

NO: R025

COUNCIL DATE: February 5, 2018

REGULAR COUNCIL

TO: **Mayor & Council**

DATE: **January 30, 2018**

FROM: **Director, Public Safety**

FILE: **7450-30**

SUBJECT: **Cannabis Legalization Report: A Framework for Action**

RECOMMENDATION

The City Manager's Department recommends that Council receive this report as information.

INTENT

The purpose of this report is to update Council on the City's approach to responding to cannabis legalization as outlined in Appendix "I": *Cannabis Legalization – An Evolving Framework for BC Municipalities* (the "Report").

BACKGROUND

Bill C-45 (the "Bill") is currently completing its first reading in the Canadian Senate, and once approved will amend the *Criminal Code of Canada* and the *Controlled Drugs and Substances Act* to allow for the legalization of cannabis. The Bill is expected to pass into law by July 1, 2018. The City of Surrey has taken a proactive approach in researching the necessary regulatory changes that will support legalization at the municipal level. This will enable the City to respond to the many issues surrounding cannabis legalization at the local level.

In parallel with development of the enclosed Report, on October 31, 2017, the City of Surrey contributed a submission to respond to the BC Minister of Public Safety and Solicitor General discussion paper on Cannabis Legalization. In October 2017, the City of Surrey joined the Joint Committee on Cannabis Regulation ("JCCR") under the Union of BC Municipalities. The JCCR is preparing a series of reports to the government on related issues and complements the response forwarded by the City of Surrey.

DISCUSSION

Cannabis legalization will result in multiple challenges for municipalities, and the City of Surrey has taken a proactive approach to research the implications for municipalities regarding legalization and create a systematic breakdown of the steps needed to implement a municipal response. This work has culminated in the *Cannabis Legalization – An Evolving Framework for BC Municipalities* (Appendix "I"). The Report is based on significant research undertaken in US jurisdictions with legalized recreational cannabis, and it reviews the current status of initiatives underway across Canada. It is designed to provide a base of information for staff, and recommendations that will assist staff in developing new bylaws, business licencing processes,

retail oversight structures and public education initiatives that will enable cannabis legalization in BC. The Report may also be valuable for other municipalities seeking a framework to assist with implementation of cannabis legalization in their own jurisdictions.

Document Overview

The report *Cannabis Legalization – An Evolving Framework for BC Municipalities* includes six sections. Section One begins with an overview of the core elements of the Bill which are expected to pass into law in July 2018. A particular focus of the first section is clarifying the jurisdictional responsibilities that fall to the Federal, Provincial/Territorial, and local levels of government. Several aspects of legalization are out of the hands of municipalities and it is important to understand jurisdictional boundaries.

Section Two reviews in some detail the nature of cannabis, its production, types of products available and a brief profile of typical uses and users, including the frequency of use. This section also provides an overview of the issues related to cannabis and defines some common terms to ensure a common base of information on the nature of the cannabis industry in 2017. It also looks at the information available on the risks and benefits of cannabis use. As noted, there is no clear consensus on the risks and benefits.

Section Three provides a brief summary of the current legal frameworks for medicinal cannabis which will remain in place following the passing of the Bill C-45.

Section Four focuses on the current status of the implementation of cannabis legalization in Canada, with a particular focus on the announcements made by Provinces/Territories to date on their response to the proposed Federal legislation.

Section Five provides a snapshot of the U.S. state regimes currently in place. Specific attention is paid to the information available on the impacts of legalization with a particular focus on the four western states of Colorado, Washington, Oregon and California. Additional data from these jurisdictions is also provided in the Report appendices.

Section Six provides a framework for cannabis legalization at the municipal level. The purpose of this section of the report is to outline the key tasks that will enable Surrey, and other municipalities, to implement effective policy responses to cannabis legalization. This will assist the City to:

- build municipal capacity;
- develop appropriate oversight mechanisms;
- enable coordination with partner agencies and groups; and
- facilitate communication with key stakeholders.

Seven core components are explained in the framework, and checklists of key considerations are outlined. The checklists outline actions or areas of work that must be undertaken to make the necessary changes to regulations, guidelines, and processes to effectively implement cannabis legalization in the city.

1. Zoning and Land Use

Specific issues that will need to be addressed include: establishment of buffer zones between retail outlets and sensitive land uses such as schools, rezoning application

processes and scheduling, land use designations for proposed federal licences and authorizations.

2. Regulatory Bylaws and Licensing

The Province anticipates establishing a retail model that includes both public and private retail opportunities and will share details regarding the model in early 2018.

Municipalities will need to determine the appropriate scope and cost of licences, and possible maximum limits on the number of each type of licences issued, as well as training and policy guidelines for staff. Several bylaw types have been identified for review including nuisance bylaws and smoking in public places bylaws.

3. Inspections

Training for staff in inspections specific to new production and retail facilities will be required to support the legislation.

4. Municipal Enforcement

Developing policing and bylaw enforcement strategies including review of staffing levels and scheduling to ensure appropriate enforcement. As well, first responders will need to receive additional training and guidance on dealing with issues specific to interpretation of new bylaws and licensing.

5. Finance and Revenue

This component includes issues such as the need to determine metrics and processes for tracking and assessing revenue relative to implementation costs, and ensuring fees are set such that they support the legislation without incentivising a rapid growth in facilities.

6. Engagement and Education

Comprehensive stakeholder consultation will be needed as part of the implementation process including support for proposed Federal and Provincial public education campaigns.

7. Economic Development

Attracting support for research and development focused on cannabis – related public health and safety concerns will be a priority. As well, there are likely to be partnership opportunities with Provincial and Federal agencies and academic institutions.

