderson, Hansen, and Rees 2013). Furthermore, Colorado has recently allowed consumption of marijuana in public spaces. This might increase the potential for negative externalities of recreational marijuana relative to medical marijuana. Despite that concern, we find limited overall evidence the fatalities are significantly increasing in Colorado and Washington following the legalization of recreational marijuana” (Hansen et al, 2019).

Source: Hansen, B., Miller, K., and Weber, C. (2019). *Early evidence on recreational marijuana legalization and traffic fatalities*. *Economic Inquiry*, 58(2), 547-568.

### Relationship between Recreational Marijuana and Alcohol-Related Behaviors in Colorado

Some theorized that legalizing recreational marijuana would decrease the levels of alcohol consumption, while others believed that there was a positive relationship between the two. These conflicting hypotheses have generated further interest on how the legalization of recreational

marijuana impacted alcohol-related behavior in states like Colorado. Analysis of the tax revenue from alcohol sales in Colorado determined an increase in liquor tax revenue related to alcohol and alcohol-related motor vehicle crash fatalities after the legalization of recreational marijuana in Colorado. Alcohol-related crash fatalities increased by nearly two and a half fatalities per month within the state. The tax revenue increase of almost \$200,000 per month cannot definitively be linked to any changes of alcohol-related societal problems.

Source: Chamlin, M. (2021). *An examination of the unintended consequences of the legalization of recreational marijuana on alcohol-related behaviors*. Journal of Crime and Justice, 1-11

### DUI Numbers Increase During Pandemic

During the height of the early stages of the pandemic from January to April 2020, DUI related deaths doubled compared to 2019 according to the Colorado State Patrol. In addition, alcohol and marijuana-related crashes increased by 32 percent during the same timeframe. The cause of this increase was unknown especially during the stay-at-home order that closed many bars. Some hypothesized that the drivers under the influence were able to drive at higher speeds with less cars on the road, leading to the increase in crashes.

Source: Grewe, L. (2020, May 26). *Despite pandemic, DUI numbers up significantly in 2020*. KKTV.

### Traffic Deaths Increase Even with Less Miles Travelled

During the first half of 2020, the number of total miles travelled decreased by 17 percent compared to the first half of 2019. Despite this, the traffic deaths increased by one percent from 256 to 259 deaths. Furthermore, this increase was significant as the fatality rate increased by 20 percent due to the large decrease in miles travelled. This trend was confirmed from analysis in 22 other states.

Source: Minor, N. (2020, September 2). *Colorado's roads are emptier, but deadlier so far this year*. CPR News.

# Section II: Marijuana Use

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## Some Findings

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Since recreational marijuana was legalized in 2013:

- Past month marijuana use for ages 12 and older **increased 26%** and is **61% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month adult marijuana use (ages 18 and older) **increased 20%** and is **62% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month college age marijuana (ages 18-25) use **increased 10%** and is **53% higher** than the national average, currently ranked **3<sup>rd</sup>** in the nation.
- Past month youth marijuana (ages 12-17) use **decreased 22%** and is **39% higher** than the national average, currently ranked **7<sup>th</sup>** in the nation.

## Data Consideration

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Healthy Kids Colorado Survey (HKCS) data is collected in the odd years and released in even years. For this reason, HKCS data is not included in this report. Please refer to Volume 7 for the most recent numbers.

Youth Risk Behavior Surveillance System (YRBSS) data is collected in the odd years and released in even years. For this reason, YRBSS data is not included in this report. Please refer to Volume 7 for the most recent numbers.

National Survey on Drug Use and Health (NSDUH) data is averaged between two years for a more accurate representation. The most recent data averaged 2018 and 2019.

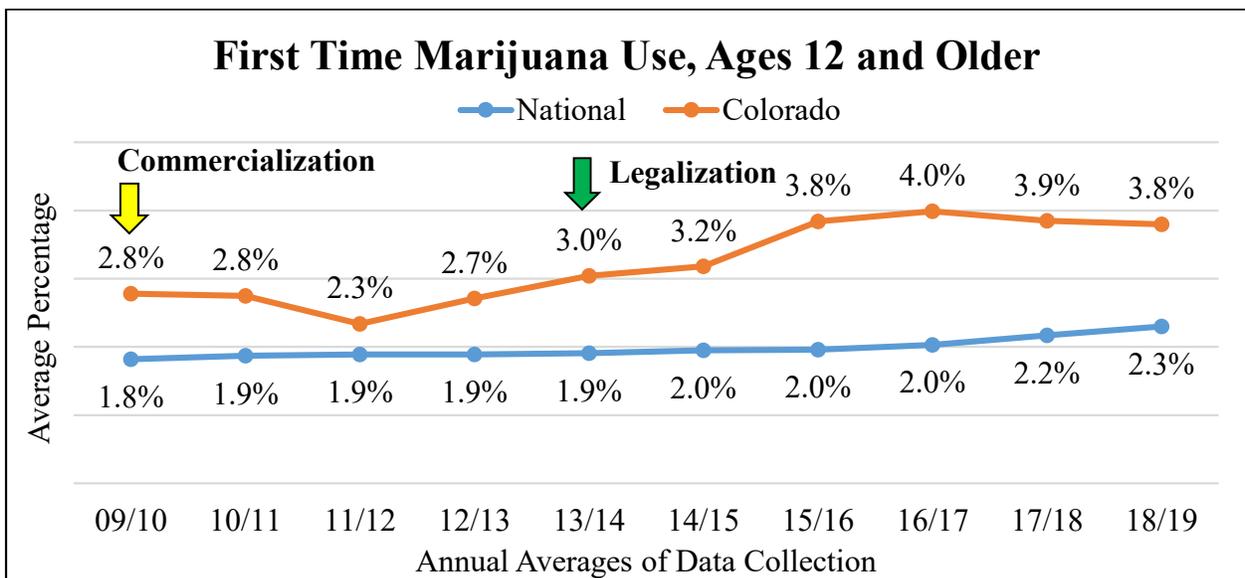
## National Survey on Drug Use and Health (NSDUH) Data

Colorado Averages Compared to National Averages		
For Ages 12 and Older:	Colorado	US
Marijuana Past Month Use	17.4%	10.8%
Perceptions of Risk for Smoking Marijuana	17.7%	24.4%
Illicit Drug Use Other than Marijuana Past Month	4.7%	3.3%
Alcohol Past Month Use	60.0%	50.9%
Cigarette Past Month Use	16.3%	16.9%
Perceptions of Risk for Smoking Cigarettes	72.5%	71.5%

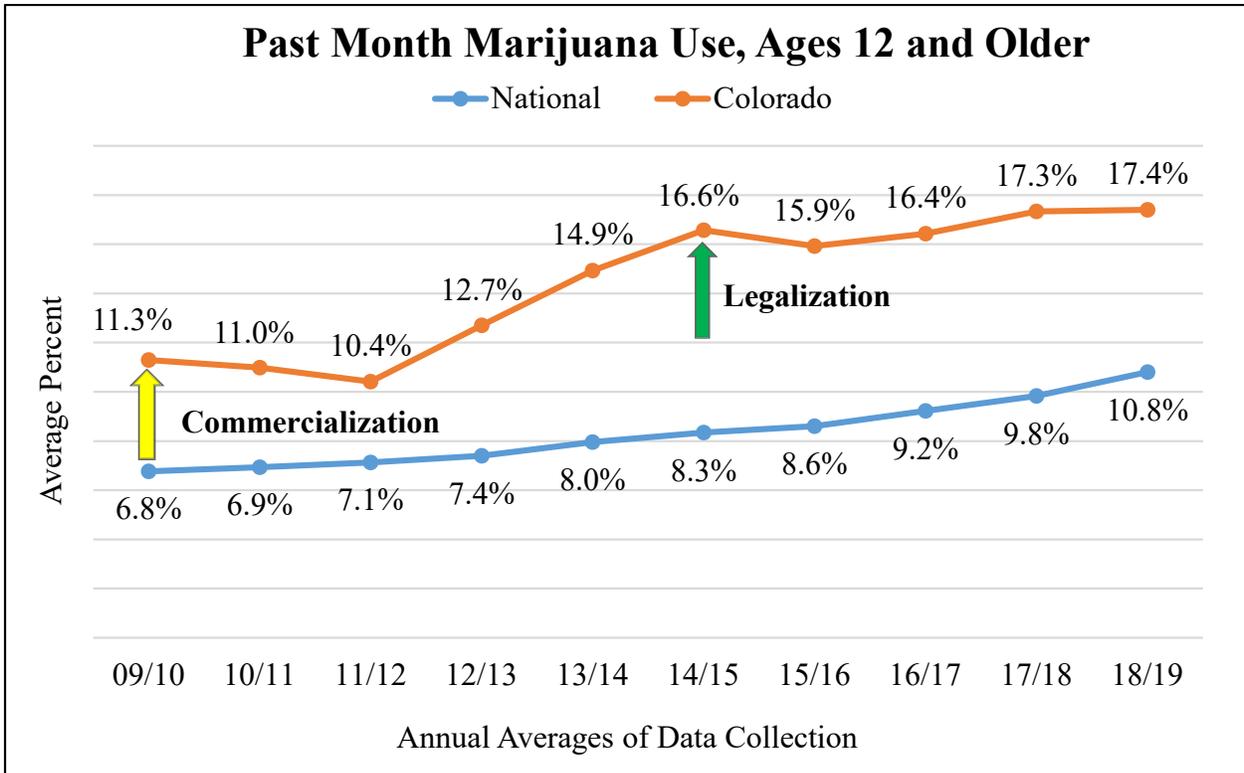
SOURCE: Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019

Marijuana First Time Use			
Age	Colorado %	Colorado U.S. Ranking	National %
12 years +	3.8%	3 <sup>rd</sup>	2.3%
12 – 17	8.0%	4 <sup>th</sup>	5.7%
18 years +	2.9%	5 <sup>th</sup>	1.7%
18 – 25	12.5%	6 <sup>th</sup>	8.4%
26+	1.2%	6 <sup>th</sup>	0.7%

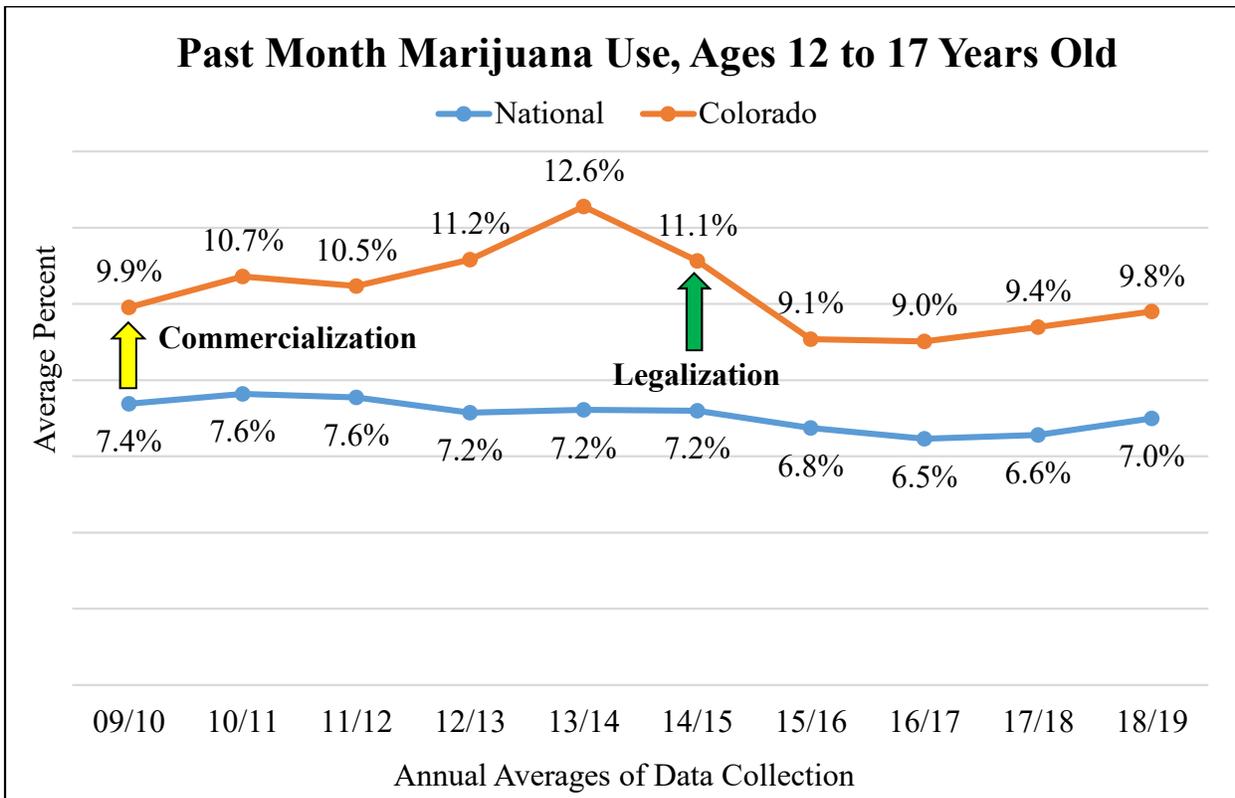
SOURCE: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019



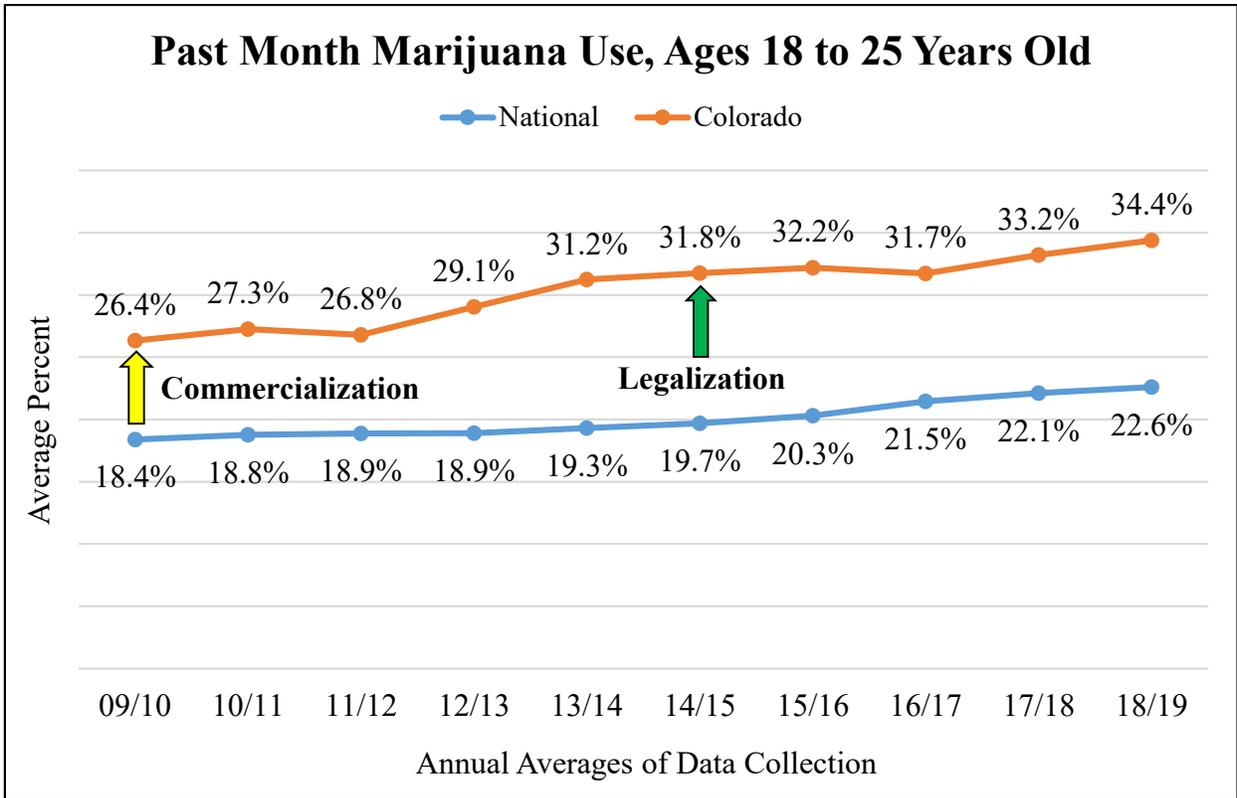
SOURCE: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019



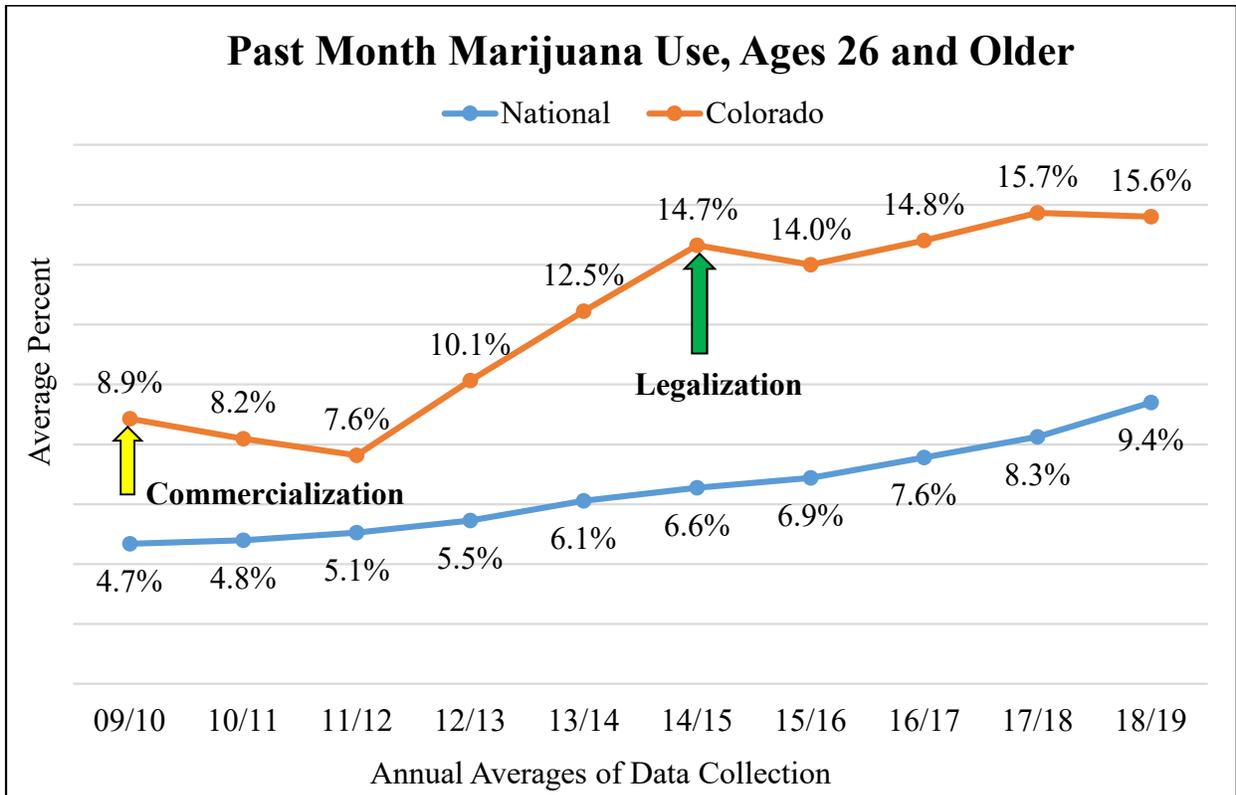
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019



Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019

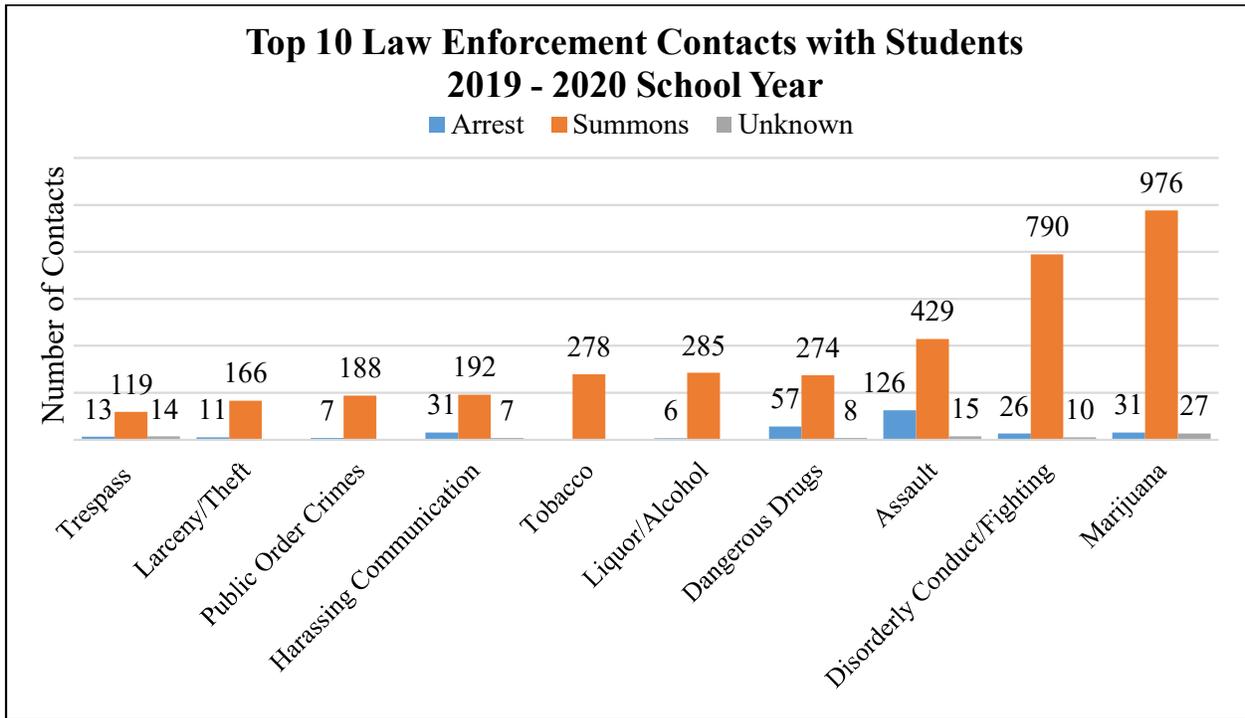


Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019



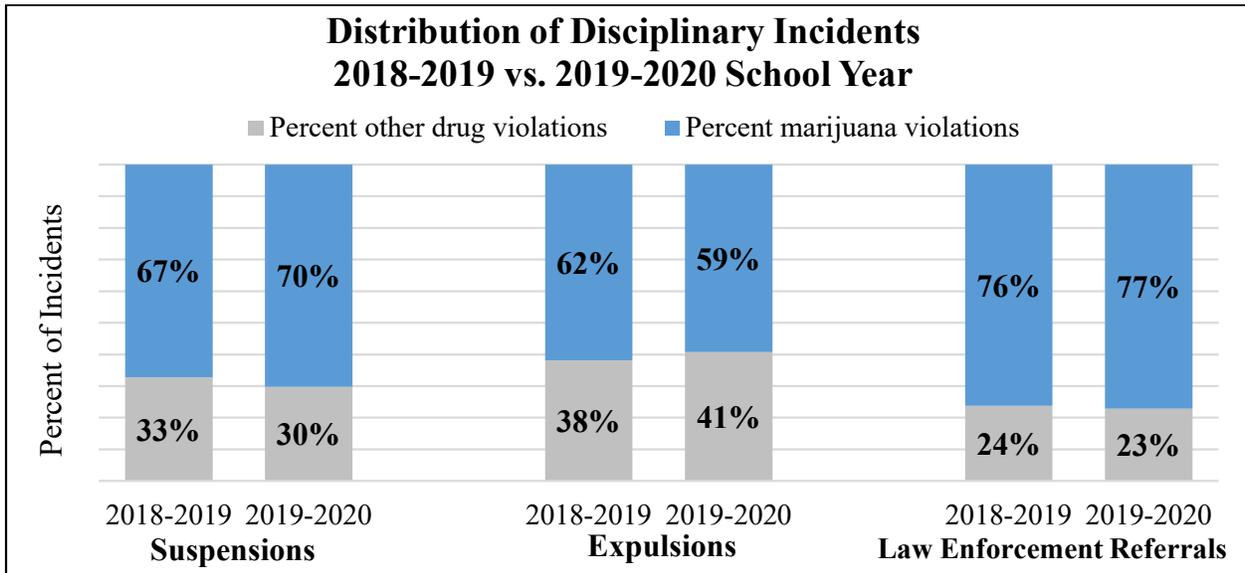
Source: SAMHSA, Center for Behavioral Health Statistics and Quality, NSDUH, 2018 and 2019

## Marijuana in Schools



SOURCE: Colorado Division of Criminal Justice

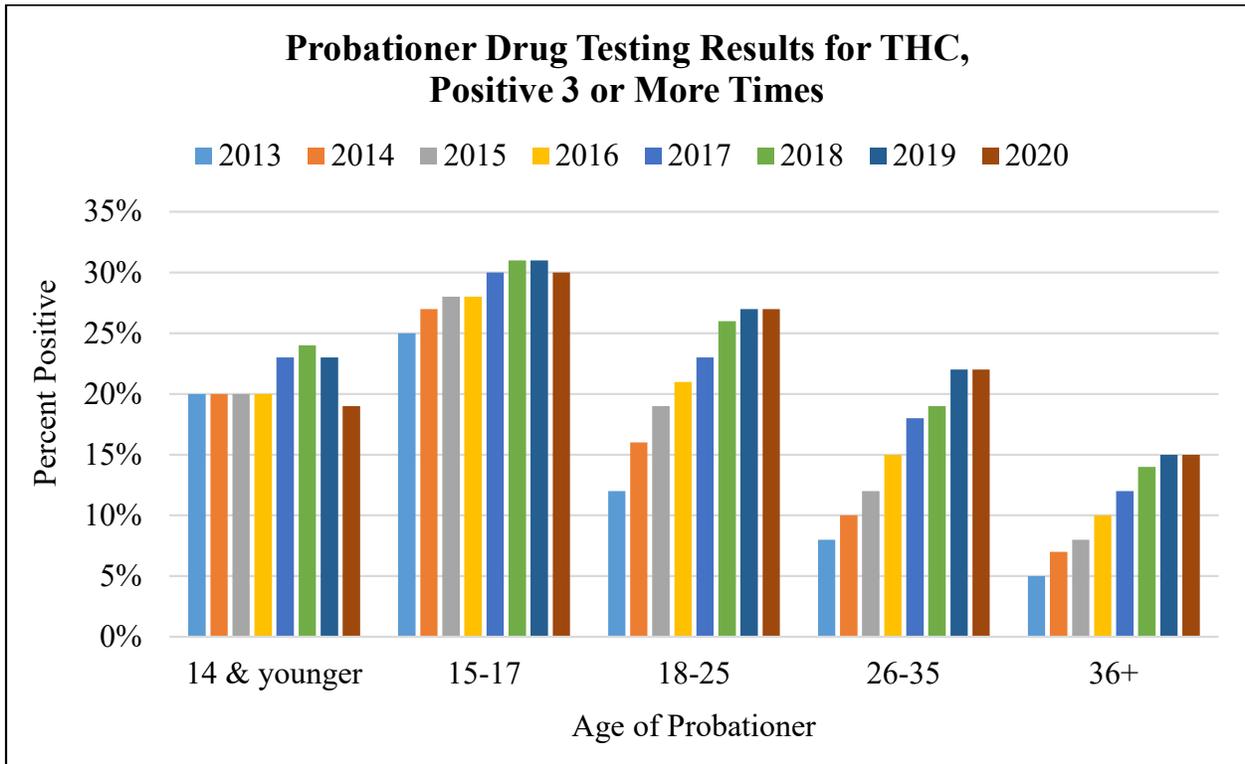
**NOTE:** The number of contacts from the 2019 to 2020 school year may not represent a complete school year due to the beginning of lockdowns associated with COVID-19 in March 2020.



SOURCE: Colorado Department of Education

**NOTE:** Law Enforcement Referrals may or may not have been in addition to another reported action taken (suspension, expulsion, or other).

## Probationer Marijuana Use



SOURCE: Colorado State Judicial Branch, Division of Probation Services

**NOTE:** Data reflects drug test results for probationers required to undergo drug testing. This does not reflect all probationers in Colorado. Probationers who have a medical marijuana card are not prohibited from using marijuana while on probation. It is possible that some positive results may come from probationers using marijuana for medical reasons.

## Marijuana Use Information

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### Analysis of Marijuana Use by College Students from 2008 to 2018

One of the largest questions after legalizing recreational marijuana was the impact on young adults across the country. A long-term study was created to compare marijuana use in states that passed recreational marijuana legalization (RML) compared to non-RML states. Researchers chose several post-secondary institutions and students between 18 to 26 years old were surveyed across ten academic years in 48 states. This resulted in seven RML states with nearly 235,000 participants from 135 institutions compared to 41 non-RML states with almost 600,000 students from 454 institutions.