Establishing a model for responsible industry development in line with City values will be important.

Effective implementation of new legislation will also rely on continued advocacy and communication with government partners at every level. Different jurisdictional boundaries impact issues such as enforcement, revenue and land use, and it is important to understand how and where municipalities can lead policy and where it may be necessary to respond to Provincial or Federal decision-making.

SUSTAINABILITY CONSIDERATIONS

The work on cannabis legalization supports the Public Safety theme in the Sustainability Charter 2.0 allowing the City to significantly deliver on all related Desired Outcomes and Strategic Directions outlined in the Sustainability Charter 2.0.

This work also supports the Health and Wellness theme. Specifically it supports the following Health Services and Programs Desired Outcomes and Strategic Directions:

- DO5: Services and programs are responsive to shifting health and social needs, and local and external factors.
- SD2: Increase the understanding of, and support for, harm reduction.

CONCLUSION

The report, *Cannabis Legalization – An Evolving Framework for BC Municipalities* provides a comprehensive review of the issues related to cannabis legalization. Therefore, it is recommended that Council receive this report as information.



Terry Waterhouse
Director, Public Safety

TW/mc

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Appendix “1” – *Cannabis Legalization – An Evolving Framework for BC Municipalities*

CANNABIS LEGALIZATION

AN EVOLVING FRAMEWORK FOR BC MUNICIPALITIES

January 2018

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EXECUTIVE SUMMARY

Cannabis has long had a significant presence in Canada. Population surveys conducted by the Federal Government have shown that cannabis is the most widely used illicit drug in the country, and Canadians continue to use cannabis at some of the highest rates in the world. Since August 2016, the production, distribution, and use of medical cannabis in Canada have been governed by the Access to Cannabis for Medical Purposes Regulations (ACMPR). This regime remains in place.

The Government of Canada has introduced legislation to legalize the recreational use of cannabis. Bill C-45, which will regulate and restrict the production, distribution, sale, and use of this product, is expected to pass into law by July 2018. This Federal legislation creates significant responsibilities for all levels of government. Provincial and Territorial governments have begun to make new policy decisions in response to the Federal legislation, and most have done so with some form of public and/or stakeholder consultation. The frameworks implemented by the Provincial and Territorial Governments provide a more detailed context for local governments to make decisions about the infrastructure and local regulations and enforcement needed to support these policy changes.

The City of Surrey like all local governments must determine what changes are needed to ensure an effective response to cannabis legalization. In managing this major legal and social change, municipalities are guided by the specific objectives of Bill C-45, which include:

- preventing youth from accessing cannabis;
- providing for controlled access to cannabis by adults;
- providing for strict regulation and oversight; and
- ensuring appropriate criminal penalties for those acting outside the legal framework.

Municipalities seeking to develop a balanced, appropriate, and evidence-based response to cannabis legalization need to consider many important implications for local communities, the reality of new costs and possible shifts in expenditures resulting from the passage of the new law, and the need to balance a concern for possible harms and public safety concerns associated with cannabis legalization with a recognition of potential benefits that may accrue.

The report outlines the key aspects of municipal policy and regulations that must be considered and implemented for an effective response to be put in place in line with Federal and Provincial regulations. Municipalities' will need to address four main areas of concern: building municipal capacity, developing and employing oversight mechanisms, coordinating efforts with multiple partner agencies and groups, and communicating with stakeholders.

While there will be some differences in rules across Provinces and Territories, the implementation checklists in Chapter 5 provide a starting point for local policy development and put in place the necessary infrastructure and regulations to respond to their specific local needs. Seven key aspects of municipal authority are outlined in the framework to provide guidance for municipal policy on cannabis.

1. Zoning and Land Use
2. Regulatory Bylaws and Licensing
3. Inspections
4. Municipal Enforcement
5. Finance and Revenue
6. Engagement and Education
7. Economic Development

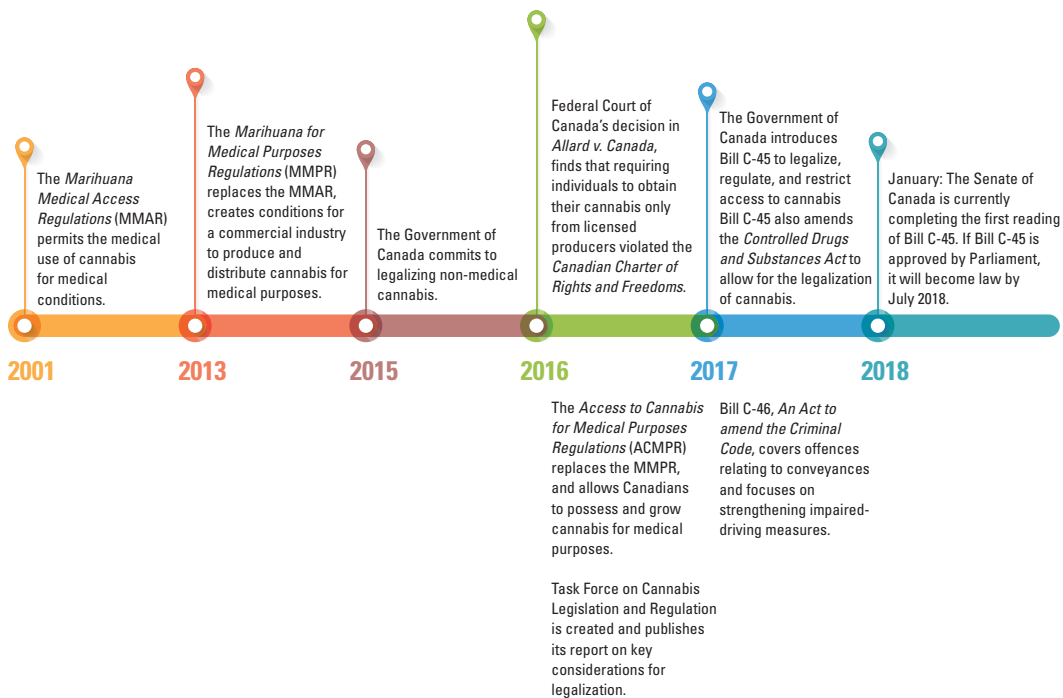
The City of Surrey has prepared this Framework to provide City staff with the necessary background and context to assist in creating an evidence-based response to cannabis legislation. We have attempted to produce it in a way which other municipalities may also find useful. The information contained is based on primary and secondary research into the public health and public safety issues associated with cannabis use, as well as the desire to reduce or eliminate the unregulated market for recreational cannabis. A review of the impact of legislation of recreational cannabis in U.S. municipalities assists in drawing out the lessons from other municipalities. This is combined with a review of the aspects of local government authority and regulations impacted by the legislation. Together this analysis provides a way forward and allows us to understand the complex issues at play, and create a framework for a municipal response to cannabis legalization.