The results indicated that “the 30-day prevalence of marijuana use increased more among college students exposed to RML relative to students attending college in non-RML states and students in RML states prior to legalization. These findings are generally consistent with those from prior studies of Oregon and Washington college students, but are a considerable extension, given that they are based on 135 institutions in seven RML states instead of one to two institutions in a single RML state. The mounting evidence for increases in college students’ marijuana use that has coincided with RML is all the more interesting in the context of the more mixed results regarding such changes among adolescents. For many young adults, the transition to college involves sudden declines in parental monitoring, exposure to older peer groups and a culture of heavy drinking and other substance use. Although heavy drinking by college students has declined nation-wide in recent years, the prevalence of marijuana use has increased” (Bae et al, 2021). Additionally, the increases in RML states were more pronounced in women, participants 21 years and older, and students living off-campus.

Source: Bae, H. and Kerr, D. (2021). *Marijuana use trends among college students in states with and without legalization of recreational use: initial and longer-term changes from 2008 to 2018*. *Addiction*, 115(6), 1115-1124.

### Relationship between Neighborhood Disorder, Marijuana Use, and Life Expectancy for Young Men Involved in the Criminal Justice System

Researchers surveyed over 1,200 young males from the Crossroads study that are involved in the justice system to examine their perception of risk-taking relative to their expectations on life expectancy. In the study, the measurements were neighborhood disorder, life expectancy, substance use, offending, and risky sexual behavior. Specific to marijuana use, the results indicated that the young men living in more disordered neighborhoods used marijuana more frequently, different findings than binge drinking and cigarette use. No causal relationship was determined between life expectancy and marijuana use.

The authors stated in the conclusion, “a possible explanation for this finding is that adolescents do not perceive using marijuana as risky or harmful. Findings from the National Institute on Drug Abuse 2013 Monitoring the Future survey indicate that while cigarette use and alcohol use have steadily declined in recent years, rates of marijuana use have remained consistently high, in large part due to adolescents’ attitudes toward marijuana risks. Only 20.6% of 12<sup>th</sup> graders perceived occasional marijuana use as harmful and only 44.1% considered daily use to be detrimental (Johnston et al., 2014). If youth tend not to view marijuana as being harmful in the long run, then

it is likely that decisions to use marijuana are not informed by youths' expectations for their futures. That is, even among adolescents who expect long lives, they may be just as likely as those with short life expectancies to engage in marijuana use because they may not perceive it as a risky behavior" (Kan et al, 2020).

Source: Kan, E., Peniche, M., Steinberg, L., Knowles, A., Frick, P., and Cauffman, E. (2020). *Neighborhood disorder and risk-taking among justice-involved youth—the mediating role of life expectancy*. *Journal of Research on Adolescence*, 31(2), 282-298.

### Examining the Validity of the Marijuana Gateway Hypothesis

Proposed during the 1970s, the marijuana gateway hypothesis was created to explain the escalation of risk from the use of tobacco and alcohol to marijuana, then to harder drugs. As a result of this hypothesis, marijuana use was harshly punished throughout the country even to today with many states legalizing recreational and medical marijuana. At this point, there has been a lack of research supporting the causal relationship between marijuana use and other drugs. The researchers in this study focused on further examining the relationship to determine the validity of the marijuana gateway hypothesis. While those who use marijuana before 21 were 157 times more likely to engage in subsequent hard drug use, most marijuana users never escalate to hard drug use. "Some studies have found moderate estimates wherein approximately 29% of marijuana users continue on to harder drug use" (Jorgensen and Wells, 2021). They state there must be a distinction between chronic users with more occasional users when examining the likelihood of escalating to harder drugs.

Data was gathered and analyzed from the National Longitudinal Study of Adolescent to Adult Health. The results showed a meaningful association between heavy marijuana use and light illicit drug use. "Considering the findings from all 18 tests together, it can be concluded that the hypothesis that marijuana is a gateway drug is unsupported. Summarily, if marijuana "really" is a gateway drug we would expect to see stronger and more consistent causal gateway effects" (Jorgensen and Wells, 2021). Additionally, the conclusion stated that if marijuana was to be considered a gateway drug that necessitates harsh punishments, the same would be needed for tobacco and alcohol.

Source: Jorgensen, C. and Wells, J. (2021). *Is marijuana really a gateway drug? A nationally representative test of the marijuana gateway hypothesis using a propensity score matching design*. *Journal of Experimental Criminology*, 17(3).

### Changes in Marijuana Use from 2005 to 2018 across the United States

The study compares marijuana use by adults from 2005 to 2011 (pre-recreational marijuana legalization) to 2012 to 2018 (post-recreational marijuana legalization). Data was utilized from the US National Health and Nutrition Examination Survey (NHANES) from 2005 to 2018 across the country. While lifetime marijuana use and first use before the age of 18 was fairly consistent over the 14 years, there was a sizable increase in past-year marijuana use. This use was higher and more common for younger people, males, participants below the poverty line, non-Hispanic blacks. Despite this, the increase in past-year use increased across all demographics including education, race, gender, and income.

Source: Mitchell, W., Bhatia, R., and Zebardast, N. (2020). *Retrospective cross-sectional analysis of the changes in marijuana use in the USA, 2005–2018*. *BMJ Open*, 1-6.

# Section III: Public Health

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## Some Findings

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- Marijuana *only* exposures **increased 185%** from 2013 when recreational marijuana was legalized compared to 2020.
- Treatment for marijuana use for all ages **decreased 34%** from 2013 to 2020.
- The percent of suicide incidents in which toxicology results were positive for marijuana has **increased** from **14%** in 2013 to **29%** in 2020.

## Definitions by Rocky Mountain HIDTA

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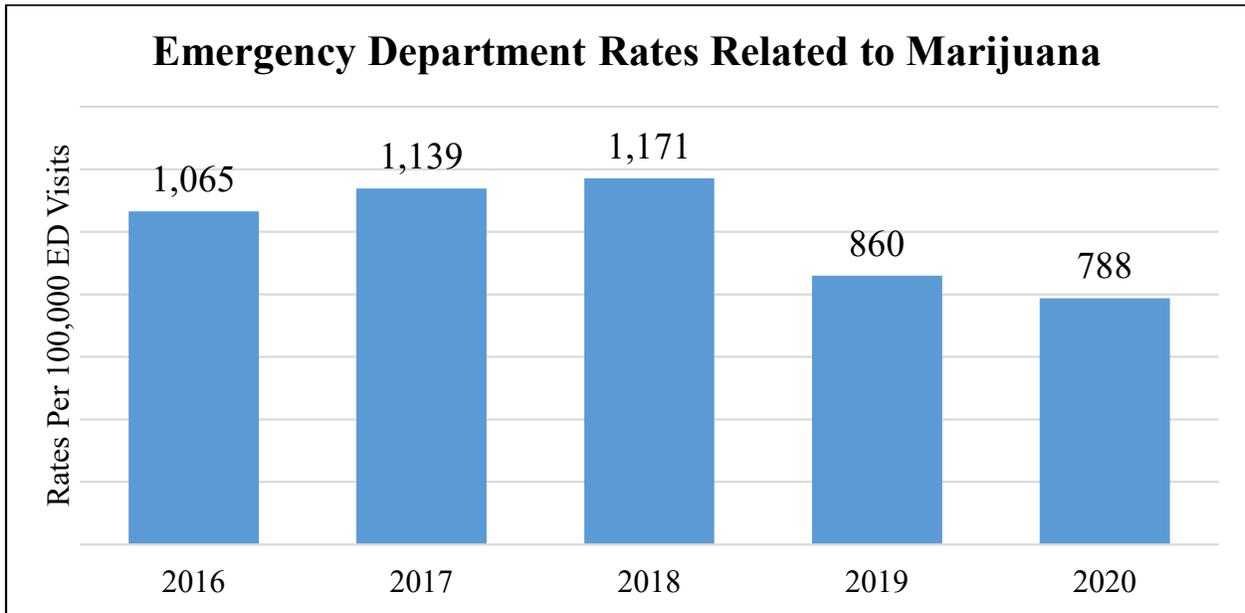
**Marijuana-Related:** Also referred to as “marijuana mentions.” Data could be obtained from lab tests, patient self-admission or some other form of validation obtained by the provider. Being marijuana-related does not necessarily prove marijuana was the cause of the emergency department admission or hospitalization.

**International Classification of Disease (ICD):** A medical coding system used to classify diseases and related health problems.

\*\*In 2015, ICD-10 (the tenth modification) was implemented in place of ICD-9. Although ICD-10 will allow for better analysis of disease patterns and treatment outcomes for the advancement of medical care, comparison of trends before and after the conversion can be made difficult and/or impossible. The number of codes increased from approximately 13,600 codes to approximately 69,000 codes. For this reason, emergency department visits and hospitalizations related to marijuana use were restricted to 2016 to 2020 in this report.

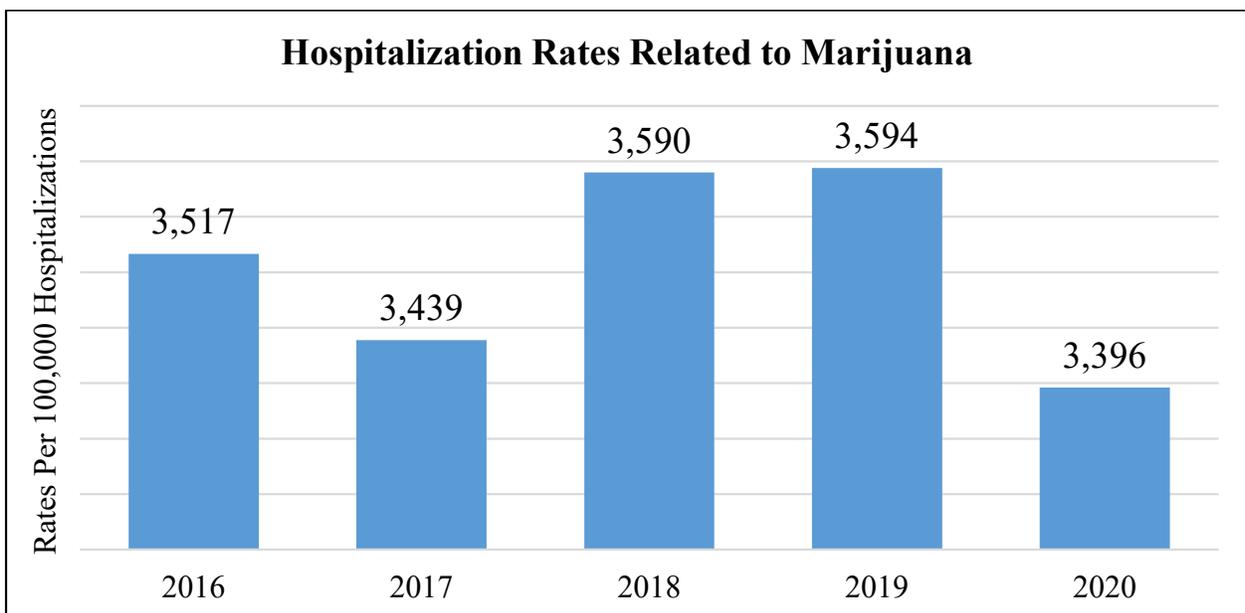
For more information regarding public health research gaps and data quality issues, please visit <https://marijuanahealthinfo.colorado.gov/research-gaps>.

## Emergency Department Data



SOURCE: Emergency Department Discharge Dataset, as analyzed by the Colorado Department of Public Health and Environment; 2016-2020

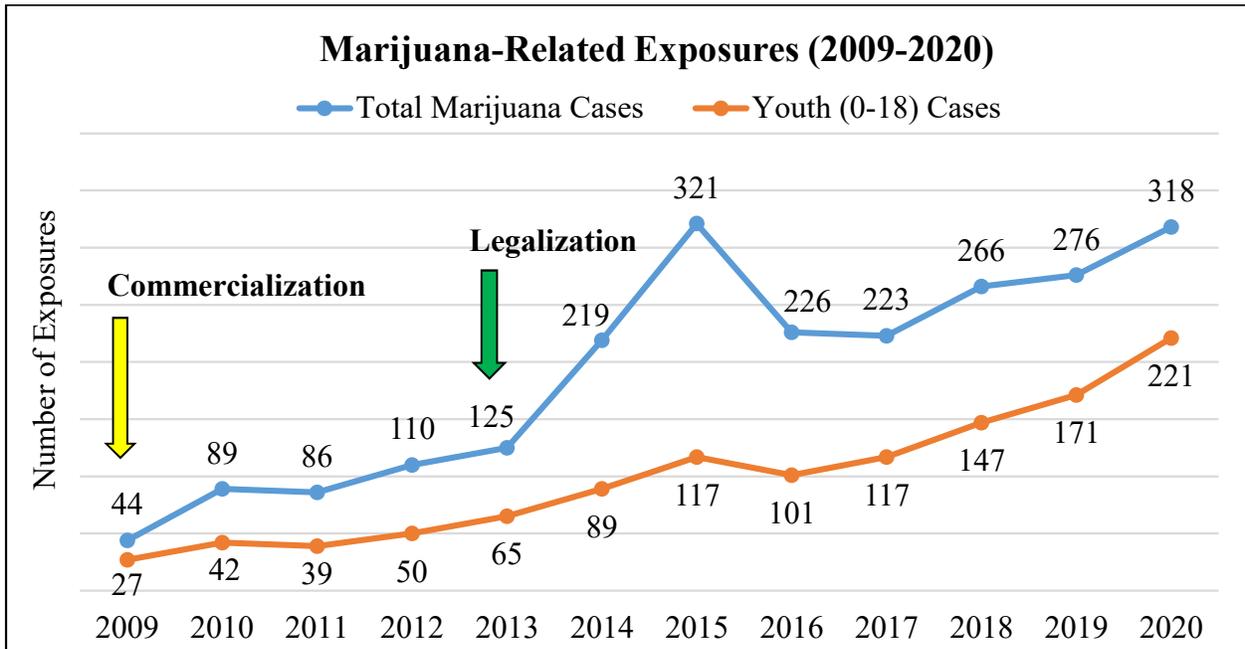
**NOTE:** Due to changes in the way the hospitalizations and emergency department visits data were coded, data before 2015 was not included for trend analysis.



SOURCE: Emergency Department Discharge Dataset, as analyzed by the Colorado Department of Public Health and Environment; 2016-2020

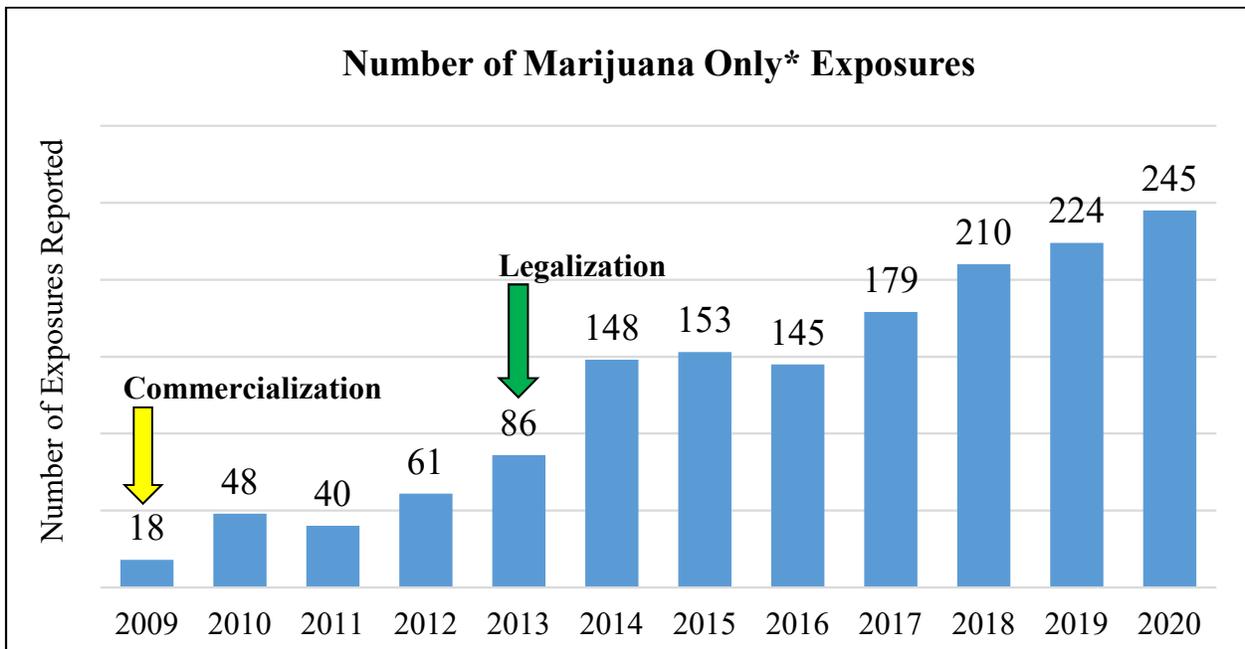
**NOTE:** Due to changes in the way the hospitalizations and emergency department visits data were coded, data before 2015 was not included for trend analysis.

## Poison Control/Marijuana Exposure Data



SOURCE: Rocky Mountain Poison and Drug Center

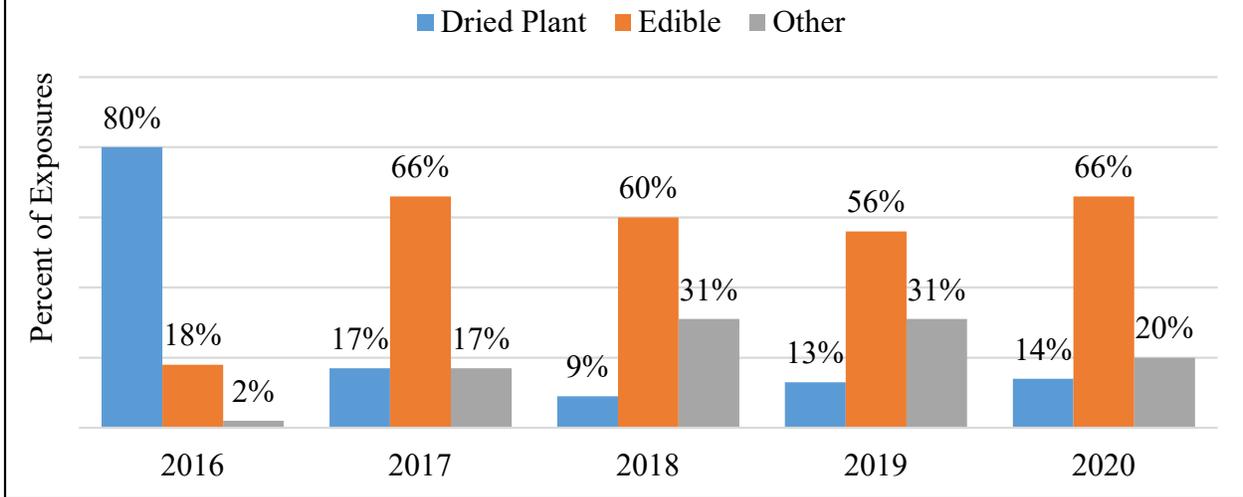
**NOTE:** Total marijuana-related exposure cases include unknown ages.



SOURCE: Rocky Mountain Poison and Drug Center

**\*NOTE:** Marijuana was the only substance referenced in the call to the poison and drug center.

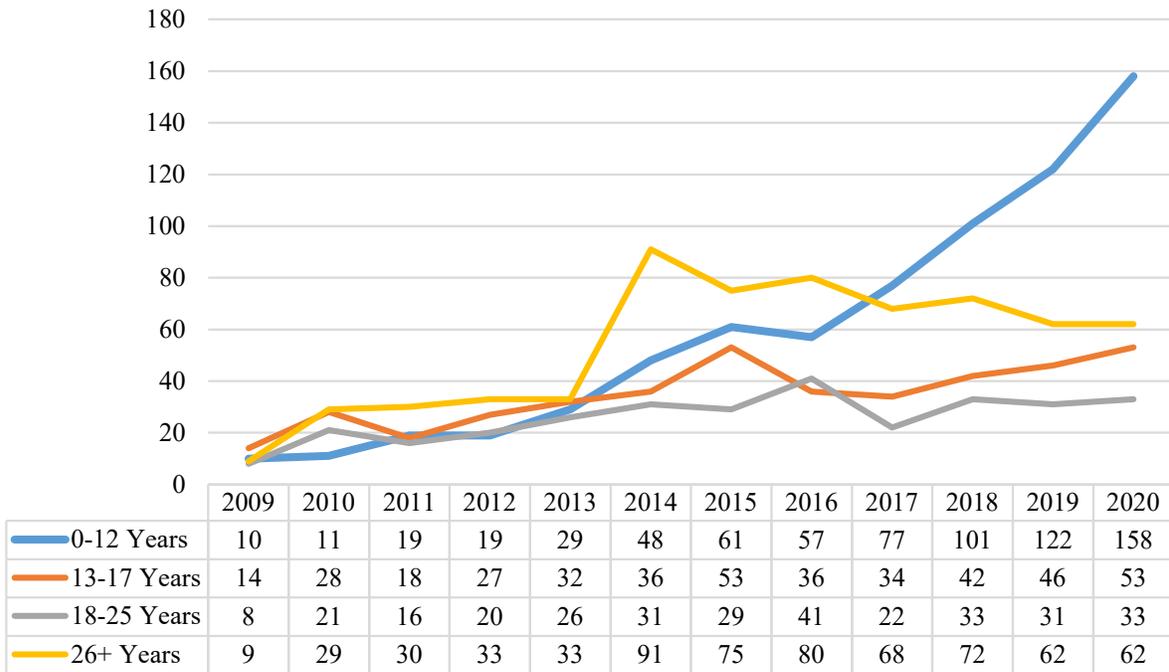
### Percent of Marijuana Exposures 0-8 Year Olds, By Marijuana Type (2016-2020)



SOURCE: Rocky Mountain Poison and Drug Center

**NOTE:** The code for marijuana edibles did not go into effect until 2016. Therefore, any cases of edible marijuana exposure which occurred prior to 2016 were coded under “dry plant.” Other marijuana includes oral pills/capsules, concentrated extracts (to include oils and tinctures), topical preparations, marijuana devices, and unknown/other forms of marijuana.

### Marijuana-Related Exposures by Age Range (2009-2020)

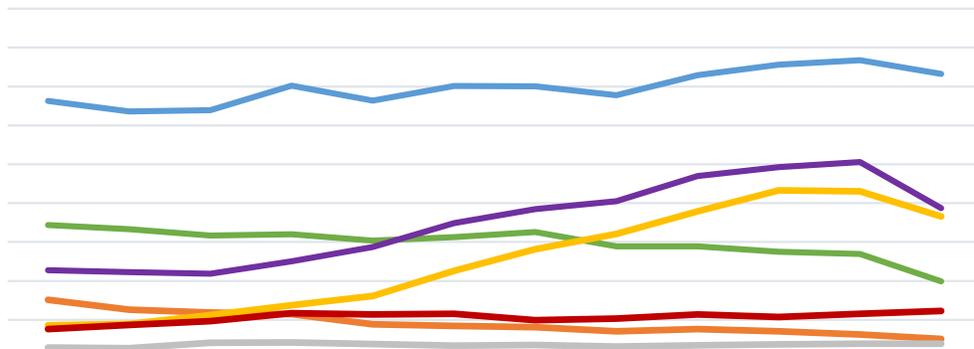


SOURCE: Rocky Mountain Poison and Drug Center

## Treatment Data

### Drug Type for Treatment Admissions, All Ages

Number of Admissions



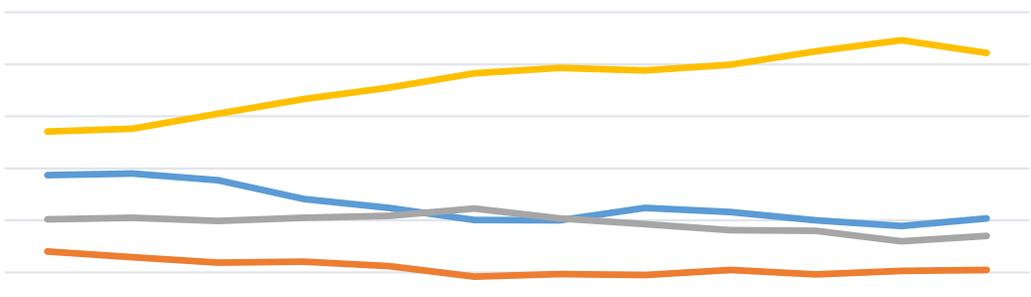
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Marijuana	6,868	6,665	6,342	6,408	6,065	6,257	6,520	5,783	5,785	5,498	5,394	3,980
Cocaine	3,034	2,523	2,380	2,288	1,775	1,681	1,618	1,414	1,518	1,402	1,252	1,017*
Meth	4,557	4,450	4,368	5,007	5,746	6,972	7,700	8,110	9,389	9,859	10,115	7,743
Heroin	1,713	1,790	2,237	2,746	3,225	4,520	5,634	6,420	7,581	8,655	8,610	7,323*
Rx Opioids	1,522	1,739	1,934	2,339	2,277	2,304	1,987	2,059	2,271	2,138	2,307	2,460
Alcohol	13,263	12,710	12,788	14,035	13,277	14,023	14,013	13,544	14,587	15,124	15,345	14,653
Other	572	548	827	830	761	667	710	620	692	734	773	768

SOURCE: Colorado Department of Health Services, Office of Behavioral Health

**\*NOTE:** Treatment admissions for cocaine and heroin in 2020 do not include the 12-17 age group as there were less than 30 admissions and were therefore omitted.

### Percent of Marijuana Treatment Admissions by Age Group

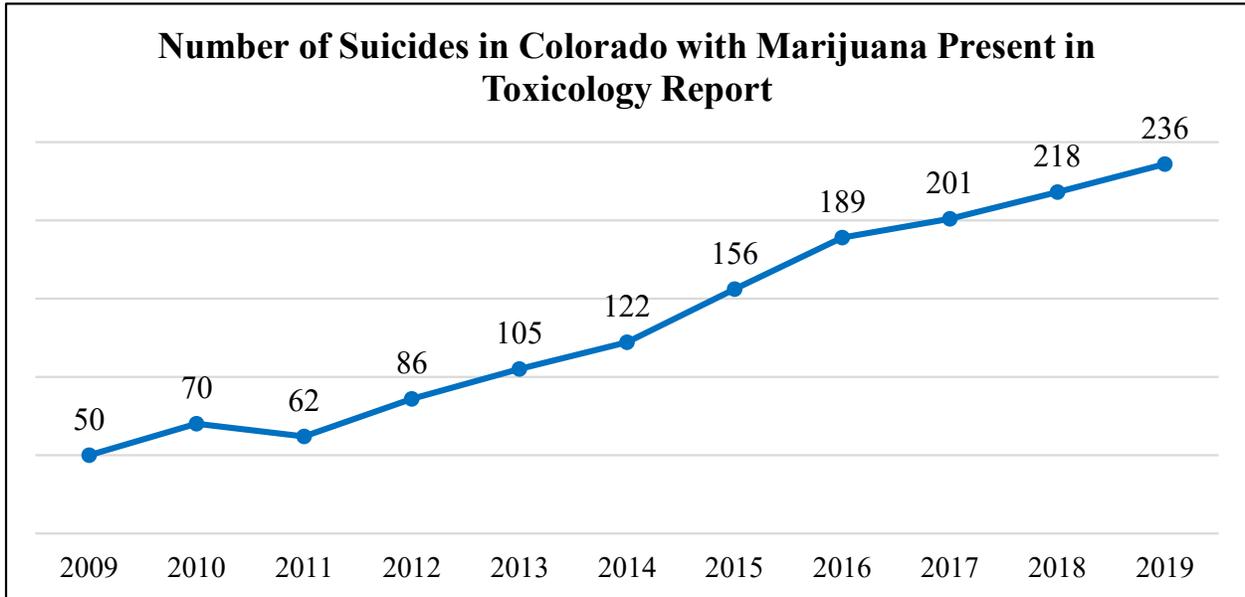
Percent of Admissions



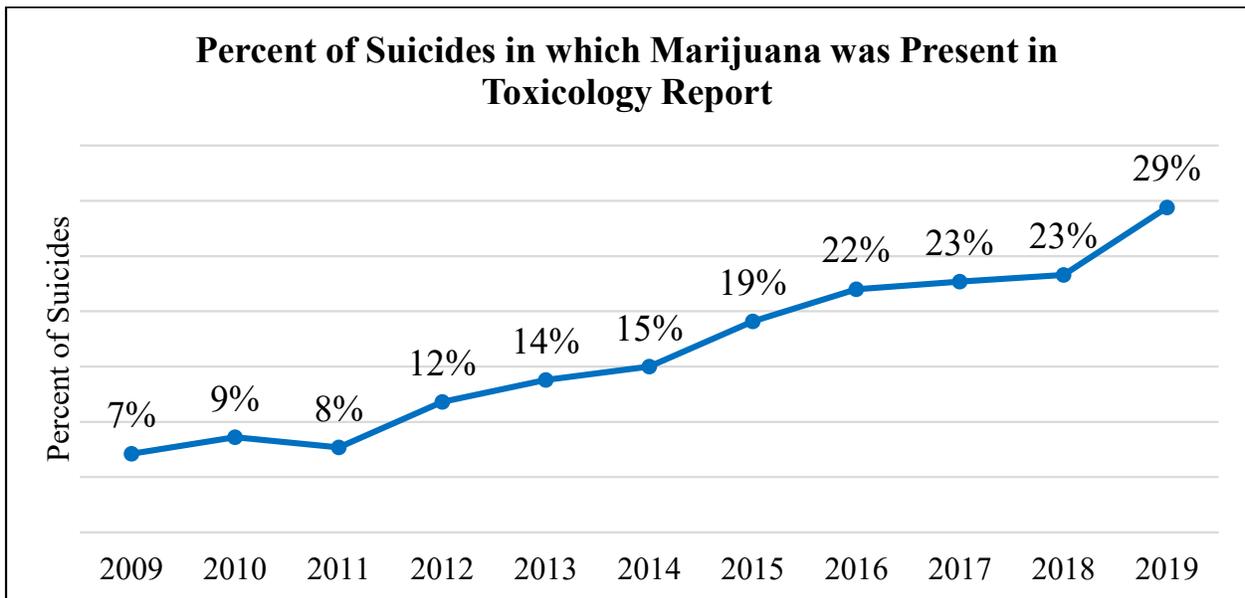
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
12-17	28.7	29.0	27.7	24.1	22.4	20.1	20.0	22.4	21.6	20.0	18.9	20.4
18-20	14.0	12.9	11.9	12.1	11.2	9.2	9.7	9.5	10.5	9.6	10.3	10.5
21-25	20.2	20.5	19.9	20.5	20.9	22.3	20.4	19.3	18.1	18.0	16.0	17
26+	37.1	37.6	40.5	43.3	45.5	48.3	49.3	48.8	49.9	52.5	54.6	52.2

SOURCE: Center for Behavioral Health Statistics and Quality, SAMHSA, Treatment Episode Data Set (TEDS). Based on administrative data reported by states to TEDS pulled on July 8, 2021.