1 BACKGROUND

Municipalities and local governments must consider and implement regulations and guidelines before the new law comes into force. This report seeks to deepen understanding of the legal, regulatory, and community landscape prior to cannabis legalization and of what might need to change – in municipal bylaws, structures, processes, procedures, and personnel – as a result of the new legislation.

Cannabis in Canada – A timeline

The debate over cannabis – whether its use should be decriminalized and if so, to what extent – began in the 1960s. In Canada since then, several developments have marked the transformation of cannabis from a substance that was added to the list of drugs in the federal Opium and Narcotics Drug Act of 1923 to one whose recreational use is expected to become legal in 2018. In the interim, cannabis remains illegal until the Bill completes the legislative process. The current regulations for accessing cannabis for medical purposes remain in place, and will remain effective under the new Act.



Legalization vs. Decriminalization

Legalization refers to the repeal or abolishment of laws that prohibit the use, sale and possession of cannabis and/or the establishment of new legislation that permits use under certain conditions or restrictions.

Decriminalization is the reduction or repeal of criminal penalties imposed for the use, sale, and/or possession of cannabis while cannabis remains illegal or unregulated by the state.

Bill C-45, Cannabis Act

There are many complex public health, public safety and economic concerns driving the decision by the Federal Government to introduce this legislation. However, the primary purpose of the proposed Act is to create a strict legal framework for controlling the production, distribution, sale, and possession of cannabis across Canada. More specifically, it outlines several objectives, including to:

- Restrict youth access to cannabis;
- Protect young people from promotions or enticements to use cannabis;
- Deter and reduce criminal activity by imposing serious criminal penalties for those breaking the law, especially those who import or export cannabis, or provide it to youth;
- Protect public health through strict requirements for product safety and quality;
- Reduce the burden on the criminal justice system;
- Provide for the legal production of cannabis to reduce illegal activities;
- Allow adults to possess and access regulated, quality-controlled legal cannabis; and
- Enhance public awareness of the health risks associated with cannabis.

There are several key provisions within Bill C-45 that will help Provinces, Territories and local governments to monitor and enforce the legislation. Health Canada has published a factsheet (Figure 1) which summarises the key provisions of Bill C-45.


LEGALIZING AND STRICTLY REGULATING CANNABIS

The proposed Cannabis Act sets out a system for legalizing, strictly regulating and restricting access to cannabis

FEDERAL RESTRICTIONS TO PROTECT YOUTH

MINIMUM AGE OF 18 TO PURCHASE	PUBLIC EDUCATION AND AWARENESS CAMPAIGN	REQUIRING CHILDPROOF PACKAGING AND WARNING LABELS
<p>PROHIBITIONS</p> <ul style="list-style-type: none"> • Products appealing to youth • Packaging or labelling cannabis in a manner that makes it appealing to youth • Selling cannabis through a self-service display or vending machine • Promoting cannabis, except in narrow circumstances where the promotion could not be seen by a young person • Penalties: Up to \$5 million fine or 3 years in jail 		<p>TWO NEW OFFENCES</p> <ul style="list-style-type: none"> • Giving or selling to youth • Using a youth to commit a cannabis-related offence • Penalties: Up to 14 years in jail

I'M AN ADULT. WHAT WILL I BE ALLOWED TO DO UNDER THE NEW SYSTEM?