## Suicide Data



SOURCE: CDPHE, Colorado Violent Death Reporting System

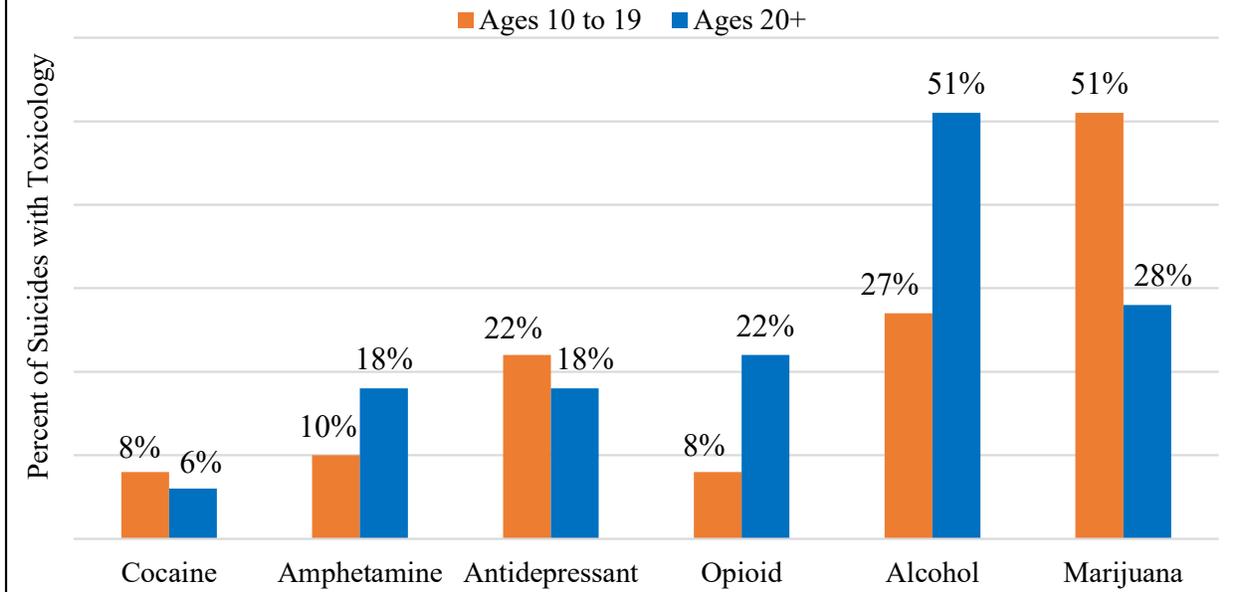


SOURCE: CDPHE, Colorado Violent Death Reporting System

**NOTE:** Toxicology is not available for every suicide. Only those suicides with toxicology available are represented above. Due to an 18-month lag in detailed suicide circumstances and toxicology information from coroner and law enforcement records, 2019 is the most recent year available.

**NOTE:** Toxicology results were available for 62% of suicides from 2019. As a result, there may be underrepresentation in the numbers and percentages presented.

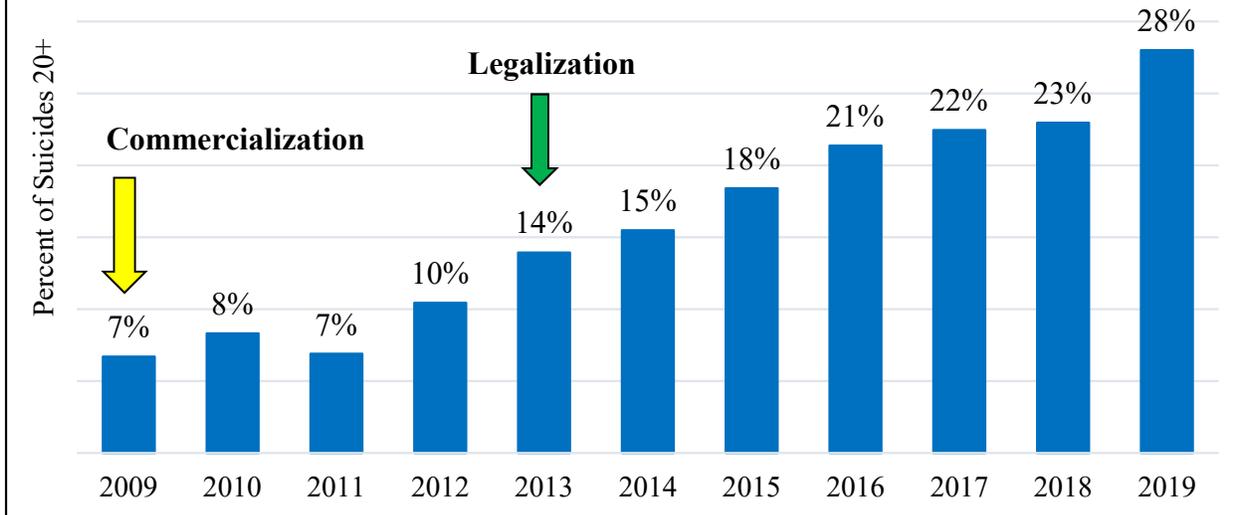
## Suicide Toxicology Results by Age Group, 2019



SOURCE: CDPHE, Colorado Violent Death Reporting System

**NOTE:** Toxicology results were available for 62% of suicides from 2019. As a result, there may be underrepresentation in the numbers and percentages presented.

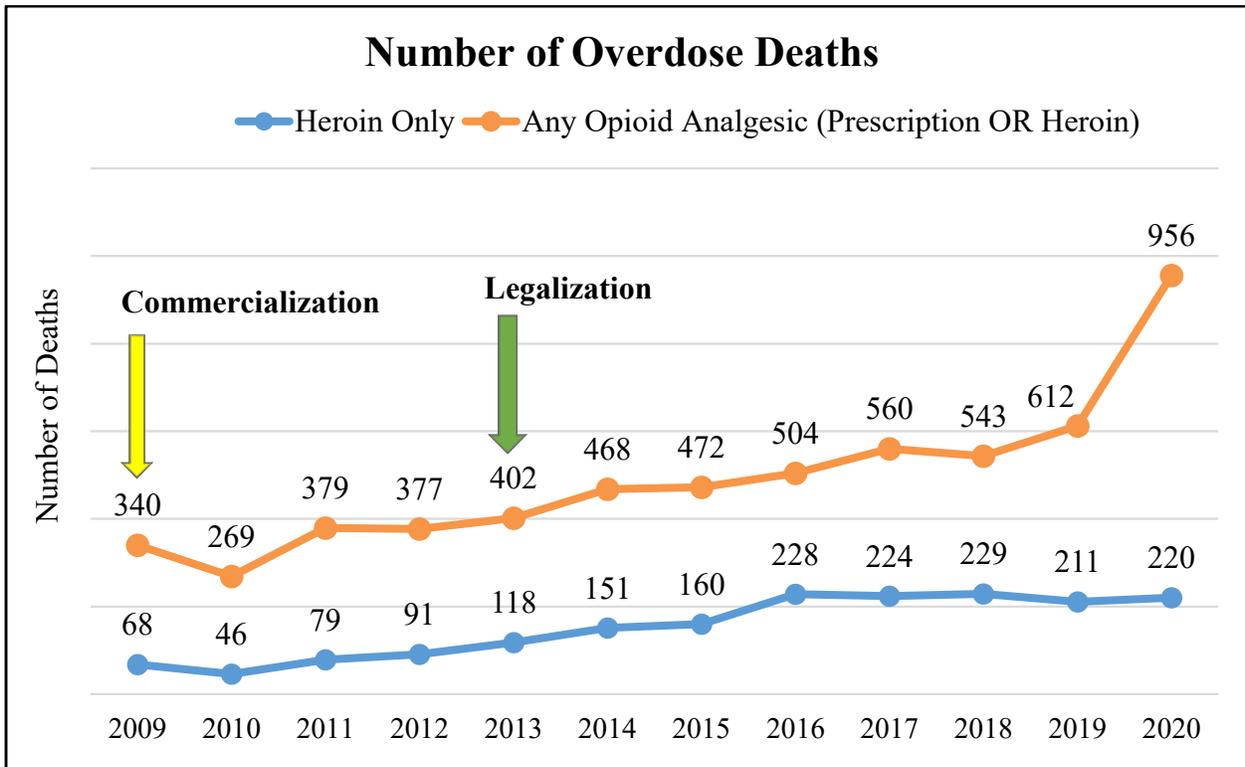
## Out of All Suicides Ages 20 and Older, The Percent Positive for Marijuana



SOURCE: CDPHE, Colorado Violent Death Reporting System

**NOTE:** Toxicology results were available for 62% of suicides from 2019. As a result, there may be underrepresentation in the numbers and percentages presented.

## Colorado Opioid Overdose Deaths



Source: CDPHE, Vital Statistics Program

This data is included in response to reports of declining opioid overdose deaths post-marijuana legalization.

**NOTE:** Heroin cause of death codes include T40.1. Any Opioid Analgesic (prescription or heroin) cause of death codes include T40.1-T40.4

## Public Health Information

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### Impact of Licensed and Unlicensed Cannabis Retailers in California

California legalized recreational marijuana in 2016, which resulted in the establishment of unlicensed retailers until the issuance of cannabis retail licenses at the end of 2017. For example, in Los Angeles County, there are 37 licensed retailers compared to 92 unlicensed retailers. This can create problems for regulation as unlicensed locations “have been reported to engage in illegal business practices that can compromise public health and encourage underage use, including selling products that exceed the legal THC limit, selling counterfeit products that contain pesticides, allowing consumption of cannabis in retail stores, not imposing daily limits on purchases, staying open late at night, and selling products that are attractive to youth and lack child-resistant packaging” (Unger et al, 2020).

The results indicated that “neighborhoods with only licensed retailers represented 8% of the California population, neighborhoods with only unlicensed retailers represented 17% of the California population, and neighborhoods with both licensed/unlicensed retailers represented 18% of the California population. Of all neighborhood types, neighborhoods with only unlicensed retailers had the lowest proportion of non-Hispanic whites (25%) and the highest proportion of Hispanics (52%). However, the highest proportions of African Americans (9%), Asian Americans (15%), and individuals living in poverty (19%) were in neighborhoods with both licensed/unlicensed retailers” (Unger et al, 2020). Residents living near unlicensed retailers face greater public health risks due to the lack of regulation of the products and the authors recommend greater enforcement of these dangerous practices.

Source: Unger, J., Vos, R., Wu, J., Hardaway, K., Li Sarain, A., Soto, D., Rogers, C., and Steinberg, J. (2020). *Locations of licensed and unlicensed cannabis retailers in California: A threat to health equity*. Preventive Medicine Reports, 19, 101165-101173.

### Mixed Findings for the Public Health Effects of Medical Marijuana Treatment

Researchers sought to examine the public health effects from the use of medical marijuana on various conditions- amyotrophic lateral sclerosis, autism, cancer, chronic noncancer pain, Crohn’s disease, epilepsy, glaucoma, human immunodeficiency virus/AIDS, multiple sclerosis (MS), Parkinson’s disease, and posttraumatic stress disorder. Across the 33 states in which medical marijuana is legal, there are over 50 medical conditions that have qualified to be treated through the use of medical marijuana. Nationwide, 6.2% of people use medical marijuana and 3.6% use both medical and recreational marijuana. A systematic review was conducted for studies that took place from May 2016 to October 2019.

The results indicated that “there is conclusive or substantial evidence for cannabis in treating chronic noncancer pain, chemotherapy-induced nausea and vomiting (oral cannabinoids), and MS spasticity symptoms (via oral cannabinoids). In addition, limited evidence was reported for the efficacy of cannabis and cannabinoids for the purposes of increasing appetite and decreasing weight loss in patients with HIV/AIDS, improving clinician measures of MS spasticity symptoms (specifically, via oral cannabinoids), and improving symptoms of PTSD (specifically, with

nabilone)” (Jugl et al, 2021). However, there was insufficient evidence to support evidence of medical marijuana improving glaucoma symptoms. In addition, studies showed neither support or opposition for indications such as “cancer (cannabinoids), cancer-associated anorexia-cachexia syndrome and anorexia nervosa (cannabinoids), symptoms of irritable bowel syndrome (dronabinol), epilepsy (cannabinoids), symptoms associated with ALS, or Parkinson’s disease-related symptoms or levodopa-induced dyskinesia (cannabinoids)” (Jugl et al, 2021).

Source: Jugl, S., Okpeku, A., Costales, B., Morris, E., Alipour-Haris, G., Hincapie-Castillo, J., Stetten, N., Sajdeya, R., Keshwani, S., Joseph, V., Zhang, Y., Shen, Y., Adkins, L., Winterstein, A., and Goodin, A. (2021). *A mapping literature review of medical cannabis clinical outcomes and quality of evidence in approved conditions in the USA from 2016 to 2019*. *Medical Cannabis and Cannabinoids*, 4(1), 21-42.

### Analysis of Pre-Existing Factors and Experiences to Marijuana Use During Pregnancy

Similar to cigarette use during pregnancy, marijuana can have physical effects on the fetus such as anemia, low birth weight, and more time spent in the neonatal intensive care unit after birth. Although women have used marijuana to assist with nausea in the first trimester, some medical professionals have expressed concerns of this practice. A study was conducted and found 29.6% of women used marijuana prior to their first prenatal visit. Additionally, the participants in the study who used marijuana while pregnant were more likely to be unemployed, have low educational attainment, use tobacco and alcohol, and experience depression. The rate of women using marijuana decreased across pregnancy terms.

The authors of this study recruited 101 pregnant participants in Indiana who used the WIC Food and Nutrition Service. The main measures were childhood adversity, interpersonal violence, cigarette use, and marijuana use. Of the participants, 71% experienced childhood adversity like physical abuse, 28% used at least one cigarette a day, and 7% used marijuana during pregnancy. Results indicated a strong association between marijuana use during pregnancy and sexual interpersonal violence.

The researchers concluded “this study suggests that a comprehensive assessment of women’s history of exposure to violence provides insight into which women may have the most difficulty with unassisted substance cessation in the prenatal period—above and beyond already known risk factors, including sociodemographic characteristics and pre-pregnancy smoking behaviors. It could be that women who have experienced recent IPV and past childhood adversity may experience a higher general stress burden, making cessation more difficult. Providing better intervention and support around smoking and marijuana cessation for women exposed to violence is therefore a critical need, even among groups that are at a generally high sociodemographic risk” (Miller-Graff et al, 2021).

Source: Miller-Graff, L., Howell, K., Grein, K., and Keough, K. (2021). *Women’s cigarette and marijuana use in pregnancy: identifying the role of past versus recent violence exposure*. *Journal of Interpersonal Violence*, 36(7-8), NP3983-NP3998.

# Section IV: Black-Market

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## Some Findings

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- RMHIDTA Colorado Drug Task Forces (10) conducted **294 investigations** of black-market marijuana in Colorado resulting in:
  - **168** felony arrests
  - **5.54** tons of marijuana seized
  - **86,502** marijuana plants seized
  - **21** different states the marijuana was destined
- Seizures of marijuana reported to the El Paso Intelligence Center (EPIC) in Colorado **increased 48%** from an average of 174 parcels (2009-2012) when marijuana was commercialized to an average of 257 parcels (2013-2020) during the time recreational marijuana become legalized.

## Definitions by Rocky Mountain HIDTA

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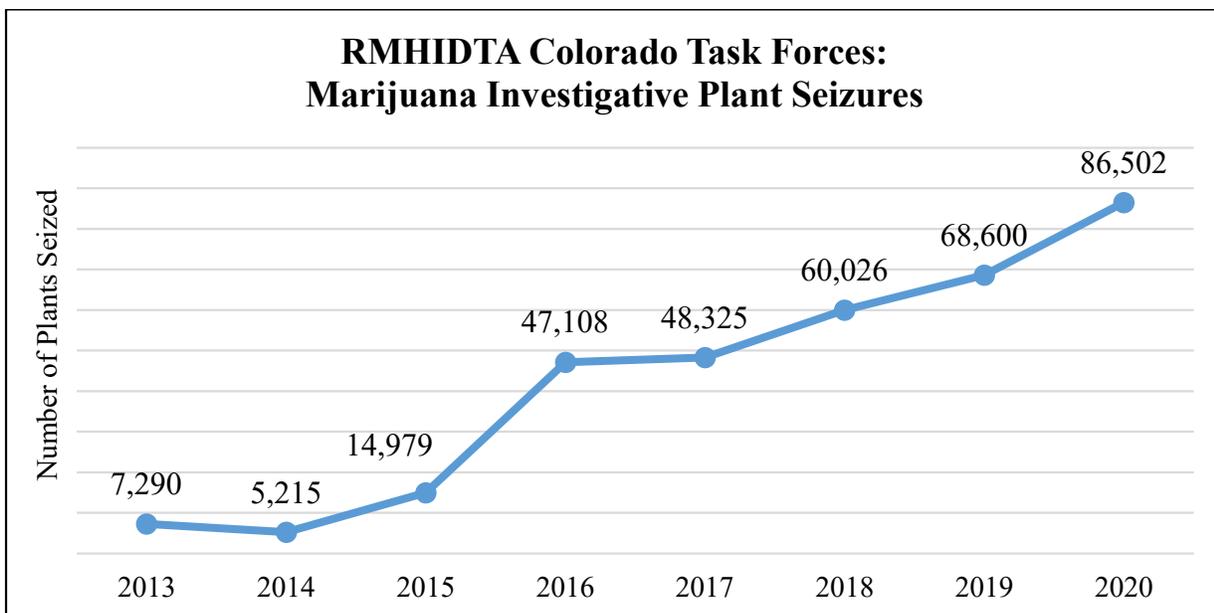
**Colorado Marijuana Investigations:** RMHIDTA Colorado drug task forces investigating individuals or organizations involved in illegally selling Colorado marijuana, both within and outside of the state. These investigations only include those reported by the ten RMHIDTA drug task forces.

**Colorado Marijuana Interdictions:** Interdictions include incidents where drugs are being transported, generally by vehicle or parcel, and the shipment is randomly seized by law enforcement. Interdictions are made by Colorado State Patrol.

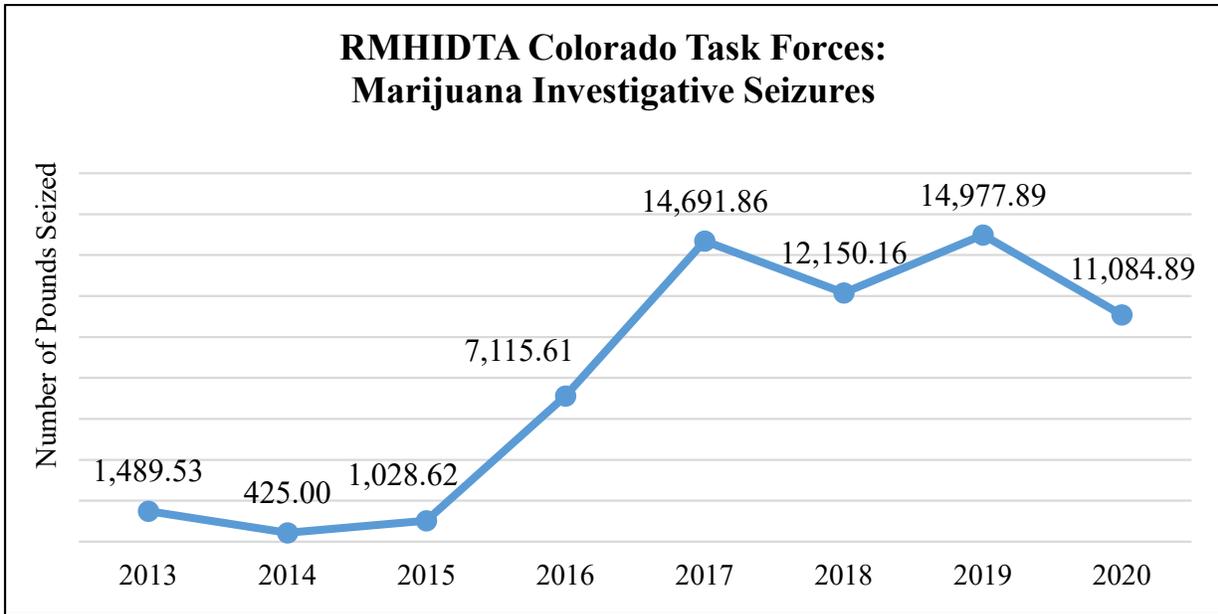
## Task Force Investigations

Rocky Mountain HIDTA Colorado Task Forces			
	2018	2019	2020
<b>Number of Completed Investigations</b>	257	278	294
<b>Number of Felony Arrests</b>	192	237	168
<b>Pounds of Bulk Marijuana Seized</b>	12,150 (6.1 tons)	14,978 (7.5 tons)	11,085 (5.5 tons)
<b>Number of Plants Seized</b>	60,026	68,600	86,502
<b>Number of Edibles Seized</b>	2,894	15,025	4,202
<b>Pounds of Hash/THC Concentrate Seized</b>	319	86	626
<b>Different States to Which Marijuana was Destined</b>	25	29	21

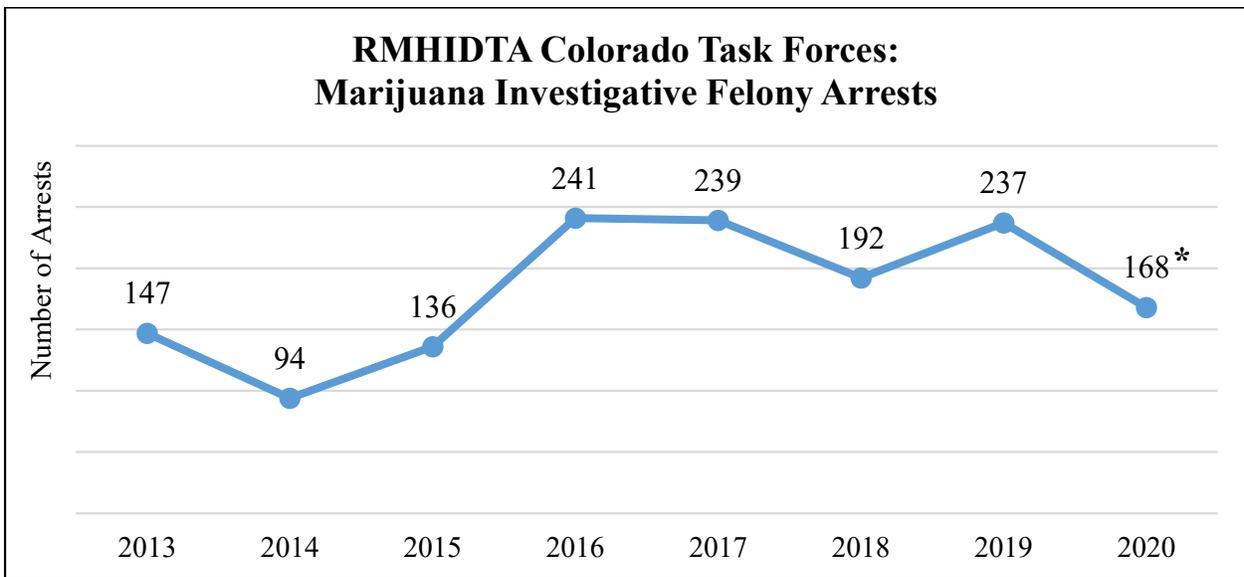
Task force data only includes completed investigations reported by the RMHIDTA Colorado Investigative Drug Task Forces. It is unknown how many of these types of investigations were completed by non-RMHIDTA Colorado drug units or task forces.



SOURCE: Rocky Mountain HIDTA Performance Management Process (PMP) Data



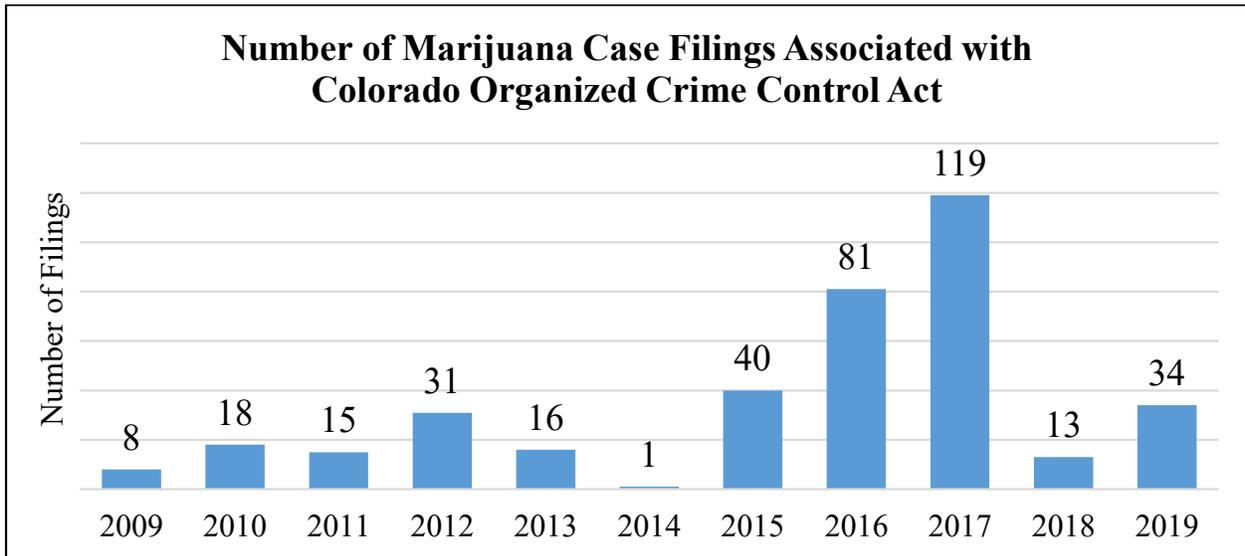
SOURCE: Rocky Mountain HIDTA Performance Management Process (PMP) Data



SOURCE: Rocky Mountain HIDTA Performance Management Process (PMP) Data

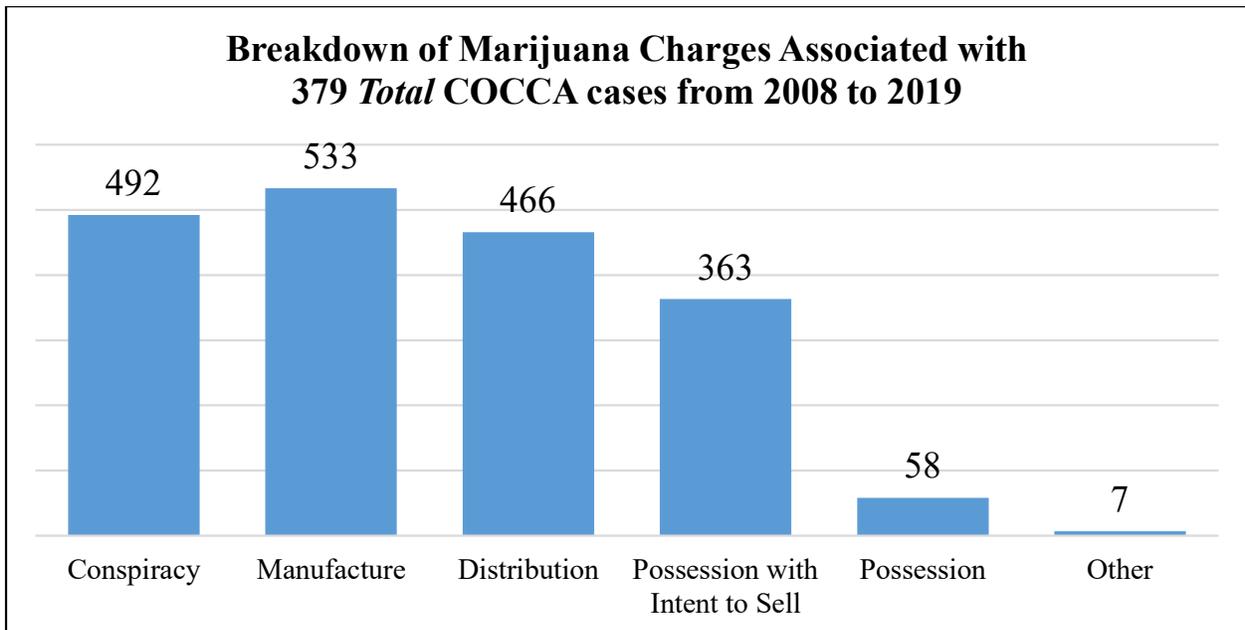
**\* NOTE:** In 2020, arrest numbers were impacted by the COVID-19 pandemic's impact of the local, state, and federal judicial systems.