 [ALLOWED]	 [PROHIBITED]
<p> POSSESSION UP TO THE LIMIT</p> <ul style="list-style-type: none"> • Up to 30 grams in public of licit dried cannabis and equivalent in non-dried • Sharing up to 30 grams among adults 	<p>DRIVING WHILE IMPAIRED BY A DRUG (INCLUDING CANNABIS)</p> <p>DRIVING WITHIN TWO HOURS OF HAVING AN ILLEGAL LEVEL OF DRUGS IN BLOOD (NEW) *</p> <ul style="list-style-type: none"> • Penalties can range from \$1,000 to life imprisonment depending on the level of drugs in blood and whether someone was hurt or killed
<p> PURCHASE AND CONSUMPTION</p> <ul style="list-style-type: none"> • From a licensed retailer • Minimum age of 18 (or higher if set by province/territory) • Up to possession limit (30 grams) • Initially available: dried and fresh cannabis, cannabis oil • Other products (e.g. edibles) available later 	<p>ILLEGAL DISTRIBUTION OR SALE</p> <ul style="list-style-type: none"> • Tickets for small amounts • Up to 14 years in jail <p>POSSESSION OVER THE LIMIT</p> <ul style="list-style-type: none"> • Tickets for small amounts • Up to 5 years less a day in jail
<p> HOME CULTIVATION</p> <ul style="list-style-type: none"> • Up to 4 plants per residence • From legal seeds/seedlings • Local oversight (e.g. registration or permit) • Make cannabis-containing products at home, such as food and drink • No use of dangerous organic solvents 	<p>GIVING OR SELLING TO YOUTH (NEW)</p> <ul style="list-style-type: none"> • Up to 14 years in jail <p>USING A YOUTH TO COMMIT A CANNABIS-RELATED OFFENCE (NEW)</p> <ul style="list-style-type: none"> • Up to 14 years in jail
<p> MEDICAL</p> <ul style="list-style-type: none"> • Access to cannabis for medical purposes will be maintained • Authorization of health care professional • Home or designated production • Direct order from licensed producer with secure delivery through mail or by courier 	<p>TAKING CANNABIS ACROSS INTERNATIONAL BORDERS</p> <ul style="list-style-type: none"> • Up to 14 years in jail <p>PRODUCTION OF CANNABIS BEYOND HOME CULTIVATION LIMITS OR WITH DANGEROUS ORGANIC SOLVENTS</p> <ul style="list-style-type: none"> • Tickets for small amounts • Up to 14 years in jail

This document reflects the provisions of the Cannabis Act as reported to the House of Commons by the Standing Committee on Health on October 5, 2017

Figure 1. Key Provisions of Bill C45

Jurisdictional responsibilities

The new legislation empowers Provincial/Territorial, and municipal governments to oversee various aspects of the new system for legalized cannabis.

Municipalities would oversee retail locations and rules, land use, and zoning. They would also support the Federal and Provincial governments on public education initiatives and the enforcement of rules and regulations. This would include enforcing laws and regulations such as:

- New impaired driving laws
- New fire and building regulations
- Prohibitions on selling cannabis to minors
- Rules on the consumption of cannabis in public
- Rules on personal cultivation of cannabis

Table 1 provides more detail on the specific and overlapping areas of Federal, Provincial/Territorial, and municipal jurisdictional responsibilities.

Table 1 - Jurisdictional Responsibilities for Federal, Provincial and Municipal Governments

ACTIVITY	AUTHORITY RESPONSIBLE		
	FEDERAL	PROVINCIAL	MUNICIPAL
Possession limits **	●		
Trafficking	●		
Advertisement and packaging **	●		
Impaired driving	●	●	
Medical cannabis	●		
Seed-to-sale tracking system	●		
Production (cultivation and processing)	●		
Age limit (federal minimum) **	●	●	
Public health	●	●	
Education	●	●	●
Taxation	●		●
Home cultivation (growing plants at home) **	●		
Workplace safety		●	
Distribution and wholesaling		●	
Retail model		●	
Retail location and rules		●	●
Regulatory compliance	●	●	●
Public consumption		●	●
Land use/zoning		●	●

** Provinces will have the ability to strengthen legislation for these areas under federal jurisdiction.¹

¹ <https://www.alberta.ca/cannabis-legalization-in-canada.aspx>

Current context

Public perception regarding cannabis use seems to have shifted in recent years and Canadians are split on their support for legalization. A 2016 study by Deloitte Touche Tohmatsu has shown that 40% of the adult population in Canada was in favour of legalization, with 36% opposed, and 25% undecided. The Canadian Centre on Substance Abuse did a study that same year showing that Canadian youth generally believe that cannabis is less harmful than alcohol and other substances. The study found that while youth want to better understand the impacts of cannabis use, they encounter conflicting messages which leads to confusion, inaccurate information and an over-reliance on peers to form their opinions.

Not surprisingly, concerns remain about the impact of cannabis legalization on public health and community safety, and about what changes the new law will bring. The issues include:

- The short- and long-term effects that cannabis use may have on physical and mental health
- The impact of cannabis consumption around infants, children, and youth
- Public consumption of cannabis and the effects of second-hand smoke
- Detection of cannabis-related impairment in individuals operating a motor vehicle, and on individuals in the workplace

As July 2018 is fast approaching, the work is imbued with a sense of urgency.

Yet, some Federal and Provincial government decisions have not yet been made (e.g., retail model, revenue generation) which means that municipalities must build systems and regulations on the information available while continuing to monitor and engage in dialogue with Provincial/Territorial and Federal counterparts.

The challenges that municipalities face are heightened by the fact that the available evidence – especially regarding the impact of cannabis – is “often incomplete or inconclusive,” a fact acknowledged by the Federal Task Force on Cannabis Legislation and Regulation in its final report.²

The City of Vancouver and the City of Victoria have already started regulating cannabis for recreational use in their municipalities. Vancouver currently has ten locations operating with an approved development permit and business license.

There are also about 60 retailers operating in Vancouver without a permit/ license. Victoria has approved one Cannabis Business Rezoning application and Cannabis Business License application. Estimates indicate that there are 38 cannabis-related businesses in Victoria, with 35 of these operating as storefront cannabis retailers without a permit/license.

² <https://www.canada.ca/en/health-canada/services/substance-abuse/controlled-illegal-drugs/about-marijuana.html>

For example, a number of complex issues regarding cannabis-impaired driving have yet to be resolved. These issues include developing an effective way to detect impairment and creating appropriate law enforcement tools and technologies. As well, the Federal Government, through Health Canada, has not been able to empower third parties to inspect license holders for producers of medical cannabis due to privacy legislation. As a result, third parties are unable to conduct systematic regulatory inspections to ensure the safety of the communities in which the production sites are located. Hence, local governments are unable to determine whether licensed medical cannabis production is having a negative impact on the health and safety of those in nearby homes and buildings.