## Colorado Organized Crime Control Act Filings



SOURCE: Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics

Colorado Organized Crime Control Act (COCCA) filings are conspiracy cases in which there is potential for a larger sentence than other types of drug filings.

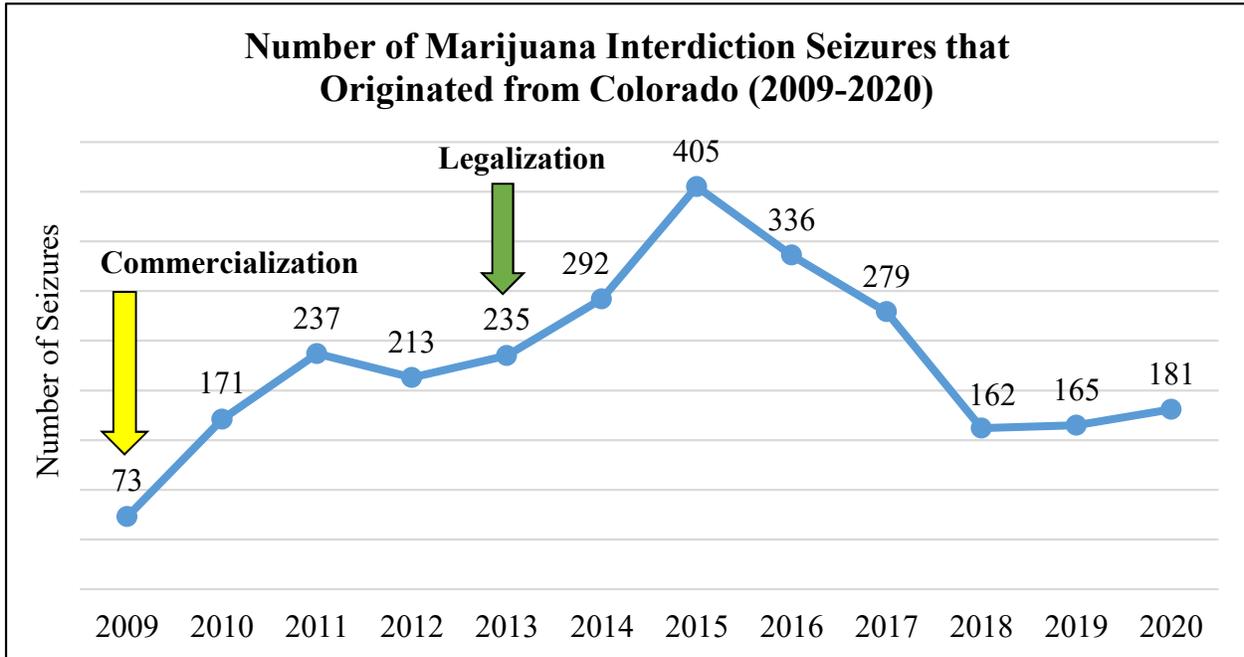


SOURCE: Colorado Department of Public Safety, Division of Criminal Justice, Office of Research and Statistics

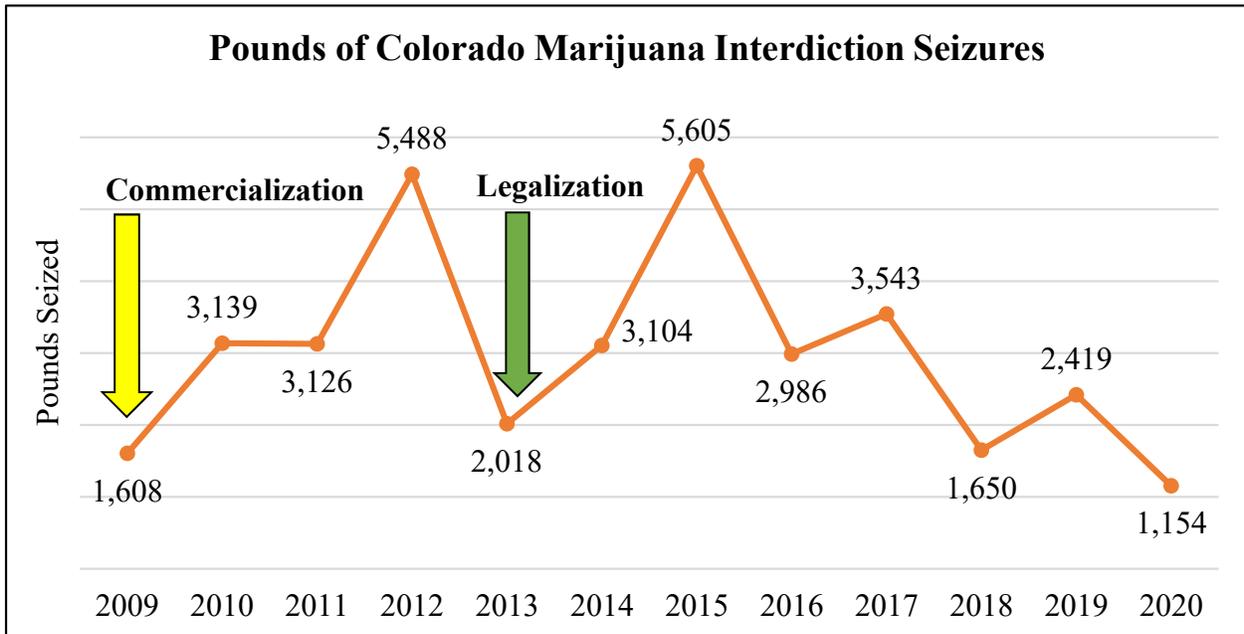
**NOTE:** The breakdown is more than the 379 total COCCA cases as there can be multiple charges associated with each case.

## Highway Interdiction Data

**NOTE:** The charts below only include cases where Colorado marijuana was actually seized and reported. It is unknown how many Colorado marijuana loads were not detected or, if seized, were not reported. These are roadside interdictions voluntarily reported by state highway patrol to EPIC.



SOURCE: EPIC, National Seizure System, as of July 2021



SOURCE: EPIC, National Seizure System, as of July 2021

## Black Market Information

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### Black-Market Marijuana Continues After Legalization

Despite the legalization of recreational marijuana in Colorado, the black-market marijuana continues to thrive. In 2019, federal and local law enforcement conducted the largest marijuana bust in the history of Colorado- raids across 250 homes and businesses, dozens of arrests, over 80,000 marijuana plants, and nearly \$2.2 million in assets. The base of this operation was buying suburban homes in the Denver Metro area with large, unfinished basements for the cultivation of thousands of plants, operating under the radar in plain sight. Then, the money was laundered through family restaurants by multiple Chinese drug trafficking organizations.

There is difficulty, however, in fully assessing the size of the black market as all the efforts are “underground” and not well known. It has been established by the Drug Enforcement Administration that well-established drug trafficking organizations are able to generate millions of dollars through the sale of up 1,800 pounds of marijuana a year based on 100 plants grown. This problem has resulted in the creation of the Illicit Market Marijuana Team within the Colorado Bureau of Investigations. The solution to combating the black market is split between those who believe law enforcement needs more resources with those who feel greater legalization and lower prices in the legal market could have the most impact.

Source: Tabachnik, S. (2021, June 20). *Black market marijuana grows are popping up faster than law enforcement can take them down. But is legalization the cause?* Denver Post. Retrieved from <https://www.denverpost.com/2021/06/20/black-market-marijuana-colorado-chinese-crime-rings/>

### Perceptions from Marijuana Users of “Legal” and “Illegal” Markets

While legalization of recreational marijuana is expected to decrease the black market in these states, this is not always the case. After legalization, the retail price of marijuana decreased by 62% in Colorado from 2014 to 2017. While the prices also dropped in Washington and Oregon, it was a lower decline than Colorado. Some studies have indicated that buyers may be willing to pay a higher price for a legal purchase as well as high quality products. For some buyers though, the pre-existing relationship with their supplier may continue to connect them to the illegal market.

The results of the online survey demonstrated a positive perception of the legal marijuana market in these states by participants. Additionally, researchers found “respondents, including frequent cannabis consumers, perceived legal cannabis to be of equal or greater quality and convenience, and as safer to buy and use than cannabis from illegal sources. The one notable exception was price: legal cannabis products were perceived as more expensive than illegal products, particularly among frequent cannabis users. The prevalence of this belief suggests that price may in fact be a barrier to transitioning to the legal market; however, it is also possible that higher prices may be tolerated given that legal cannabis products may be perceived as higher quality, safer and more convenient to access. However, frequent users may be able to obtain what they perceive as high-quality products at lower prices through established relationships with unauthorized dealers. Price perceptions were generally more favorable in states with a longer time with retail sales: Colorado, Washington, and Oregon” (Fataar et al, 2021).

Source: Fataar, F., Goodman, S., Wadsworth, E., and Hammond, D. (2021). *Consumer perceptions of “legal” and “illegal” cannabis in US states with legal cannabis sales.* Addictive Behaviors, 112, 106563-106569

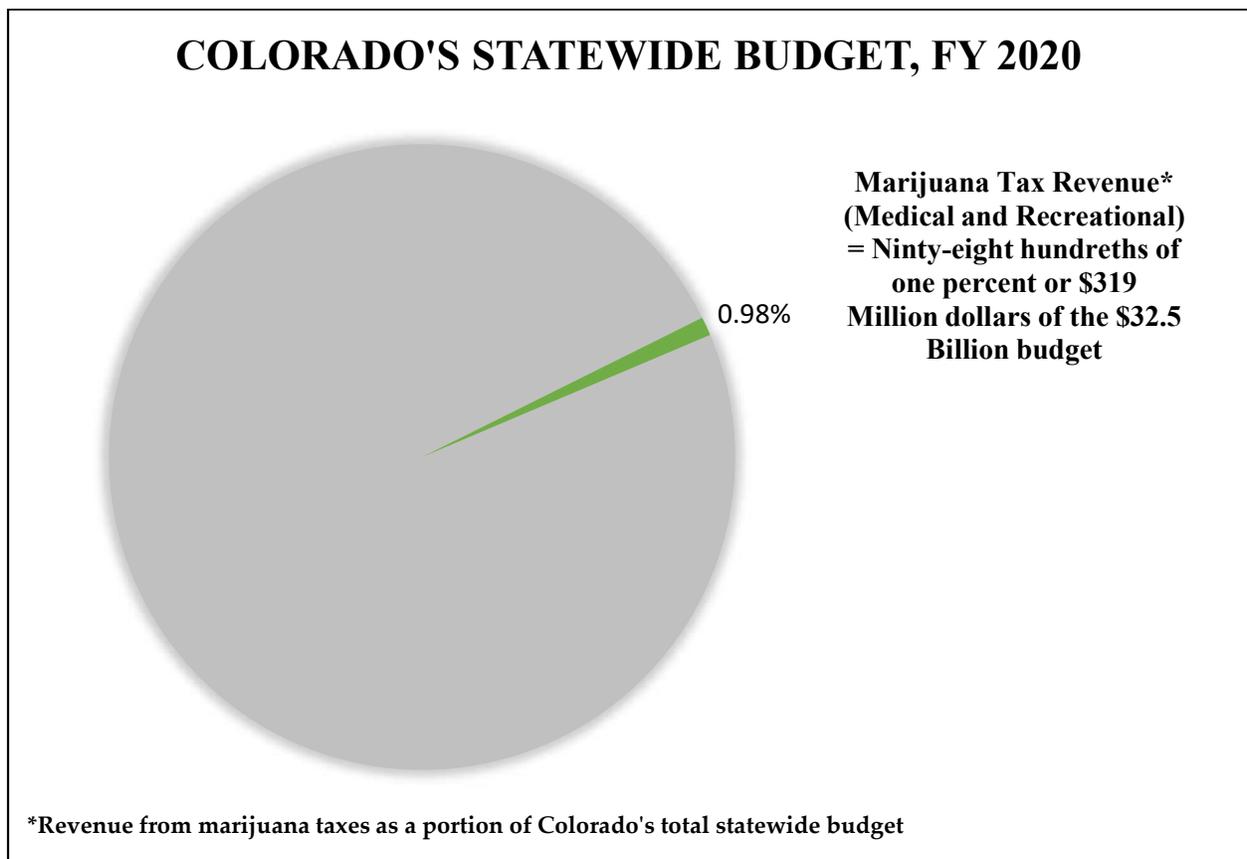
# Section V: Societal Impact

## Some Findings

- Marijuana tax revenue represent approximately **0.98%** of Colorado’s FY 2020 budget.
- **66%** of local jurisdictions in Colorado have banned medical and recreational marijuana businesses.

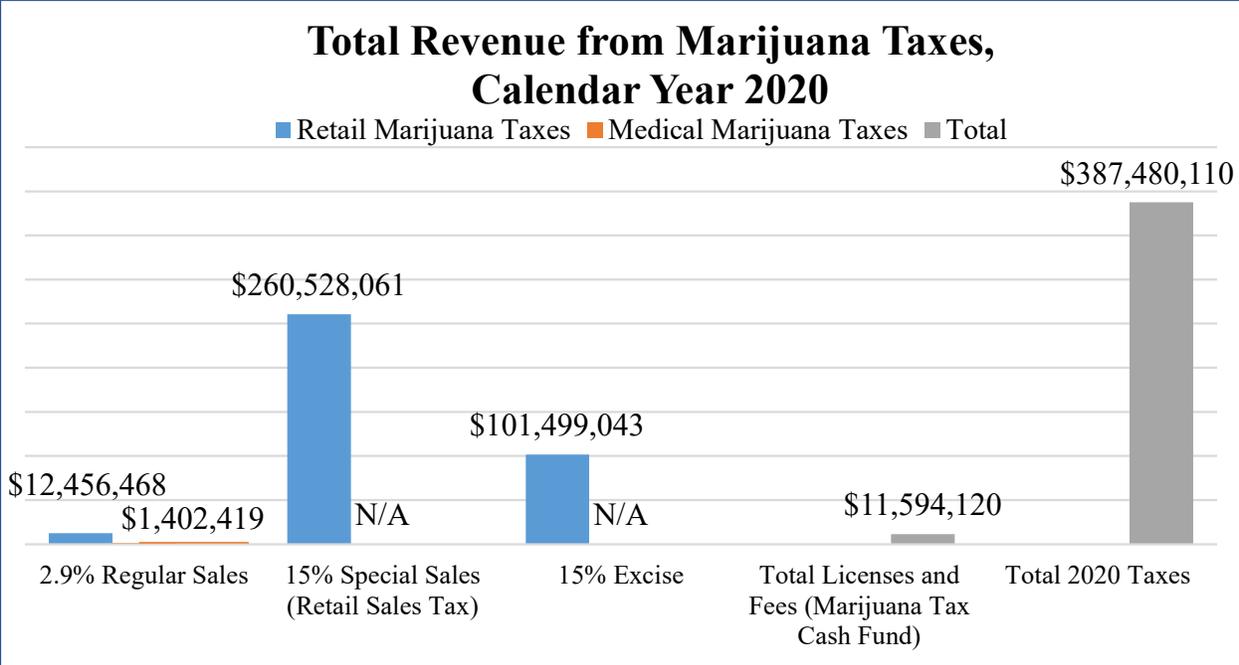
For more detailed marijuana-related crime information, please visit [https://cdpsdocs.state.co.us/ors/docs/reports/2021-SB13-283\\_Rpt.pdf](https://cdpsdocs.state.co.us/ors/docs/reports/2021-SB13-283_Rpt.pdf).

## Tax Revenue



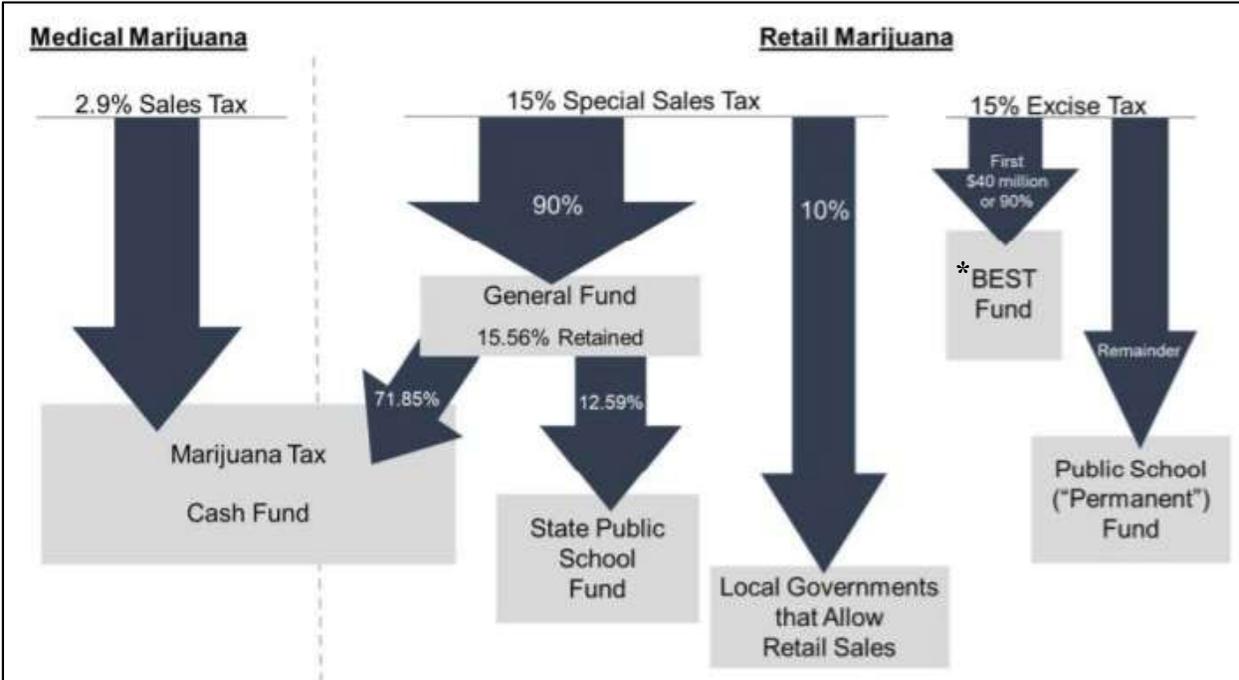
SOURCE: Governor’s Office of State Planning and Budgeting

**\*NOTE:** Revenue from marijuana taxes as a portion of Colorado's total statewide budget.



SOURCE: Colorado Department of Revenue

**NOTE:** Figures do not include any city taxes; the state does not assess or collect those taxes. Per §39-26-729, C.R.S., retail marijuana, retail marijuana products, and retail marijuana concentrates are exempt from the 2.9% regular sales tax; however, products that do not contain marijuana (i.e., accessories) are still subject to the 2.9% regular sales tax. Licenses and fees include the following categories: retail marijuana, individual, others, and collections not yet allocated.



SOURCE: Joint Budget Committee Appropriations Report Fiscal Year 2019-2020

\*BEST- Building Excellent Schools Today

## Crime

<b>Marijuana-Related Arrests in Colorado</b>			
	<b>Crimes Against Person</b>	<b>Crimes Against Property</b>	<b>Crimes Against Society</b>
<b>2009</b>	187	426	10,388
<b>2010</b>	172	416	10,026
<b>2011</b>	167	450	10,576
<b>2012</b>	192	441	11,365
<b>2013</b>	45	216	5,358
<b>2014</b>	60	273	5,689
<b>2015</b>	55	253	5,560
<b>2016</b>	69	327	5,126
<b>2017</b>	83	297	4,983
<b>2018</b>	74	310	4,641
<b>2019</b>	70	268	3,704
<b>2020</b>	65	188	2,140

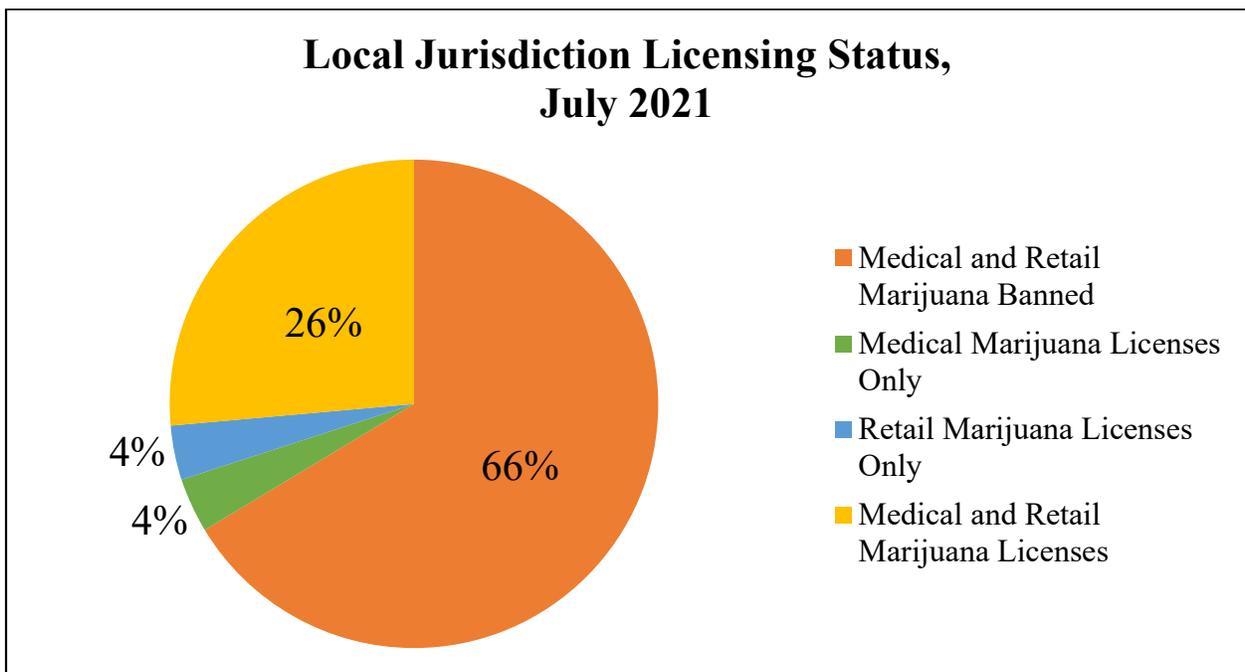
SOURCE: Colorado Bureau of Investigations Crime Statistics

**NOTE:** In 2020, arrest numbers were impacted by the COVID-19 pandemic's impact of the local, state, and federal judicial systems.

## Local Response

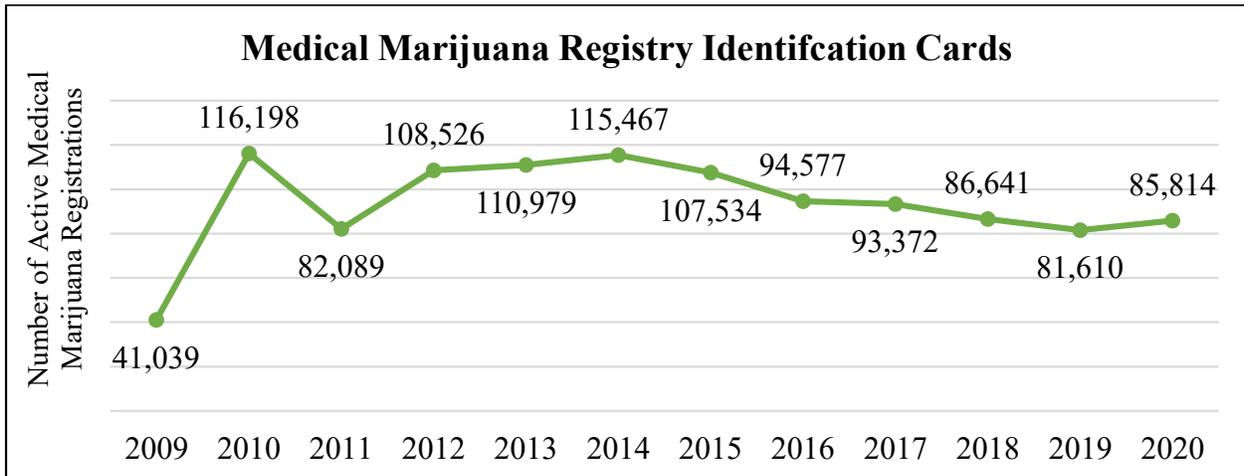
Status of Local Jurisdictions Reporting Marijuana Licensing as of July 12, 2021	
	Number of Jurisdictions
Medical and Retail Marijuana Banned	221
Medical Marijuana Licenses Only	12
Retail Marijuana Licenses Only	12
Medical and Retail Marijuana Licenses	88
<b>Total</b>	<b>333</b>

SOURCE: Colorado Marijuana Enforcement Division



SOURCE: Colorado Marijuana Enforcement Division

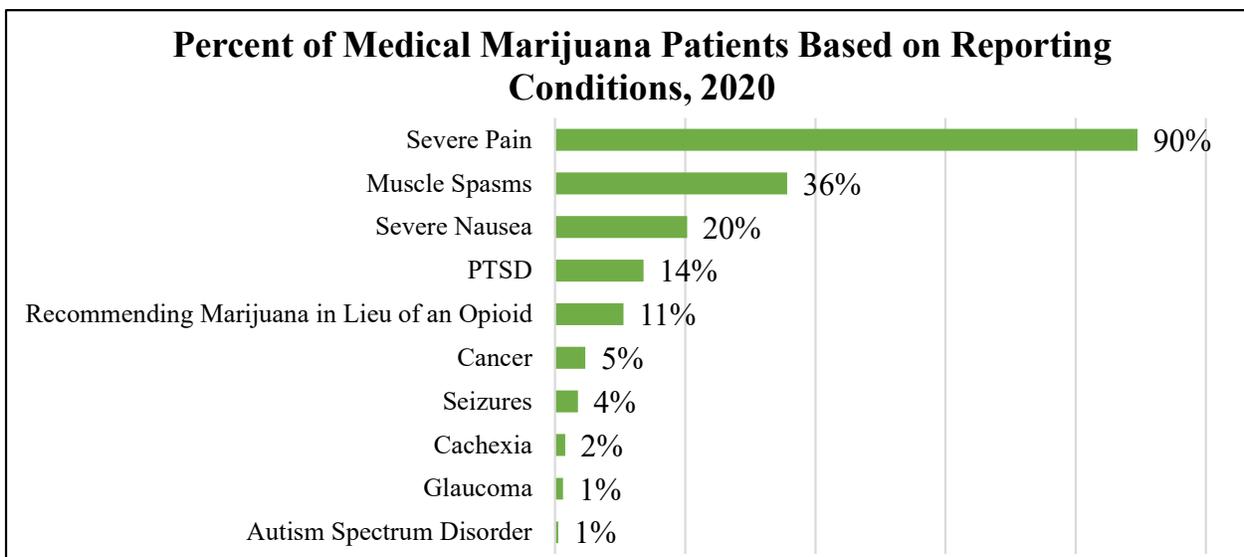
## Medical Marijuana Statistics



SOURCE: Colorado Department of Public Health and Environment (CDPHE)

### Profile of Colorado Medical Marijuana Cardholders:

- Demographics of cardholder:
  - 61% male with an average age of 41 years
  - 39% female with an average age of 44 years
  - 0.32% between the ages of 0 and 17
  - 4.57% between the ages of 18 and 40 and 22.81% between the ages of 21 and 30
- Top five counties in Colorado- 63.1% of total patients:
  - El Paso County- 28.6%
  - Denver County 13.0%
  - Jefferson County- 9.5%
  - Arapahoe County-7.7%
  - Adams County- 6.3%

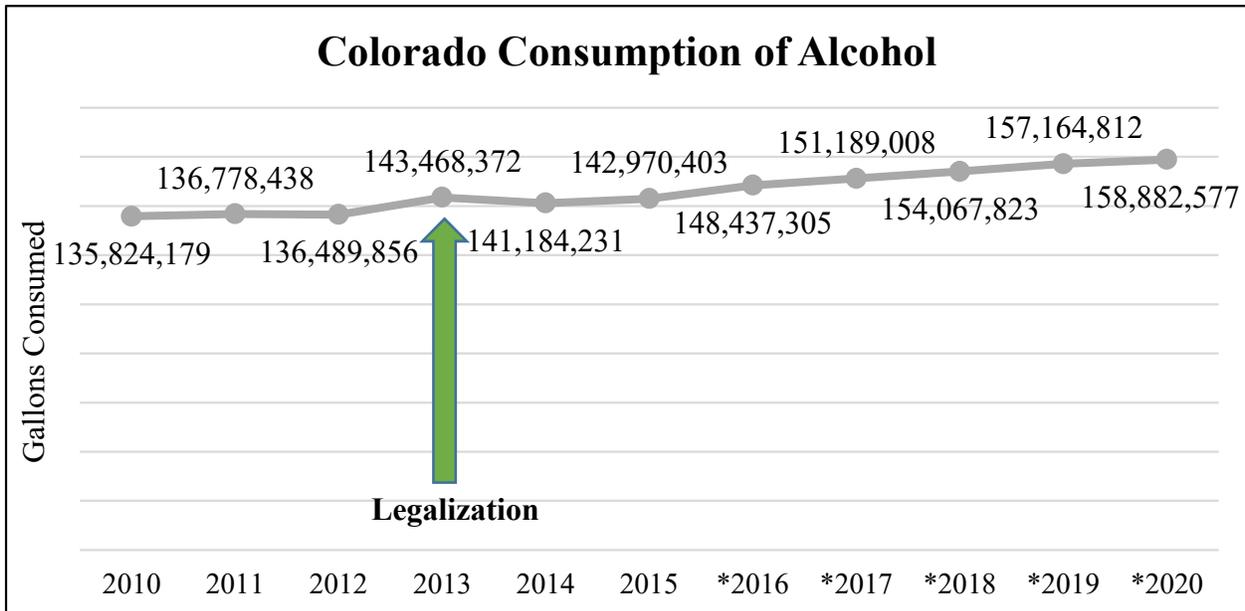


SOURCE: Colorado Department of Public Health and Environment (CDPHE)

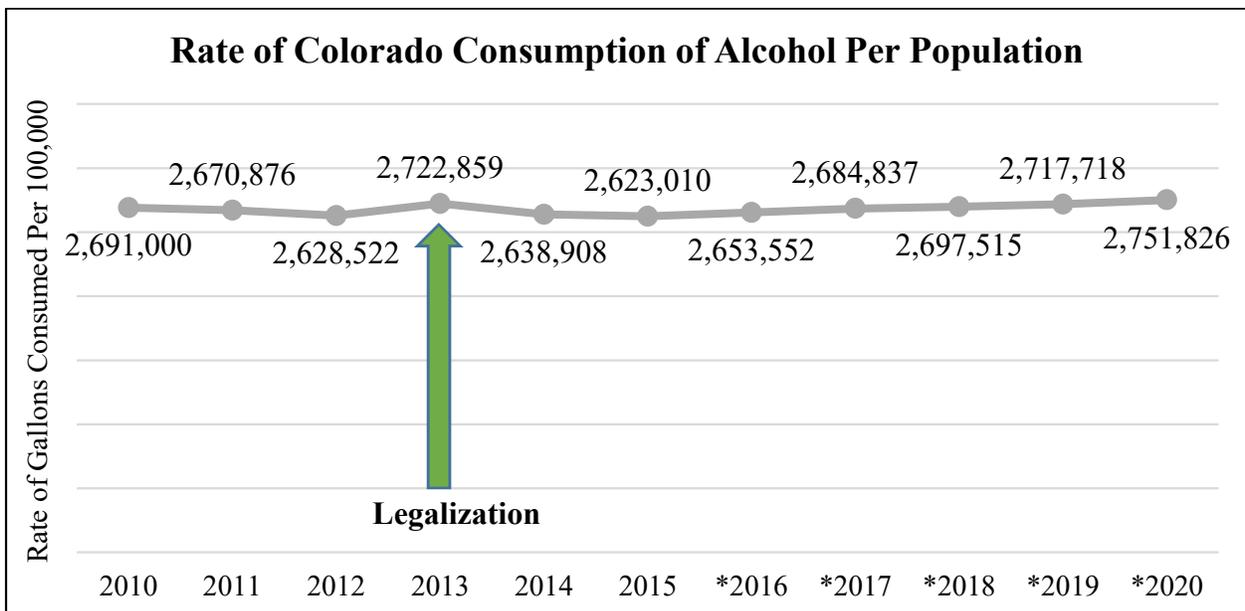
**NOTE:** Percentages do not add to 100% as some patients report more than one debilitating or disabling medical condition.

## Alcohol Consumption

- It has been suggested that legalizing marijuana would reduce alcohol consumption. Thus far that theory is not supported by the data.



SOURCE: Colorado Department of Revenue, Colorado Liquor Excise Tax



SOURCE: Colorado Department of Revenue, Colorado Liquor Excise Tax

**\*NOTE:** Data from 2009 was not available at this time. Calculations of total gallons consumed and the rate of consumption slightly differed from 2010-2015 compared to 2016-2020.

## Societal Impact Information

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### Recreational Marijuana Dispensaries Impact on Property Values in Washington

A study in Washington was completed to assess the impact of marijuana legalization on property values throughout the state. The authors sought to better understand the local level impacts of the expansion of marijuana businesses in neighborhoods throughout Washington. This study utilized data from property sales and retailers statewide to compare the prices in neighborhoods before and after the opening of a recreational marijuana business. One factor that the authors hypothesize may be the source of the decrease in prices is the perception that dispensaries result in more crime in the area. However, existing evidence is unclear of this relationship.

The study resulted in an estimation that while there was not a statistically significant impact on overall crime reports, nuisance crimes around dispensaries increased but drug-related crimes decreased. “Increased nuisance related crime, therefore, may be one contributing factor to depressed home prices in areas near dispensaries” (Thomas and Tian, 2021). When examining the final results, “a marijuana dispensary decreases property values by 3%–4% for homes within 0.36 miles of the retailer, a decline of about \$10,000-\$15,000 based on the average home values in Washington. These results imply a high willingness to pay to avoid the local negative externalities. [...] While we find limited evidence of a general decrease in overall crime and statistically significant evidence of a decrease in drug-related reports, we estimate that nuisance-related crime reports increase by about 4.2 per 10,000 census tract residents. Moreover, we find evidence that violent crime slightly increases in census tracts adjoining those where dispensaries locate. Our findings suggest that crime risk could be a contributing factor to the negative price impacts of dispensaries, but that is likely only a partial explanation” (Thomas and Tian, 2021).

Source: Thomas, D. and Tian, L. (2021). *Hits from the bong: The impact of recreational marijuana dispensaries on property values*. *Regional Science and Urban Economics*, 87, 103655-103675.

### Crime in Colorado and Washington State Post-Legalization

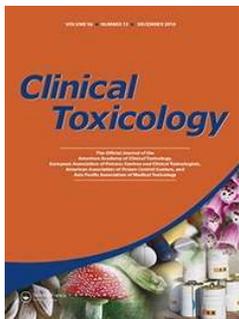
While some believed that crimes, particularly marijuana-related crimes, would decrease after the legalization of recreational marijuana, the preliminary data suggested a significant increase in crime rates. The authors created a study examining the UCR data from 1999 to 2016 in Colorado and Washington at a monthly crime rate compared to control states in which recreational marijuana was not legal. In the results, there was little effect on overall crime rates in Colorado and Washington post-legalization, particularly on violent crimes. However, there was a statistically significant increase in larceny in Colorado immediately after legalization as well as an increase in aggravated assaults, burglary, and overall property crime in Washington. This trend dissipated in recent years and appeared to have been short-lived. Overall, the authors concluded there was “virtually no statistically significant long-term effects of recreational marijuana legalization or retail sales on violent or property crime rates, except for a significant decline of burglary rates in Washington. There were some immediate increases in crime at the point of legalization, but these did not result in long-term effects” (Lu et al, 2021).

Source: Lu, R., Willits, D., Stohr, M., Makin, D., Snyder, J., Lovrich, N., Meize, M., Stanton, D., Wu, G., and Hemmens, C. (2021) *The cannabis effect on crime: time-series analysis of crime in Colorado and Washington state*. *Justice Quarterly*, 38(4), 565-595.

## Impact of Marijuana Legalization on Colorado Clearance Rates

One of the arguments in favor of the legalization of marijuana was police resources would be freed up with less marijuana-related crimes. On the other side of the argument, some believed areas around dispensaries would become a hub for crime, both violent and property, due to the large amount of cash associated with these locations. This study examined violent and property crimes from 2000 to 2017 in Colorado and Washington and compared the crime rates to states where marijuana was not legalized. The results indicated that violent crime clearance rates were not affected by the legalization of marijuana in Colorado. Property crime clearance rates were also not impacted in the long-term in Colorado but instead only for one year after legalization. Similar results were found in Washington when these crimes examined in these two categories compared year-to-year. The authors speculate if the legalization of marijuana has shifted the focus from law enforcement to investigating marijuana-related DUI cases for example rather than clearing crimes.

Source: Jorgensen, C. and Harper, A. (2020). *Examining the effects of legalizing marijuana in Colorado and Washington on clearance rates: a quasi-experimental design*. *Journal of Experimental Criminology*, 1-22.



## Trends in intentional abuse and misuse ingestions in school-aged children and adolescents reported to US poison centers from 2000-2020

Adrienne R. Hughes, Sara Grusing, Amber Lin, Robert G. Hendrickson, David C. Sheridan, Rebecca Marshall & B. Zane Horowitz

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## Trends in intentional abuse and misuse ingestions in school-aged children and adolescents reported to US poison centers from 2000-2020

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### ABSTRACT

**Context:** Childhood and adolescent misuse and abuse exposures remain a serious public health challenge in the United States. This study aimed to describe recent trends and patterns of intentional substance misuse and abuse exposures among school-aged children and adolescents in the United States.

**Methods:** This study was a retrospective cohort study of intentional misuse and abuse exposures in children 6 through 18 years reported to the National Poison Data System (NPDS) from January 1, 2000, through December 31, 2020. Demographic trends, reported clinical effects, treatments, management sites, and health outcomes were assessed overall and within four age categories: 6–9, 10–12, 13–15, and 16–18.

**Results:** Between 2000 and 2020, there were 338,727 cases regarding intentional misuse and abuse exposures for children ages 6 through 18 years old. Overall, misuse/abuse ingestions fluctuated over time, with a peak in 2011. The majority of intentional misuse/abuse ingestions occurred in males (58.3%), and more than 80% of all reported exposure cases occurred in youth aged 13 to 18. 32.6% of ingestions resulted in worse than minor clinical outcomes. Older age groups had a greater number of severe medical outcomes compared to younger age groups. Major or life-threatening exposures (including those resulting in death) were more common in males. Overall, deaths were rare ( $n = 450$ , 0.1%). Male sex, older age, abuse ingestions, exposure site of a public area or other residence, and multiple ingested substances were other factors associated with increased mortality. Marijuana exposure rates had the highest average monthly increase overall, with the most dramatic rise occurring from 2017 to 2020. Edible marijuana preparations accounted for the highest increase in call rates compared with all other forms of marijuana.

**Discussion and Conclusion:** With over 330,000 poison center cases reported during the 20-year study period, intentional substance misuse and abuse exposures substantially impact the pediatric population. The substances most commonly misused/abused are more widely available substances such as over-the-counter medications, household products and pharmaceuticals commonly prescribed to youth. Differences in age and sex were evident, with males and adolescents more likely to abuse and misuse substances. Our study describes an upward trend in marijuana misuse/abuse exposures among youth, especially those involving edible products. These findings highlight an ongoing concern about the impact of rapidly evolving cannabis legalization on this vulnerable population.

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### Introduction

Substance misuse and abuse are significant public health threats. While national survey data helps track substance use trends among young people, it often lags behind current trends and information about impacts on the healthcare system. These surveillance methods are usually limited to adolescents and adults and rarely include school-aged children. Earlier initiation of substance use is an important predictor of developing a substance use disorder later in life. As such, clinicians who care for children and adolescents should be well-informed about emerging and shifting patterns of drug abuse and misuse to offer early identification and intervention for problematic substance use. Additionally, age-specific

substance misuse/abuse trends may provide further insight and direction for future prevention efforts. This study aimed to identify recent outcomes and trends in intentional substance misuse and abuse among school-aged children and adolescents using a national source of poison center case data over 20 years.

### Methods

This is a retrospective cohort study of intentional misuse and abuse exposures in school-aged children and adolescents reported to the National Poison Data System (NPDS) from January 1, 2000, through December 31, 2020. NPDS is maintained by the American Association of Poison Control

Centers (AAPCC). Data are collected at each certified regional U.S. Poison Control Center (PCCs). Currently, 55 PCCs serve the entire U.S. population, territories, and Washington DC. Poison centers receive calls from the public, health professionals, and public health agencies for exposure to various substances through a 24-hour poison helpline. PCCs are staffed 24 h a day by health professionals with specialized training in toxicology. These trained specialists in poison information collect and code case data entered into an electronic health record collection system that is uploaded to NPDS in near real-time.

We received coded, de-identified NPDS data for all intentional abuse and misuse cases in individuals aged 6 through 18 years old. *Intentional misuse* is defined as an exposure resulting from the intentional improper or incorrect use of a substance for reasons other than the pursuit of a psychotropic effect. *Intentional abuse* exposures are from the intentional improper or incorrect use of a substance in which the patient was likely attempting to gain a “high,” euphoric effect or some other psychotropic effect, including recreational use of a substance for any effect. Only coded data were available to the investigators, not free text fields. We excluded cases from unknown geographic regions and those with missing age. The data were a mix of single-substance and polysubstance exposures; however, the number of single substance exposures was explicitly reported.

### Statistical analysis

Data were received from the NPDS in Excel (Microsoft, Redmond, WA) format. Data analysis was largely descriptive and included summary statistics for demographic trends, reported clinical effects, treatments, management sites, and health outcomes. We assessed trends of intentional abuse/misuse exposures overall and within four age categories: 6–9, 10–12, 13–15, and 16–18. The top 10 most ingested substances were determined for each year of the study and plotted over time. Additionally, the substances with the highest average monthly increase in exposure rates were determined overall and for each age group using linear regression. We also analyzed marijuana exposures by type of marijuana preparation for all ages and by age group, sorted by the average monthly increase. Multivariable logistic regression of odds of death after a misuse/abuse ingestion was also performed. To correct for multiple testing, we calculated adjusted *p*-values using the Hochberg and Benjamini adaptive step-up Bonferroni method [1]. To test for multicollinearity, we calculated the variance inflation factor (VIF) for each variable, and to check model fit and specification, we calculated the *c*-statistic (AUROC) and Hosmer–Lemeshow goodness-of-fit statistic.

Clinical outcome was coded using a priori definitions from the NPDS coding manual: no effect, minor effect, moderate effect, major effect, or death [2]. This study was determined exempt by the institutional review board of Oregon Health and Sciences University (OHSU). Data management and analysis was performed in SAS 9.4 (SAS Institute, Cary, NC, USA),

and analysis and creation of figures was performed in R 4.0.3 (R Foundation for Statistical Computing, Vienna, Austria).

## Results

### Patient characteristics

Between 2000 and 2020, US Poison Control Centers (PCCs) consulted on 338,727 cases regarding intentional misuse and abuse exposures for children ages 6 through 18 years old. Characteristics of exposures are described in Table 1. Overall, the frequency of misuse/abuse ingestions fluctuated over time, with a peak in 2011 (Figure 1). The majority of intentional misuse/abuse ingestions occurred in males (58.3%), and more than 80% of all reported exposure cases occurred in youth aged 13 to 18 (Table 1). The greatest proportion of misuse/abuse cases involved exposures in adolescents aged 16–18 (48.5%). Overall, intentional abuse cases were more frequent than misuse (57.4% vs. 42.6%). Misuse ingestions were more common in younger age groups, while abuse ingestions occurred more frequently in older age groups. A single substance was involved in 81.2% (275,144) of misuse/abuse exposures (Table 1).

### Substance trends

Figure 2 illustrates trends in total misuse/abuse cases for the most reported substances per year over the 20-year period. In 2000, the largest number of misuse/abuse cases involved exposure to ethanol (1318, 9.8%). Dextromethorphan was the most reported misused/abused substance from 2001 to 2016. Since 2018, the most reported misused/abused substance involved exposure to marijuana. Dextromethorphan had the highest total number of exposure cases (51,667, 15.25%) over the study period, followed by cases for benzodiazepines (26,037, 7.68%). Intentional misuse/abuse ingestions of diphenhydramine alone have been steadily increasing, with the number of cases reported in NPDS increasing from a low of 193 cases in 2000 to 668 cases in 2020.

Cases regarding abuse or misuse of marijuana have steadily increased over the study period (Figure 2). There were 510 and 1761 marijuana exposure cases in 2000 and 2020, respectively, corresponding with a 245% increase during the 20 years (Figure 2). Marijuana exposure cases remained relatively stable from 2000 to 2009 (mean: 636.7, range: 510–713), then steadily rose beginning around 2011, with an even more dramatic rise in cases from 2017 to 2020. This upward trend contrasts with ethanol exposure cases, which have gradually declined over the study period. There were a total of 1318 ethanol cases in 2000 and 916 in 2020, with an average linear decrease of 28.1 exposures each year (95% CI 21.8 to 34.4,  $p < 0.01$ ) across the study period. Ethanol misuse/abuse cases exceeded the number of marijuana cases every year from 2000 through 2013. In 2014, marijuana misuse/abuse exposure cases surpassed ethanol cases, and since then, marijuana exposure cases have exceeded ethanol cases every year, and by a greater amount each year than the prior.

**Table 1.** Population characteristics, clinical effects, therapies, and outcomes of abuse and misuse ingestions, *n* = 338,727.

	All cases <i>N</i> = 338,727		Ages 6-9 years 28,086 (8.3%)		Ages 10-12 years 29,402 (8.7%)		Ages 13-15 years 117,019 (34.6%)		Ages 16-18 years 164,220 (48.5%)	
<b>Gender</b>										
Female	140,870	41.6%	10,928	38.9%	11,307	38.5%	56,094	47.9%	62,541	38.1%
Male	197,344	58.3%	17,049	60.7%	17,943	61%	60,788	51.9%	101,564	61.8%
Unknown	513	0.2%	109	0.4%	152	0.5%	137	0.1%	115	0.1%
<b>Reason</b>										
Intentional Abuse	194,292	57.4%	1,529	5.4%	7,462	25.4%	73,565	62.9%	111,736	68%
Intentional Misuse	144,435	42.6%	26,557	94.6%	21,940	74.6%	43,454	37.1%	52,484	32%
Single substance ingestion	275,144	81.2%	26,565	94.6%	26,728	90.9%	95,776	81.8%	126,075	76.8%
<b>Exposure site</b>										
Own residence	244,590	72.2%	21,651	77.1%	19,216	65.4%	80,636	68.9%	123,087	75%
School	35,388	10.4%	3,851	13.7%	6,984	23.8%	16,039	13.7%	8,514	5.2%
Other residence	16,725	4.9%	1,528	5.4%	1,422	4.8%	5,968	5.1%	7,807	4.8%
Public area	9,925	2.9%	517	1.8%	600	2%	3,244	2.8%	5,564	3.4%
Other	11,916	3.5%	437	1.6%	702	2.4%	4,275	3.7%	6,502	4%
Unknown	20,183	6%	102	0.4%	478	1.6%	6,857	5.9%	12,746	7.8%
<b>Clinical effects</b>										
Cardiac arrest	272	0.1%	21	0.1%	34	0.1%	81	0.1%	136	0.1%
Hypotension	8,829	2.6%	776	2.8%	774	2.6%	3,022	2.6%	4,257	2.6%
Respiratory arrest	516	0.2%	40	0.1%	37	0.1%	174	0.1%	265	0.2%
Ventricular tachycardia/fibrillation	232	0.1%	17	0.1%	30	0.1%	66	0.1%	119	0.1%
Dysrhythmia not otherwise specified	606	0.2%	44	0.2%	46	0.2%	223	0.2%	293	0.2%
Seizure	6,374	1.9%	523	1.9%	563	1.9%	2,140	1.8%	3,148	1.9%
<b>Therapies</b>										
ECMO	13	0%	0	0%	0	0%	6	0%	7	0%
CPR	550	0.2%	4	0%	14	0%	111	0.1%	421	0.3%
Hemodialysis	114	0%	0	0%	2	0%	23	0%	89	0.1%
Intubation	4,677	1.4%	22	0.1%	100	0.3%	1,374	1.2%	3,181	1.9%
Ventilator	4,114	1.2%	16	0.1%	86	0.3%	1,191	1%	2,821	1.7%
Vasopressors	709	0.2%	4	0%	15	0.1%	165	0.1%	525	0.3%
<b>Highest level of care</b>										
Patient lost to follow-up/left AMA	89,165	26.3%	19,651	70%	15,668	53.3%	25,744	22%	28,102	17.1%
Treated/evaluated and released	168,721	49.8%	6,827	24.3%	10,302	35%	63,090	53.9%	88,502	53.9%
Admitted to critical care unit	30,936	9.1%	472	1.7%	1,026	3.5%	10,098	8.6%	19,340	11.8%
Admitted to noncritical care unit	26,198	7.7%	732	2.6%	1,324	4.5%	9,360	8%	14,782	9%
Admitted to psychiatric care facility	16,973	5%	94	0.3%	628	2.1%	6,487	5.5%	9,764	5.9%
Patient refused referral/did not arrive at HCF	6,734	2%	310	1.1%	454	1.5%	2,240	1.9%	3,730	2.3%
<b>Outcomes</b>										
Moderate	100,333	29.6%	2,078	7.4%	3,997	13.6%	34,550	29.5%	59,708	36.4%
Major	9,555	2.8%	105	0.4%	254	0.9%	2,753	2.4%	6,443	3.9%
Death	450	0.1%	3	0%	14	0%	65	0.1%	368	0.2%

Table 2 lists those substances with the highest average monthly increase in exposure rate overall and for each age group. There were differences in the types of exposures that accounted for the increased case rates across each age group. Marijuana (all preparations) exposure rates had the highest average monthly increase overall, followed by cannabidiol (CBD), diphenhydramine-alone, eCigarettes (nicotine), and benzodiazepines (all  $p < 0.01$ ). Exposures from vitamins, plants, melatonin, and hand-sanitizers increased during the study period in younger age groups. In contrast, marijuana, diphenhydramine-alone, hand sanitizers, CBD, e-cigarettes (nicotine), and benzodiazepine exposures accounted for the highest increase in case rates amongst older age groups.

Table 3 lists the top two marijuana preparations with the highest monthly average increase by age group. Edible marijuana preparations had the highest average monthly increase

in call rates compared with all other forms of marijuana overall and within each age group except the 6 through 9-year-old group. Overall, there was an increase in edible marijuana exposures by 11.7 cases per month from 2000 to 2020 (95% CI 9.7-13.8,  $p < 0.0001$ ). Adolescents (age 13–18 years) had an increase in exposures to concentrated extracts during the study period.

### Clinical effects

Several clinical effects occurred at similar rates across all the age groups, including seizures, hypotension, ventricular tachycardia/fibrillation, and dysrhythmia (Table 1). One-third (32.6%) of ingestions resulted in worse than minor clinical outcomes. Older age groups had a greater number of severe medical outcomes compared to younger age groups. Major or life-threatening exposures (including those resulting in death) were more common in males. Overall, deaths were rare ( $n = 450$ , 0.1%). Most deaths occurred in those 16 through 18 years old ( $n = 368$ , 81.7%), with only three deaths in children aged 6 through 9 years (Table 1). Table 4 lists those factors associated with the highest increase in odds of death. After controlling for patient demographics and substances ingested, we found that opioid exposures were associated with the highest increase in odds of death (15.6, 95% CI: 12.6–19.3,  $p < 0.01$ ). Opioids were associated with 286 instances of death (Table 5). No documentation of laboratory verification were available in these facilities, but fatality cases undergo a second level of review during the NPDS process to determine the contribution of the substance with the death and to maximize coding accuracy. Male sex, older age, abuse ingestions, exposure site of public area or other residence, and multiple ingested substances were other factors

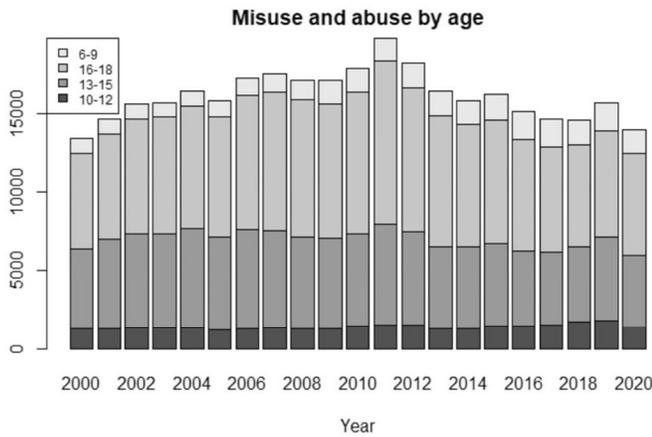


Figure 1. Misuse/abuse ingestions by age and sex over time, 2000-2020.

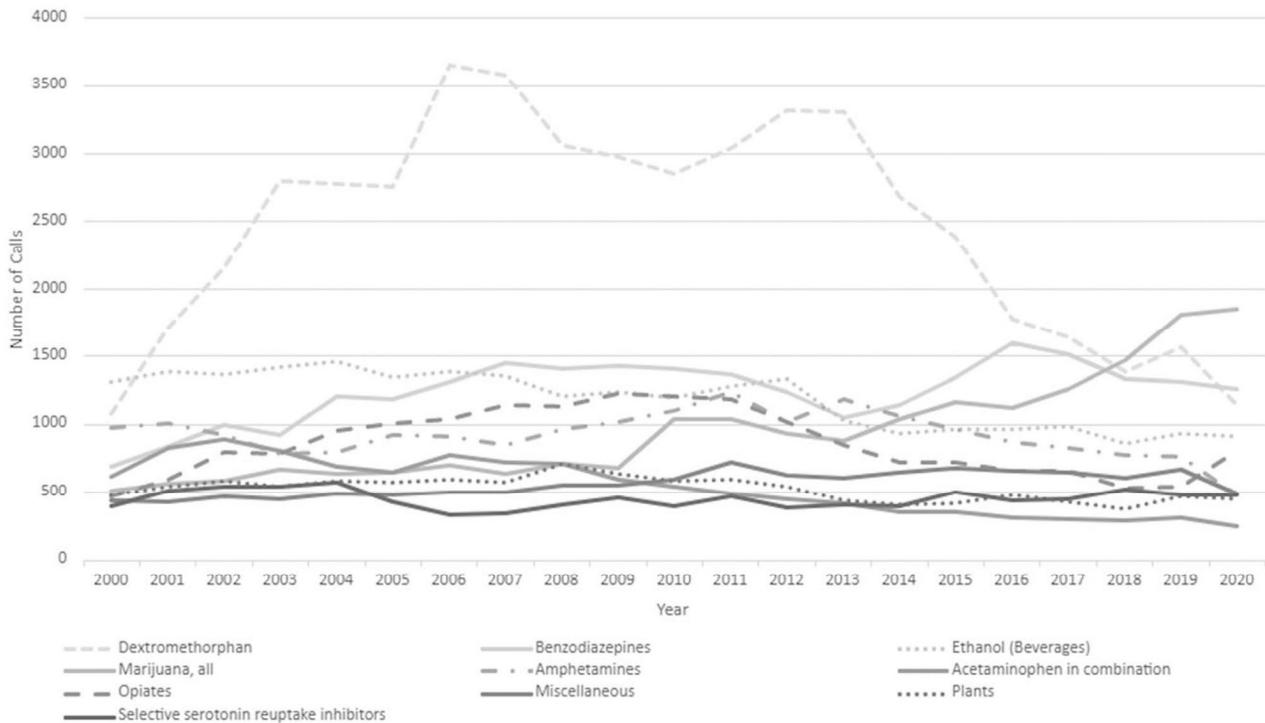


Figure 2. Top 10 substances ingested in misuse/abuse ingestions 2000-2020, by year.