In this environment of incomplete data, it is vital that municipalities consider all the available evidence with caution and take an evidence-based approach whenever possible. Where more information is needed, implementing a policy framework that leaves room for evolution over time is advised.

2 CANNABIS IN 2017

Definition

The term “cannabis” refers to the plant *Cannabis sativa*. The flowers and leaves of this plant are used for their ability to cause psychoactive effects (effects on the mind), including euphoria (feeling high), a sense of well-being, relaxation, and heightened sensory experiences (such as sight, taste, smell, and sound). The cannabis plant is also used for medical, social, or religious purposes. Many cannabis products come from or can be made using the flowers and leaves of the cannabis plant. Table 2 outlines some of the main forms in which cannabis is purchased.

Table 2 – Types of Cannabis

TYPE	CHARACTERISTICS
Kief or hashish	<ul style="list-style-type: none"> • Kief is a powder made from the trichomes of the cannabis plant, while hashish is the resin that is produced when the trichomes are pressed. Hashish may be soft and flexible or firm and brittle. It comes in different colours, including gold, black, green, and brown. Hashish can also be made into various forms or shapes, such as balls, bricks, sticks or cakes. • There is more THC in both kief and hashish than in dried cannabis. Hashish can be as much as 60% THC, while the amount of THC in cannabis is usually lower. • Kief and hashish can be smoked or mixed with foods or liquids and eaten or drunk.
Hash oil (also referred to as “errl”)	<ul style="list-style-type: none"> • Hash oil is made by mixing cannabis plant material with petroleum-based solvents like butane. This process pulls the cannabinoids out of the plant and into the butane. This method is dangerous and can cause fires or explosions. The resulting product is called butane hash oil/butane honey oil (BHO). The colour of this oil can be red, gold, or dark brown. • Hash oil is usually a thick, sticky liquid and may contain more THC than dried cannabis plant material. The amount of THC in hash oil can be as much as 80%.
Shatter, budder, wax, honeycomb	<ul style="list-style-type: none"> • These are often the strongest cannabis products. Some of these can have up to 90% THC. Many are made from butane hash oil (BHO) using various processes, while others, like rosin, are made without solvents. • These products each have a different look and feel • Shatter is hard, brittle, and amber-coloured. • Budder and wax are soft and feel like lip balm. • Honeycomb looks like a honeycomb.
Rosin	<ul style="list-style-type: none"> • The term “rosin” originally referred to a method of making a product that was used to lubricate violin bows. • In the context of cannabis, it refers to an extraction process involving a combination of heat and pressure to extract resin from the cannabis plant. (No foreign substances, such as butane or propane, are used in the extraction process.) The end product is translucent, sappy, and sometimes shatter-like.

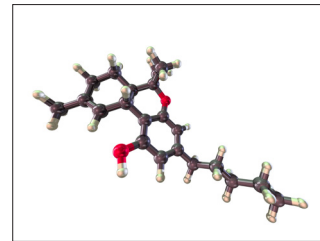
Consumption methods

Cannabis can be consumed in many different ways, including smoking, vaping, dabbing, drinking or eating. Dried cannabis can be smoked using “joints” or “spliffs” (cannabis wrapped in partially translucent paper; can be mixed with tobacco), pipes, such as “bongs”; or in “blunts” (partially or entirely hollowed out cigar wrappers filled with cannabis). Vaping refers to breathing in cannabis and cannabis concentrate vapours through a vaporizer. Dabbing is similar but vapours are produced by heating cannabis concentrates with a blowtorch.

One of the fastest growing segments of the cannabis industry is the edible market. This includes drinking teas or sodas infused with cannabis, and eating baked goods, candies or other edible products made with cannabis or its extracts. Note that the federal government has not yet released a proposed framework and regulations for edible cannabis products, though they are anticipated to be introduced soon after the implementation of Bill C-45.

Chemical composition

Cannabis contains hundreds of chemical substances. Over 100 of these are known as cannabinoids because they come from the cannabis plant. Cannabinoids are made and stored in the plant’s trichomes, which are tiny, clear hairs that stick out of the flowers and leaves of the plant. Cannabinoids are chemicals that have an effect on cell receptors in the brain and body, and can change how those cells behave.³



THC molecular structure

3 <https://www.canada.ca/en/health-canada/services/substance-abuse/controlled-illegal-drugs/about-marijuana.html>

Table 3 – Chemical Substances in Cannabis

CANNABINOID	CHARACTERISTICS
THC (Delta-9-tetrahydrocannabinol)	<p>THC is the most researched cannabinoid. It is responsible for the way the brain and body respond to cannabis. While THC has some therapeutic effects, it also has harmful effects.</p> <p>The potency (concentration) of THC in cannabis is often presented as a percentage of THC by the weight of a specific part of the plant.</p> <p>The THC potency in dried cannabis has increased from an average of 3% in the 1980s to around 15% today. Some strains can have an average of as much as 30% THC. Cannabis that contains very low amounts of THC in its flowers and leaves (less than 0.3%) is classified as hemp.</p>
CBD (Cannabidiol)	<p>Unlike THC, CBD is not psychoactive.</p> <p>There is some evidence that CBD may block or decrease some of the psychoactive effects of THC. This may occur when the amount of CBD in the cannabis is equal to or greater than the amount of THC.</p> <p>CBD is also being studied for its potential therapeutic uses.</p>
Terpenes	<p>Terpenes are chemicals made and stored in the trichomes of the cannabis plant, along with cannabinoids.</p> <p>Terpenes give cannabis its smell. Cannabis has been described as smelling like pine, spice, citrus, skunk, diesel, and cheese.</p>

Cannabis Users

Cannabis users fall into two groups: medicinal users and recreational users.

The substance is increasingly being consumed for medical purposes including alleviating the symptoms of certain conditions or diseases, and as a treatment for pain. It should be noted that clinical data on the medical uses of cannabis is mixed and there is no clear scientific consensus on the specific benefits of cannabis from a medical standpoint. The two key chemicals relevant in the medical application of cannabis are:

- Tetrahydrocannabinol (THC), which is the psychoactive compound in cannabis (i.e., the element that produces the high)
- Cannabidiol (CBD), which is the substance that does not produce psychoactive effects. Medical cannabis is often cultivated to have a higher CBD content.

Although the U.S. Food and Drug Administration does not recognize the cannabis plant as medicine, it is being prescribed to help with pain, multiple sclerosis, nausea, epilepsy, concussion, Alzheimer’s disease, and bipolar disorder.⁴

Approximately 22% of Canadians are existing recreational users of cannabis.⁵ There is little variation in the gender of users with males and females reporting similar levels of use. However, age does seem to have significant impact on reported cannabis use. 33% of millennials have used cannabis at least occasionally; with 23% of generation X reporting some usage and only 13% of baby boomers reporting any consumption at all. It seems that generation X and boomers use occasionally if at all, whereas, 11% of millennials in the study reported using cannabis daily.

⁴ 7 uses for medical marijuana: <http://www.cnn.com/2014/03/07/health/gallery/uses-for-medical-marijuana/index.html>

⁵ Deloitte Touche Tohmatsu Ltd., Recreational Marijuana: Insights and Opportunities: https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/Analytics/ca-en-analytics-DELOITTE%20Recreational%20Marijuana%20POV%20-%20ENGLISH%20FINAL_AODA.pdf

Rationale for cannabis use

Recreational users typically consume cannabis for the psychoactive effects of the THC. A 2016 study published by Deloitte Touche Tohmatsu⁶ found that the most common three motivations for recreational cannabis consumption were relaxation, reduction of anxiety and social using (Figure 2).



Figure 2. Percentage of users stating motivation for recreational cannabis use (Source: Deloitte Touche Tohmatsu, 2016)

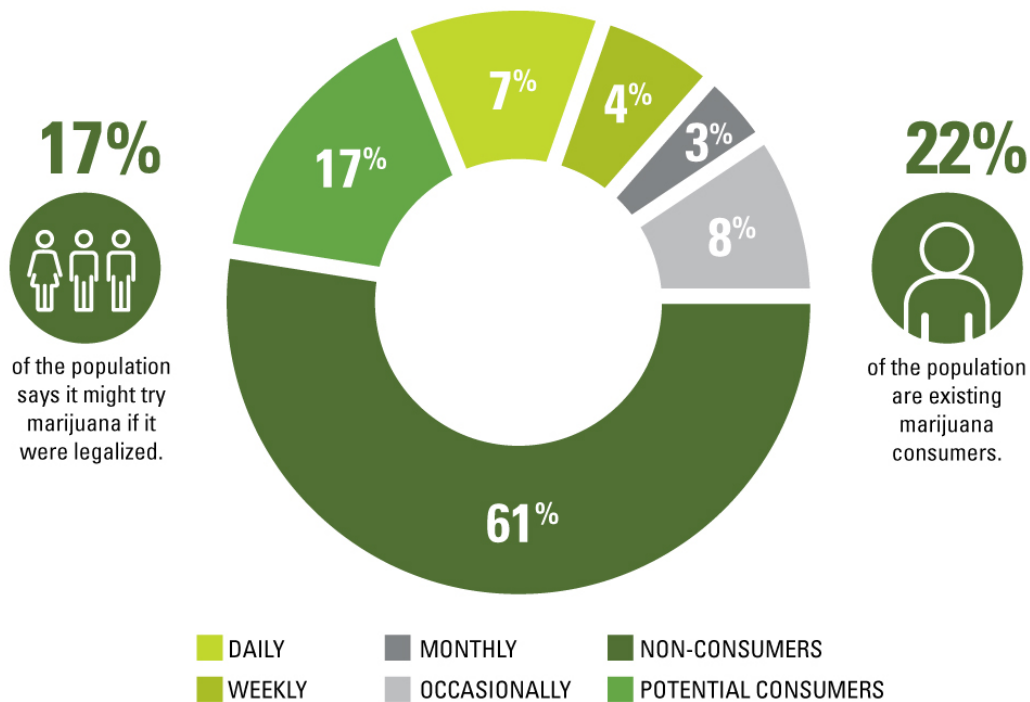
As with the frequency of use above, the reasons for using vary by age. A study published in 2017 by the Canadian Centre on Substance Abuse surveyed youth to assess their perception of cannabis and reasons for use.⁷ This study found that youth were strongly motivated by influence of those around them, the availability of the drug, and perceived benefits from cannabis use. Most youth used cannabis socially with their peers and associated it with building social connections. This was interpreted both positively in terms of building a social identity with their peer group, but also negatively in terms of “peer pressure” and the need to fit in with their social group. Conversely, youth in the study stated the main influences against using cannabis was fear of consequences (arrest, or “getting in trouble”), the negative physical effects of using (especially using while consuming alcohol), and the stigma associated with using (i.e., being labeled a “pothead” or “stoner”).