**Table 2.** Substances with highest monthly average increase, 2000-2020 across  $n = 338,727$  cases.

Grouped generic code name	N Months with Substance Present	Average monthly increase in cases (95% CI)	p-value
<b>All ages</b>			
Marijuana	252	4.8(4.4–5.2)	<0.01
Cannabidiol (CBD)	21	4(1.5–6.6)	0.99
Diphenhydramine alone	252	2.3(2.1–2.4)	<0.01
eCigarettes	90	2(1.3–2.7)	<0.01
Benzodiazepines	252	1.9(1.4–2.3)	<0.01
<b>Ages 6-9</b>			
Vitamins	250	0.6(0.5–0.7)	<0.01
Plants	247	0.4(0.2–0.5)	<0.01
Melatonin	129	0.3(0.3–0.4)	<0.01
Hand Sanitizers	110	0.3(0.1–0.5)	0.23
Objects (Pencils, Coins, Glass, Incense, Fireworks, Golf Balls, Ashes, Feces)	245	0.3(0.2–0.3)	<0.01
<b>Ages 10-12</b>			
Hand Sanitizers	106	0.7(0.4–0.9)	<0.01
Other Adverse Reactions to Food	30	0.4(-0.1–1)	0.99
Vitamins	237	0.3(0.2–0.4)	<0.01
Melatonin	115	0.2(0.1–0.2)	<0.01
Marijuana	177	0.2(0.1–0.2)	<0.01
<b>Ages 13-15</b>			
Marijuana	252	1.7(1.5–1.9)	<0.01
Cannabidiol (CBD)	16	1.2(-0.7–3.1)	0.99
Diphenhydramine alone	252	0.9(0.8–1)	<0.01
Hand Sanitizers	114	0.4(0.3–0.6)	<0.01
Benzodiazepines	252	0.4(0.2–0.6)	<0.010.06
<b>Ages 16-18</b>			
Marijuana, Synthetic Phenethylamines, Analogs, and Precursors	252	2.9(2.7–3.1)	<0.01
	21	1.9(-1.2–5.1)	0.99
Benzodiazepines	252	1.6(1.3–1.8)	<0.01
Cannabidiol (CBD)	15	1.4(-0.4–3.3)	0.99
eCigarettes	85	1.4(0.8–1.9)	<0.01

**Table 3.** Top 2 marijuana preparations with highest monthly average increase by age group, 2000-2020 across  $n = 338,727$  cases.

Grouped generic code name	N Months with Substance Present	Average monthly increase in cases (95% CI)	p-value
<b>Ages 6-9</b>			
Not applicable, no increase			
<b>Ages 10-12</b>			
Marijuana: Edible Preparation	28	0.6(0.2–1)	0.01
Marijuana: Dried Plant	171	0.1(0–0.1)	<0.01
<b>Ages 13-15</b>			
Marijuana: Edible Preparation	44	5.1(3.9–6.4)	<0.01
Marijuana: Concentrated Extract (Including Oils and Tinctures)	42	1.1(-0.1–2.4)	0.18
<b>Ages 16-18</b>			
Marijuana: Edible Preparation	47	5.6(4.5–6.8)	<0.01
Marijuana: Concentrated Extract (Including Oils and Tinctures)	48	1.9(0.9–3)	<0.01

associated with increased mortality (Table 4). In the final regression model, there was no evidence of multicollinearity (all VIF < 1.5), and diagnostics indicated good model fit (Hosmer-Lemeshow  $p = 0.736$ ;  $c$ -statistic = 0.894).

Of the 331,993 cases managed in a health care facility (HCF), 168,721 (50.82%) were treated and released, 30,936 (9.31%) were admitted to a critical care unit, 26,198 (7.89%) were admitted to a non-critical care unit, and 16,973 (5.11%) were admitted directly to a psychiatric facility (Table 1). The percentage of patients treated in a HCF varied considerably with age. Only 8.36% of children 6-9 years and 8.71% of children between 10 and 12 years were managed in a HCF compared to 34.57% of younger teenagers (13–15 years) and 48.34% of older teens (age 16–18 years).

## Discussion

The current study examined trends in US intentional abuse and misuse exposures in school-aged children and

adolescents from 2000 to 2020. With over 330,000 poison center cases reported during the 20-year study period, intentional substance misuse and abuse exposures substantially impact the pediatric population. The most commonly misused/abused substances are more widely available substances, such as over-the-counter medications, household products and pharmaceuticals commonly prescribed to youth. Consistent with other studies, our current data indicate higher abuse/misuse among males and older adolescents [3–5].

Developmental and societal factors contributing to pediatric poisoning vary widely from childhood to adolescence, as do the substances involved in these exposures. Effective prevention and treatment efforts require a thorough understanding of the specific vulnerabilities of different pediatric age groups. In the current study, intentional misuse and abuse exposures were significantly less common in children than adolescents, with the majority due to misuse rather

than abuse, especially in children aged 6 to 9 years; this is consistent with prior studies [6]. While both misuse and abuse ingestions increased with age, intentional abuse was

significantly more common among adolescents than in children aged 6 to 12 years.

Consistent with prior literature, the current data indicate high sustained OTC medication misuse and abuse rates among older children and teens. OTC antihistamines were among the most commonly misused/abused substances in this study. Many OTC medications have a high potential for abuse and misuse since they are legal and easily obtainable without a prescription. Children and teens may perceive OTC drugs as relatively safe; however, a growing body of evidence demonstrates increasing rates of abuse and overdose of OTC medications in the United States [3, 7–10].

While dextromethorphan (DXM) was the most reported substance over the study period, with high average monthly increase in misuse/abuse exposures, DXM misuse/abuse rates peaked in 2006 and have decreased since that time (Figure 2). This observed decline in DXM abuse corresponds to increasing public health efforts and initiatives to reduce and prevent OTC medication abuse. In 2012, California became the first state to prohibit sales of DXM-containing products to minors. Since then, 21 states have adopted similar laws to combat teen abuse of OTC medications containing dextromethorphan.

Our study describes an upward trend in cannabis misuse/abuse exposures. These findings may reflect the impact of rapidly evolving cannabis legalization on this vulnerable population. While legalization of cannabis is primarily restricted to adult populations, it has rendered the drug more accessible to children and adolescents. In Canada, where national legalization occurred, and edibles became available in 2021, the proportion of cannabis-related

**Table 4.** Multivariable logistic regression of odds of death after a misuse/abuse ingestion.

	Odds of death (95% CI)	p-value
<b>Gender</b>		<b>&lt;0.01</b>
Female	Referent	
Male	<b>1.4(1.1–1.7)</b>	
Unknown	5.2(0.7–38.4)	
<b>Age</b>		<b>&lt;0.01</b>
6-9	0.3(0.1–1)	
10-12	0.7(0.4–1.2)	
13-15	<b>0.4(0.3–0.5)</b>	
16-18	referent	
<b>Year</b>	<b>1.0(1.0–1.1)</b>	<b>&lt;0.01</b>
<b>Exposure site</b>		<b>&lt;0.01</b>
Own residence	referent	
School	<b>0.1(0.0–0.3)</b>	
Public area	<b>1.8(1.2–2.7)</b>	
Other residence	<b>2.4(1.8–3.3)</b>	
Other/Unknown	<b>1.5(1.2–2)</b>	
<b>Reason for ingestion</b>		<b>&lt;0.01</b>
Misuse	referent	
Abuse	<b>5.9(3.9–8.9)</b>	
<b>Multiple substances</b>	<b>1.6(1.3–2)</b>	<b>&lt;0.01</b>
<b>Substances</b>		
Acetaminophen	<b>0.2(0.1–0.3)</b>	<b>&lt;0.01</b>
Benzodiazepines	<b>0.7(0.5–0.9)</b>	<b>0.01</b>
Dextromethorphan	<b>0.1(0.1–0.3)</b>	<b>&lt;0.01</b>
Diphenhydramine	0.6(0.2–1.3)	0.16
Ethanol beverages	0.8(0.6–1)	0.10
Methamphetamine	<b>2.5(1.9–3.2)</b>	<b>&lt;0.01</b>
Opioids	<b>15.6(12.6–19.3)</b>	<b>&lt;0.01</b>

Results in bold, italics are statistically significant,  $p < 0.05$ .

**Table 5.** Substances coded as fatalities.<sup>a</sup>

Substance Coded in Death Cases	N deaths	N ingestions of this substance	% of all ingestions that resulted in death
OPIOIDS	286		
Opiate NOT in OTC combination	117	4,332	2.7%
Opiate in OTC combinations	89	13,782	0.6%
Heroin	39	1,917	2.0%
Non-Prescription Fentanyl	34	94	36.2%
Tramadol	5	2,372	0.2%
Synthetic Opioids (Excluding Pharmaceutical Preps)	2	12	16.7%
Benzodiazepines	69	26,037	0.3%
STIMULANTS	141		
Amphetamines and Related Compounds	23	10,277	0.2%
Methamphetamines	22	2,526	0.9%
Hallucinogenic Amphetamines	50	6,682	0.7%
Cocaine	46	4,023	1.1%
Synthetic Phenethylamines, Analogs, and Precursors	2	345	0.6%
Ketamine and Analogs	2	423	0.5%
MARIJUANA	66		
Marijuana: Dried Plant	45	17,302	0.3%
Synthetic Cannabinoids, Analogs and Precursors	12	8,246	0.1%
Marijuana: Other or Unknown Preparation	7	488	1.4%
Marijuana: Concentrated Extract	2	664	0.3%
Ethanol (Beverages)	54	24,922	0.2%
ANTIDEPRESSANTS	19		
Selective serotonin reuptake inhibitors (SSRIs)	9	9,092	0.1%
Other Types of Antidepressant	4	2,012	0.2%
Tricyclic Antidepressant (TCA)	2	613	0.3%
Bupropion	2	710	0.3%
Monoamine Oxidase Inhibitor (MAOI)	1	7	14.3%
Serotonin Antagonist and Reuptake Inhibitor (SARI)	1	2,364	0.0%
Lysergic acid diethylamide (LSD)	9	4,198	0.2%
Other Hallucinogens	5	328	1.5%
Diphenhydramine alone	6	9,457	0.1%

<sup>a</sup>There were other substances coded as occurring in one instance only that are not included.

Emergency Department (ED) visits with hospitalization for children aged 0 to 9 years old increased significantly after the introduction of edibles [11]. This increase occurred despite a decrease in total poisoning-related pediatric ED visits. As the legal landscape around cannabis continues to evolve rapidly, so do the social norms around its use, with an overall steady decline in perceived risk associated with cannabis since 2009 [12,13]. Increased availability and peer norms changes are likely strong drivers of increasing cannabis use.

Along with increasing cannabis legalization, we are also seeing the emergence of alternative modes of consumption, especially non-combustible products such as edibles and vaping devices. A significant proportion of youth use alternative methods to consume cannabis [14,15]. In the current study, edible marijuana products had the highest average monthly increase in case rates across all ages compared with any other form of marijuana. This was also true within each age group, except for children 6 through 9. Marijuana concentrates/extracts (e.g. cannabis vaping liquid) were also used at significantly increasing rates by adolescents (aged 13–18 years). These edible products and vaping products are often marketed in ways that are attractive to youth, can be used with more discretion, and are more convenient. A focus group study with teenagers found that edibles were attractive to those concerned about smoking or the smell associated with smoking marijuana [16].

While several studies show that edible cannabis products are increasingly perceived as less harmful by adolescents, concerns exist about their potency and delayed effects [17–19]. Compared to smoking cannabis, which typically results in an immediate and titratable high, intoxication from edibles usually takes several hours, which may lead some individuals to consume greater amounts and cause delayed effects with unexpected and unpredictable highs. A study of marijuana-related Emergency Department (ED) visits in Colorado between 2012 and 2016 found that edible cannabis consumption led to more acute psychiatric symptoms and cardiovascular events than inhaled cannabis and that ED visits due to edibles were 33 times higher than expected, when controlled for product sales in the state [20]. Furthermore, the duration of time since cannabis legalization is associated with earlier age of onset of edible use in adolescents [15].

Marijuana and alcohol are the two most abused substances reported by adolescents [21]. Prior to 2007, Monitoring the Future (MTF) data suggests that alcohol and marijuana use generally fluctuated in parallel; when substance use increased for one, so did the other. Since 2007, trends in reported use of these two substances have changed. While alcohol use declined markedly between 2007 and 2020, marijuana use remained steady or increased for 8th, 10th, and 12th graders [21]. These findings align with the current study, which indicates a gradual decline in poison center cases for alcohol misuse/abuse over the study period with a concomitant rise in marijuana cases. While increased marijuana use may in part account for a reduction in alcohol use, it is unclear if and to what extent the reported change in marijuana leads to a change in alcohol use. These observed trends in poison-center cases mirror MTF surveillance data that indicate an ongoing decline in admitted adolescent binge drinking since the recent

peaks reached in the 1990s with a concomitant ongoing rise in admitted marijuana use [21].

## Limitations

The National Poison Data System is dependent on voluntary reporting and the data likely underrepresents the actual number of suspected intentional misuse and abuse exposures. The AAPCC maintains the NPDS, which houses only de-identified case records of self-reported cases managed by US poison centers. NPDS data do not reflect the entire universe of exposures to a particular substance nor the opinions of the AAPCC. NPDS data should not be construed to represent the complete incidence of exposures to any substance(s). Exposure does not necessarily represent poisoning or overdose. Not all substances coded are verified by a toxicology laboratory. The accuracy and completeness of the data relies on correct coding within the NPDS database by poison center specialists. Neither AAPCC nor the individual regional poison center can completely verify the accuracy of every report. Our analysis was limited to exposure cases classified as abuse or misuse. It is possible that additional misuse or abuse cases were classified otherwise and thus were missed. Despite these limitations, NPDS data can be a valuable tool for evaluating the epidemiology of substance misuse/abuse at the national level.

## Conclusion

U.S. Poison Centers reported greater than 330,000 misuse and abuse exposure cases and 450 deaths over 20 years for school-aged children and adolescents, demonstrating a substantial ongoing health impact on this vulnerable population. The substances most commonly misused/abused reflect widely available substances such as over-the-counter medications, household products and pharmaceuticals commonly prescribed to youth. Differences in age and sex were evident, with males and adolescents more likely to abuse and misuse substances. Although alcohol exposure cases have been slowly decreasing, marijuana exposure cases, especially those involving non-combustible products such as edibles and vaping products, are increasing. This trend has been most apparent in recent years in the wake of legalization and decriminalization in US cannabis laws and future research is needed to better understand how legal cannabis laws may be contributing to these trends.

## Disclosure statement

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Robert G. Hendrickson  <http://orcid.org/0000-0002-5998-3908>

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**To:** Planning Commission

**From:** Brian Shorkey, AICP, Senior Planner

**Date:** January 5, 2023

**Re:** Rezoning #23010 (MW6, LLC), rezone one parcel on Lake Court from RB (One-Family High Density) and C-1 (Neighborhood Service) to RCC (Multiple Family High Density Residential), subject to a conditional rezoning agreement.

MW6, LLC (Applicant) has requested the rezoning of an approximate 0.7-acre parcel (Subject Property) located on Lake Court, west of Marsh Road, from RB (One-Family High Density Residential) and C-1 (Commercial) to RCC (Multiple Family Residential - maximum 34 dwelling units per acre). The parcel proposed for rezoning, Parcel #10-207-032, was created from eleven lots that were combined in 2022. The lot combination was approved on September 21, 2022.

The Applicant is proposing to construct six duplexes, for a total of 12 units, on the Subject Property. The current RB and C-1 zoning designations do not allow duplexes. The Applicant is offering the condition that if the rezoning were approved, no more than six duplexes, for a total of 12 units, shall be constructed on the Subject Property.

### Future Land Use

The Future Land Use Map from the 2017 Master Plan designates the Subject Property in the R3 - 1.25-3.5 DU/A Future Land Use category. The intent of the R3 designation is to encourage residential infill near activity centers to promote density and walkability.

The land to the west is also designated as R3, as is a parcel to the north. Most of this property consists of single-family residential development. Property to the east and northeast of the Subject Property is designated as Commercial and consists of the now-closed Cheesy D's directly to the east and The Watershed to the northeast. The property to the south is designated as MR - 5-14 DU/A. The property directly to the south is Marsh Pointe Apartments while property to the southwest is owned



by Meridian Charter Township

Table 1 in the 2017 Master lists the future land use categories and the zoning districts that correlate. The future land use category for the subject property is R3, which correlates with the RA, RB, and RX zoning districts.

**Table 1. Future Land Use and Zoning Map Correlation**

Future Land Use Designation	Zoning Districts
R1 Residential	RR, RRR, AG, CV
R2 Residential	RRA, RAAA, RAA, RA
R3 Residential	RA, RB, RX
MR Residential	RX, RD, RDD, RC, RCC, RN, PRD, MP, PUD
Business/Technology	PO, RP, I
Commercial	C-1, C-2, C-3, PO, CR
Mixed Use Planned Unit Development	C-PUD, MUPUD
Mixed Use Core	C-PUD, PUD, MUPUD
Institutional	All Districts
Parks and Open Space	All Districts

The requested RCC zoning district allows development with more density than the RA, RB, and RX zoning designations. However, the Applicant has offered the condition that no more than 12 units will be constructed in this project. Because of the condition, the higher density of the RCC district is somewhat mitigated and more closely aligns to the R3 Future Land Use designation.

**Zoning**

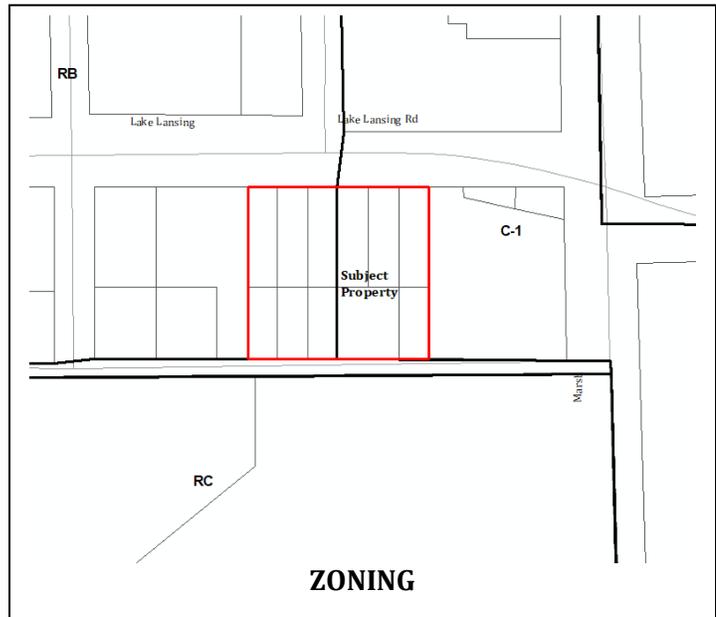
The requested RCC zoning district requires a minimum of 100 feet of lot width. There is no minimum lot area listed in the Schedule of Regulations. Duplexes are allowed as a use by right in the RCC district provided that no more than two unrelated persons occupy a dwelling unit.

**Physical Features**

All five of the homes on the Subject Property were demolished in 2022. Therefore, the Subject Property is vacant.

**Wetlands and Greenspace Plan**

The Township Wetland Map depicts no wetlands on the Subject Property. In addition, the Subject Property contains no floodplains. The Township Pathway Plan shows a pathway on the Lake Lansing Road side of the Subject Property, which is in place. The Township Greenspace Plan does not show any preservation corridors.



**Streets & Traffic**

The Subject Property fronts on both Lake Lansing Road and Lake Drive. The proposed project is expected to access both, with three duplexes fronting on each road. Final access to Lake Lansing Road and Lake Drive will be reviewed by the Ingham County Road Department at the time of a development

submittal. The trip generation memo from RS Engineering, LLC, dated December 16, 2022, confirms that a full traffic study is not required for this rezoning.

### **Utilities**

Municipal water and sanitary sewer serve the subject site. The location and capacity of utilities for any proposed development will be reviewed in detail by the Department of Public Works and Engineering at the time of a development submittal.

### **Staff Analysis**

When evaluating a rezoning request, the Planning Commission should consider all uses permitted by right and by special use permit in the current and proposed zoning districts, as well as the reasons for rezoning listed on page two of the rezoning application (attached).

The purpose of the RCC zoning district (Section 86-376) is to accommodate multiple-family residential uses at a higher density than any single-family district. The district is meant to, “accommodate multiple-family developments of sustained desirability and stability that will be harmonious to adjacent properties.” Because the applicant is offering the condition to limit the development to six duplex units, the final density of the development would be similar to the prior density of the property, since five single-family homes were demolished.

As noted above, the Future Land Use Map designation for the Subject property is R3 – 1.25-3.5 DU/A category. The intent of the R3 future land use designation is to, “encourage residential infill near activity centers to promote density and walkability.” The project that is being proposed is an infill project, as six of the former parcels were vacant.

The requested RCC zoning is slightly denser than the R3 future land use designation calls for. However, this is mitigated for by the applicant’s condition to limit development to six duplexes. The final density of the proposed project is somewhat denser than surrounding neighborhoods to the west and northwest. However, since the proposed project is on the edge of the single-family development, the project would act as a transition from commercial land uses to the east and northeast.

If the rezoning application is approved, the Applicant will followup with a development application and a Site Plan review. Specific site issues will be worked out at that time.

### **Planning Commission Options**

The Planning Commission may recommend approval or denial of the request, or it may recommend a different zoning designation than proposed by the applicant to the Township Board. A resolution will be provided at a future meeting.

### **Attachments**

1. Application material, dated November 21, 2022 and received by the Township on November 22, 2022.
2. Rezoning criteria.
3. Letter from RS Engineering, LLC, dated December 16, 2022 and received by the Township on December 20, 2022.



CHARTER TOWNSHIP OF MERIDIAN  
DEPARTMENT OF COMMUNITY PLANNING AND DEVELOPMENT  
5151 MARSH ROAD, OKEMOS, MI 48864  
PHONE: (517) 853-4560, FAX: (517) 853-4095

REZONING APPLICATION

Part I, II and III of this application must be completed. Failure to complete any portion of this form may result in the denial of your request.

(MWB LLC) Dominic Lee - 517-648-6544

Part I

A. Owner/Applicant Michael Williams  
Address of applicant 2419 Science PKWY, OKEMOS  
Telephone: Work 517-331-3203 Home \_\_\_\_\_  
Fax \_\_\_\_\_ Email MDWCBZ018@GMAIL.COM

If there are multiple owners, list names and addresses of each and indicate ownership interest. Attach additional sheets if necessary. If the applicant is not the current owner of the subject property, the applicant must provide a copy of a purchase agreement or instrument indicating the owner is aware of and in agreement with the requested action.

B. Applicant's Representative, Architect, Engineer or Planner responsible for request:  
Name / Contact Person Jesse Lewter (Wolverine engineering)  
Address ~~312 North St. Mason, MI 48854~~ 312 North St. Mason, MI 48854  
Telephone: Work 517-676-9200 Home \_\_\_\_\_  
Fax \_\_\_\_\_ Email JesseL@Wolveng.com

C. Site address/location 1642 Lake Court  
Legal description (Attach additional sheets if necessary) \_\_\_\_\_  
Parcel number 33-02-02-10-207-032 Site acreage .702

D. Current zoning RB Requested zoning ~~RB~~ ~~RC~~ RCC (only 12 units needed)

E. The following support materials must be submitted with the application:

1. Nonrefundable fee.
2. Evidence of fee or other ownership of the subject property.
3. A rezoning traffic study prepared by a qualified traffic engineer based on the most current edition of the handbook entitled *Evaluating Traffic Impact Studies: A Recommended Practice for Michigan Communities*, published by the State Department of Transportation, is required for the following requests:
  - a. Rezoning when the proposed district would permit uses that could generate more than 100 additional directional trips during the peak hour than the principal uses permitted under the current zoning.
  - b. Rezoning having direct access to a principal or minor arterial street, unless the uses in the proposed zoning district would generate fewer peak hour trips than uses in the existing zoning district.  
(Information pertaining to the contents of the rezoning traffic study will be available in the Department of Community Planning and Development.)
4. Other information deemed necessary to evaluate the application as specified by the Director of Community Planning and Development.

I (we) hereby grant permission for members of the Charter Township of Meridian's Boards and/or Commissions, Township staff member(s) and the Township's representatives or experts the right to enter onto the above described property (or as described in the attached information) in my (our) absence for the purpose of gathering information including but not limited to the taking and the use of photographs.

Yes     No    (Please check one)

By the signature(s) attached hereto, I (we) certify that the information provided within this application and accompanying documentation is, to the best of my (our) knowledge, true and accurate

  
Signature of Applicant

11-21-2022  
Date

MICHAEL WILLIAMS  
Type/Print Name

Fee: \$700

Received by/Date: 11/22/2022

## 1642 Lake Court Rezoning Application

Address: 1642 Lake Court, Haslett, MI 48840

Parcel Number: 33-02-02-10-207-032

Legal Description: LOTS 180 THROUGH 185 & 193 THROUGH 198 OAK GROVE PARK SPLIT/COMBINED ON 09/21/2022 FROM 33-02-02-10-207-005, 33-02-02-10-207-006, 33-02-02-10-207-007, 33-02-02-10-207-008, 33-02-02-10-207-009, 33-02-02-10-207-010, 33-02-02-10-207-015, 33-02-02-10-207-016, 33-02-02-10-207-017, 33-02-02-10-207-018, 33-02-02-10-207-019;

Reason for requested rezone: We are requesting rezoning because the current zoning does not support the redevelopment we are wanting to do at the above listed property.

**Part II**

**REASONS FOR REZONING REQUEST**

**Respond only to the items which you intend to support with proof. Explain your position on the lines below, and attach supporting information to this form.**

A. Reasons why the present zoning is unreasonable:

- 1) There is an error in the boundaries of the Zoning Map, specifically: \_\_\_\_\_  
\_\_\_\_\_
- 2) The conditions of the surrounding area have changed in the following respects: \_\_\_\_\_  
\_\_\_\_\_
- 3) The current zoning is inconsistent with the Township's Master Plan, explain: \_\_\_\_\_  
\_\_\_\_\_
- 4) The Township did not follow the procedures that are required by Michigan laws, when adopting the Zoning Ordinance, specifically: \_\_\_\_\_  
\_\_\_\_\_
- 5) The Township did not have a reasonable basis to support the current zoning classification at the time it was adopted; and the zoning has exempted the following legitimate uses from the area: \_\_\_\_\_  
\_\_\_\_\_
- 6) The current zoning restrictions on the use of the property do not further the health safety or general welfare of the public, explain: \_\_\_\_\_  
\_\_\_\_\_

B. Reasons why the requested zoning is appropriate:

- 1) Requested rezoning is consistent with the Township's Master Plan, explain: \_\_\_\_\_  
\_\_\_\_\_
- 2) Requested rezoning is compatible with other existing and proposed uses surrounding the site, specifically: \_\_\_\_\_  
\_\_\_\_\_
- 3) Requested rezoning would not result in significant adverse impacts on the natural environment, explain: \_\_\_\_\_  
\_\_\_\_\_
- 4) Requested rezoning would not result in significant adverse impacts on traffic circulation, water and sewer systems, education, recreation or other public services, explain: \_\_\_\_\_  
\_\_\_\_\_
- 5) Requested rezoning addresses a proven community need, specifically: \_\_\_\_\_  
\_\_\_\_\_
- 6) Requested rezoning results in logical and orderly development in the Township, explain: \_\_\_\_\_  
\_\_\_\_\_
- 7) Requested rezoning will result in better use of Township land, resources and properties and therefore more efficient expenditure of Township funds for public improvements and services, explain: \_\_\_\_\_  
\_\_\_\_\_

**DATE:** December 16, 2022

**TO:** Jesse A. Lewter  
Wolverine Engineers & Surveyors

**FROM:** Leigh Burgess, PE, PTOE  
RS Engineering, LLC

**SUBJECT:** Trip Generation for Proposed Duplex Construction in Haslett, MI

As part of an agreement with Wolverine Engineers & Surveyors, RS Engineering LLC (RSE) completed a trip generation analysis to determine if the volume for the proposed duplex construction on Lake Lansing Road would meet the requirements for a Traffic Impact Assessment (TIA) or Traffic Impact Studies (TIS) according to MDOT guidelines and standards. The proposed six duplex development is located at 1647 Lake Lansing Road in Haslett, MI. It will replace five existing single-family houses. The development will include two driveways on Lake Lansing Road and three driveways on Lake Ct. The proposed site location and expansion is shown on **Exhibit 1**.

**EXHIBIT 1: SITE LOCATION MAP**



Map Data © 2022 Google Maps

The *ITE Trip Generation Manual, 11th Edition* (Institute of Transportation Engineers, 2021) provides equations and rates to calculate the estimated traffic from over 170 different land uses. The proposed site plan is to demolish five existing houses and construct six duplexes. The following ITE Trip Generation Land Use was identified in the site development plan and used in the analysis:

- Land Use 215 – Single Family Attached Housing

Trips generated by the duplex development are captured using Land Use 215, Single Family Attached Housing. This land use most closely captures the type of development. ITE describes Single Family Attached Housing as any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space. This land use includes duplexes and townhouses/rowhouses. The ITE Trip Generation Manual provides estimated trip generation for AM and PM peak hours during weekdays, Saturdays, and Sundays. Both equations and rates are provided in the manual. Although the equations have high  $R^2$  values, rates were used in this analysis because the rates provide higher trip generation numbers for the development. This analysis includes both the AM and PM peak hour rates for the adjacent street. The AM peak hour trip generation is shown below in Table 1.

**Table 1: Future AM Trip Generation**

Lake Lansing Rd Duplex Park Trip Generation (Trip Generation Manual 11th Edition)								
Land Use Code	Land Use	Units	AM Peak Hour of Adjacent Street Traffic					
			# of Dwelling Units	Page #	Equation/Rate	Enter	Exit	Total
215	Single Family Attached Housing	Dwelling Units	12	240	0.48	1	5	6
<b>Total</b>						<b>1</b>	<b>5</b>	<b>6</b>

The PM peak hour trip generation is shown below in Table 2. The PM peak hour is the highest trip generation for the development.

**Table 2: Future PM Trip Generation**

Lake Lansing Rd Duplex Park Trip Generation (Trip Generation Manual 11th Edition)								
Land Use Code	Land Use	Units	PM Peak Hour of Adjacent Street traffic					
			# of Dwelling Units	Page #	Equation/Rate	Enter	Exit	Total
215	Single Family Attached Housing	Dwelling Units	12	240	0.57	4	3	7
<b>Total</b>						<b>4</b>	<b>3</b>	<b>7</b>

Based on the traffic data and the results of the trip generation analysis presented herein, RSE has determined that the proposed duplex development is expected to generate less than the required number of trips to warrant a Traffic Impact Assessment or Traffic Impact Study. Per *MDOT Geometric Design Guidance section 1.2.4 and 1.2.5*, for a development to meet the requirements for a TIA, the new trips generated must exceed 50 directional trips, and for a TIS, the requirement is over 100 directional trips. Based on estimated trip generation for the Lake Lansing Road duplex development being well below the 50 directional trips, a TIA or TIS is not warranted.



**To: Members of the Planning Commission**

**From: Timothy R. Schmitt, AICP  
Community Planning and Development Director**

**Date: January 5, 2023**

**Re: 2022-19 – Recreational Marijuana Ordinance**

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After the Planning Commission’s discussions on October 10<sup>th</sup> and October 24<sup>th</sup>, and the public hearing that was held on December 12, 2022, Staff is presenting the attached ordinance for final discussion and potential recommendation to the Township Board. To reiterate, the ordinance proposes to take the existing medical marijuana overlay district and modify it to allow recreational marijuana. This would leave the Township with a single Zoning District addressing all marijuana businesses, rather than two separate ordinances.

At the December 12<sup>th</sup> meeting, no major changes were recommended by the Planning Commission with respect to the text/structure of the ordinance. There was discussion about the topic more generally, but the ultimate straw poll on the topic was 5-1-1 for approval, with one against and one abstention. Therefore, Staff has provided a resolution for approval, for the Commission’s use in discussion of this topic.

One of the only specific points of discussion at the December meeting was with respect to grow operations. The current draft does not allow them, but the ordinance could easily be modified to allow them under the new regulations. If the Planning Commission would like to proceed forward with an option to allow grow operations in the ordinance, the Planning Commission should make their intent clear. Staff can make that change prior to the Township Board’s review, if a motion for approval is made. Staff offers the following motion for the Planning Commission’s use in discussion of this matter:

**Motion to approve the resolution to recommend approval to the Township Board of Ordinance 2022-19, Recreational Marijuana Establishments, and the revised Overlay Map.**

**(OPTIONAL): Subject to Staff including language to allow marijuana grow operations in the Ordinance, similar to the current ordinance for medical marijuana.**

**Attachments**

1. Ordinance 2022-19 – Recreational Marijuana CLEAN
2. Resolution to Approve Ordinance 2022-19
3. Proposed Overlay Map

ORDINANCE NO. 2022-19

AN ORDINANCE TO AMEND THE ZONING ORDINANCE OF THE CHARTER TOWNSHIP OF  
MERIDIAN TO PERMIT RECREATIONAL MARIJUANA ESTABLISHMENTS

**THE CHARTER TOWNSHIP OF MERIDIAN ORDAINS:**

**Section 1.** Section 86-2, Definitions, is hereby amended to add the following definitions:

**Marijuana Business**

One of the following:

- (1) A Marijuana Retailer, as defined by Initiated Law 1 of 2018;
- (2) A Provisioning Center, as defined Act 281 of 2016.

**Marijuana Retailer**

A location at which a licensee is licensed under the Michigan Regulation and Taxation of Marihuana Act (Initiated Law 1 of 2018) to obtain marijuana from marijuana establishments and to sell or otherwise transfer marijuana to marijuana establishments and to individuals who are 21 years or age or older.

**Provisioning Center**

A location at which a licensee that is a commercial entity is licensed under the Medical Marihuana Facilities Act (Act 281 of 2016), to purchase marijuana from a grower or processor and sell at retail, supply, or provide marijuana to a registered qualifying medical marijuana patient or registered primary caregiver.

**Section 2.** Section 86-445 is hereby renamed Marijuana Business Overlay District and is hereby amended to read as follows:

- (a) Applicability. The Marijuana Business Overlay District shall apply to all lots within the areas shown on Maps 1, 2, 3, 4, and 5 (the "overlay areas"). All lots included in the overlay district shall be subject to the terms and conditions imposed in this section, in addition to the terms and conditions imposed by the zoning district where such lots may be located, any other applicable ordinance and the requirements of all Ordinances authorizing and permitting Marijuana Businesses.
- (b) [UNCHANGED]
- (c) Uses permitted by special use permit: all uses permitted by special use permit in the underlying zoning district and all types of marijuana businesses subject to the number of available permits allowed per all Ordinances authorizing and permitting Marijuana Businesses.
- (d) Uses not permitted. Any use not permitted in the underlying zoning district is not permitted in the Marijuana Business Overlay District.
- (e) Permitted locations.
  - (1) Provisioning Centers or Marijuana Retailers are permitted in any Overlay Area on property zoned C-1, C-2, or C-3 (Commercial) and RP (Research and Office Park).
  - (2) No marijuana business shall be located within 500 feet from any church, place or worship, religious facility, library, preschool, or childcare center, measured horizontally between the nearest property lines.

1 (3) No marijuana business shall be located within 1,000 feet from any public or private K-12  
2 school, measured horizontally between the nearest property lines.

3 (4) No marijuana business shall be located within 2,000 feet from any other licensed and  
4 approved marijuana business.

5 (5) All activities related to marijuana businesses must occur indoors.

6 (f) Additional Regulations.

7 (1) Mobile marijuana businesses and drive-through operations are prohibited.

8 (2) The business' operation and design shall minimize any impact to adjacent uses,  
9 including the control of any odor, by maintaining and operating an air filtration system  
10 so that no odor is detectable outside the permitted promises.

11 (g) Application and departmental reviews.

12 (1) [UNCHANGED]

13 (2) Departmental reviews. The applicant's plan shall be reviewed by the Township  
14 Department of Community Planning and Development, the Township EMS/Fire  
15 Department, the Township Police Department, and the Township Public  
16 Works/Engineering Department, in order to ensure that public utilities, road, and other  
17 infrastructure systems are or will be adequate to support the proposed development.

18 (h) Review Process. [UNCHANGED]

19 (1) [UNCHANGED]

20 (2) [UNCHANGED]

21 (i) Amendments. [UNCHANGED]

22  
23 **Section 3.** Validity and Severability. The provisions of this Ordinance are severable and the  
24 invalidity of any phrase, clause or part of this Ordinance shall not affect the validity  
25 or effectiveness of the remainder of the Ordinance.

26  
27 **Section 4.** Repealer Clause. All ordinances or parts of ordinances in conflict therewith are  
28 hereby repealed only to the extent necessary to give this Ordinance full force and  
29 effect.

30  
31 **Section 5.** Savings Clause. This Ordinance does not affect rights and duties matured, penalties  
32 that were incurred, and proceedings that were begun, before its effective date.

33  
34 **Section 6.** Effective Date. This Ordinance shall be effective seven (7) days after its publication  
35 or upon such later date as may be required under Section 402 of the Michigan Zoning  
36 Enabling Act (MCL 125.3402) after filing of a notice of intent to file a petition for a  
37 referendum.

38  
39 ADOPTED by the Charter Township of Meridian Board at its regular meeting this **XX**th day of  
40 **XXXXXXX**, 2023.

41  
42  
43  
44 \_\_\_\_\_  
45 Patricia Herring Jackson, Township Supervisor

46  
47  
48 \_\_\_\_\_  
49 Deborah Guthrie, Township Clerk

**RESOLUTION TO RECOMMEND APPROVAL**

**Zoning Amendment #2022-19  
Recreational Marijuana**

**RESOLUTION**

At the regular meeting of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, held at the Meridian Municipal Building, in said Township on the 9<sup>th</sup> day of January, 2023 at 7:00 p.m., Local Time.

PRESENT: \_\_\_\_\_

ABSENT: \_\_\_\_\_

The following resolution was offered by \_\_\_\_\_ and supported by \_\_\_\_\_.

WHEREAS, In 2018, the State of Michigan votes adopted Ballot Proposal 1, which legalized recreational marijuana in the State; and

WHEREAS, The Township is currently opted out of recreational marijuana by ordinance, but allows medical marijuana; and

WHEREAS, In 2022 Township voters narrowly defeated a proposed ban on recreational marijuana in the Township; and

WHEREAS, After that vote, the Township Board directed Staff and the Planning Commission to develop an ordinance to opt the Township into recreational marijuana businesses; and

WHEREAS, The Planning Commission held a public hearing on the proposal on December 12, 2022 and discussed the matter at the October 10, 2022, October 24, 2022, and January 9, 2023 meetings.

NOW THEREFORE BE IT RESOLVED THE PLANNING COMMISSION OF THE CHARTER TOWNSHIP OF MERIDIAN hereby recommends approval to the Township Board of Zoning Amendment #2022-19, an ordinance to provide regulations for recreational marijuana in the Township.

ADOPTED: YEAS: \_\_\_\_\_

NAYS: \_\_\_\_\_

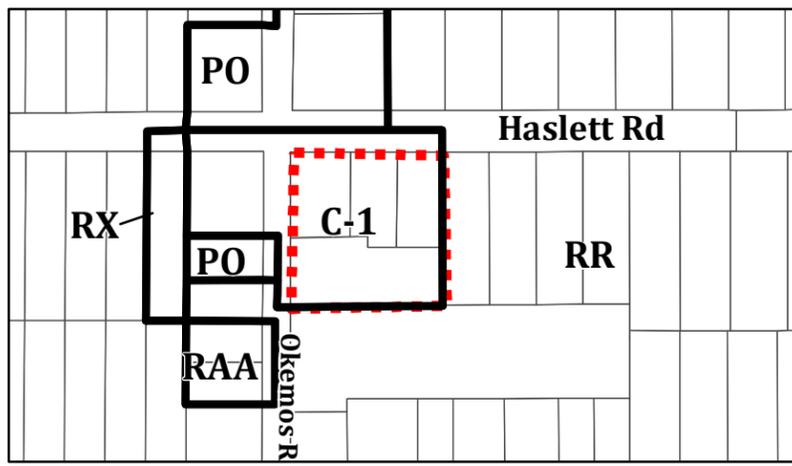
STATE OF MICHIGAN )

) ss

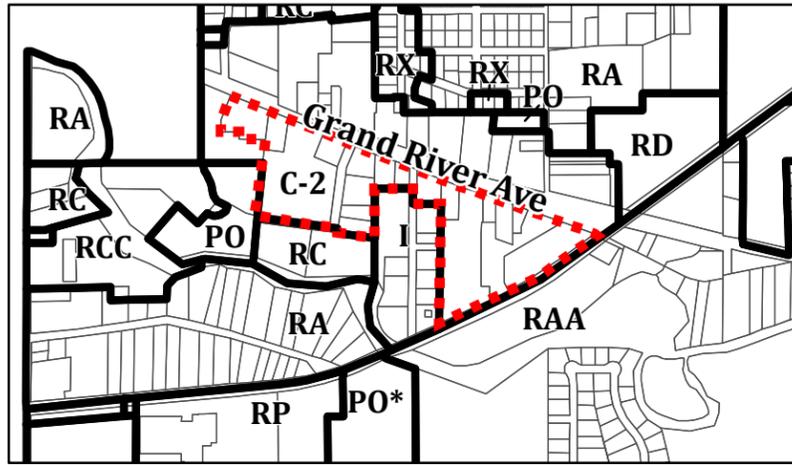
COUNTY OF INGHAM )

I, the undersigned, the duly qualified and acting Chair of the Planning Commission of the Charter Township of Meridian, Ingham County, Michigan, DO HEREBY CERTIFY that the foregoing is a true and complete copy of a resolution adopted at a regular meeting of the Planning Commission on the 9<sup>th</sup> day of January, 2023.

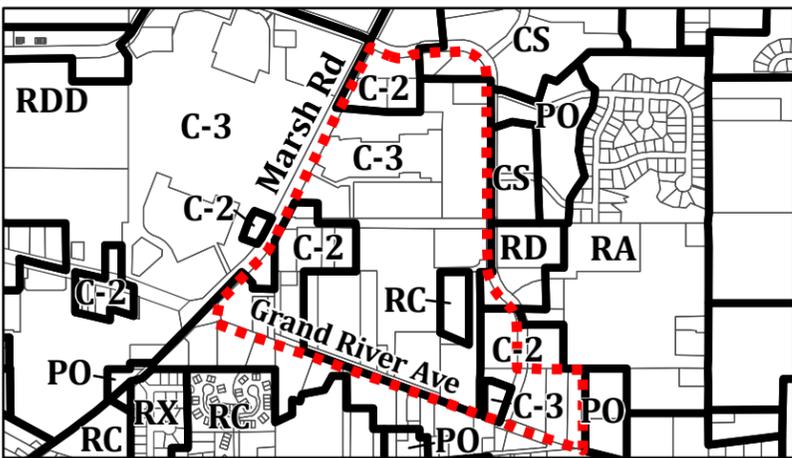
\_\_\_\_\_  
Mark Blumer  
Planning Commission Chair



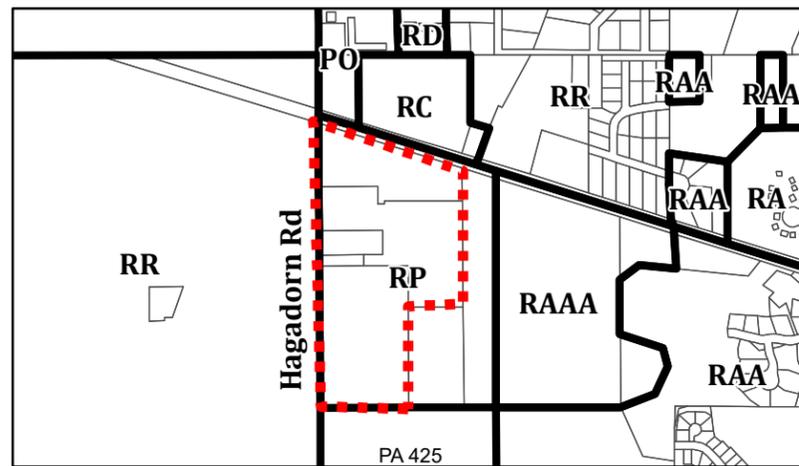
**1**



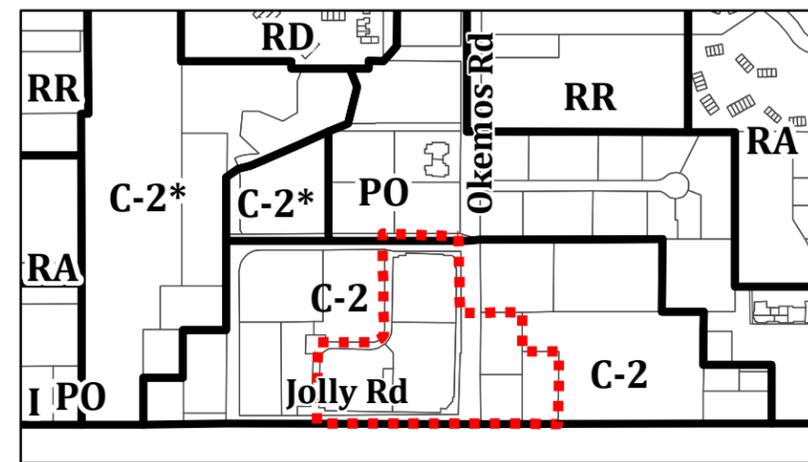
**2**



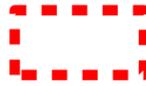
**3**

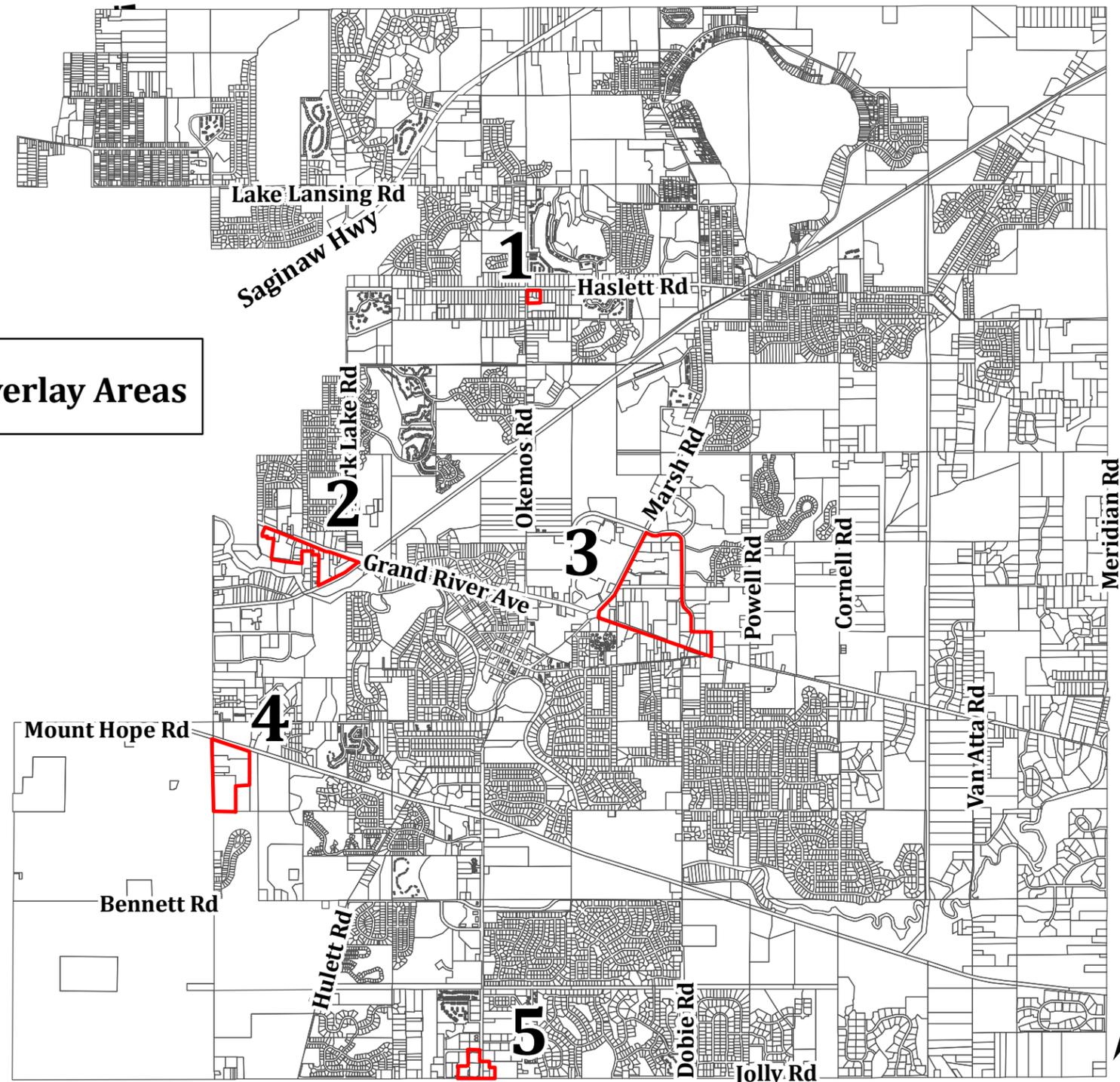


**4**



**5**

 **Proposed Overlay Areas**



**Updated:  
11/9/22**



**To: Members of the Planning Commission**

**From: Timothy R. Schmitt, AICP  
Director of Community Planning and Development**

**Date: January 9, 2023**

**Re: 2022 Planning Commission Annual Report**

---

Staff is pleased to present the following Annual Report for the Planning Commission's consideration. Under the Michigan Planning Enabling Act, Planning Commissions are required to create an annual report outlining the work that was done in the previous year, to be presented to the legislative body in the local municipality. There are number of items to track, from zoning changes to site plans and potential ordinance changes. If the Planning Commission has suggestions for other items that they would like to see in this year-end wrap up in future years, please let us know and Staff would be happy to incorporate them.

### **Development Reviews**

2022 saw Meridian Township coming out of the Covid19 pandemic and in turn was a busy and productive year for planning activity in the Township. The attached chart outlines all of the applications that were submitted in 2022 and includes some major undertakings, including the Haslett Village mixed-use project on Haslett Road, an amendment to the Village of Okemos mixed-use project, the expansion of the Radmoor Montessori school, and the Grand Reserve residential project. Overall, there were 10 new Special Land Use applications, one mixed-use development, one new rezoning, and several zoning ordinance text amendments submitted for review in 2022.

In addition to the project applications that are reviewed by the Planning Commission, site plans are administratively reviewed by Staff. These include site plans that follow approvals from the Planning Commission. In 2022, Staff reviewed ten site plans, most of which were for minor site improvements.

### **Variances**

In addition to the Planning Commission and administrative applications, the Zoning Board of Appeals heard another 18 requests on the year. Six of the variance requests related to signs, while the majority of the rest of the cases related to residential properties. One variance request was withdrawn after the Lake Lansing dimensional regulations were updated and one variance was denied. Although not specifically related to the Planning Commission's work in 2022, a synopsis of Zoning Board of Appeals activities for the year is attached at the end of this report, to show that Board's work and the occasional overlap with the Planning Commission.

The Zoning Board of Appeals pointed out some situations where the ordinances need updated, based on the types of requests that have been seen over the course of the past several years. This was especially true of the area around Lake Lansing. Staff wrote proposals to update the standards for lots around Lake Lansing, as well as updating the standards for reviews for variances. Longer term, an overhaul of the Lake Lansing Residential Overlay district is likely necessary to allow the ordinance to function effectively for all property owners.

## 2022 Planning Commission Annual Report

At the end of 2022, Planning Commissioner David Premoe announced that he was stepping down from the Planning Commission. Since he was the Planning Commission's representative on the Zoning Board of Appeals, a vacancy was created. This vacancy was in addition to the two vacancies of the alternate seats on the Zoning Board of Appeals that have persisted throughout 2022.

### Zoning Amendments

There were fourteen ordinance amendments recommended for approval by the Planning Commission in 2022, almost all of which were initiated by the Township at the suggestion of Staff. Major amendments included the update of the sign ordinance, traffic impact standards, and the creation of language to regulate PODs and storage containers. In addition, two of these amendments eliminated the language for two zoning districts and two amendments amended dimensional standards in the Lake Lansing Overlay District.

There were also two rezoning requests that were reviewed by the Commission in 2022, one of which (Becky Beauchine Kulka Inc.) was a holdover from 2021. The other rezoning was initiated by the Township and resulted in the elimination of the RRA zoning district language from the Zoning Ordinance. Both rezonings were approved by the Township Board after positive recommendations from the Planning Commission. Rezoning property is similar in nature to the text amendments described above, in that it amends the official zoning map for the township, which is adopted as part of the Zoning Ordinances. Rezoning requests have different processes and procedures than text amendments.

### Current Planning Commission Membership

The Planning Commission lost a member in 2022 when Scott Hendrickson was appointed to fill a vacancy in the Township Board. The vacancy was never filled in 2022. The eight members of the Commission are as follows:

Mark Blumer, Chair  
Peter Trezise, Vice Chair  
Jerry Richards, Secretary  
David Premoe

Alisande Shrewsbury  
Bill McConnell  
Holly Cordill  
Christina Snyder

At the end of 2022, Planning Commissioners Holly Cordill and David Premoe announced that they were stepping down from the Planning Commission. As a result, 2022 ended with three vacancies on the Planning Commission.

### Master Plan Review

The Township has begun to review and update the Master Plan in 2022, five years after the previous plan was adopted. This is pursuant to the Michigan Planning Enabling Act, which requires a review every five years. To that end, the Planning Commission instructed Staff to issue the Notice of Intent to Plan for the 2022 Master Plan Update in August. This was followed by a public hearing to officially launch the Master Plan update at the regular Planning Commission meeting on October 24, 2022. At the same time, an online survey was launched on the Township's website. The survey has garnered several responses from residents and will continue to be advertised into 2023 for further public comments.

## 2022 Planning Commission Annual Report

Staff has been submitting subject-specific background material to the Planning Commission at each meeting. It is anticipated that this will lead to a review of the goal and objectives early in 2023. The complete draft Master Plan update should be complete later in 2023, at which point it will be sent out for comment before final adoption.

In order to further inform the public about the Master Plan update, Staff has been attending the boards and commissions meetings to introduce the Master Plan update and to begin gathering their opinions and initial comments. By the end of 2022, Staff discussed the Master Plan update with the Environmental Commission, the Transportation Commission, and the Zoning Board of Appeals.