6
7

ibid
McKiernan, A., & Fleming, K. (2017) Canadian Youth Perceptions on Cannabis, Ottawa, Ont.: Canadian Centre on Substance Abuse

Prevalence of cannabis use

As recreational use of cannabis is currently illegal it is very difficult to find reliable data on the prevalence, volume and price of product consumed in Canada. However, several studies have been undertaken to survey Canadian user groups to discern patterns of consumption. One of the most recent of these was a 2016 study of 5,000 individuals across Canada completed by Deloitte Touche Tohmatsu. Participants were asked to detail both their existing experience with cannabis and their perception of whether they would use cannabis following legalization. Figure 3 outlines the frequency of use based on the Deloitte study.



Note: *Potential consumers defined by the 17% of non-consumers who indicated that they would definitely, probably or might try.

Figure 3. Consumption of Cannabis by Frequency and Potential
(Source: Deloitte Touche Tohmatsu, 2016)

The price of cannabis is hard to assess definitively due to the variability of local illicit markets across Canada. However, a 2017 publication by Public Safety Canada estimates that the average price of cannabis in Canada is \$6.60 per gram for illicit cannabis and \$8.37 per gram for licit cannabis, as reported by users.⁸ There has been a trend towards a decline in price per gram over the last five years, according to the study. Medical cannabis is on average \$2.00 higher per gram than recreational cannabis. A 10% drop in the price of cannabis is estimated to cause a 4% to 6% increase in the consumed amount of cannabis.

⁸ Research Summary: Price of Cannabis in Canada, Public Safety Canada 2017-S005

Perception of cannabis

There is no question that perceptions regarding cannabis use and cannabis legalisation have changed dramatically over time. From the mid 1930's publication of movies such as "Reefer Madness" to 2008's "Pineapple Express" public perception has come a long way. "Reefer Madness" was created by a church group and promoted to parents as a way of warning their children of the dangers of cannabis consumption. It had a major influence on both public policy and public perceptions regarding cannabis and its impact lasted for decades. "Pineapple Express" is a comedy/action movie that follows a regular cannabis user and his dealer as they try to evade illegal cannabis growers after witnessing a murder. Cannabis consumption occurs throughout the movie and is played for comedic effect rather than as a morality lesson for the viewer. While these are just two examples from popular culture, they are indicative of the normalization of cannabis use in western culture over time.

There remain however clear differences among different subgroups, for example, millennials commonly view cannabis in a more positive light, and generation X and baby boomers are much more likely to equate the negative effects of cannabis with those of other drugs.

The 2017 study by the Canadian Centre on Substance Abuse suggest that Canadian youth generally believe that cannabis is less harmful than alcohol and other substances. They generally felt that the impact of cannabis use is dependent on the frequency of use, the amount used, and the users themselves. They seem to believe that cannabis use has long-term effects only on those who use the substance often and for a long period. While the empirical data is less clear, it seems that younger users have less negative perceptions of cannabis use.

Youth understand that it is dangerous to drive after consuming cannabis but believe the level of impairment depends on the driver. Therefore, they may underestimate the effects of cannabis in terms of impairment on driving.

“ Yeah, I think that [driving high will] become a lot bigger issue because people don't think about it. When people are drunk, I think they think of it differently because if you're really clearly impaired, you know that your judgement and reaction times are off, and people kind of seem to forget—because it's a different type of impairment when you're high—they seem to forget. ”

Participant Canadian Centre on Substance Abuse study 2017

As the perceptions around the substance and its use have changed, so has perception of the legal status of cannabis. The 2016 Deloitte study showed that 40% of the adult population in Canada was in favour of legalization, with 36% opposed and 25% undecided. 59% of respondents believed that recreational cannabis has the same (or less) health and social impact as alcohol. This suggests that the majority believe there is a disparity between the perception of harms from alcohol and cannabis and their status under the law.

Cannabis impairment

It is currently possible to test for levels of THC or other chemicals in a user's blood or urine. However, at time of publication there is currently no standard scientific test that equates specific levels of THC or other chemicals with levels of cognitive or physical impairment. This makes it extremely difficult to objectively assess the degree of impairment in cannabis users. The level of impairment may be impacted by many factors such as; time since consumption, potency of cannabis, size of dose, consumption method, the amount of previous exposure to cannabis and individual characteristics of the user.

Some heavy regular users of cannabis, including those who use it for medical purposes, may not show any obvious signs of impairment even with significant THC concentrations in their blood. Conversely, infrequent users with the same or lower THC concentrations may demonstrate more significant impairment.

There is also a significant "combination effect" when cannabis is consumed with alcohol, leading to intoxication and control problems that are greater than those arising in situations where either substance was consumed alone. Following their extensive consultation, the Federal Task Force on Cannabis Legalization and Regulation, urged there to be "no co-location of alcohol or tobacco and cannabis, wherever possible." As well, the Canadian Public Health Association has made a strong statement on the issue, urging that "Under no circumstance should retail sales be co-located with sales of other controlled substances such as alcohol, tobacco and/or pharmaceuticals."⁹

In BC, Dr. Perry Kendall, the Provincial Health Officer, along with Dr. Marcus Lem the Chair of the Health Officers Council of B.C., recently stated there are two reasons for this recommendation.¹⁰ The first is that there are risks that co-sale may condone, even encourage the dangerous combined use of cannabis and alcohol which increases impairment, especially as it relates to impaired driving. Secondly, co-location would lead to more British Columbians being introduced to Cannabis. This is a concern given that British Columbians have an annual alcohol consumption rate of 79%, compared to the much lower current rate of cannabis use at 17%.

Other challenges exist, including the need to account for the rapid and sharp decline of THC levels in the blood in the hours after cannabis is smoked, with edibles, the decline in THC has been observed to be more gradual.