<b>SYNOPSIS OF PLANNING ACTIVITIES – 2022</b>				
<b>Case #</b>	<b>Applicant</b>	<b>Request</b>	<b>Location</b>	<b>Decision</b>
<b>Zoning Amendments</b>				
2022-02	Planning Commission	Update of the Zoning Board of Appeals standards of review	Various	Approved
2022-03	Planning Commission	Modification of the maximum amount of lot coverage permitted in the Lake Lansing Residential Overlay district	Lake Lansing Overlay District	Approved
2022-04	Planning Commission	Modification of front yard setbacks in the Lake Lansing Residential Overlay district	Lake Lansing Overlay District	Approved
2022-05	Planning Commission	Modification of fence height standards in non-residential districts	Various	Approved
2022-06	Planning Commission	Modification of yard encroachment standards to allow multiple decks or patios in the same yard	Various	Approved
2022-07	Planning Commission	Elimination of the RRR Zoning District	None	Approved
2022-08	Planning Commission	Update of the Traffic Impact Study standards	Various	Approved
2022-10	Planning Commission	Modification of PUD ordinance to allow decks to encroach into open space	Single-family homes in older PUDs	Approved

## 2022 Planning Commission Annual Report

2022-11	Meridian Township	Amendment to Sign Ordinance language to exempt Township signage from the Sign Ordinance	Township owned signs	Approved
2022-12	Planning Commission	Creation of language to regulate PODs and temporary container units	Various	Approved
2022-14	Planning Commission	Elimination of the RRA Zoning District	Seven properties on Van Atta Road and Ethel Street	Approved
2022-15	Planning Commission	Amendment to definitions of Family Child Care Home and Group Child Care Home	Various	Approved
2022-16	Planning Commission	Update of Article VII – Signs and Advertising Structures	Signage within the Township	Ongoing
2022-19	Planning Commission	Update of the Marijuana ordinance to include Recreational Marijuana	Marijuana overlay districts	Ongoing
<b>Rezoning</b>				
21060	Becky Beauchine Kulka Inc.	Rezone approximately 0.99 acres located at 2260 Jolly Oak Road from PO (Professional Office) to C-2 (Commercial)	2260 Jolly Oak Road	Approved
2022-18	Planning Commission	Rezoning of seven parcels from RRA to RA - Residential	Seven properties on Van Atta Road and Ethel Street	Approved
<b>Special Use Permits</b>				
22011	M & J Management, LLC	Meridian Company	1999 M-78 Highway	Approved
22021	Bennett Road Holding, LLC	Silverleaf Floodplain Permit	Bennett Road	Approved

## 2022 Planning Commission Annual Report

22031	MDOT	Grand River Project Floodplain Permit	Grand River and Okemos Road Intersection	Approved
22041	Radmoor Montessori	Amended SUP to construct 5,635 square foot addition	2745 Mt. Hope Road	Approved
22051	JV Landlord-Lansing, LLC	Bickford building addition	3830 & 3836 Okemos Road	Approved
22061	Meridian Township	Installation of two changing message signs	5151 Marsh Road & 1995 Central Park Drive	Approved
22071	Murooj Al Saedi	Group Child Care Home	2149 Quarry Road	Approved
22091	Newman Equities II, LLC	Residential development consisting of 60 duplexes and 55 single-family homes	Between Central Park Drive and Powell Road	Approved
22101	Meridian Township Engineering	Phase I of the MSU to Lake Lansing Trail	Along Red Cedar River between Hagadorn Road and Grand River	Ongoing
22111	Douglas J	Floodplain permit for ramps and landscaping	4663 Ardmore Avenue	Ongoing
<b>Site Plan Reviews</b>				
22-01	Lodges II	760 square foot lean-to added to an existing building	2700 Hannah Boulevard	Approved
22-02	Village of Okemos	Site plan following MUPUD #21-19024-2	Village of Okemos	Withdrawn
22-03	Douglas J	Construction of heated walkway, new vestibule, and new pedestrian bridge	4663 Ardmore Avenue	Approved

## 2022 Planning Commission Annual Report

22-04	Commons Church	Expansion of parking lot	4720 Marsh	Approved
22-05	Bharatiya Lights	New parking lights	955 Haslett Road	Approved
22-06	Grange Acres Dumpsters	Installation of new dumpsters	1747 Hillcurve Road	Approved
22-07	Presbyterian Church of Okemos	Installation of new solar panels	2258 Bennett Road	Approved
22-08	Chick-fil-a	Construction of drive through canopies	2075 Grand River Avenue	Approved
22-09	MSUFCU – Central Park	Reconfigured drive through and landscaping changes	1775 Central Park Drive	Approved
22-10	Village of Okemos	Site plan following MUPUD #22-19024	Village of Okemos	Ongoing
<b>Commission Reviews</b>				
22013	New China of Michigan Inc.	Division of a parcel into two parcels	5114 Jo Don Drive	Approved
22023	Meridian Township Engineering	Division of a parcel into two parcels into three parcels	4887 & 4893 Dawn Avenue	Approved
22033	Robert & Susan Brundage	Division of a parcel into two parcels	East Reynolds Road	Approved
22043	CBL Meridian Mall OP Prop Co II, LLC	Division of a parcel into three separate parcels	Meridian Mall	Approved
22053	Clark Hill PLC	Combination of three parcels into one new parcel	Okemos Road, south of Grand River	Approved
22063	Hassan Sumbal	Division of a parcel into two parcels	3746 Okemos Road	Approved
22073	Newman Road Properties, LLC	Division of a parcel into two parcels	1841 Newman Road	Approved

## 2022 Planning Commission Annual Report

Mixed Use Planned Unit Developments				
22014	Lake Drive Group, LLC	Haslett Village	SW corner of Marsh Road and Haslett Road	Approved
22-19024	Village of Okemos, LLC	Minor amendment to Village of Okemos MUPUD	Hamilton and Okemos Roads	Approved
Planned Unit Developments				
22014	Jim Giguere	Six single-family homes	Hulett Road	Approved
Zoning Board of Appeals Applications				
22-01-19	Frank Gawdun	Front setback variance for a canopy	2075 Grand River Avenue	Approved
22-02-16-1	MDOT	Compensating cut within the wetland buffer	5000 Okemos Road	Approved
22-02-16-2	Dawn Avenue Associates LLC	Lot size and lot width variances	4887 & 4893 Dawn Avenue	Approved
22-02-16-3	Johnson Sign Company	Larger wall sign	2090 West Grand River	Approved
22-03-16-1	E.W. Sparrow Hospital Association	Five extra wall signs	2449 Jolly Road	Approved
22-04-20-1	Jerry Fedewa Homes	41.5-foot variance to allow construction of a new home	6059 Lake Drive	Approved
22-04-20-2	Jerry Fedewa Homes	14.67-foot variance to allow construction of a new home	6099 Lake Drive	Withdrawn
22-04-20-3	Eyde Hannah Plaza, LLC	New freestanding sign	4790 Hagadorn Road	Approved
22-04-20-4	SH G2755 LLC	Second wall sign	2755 East Grand River	Approved
22-05-18-1	Johnson Sign Company	Third wall sign	4660 Hagadorn Road	Approved

## 2022 Planning Commission Annual Report

22-05-18-2	MAG OKF RE LLC	Larger wall sign	1830 West Grand River	Approved
22-06-15-1	Roger Taylor	Accessory structure in the side setback	6089 East Lake Drive	Denied
22-07-20-1	Paul Andrus	4.5-foot variance to allow a garage addition	6116 Columbia Street	Approved
22-08-17-1	David & Cathie Myers	Accessory structure in the front yard	419 Haslett Road	Approved
22-08-17-2	Craig Linnell	Accessory structure in the front yard	6078 Porter Avenue	Approved
22-10-19-1	Blaine S Schultz	Construction of a home within the front setback	2205 Hamilton Road	Approved
22-10-19-2	Aaron Smith & Jessica Dietrich	Construction of a deck in the floodway	4810 Arapaho Trail	Approved
22-12-21-1	Newton Equity II, LLC	Construction of a road through a wetland buffer	Between Central Park Drive and Powell Road	Approved



**To: Members of the Planning Commission**

**From: Timothy R. Schmitt, AICP  
Director of Community Planning and Development**

**Date: January 6, 2023**

**Re: Planning Commission Liaison Assignments**

---

On an annual basis, the Planning Commission assigns liaisons to several Boards and Commissions for the upcoming year. In 2022, the following assignments were made by the Planning Commission:

- Zoning Board of Appeals (ZBA) – Commissioner Premoe
- Corridor Improvement Authority (CIA) – Commissioner Cordill
- Downtown Development Authority (DDA) – Commissioner Blumer
- Environmental Commission (EC) – Commissioner McConnell
- Economic Development Corporation (EDC) – Vice Chair Trezise
- Transportation Commission (TC) – Commissioner Snyder
- Brownfield Redevelopment Authority (BRA) – Vice Chair Trezise

The meeting schedule for those boards is as follows:

- ZBA – 6:30PM on the 3<sup>rd</sup> Wednesday of the month
- CIA – 6:00 PM on the 3<sup>rd</sup> Wednesday of the month
- DDA – 7:30AM on the 1<sup>st</sup> Monday of the month
- EC – 7:00PM on the 1<sup>st</sup> Wednesday of the month
- EDC – 7:30AM on the 1<sup>st</sup> Thursday of the month
- TC – 7:00PM on the 3<sup>rd</sup> Thursday of every other month
- BRA – On demand, but generally 8AM on the 3<sup>rd</sup> Thursday of the month

Please let me know if you have any questions in advance of the Planning Commission’s meeting. As a reminder for scheduling purposes, the Township Board generally meets on the 1<sup>st</sup> and 3<sup>rd</sup> Tuesdays of a month and the Planning Commission on the 2<sup>nd</sup> and 4<sup>th</sup> Mondays.



**To: Members of the Planning Commission**

**From: Timothy R. Schmitt, AICP  
Community Planning and Development Director**

**Date: January 6, 2023**

**Re: Master Plan Update – Public Comment Received to Date**

---

As we begin to formulate goals and objectives for the Master Plan, Staff wanted to share the feedback we've received thus far from our outreach. There are a wide variety of opinions and thoughts being received and Staff continues to reach out through social media and the Township's existing channels to get public input. Although we don't anticipate a large scale public charette or anything of that nature with this update, we do continue to seek comment, as the more input we get, the more robust the plan is. Staff welcomes any feedback as we move forward.

# Faith Lutheran Church

A Congregation of the Evangelical Lutheran Church in America  
4515 Dobie Road, Okemos, MI 48864

December 5, 2022

Mark Blumer, Chair  
And Planning Commissioners  
Meridian Township Planning Commission  
5151 Marsh Road  
Okemos, MI 48864

Dear Chair Blumer and Planning Commissioners:

I write to you today as a representative of the Church Council at Faith Lutheran Church, located 4515 Dobie Road, City of Okemos, Township of Meridian. We understand that the Planning Commission is beginning the difficult process of reviewing the Township's "Master Plan," a process which involves outlining the types of growth the commission would like to see in the Township over the next five years. We would like to thank you for your leadership in this no doubt laborious process, and would also like to take this opportunity to give you our input in regard to density changes involving a vacant parcel of land owned by Faith Lutheran, which lies on the northern boundary of our church property.

Our entire parcel is currently listed as Institutional Usage. We believe the current classification results in an underutilization of the subject parcel, in that its current density is much more restrictive than the properties surrounding the parcel. We are requesting that the Commission consider changing the density of the northern portion of our property so as to bring the density into line with the current density of the property adjacent to our northern boundary. In our opinion, such a change would be within the spirit of the Master Plan ideals, and would provide a mutual benefit to our church and to the Township as described below. That proposed density change would:

- Encourage infill on a corridor roadway near activity/commercial centers
- Focus growth back into the Urban Services District to ensure efficient and fiscally responsible use of public services.
- Encourage cluster development/compact residential development close to activity/commercial centers.
- Prevent undesired residential sprawl past the Urban Service boundary on the East end of the Township.

- Provide for additional multi-family housing, which is a recognized need in the Township.
- Provide for moderately-priced rental housing, which is also a recognized need in the Township.

We appreciate your hard work on behalf of the Township, as well as your willingness to listen to those in the community most affected by the decisions you make. We look forward to working with you on this issue of great importance both to our church and to our community, and we wish you luck as you begin the process of updating the Township Master Plan. If you have any questions or comments, please do not hesitate to contact our church directly at (517) 349-0620, or to contact Cecelia Kramer of the Church Parcel Committee at (517)-898-0097. Thank you for your time, and have a blessed day.

Sincerely,



**Ryan Edberg**  
**Council President**  
**Faith Lutheran Church**

E-SIGNED by Ellen Schoepf  
on 2022-12-05 13:01:17 EST

Ellen Schoepf  
Pastor

E-SIGNED by linda Hirt  
on 2022-12-05 13:10:08 EST

Linda Hirt  
Member at Large



Michael Eschelbach  
Vice-President

E-SIGNED by Gwynne Kadrofske  
on 2022-12-05 16:08:19 EST

Gwynne Kadrofske  
Treasurer



Jean Lewis  
Member at Large

E-SIGNED by John McCracken  
on 2022-12-05 19:41:50 EST

John McCracken  
Church Parcel Committee

E-SIGNED by Molly DeHate  
on 2022-12-05 19:36:51 EST

Molly DeHate  
Secretary

E-SIGNED by Ryan Thompson  
on 2022-12-05 13:36:19 EST

Ryan Thompson  
Church Parcel Committee

E-SIGNED by Jon Harrison  
on 2022-12-05 14:23:48 EST

Jon Harrison  
Financial Secretary

E-SIGNED by Cecelia Kramer  
on 2022-12-05 22:20:09 EST

Cecelia Kramer  
Church Parcel Committee

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 18, 2022 9:03:01 PM

---

### Master Plan Feedback Form

**Submission #:** 2093196  
**IP Address:** 68.56.67.187  
**Submission Date:** 11/18/2022 9:02  
**Survey Time:** 4 minutes, 28 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Anne Hansknecht

**Where can we email a response?**

annehans@comcast.net

**What is your phone number?**

5177496858

**Write us a mesesage:**

Redo Hillbrook park to have 6 pball courts as well as the backboard & hoop area. More paved parking. Suggest putting in pickleball at Wonch Park as that would help serve more of the Twp and ease more of the pressure on lack of courts currently.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

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**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 25, 2022 11:37:32 AM

---

### Master Plan Feedback Form

**Submission #:** 2101282  
**IP Address:** 73.145.146.88  
**Submission Date:** 11/25/2022 11:37  
**Survey Time:** 25 minutes, 48 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Bruce Mortimer

**Where can we email a response?**

bmortimerdvm@comcast.net

**What is your phone number?**

5172301953

**Write us a mesesage:**

I appreciate you taking the time to gather residence input. We currently live on Van Atta next to Davis preserve and have been here about 17 years. We enjoy the semi rural setting and low density of housing that is in the area. Over the years I have seen the population and housing increase around us and slowly encroach. While I know the growth is important to a township the amount of growth should be controlled based on the environmental, infrastructure present, quality of life of current residents and safety(traffic). For every subdivision put in the stress on the environment is huge with loss of habitat, water quality, invasive species introduction and disruption of the natural hydrological flow of the our very important wetlands. Over the years with increasing building I have seen our quiet rural road turn into a gauntlet of speeding cars. I have also noticed an increased amount of wildlife car deaths, especially the increasing number of deaths to endangered Blandings turtles.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Thursday, December 15, 2022 11:16:34 AM

---

### Master Plan Feedback Form

**Submission #:** 2134933  
**IP Address:** 108.224.52.171  
**Submission Date:** 12/15/2022 11:16  
**Survey Time:** 12 minutes, 4 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Bruce Peffers

**Where can we email a response?**

peffersb@yahoo.com

**What is your phone number?**

5175153022

**Write us a mesesage:**

I would strongly urge the Planning Commission to add the option of Form Base Code for new or re-development projects, especially along the Grand River corridor. Current zoning conditions are antiquated and outdated. Shifting to Form Base Code will streamline the approval process and bring the township section of the corridor closer to aligning with Lansing and East Lansing sections.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Sunday, January 1, 2023 12:58:40 PM

---

### Master Plan Feedback Form

**Submission #:** 2158684  
**IP Address:** 73.18.185.5  
**Submission Date:** 01/01/2023 12:58  
**Survey Time:** 15 minutes, 54 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Charles Kotz

**Where can we email a response?**

cdkotz73@gmail.com

**What is your phone number?**

5175252258

**Write us a mesesage:**

The new Master Plan for Meridian Township must include an iron clad tree ordinance. Please look at what other communities in the Midwest have had in place for years, and take the best from these, to formulate a Meridian Township Tree PRESERVATION Ordinance. Evanston. Illinois has an exemplary Tree Preservation Ordinance. The City of Grosse Pointe, also has a good, but limited in scope, tree ordinance. Meridian Township is very late to the game. I hope this will finally be addressed in the new Master Plan.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 4, 2022 2:41:23 PM

---

### Master Plan Feedback Form

**Submission #:** 2067156  
**IP Address:** 73.18.185.5  
**Submission Date:** 11/04/2022 2:41  
**Survey Time:** 12 minutes, 39 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Charles Kotz

**Where can we email a response?**

cdkotz73@gmail.com

**What is your phone number?**

5175252258

**Write us a mesesage:**

Meridian Township has already surpassed its "carrying capacity", an ecological term that refers to the number of people that a region can support without environmental degradation. The Township needs to recognize that every additional housing development that increases our population, destroys green space, and increases the number of cars on the roads, further detracts from the quality of life for the people that reside here. Work needs to be done to make foot and bicycle travel viable. The Planning Commission and the Board need to create a new vision for the Township, and institute policies that will make the community more livable for all of us that live here. The goal should not be to grow further, but to enhance the experience for those that actually make Meridian Township their home. A moratorium on housing construction that destroys greenspace would be an excellent first step.

**Do you have a preferred contact method?**

Please reply by phone

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Sunday, November 20, 2022 9:06:03 AM

---

### Master Plan Feedback Form

**Submission #:** 2094226  
**IP Address:** 68.37.118.223  
**Submission Date:** 11/20/2022 9:05  
**Survey Time:** 54 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Elizabeth Bolger

**Where can we email a response?**

bette23@comcast.net

**What is your phone number?**

5178617831

**Write us a mesesage:**

Looking for the Master Plan survey form that is supposed to be at this link.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Wednesday, November 16, 2022 9:20:39 AM

---

### Master Plan Feedback Form

**Submission #:** 2087145  
**IP Address:** 172.58.123.162  
**Submission Date:** 11/16/2022 9:20  
**Survey Time:** 10 minutes, 14 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Jason Stevens

**Where can we email a response?**

Jasonhockey04@yahoo.com

**What is your phone number?**

5178620518

**Write us a mesesage:**

Well you could start by making it easier to arrive in meridian and not harder, stop with the roundabouts and Michigan lefts that mess up drives in,. Lower the gas prices this township is overly priced all the time by 20 or more cents, if you want us to work and visit make it affordable. Don't schedule that much road construction at once you just clog the detours that can't handle the traffic. Neighborhood paving is nice a bit slow but nice improvement, libraries of thr township could use more updating and resources. Please sequence the traffic lights you seem to stop at almost every light instead of being able to flow thru town. All roads should be looked at park lake okemos and Dobie seem most out of sequence

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Tuesday, November 22, 2022 9:26:34 AM

---

### Master Plan Feedback Form

**Submission #:** 2097262  
**IP Address:** 35.21.132.223  
**Submission Date:** 11/22/2022 9:26  
**Survey Time:** 32 minutes, 20 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Justin Rabineau

**Where can we email a response?**

rabinea1@msu.edu

**What is your phone number?**

9064408711

**Write us a mesesage:**

Meridian Township needs to eliminate minimum parking standards. Too much of our beautiful township is taken up by a sea of empty parking lots and parking minimums discourage new development by requiring additional costs and space. Abolishing parking mandates will help to meet the stated goals in the Master Plan by allowing for the preservation of open space and natural areas, enhancing the viability of township businesses, and promoting safe and efficient multi-modal transportation.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 18, 2022 11:34:35 PM

---

### Master Plan Feedback Form

**Submission #:** 2093300  
**IP Address:** 172.58.121.74  
**Submission Date:** 11/18/2022 11:34  
**Survey Time:** 6 minutes, 1 second

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Kelly Rush

**Where can we email a response?**

kellyrush@gmail.com

**What is your phone number?**

5179741570

**Write us a mesesage:**

I'd like to see a long-term vision for the area around Lake Lansing near the Quality Dairy/Bluegill Grill/Mayfair Bar section. This seems like the perfect location for a MUPUD that incorporates some type of boardwalk design, so that foot-traffic becomes a more prominent part of the makeup of that space. This could incorporate parts of Shaw St, Lake Lansing Rd, and Marsh Rd. and would continue to provide housing options while also increasing retail space, but in a way that is respectful to the character of that part of the community. Also, I'd like to see better planning for Saginaw, from Costco (west) to MSUFCU area (east). There appears to be no real plan for this space, and it's beginning to fill up with random commercial interests, without any real thought to what that strip's purpose should be.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Thursday, November 17, 2022 4:20:56 PM

---

### Master Plan Feedback Form

**Submission #:** 2090698  
**IP Address:** 174.210.232.246  
**Submission Date:** 11/17/2022 4:20  
**Survey Time:** 7 minutes, 53 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Kip Conley

**Where can we email a response?**

kip.conley@gmail.com

**What is your phone number?**

2488609659

**Write us a mesesage:**

While it seems like there has been a movement towards building new construction in Meridian township, I feel there has been a lack of diversity in approved proposals. Most construction sites that you pass driving through the township seem to be oriented around the elderly or assisted living. If you are trying to attract young families, other ideas should be taken into consideration. Areas that bring people in are local eateries, small business for shopping, and community meeting places for events and gatherings. Sun King in Indianapolis and Little Fleet are prime examples of locations that offer residents small business mixed with a unique area for the community to meet. It is nice to have great parks, but there needs to be more done to draw in younger families that want to raise families, not just for retirees.

**Do you have a preferred contact method?**

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Monday, November 21, 2022 7:35:11 AM

---

### Master Plan Feedback Form

**Submission #:** 2095006  
**IP Address:** 73.145.146.88  
**Submission Date:** 11/21/2022 7:35  
**Survey Time:** 8 minutes, 39 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Kris Parnell

**Where can we email a response?**

krisgardens@comcast.net

**What is your phone number?**

5178812845

**Write us a mesesage:**

My husband and I live on van atta road north of the foster davis preserve. On this road we have helped moved several blandings turtles (which are endangered) across the road. It was a beautiful quiet road when we first moved here and has become noisier with regular daily traffic since they resurfaced it. Now we are more likely to find dead turtles then live turtles we can help across. We live in a beautiful natural area and I hope that we can maintain areas like this in meridian township. There are many developed areas to put homes in the surrounding areas. Why is it necessary to add new sub divisions? Sincerely, Kris Parnell

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Sunday, November 20, 2022 5:09:05 PM

---

### Master Plan Feedback Form

**Submission #:** 2094597  
**IP Address:** 68.56.115.141  
**Submission Date:** 11/20/2022 5:08  
**Survey Time:** 7 minutes, 4 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Maribeth Fletcher

**Where can we email a response?**

jmbfletcher@gmail.com

**What is your phone number?**

5173494572

**Write us a mesesage:**

As a 48-year resident, I do see a need for affordable housing, but our parks need to be preserved as well as pedestrian bikeways and walkways.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Sunday, November 6, 2022 7:53:59 PM

---

### Master Plan Feedback Form

**Submission #:** 2069678  
**IP Address:** 174.210.228.53  
**Submission Date:** 11/06/2022 7:53  
**Survey Time:** 9 minutes, 10 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Mark Redker

**Where can we email a response?**

Mredker@aol.com

**What is your phone number?**

5173393988

**Write us a mesesage:**

We need affordable apartments for low wage earners. We need to halt additional retail and office space. Must backfill current space. No more projects like the downtown Okemos plan. It is a complete failure on both township and the developers. L&L project appears to be problematic as well. The apartment on the end is the only project that is underway elevator shafts are going up workers are working the site.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Saturday, November 26, 2022 7:44:41 AM

---

### Master Plan Feedback Form

**Submission #:** 2101949  
**IP Address:** 68.60.61.166  
**Submission Date:** 11/26/2022 7:44  
**Survey Time:** 58 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Mary Farris

**Where can we email a response?**

02.casters.nylon@icloud.com

**What is your phone number?**

**Write us a mesesage:**

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Thursday, December 8, 2022 11:31:20 AM

---

### Master Plan Feedback Form

**Submission #:** 2123197  
**IP Address:** 73.191.184.99  
**Submission Date:** 12/08/2022 11:31  
**Survey Time:** 7 minutes, 50 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Melissa Straus

**Where can we email a response?**

mmstraus@comcast.net

**What is your phone number?**

5178039522

**Write us a mesesage:**

Maintain low density, and natural areas. Do not develop Van Atta Road. I am opposed to any road development along our property line.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Wednesday, November 16, 2022 9:44:01 AM

---

### Master Plan Feedback Form

**Submission #:** 2087186  
**IP Address:** 68.37.123.25  
**Submission Date:** 11/16/2022 9:43  
**Survey Time:** 12 minutes, 55 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Nancy Nagele

**Where can we email a response?**

nagelenancy@gmail.com

**What is your phone number?**

5172426323

**Write us a mesesage:**

All of Tihart and Van Atta roads need to be paved property- Tihart especially is a high use road for cars and school buses and yet is always in terrible condition. It seems to be part old pavement and part dirt and although Ingham county road tries to periodically fix it when asked, it quickly deteriorates again. Drive your car down either of these roads if you dare and you'll wonder why they are not properly maintained by Meridian Township.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 18, 2022 3:10:18 PM

---

### Master Plan Feedback Form

**Submission #:** 2092475  
**IP Address:** 216.163.62.37  
**Submission Date:** 11/18/2022 3:06  
**Survey Time:** 3 minutes, 14 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Nick Krueger

**Where can we email a response?**

nreedkrueger54@yahoo.com

**What is your phone number?**

5176059510

**Write us a mesesage:**

Township needs to focus on accessibility in all neighborhoods and parks. Township should focusing on making sure all residents can safely walk for exercise and to commute to a destination. The neighborhood closest to three schools is partially set up with sidewalks making many young residents to walk on streets with poor lighting. This is a safety concern from a resident living on Orlando Dr.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 18, 2022 11:44:54 AM

---

### Master Plan Feedback Form

**Submission #:** 2091945  
**IP Address:** 73.145.133.194  
**Submission Date:** 11/18/2022 11:44  
**Survey Time:** 30 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Siri Rainone

**Where can we email a response?**

sirirainone@gmail.com

**What is your phone number?**

7173184173

**Write us a mesesage:**

Would love to receive information, or offer input.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Saturday, November 19, 2022 4:02:33 AM

---

### Master Plan Feedback Form

**Submission #:** 2093368  
**IP Address:** 73.145.139.157  
**Submission Date:** 11/19/2022 4:02  
**Survey Time:** 21 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Tamara Buswinka

**Where can we email a response?**

tamarabuswinka@gmail.com

**What is your phone number?**

9897144417

**Write us a mesesage:**

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Friday, November 18, 2022 12:39:08 PM

---

### Master Plan Feedback Form

**Submission #:** 2092078  
**IP Address:** 73.145.148.20  
**Submission Date:** 11/18/2022 12:39  
**Survey Time:** 49 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

Vin Lyon-callo

**Where can we email a response?**

Vlyoncallo@gmail.com

**What is your phone number?**

5172142785

**Write us a mesesage:**

My only suggestions are to prioritize the environment. Degrowth instead of growth.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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**From:** [webmaster@meridian.mi.us](mailto:webmaster@meridian.mi.us) on behalf of [Meridian Township, MI](#)  
**To:** [Tim Schmitt](#); [Keith Chapman](#); [Brian Shorkey](#)  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form  
**Date:** Wednesday, November 16, 2022 6:56:02 AM

---

### Master Plan Feedback Form

**Submission #:** 2087031  
**IP Address:** 67.167.160.223  
**Submission Date:** 11/16/2022 6:55  
**Survey Time:** 11 minutes, 59 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

William Seck

**Where can we email a response?**

wfseck48@yahoo.com

**What is your phone number?**

5173392287

**Write us a mesesage:**

Time to look at North/South Cornell Road. Idea of keeping it as a "Natural Beauty road" was at its time a good decision however with increased housing and traffic congestion this road is now too heavily traveled . No shoulder with people still trying to bike and jog on it is problematic. Get a good traffic count and have the police take a quick idea of typical speeds present (especially at rush hours)

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

**This is an automated message generated by Granicus. Please do not reply directly to this email.**

## Brian Shorkey

---

**From:** webmaster@meridian.mi.us on behalf of Meridian Township, MI <webmaster@meridian.mi.us>  
**Sent:** Wednesday, December 14, 2022 2:26 PM  
**To:** Tim Schmitt; Keith Chapman; Brian Shorkey  
**Subject:** \*NEW SUBMISSION\* Master Plan Feedback Form

### Master Plan Feedback Form

**Submission #:** 2133466  
**IP Address:** 170.103.53.206  
**Submission Date:** 12/14/2022 2:25  
**Survey Time:** 2 minutes, 39 seconds

You have a new online form submission.

Note: all answers displaying "\*\*\*\*\*" are marked as sensitive and must be viewed after your login.

### Get in Touch

**Please fill out the quick form and we will be in touch with lightning speed.**

**What is your first and last name?**

William White

**Where can we email a response?**

whitewi5@msu.edu

**What is your phone number?**

5179036040

**Write us a mesesage:**

There is a major disconnect between the Township Master Plan and the DDA Integrated Plan, which the Master Plan cites as a guide for redevelopment in the old downtown. The DDA plan urges preservation of the historic buildings, but they were torn down for the original Douglas J project. The DDA plan was completely ignored, with none of its recommendations followed. The idea that this plan is viable for future development is problematic. The 2022 Master Plan should either change that reference, or the DDA Integrated Plan revised, which could have been done when the DDA district was expanded a few years ago. "The downtown Okemos area" is poorly defined. Many residents are not familiar with that and would argue it should include the commercial area at Marsh Rd and Grand River, the real "Main Street" of the community.

**Do you have a preferred contact method?**

Please reply by email address

Thank you,

**Meridian Township, MI**

---

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