9 <https://www.cpha.ca/sites/default/files/uploads/policy/positionstatements/cannabis-positionstatement-e.pdf>
10 <http://vancouversun.com/opinion/op-ed/drs-perry-kendall-and-marcus-lem-selling-cannabis-in-liquor-stores-would-be-a-bad-idea>

Therefore, an important area of future study as regards cannabis use, is the assessment of impairment through rigorous scientific methods. The Task Force has called for funding in several areas, including studies on the link between THC levels and impairment, which could support the development of a per se limit; development of effective and reliable roadside testing tools to detect impairment based on a per se limit; and once these are developed, preparation of a plan to deploy them nationally. The Task Force also indicated that Canada needs to hire, train and certify more Drug Recognition Experts (DRE) and officers able to conduct a standardized field sobriety test (SFST).

Risks

There are well-documented risks¹¹ from cannabis use to both immediate and long-term health. The main health risks include:

- Cognitive, psychomotor, and memory impairments;
- Hallucinations and impaired perception;
- Impaired child and youth brain development
- Mental health problems (including psychosis);
- Pulmonary/bronchial problems (e.g., bronchitis, lung infections, chronic cough, increased mucus buildup in the throat, and potentially lung cancer)
- Dependence; and
- Reproductive problems.

In 2017 Garis and Tyakoff¹² undertook a literature review to assess the main risks associated with cannabis production, consumption and use. They categorised these risks into five main areas of harm.

1. Harms to infants, children and adolescents

The primary harms identified in the literature relate to effects on brain development of infants, children and adolescents from either second hand smoke exposure for infants and children or first-hand exposure by adolescents. Brain development continues until approximately 25 years of age and the earlier that youth are exposed to cannabis products the greater the risk of impacts on brain health.

2. Burn injuries associated with production/use

Most of the risks associated with burn injuries relate to the production of butane hash oil (BHO) in the home. Both California and Colorado reported increased rates of burn injury from production of BHO. Any use of volatile chemical compounds such as BHO carries increased risk of burn injury.

¹¹ Fischer, B., Russell, C., Sabioni, P., van den Brink, W., Le Foll, B., Hall, W., Rehm, J. & Room, R. (2017). "Lower-Risk Cannabis Use Guidelines (LRCUG): An evidence-based update." *American Journal of Public Health*, 107(8). DOI: 10.2105/AJPH.2017.303818

¹² Garis, L, Tyakoff, A., (2017). "The Legalization and Regulation of Marijuana and Implications for Local Government: A Literature Review." University of the Fraser Valley.

3. Workplace injuries associated with cannabis impairment

While there is no standard scientific test from cannabis impairment the review of the literature suggests significant concerns, especially in safety sensitive positions, from cannabis use in the workplace. The cognitive skill needed to operate equipment safety may be impaired by cannabis use. However the degree of impairment will depend on many factors (e.g., potency, timing and frequency of use, and size of the dose) and is difficult to assess scientifically.

4. Injuries and fatalities from cannabis impaired driving

While there is no scientifically accepted test for impairment from cannabis, there is a correlation between cannabis use and motor vehicle collisions. Garis and Tyakoff found that the risk of a motor vehicle collision was increased by a factor of 2 following cannabis smoking. According to Canada's National Fatality Database, fatalities from motor vehicle accidents that tested positive for cannabis rose by almost 7% between 2000 and 2012 so the frequency of cannabis use before or while driving seems to be increasing.

The Federal Task Force report states that while cannabis is known to impair psychomotor skills and judgement cannabis-impaired driving is a more complex topic of study than alcohol-impaired driving. The level of THC in bodily fluids cannot be used in a reliable manner to indicate the degree of impairment or crash risk. Evidence was gathered over many years to arrive at a metric for alcohol intoxication (i.e., blood alcohol concentration, or BAC). Such data do not yet exist for cannabis.

5. Health and safety risks from cultivation of cannabis in the home

Large-scale growing operations have long been demonstrated to create significant risks from exposure to volatile chemicals and risks from fires. It is not yet clear the degree of risk from small scale cultivation under the proposed legislation but research also indicates that large-scale cultivation of cannabis (commonly referred to as "grow-ops") also creates significant water vapour which can lead to an increase in mould in the home. There are also a number of abiotic hazards resulting from cannabis production, including pesticides, carbon monoxide, and products of unvented combustion appliances.

Medical benefits

The medical use of cannabis has been studied for decades, but experts do not yet agree on how safe it is or how well it works. Some medical experts recommend the use of cannabis to address certain medical symptoms and conditions. Others do not recommend cannabis use because of the short and long-term ill effects it may have on physical and mental health. They also maintain that other prescription drugs – such as new forms of pain and nausea medication may work just as well.

In 2016 Health Canada published a consumer information fact sheet on cannabis specifically for those who intended to use the product for medical purposes.¹³ The publication refers to the use of cannabis “for the relief of one or more symptoms associated with a variety of disorders which have not responded to conventional medical treatments.” Some of the symptoms and conditions for which cannabis is most often prescribed include:

- Severe refractory nausea and vomiting associated with cancer chemotherapy
- Loss of appetite and body weight in cancer patients and patients with HIV/AIDS
- Pain and muscle spasms associated with multiple sclerosis
- Chronic non-cancer pain (mainly neuropathic)
- Severe refractory cancer-associated pain
- Insomnia and depressed mood associated with chronic diseases (HIV/AIDS, chronic non-cancer pain)
- Symptoms encountered in the palliative/end-of-life care setting

The therapeutic and adverse effects of cannabis use depend on a variety of factors, including the amount used, the concentration of cannabinoids in the product used, the frequency of use, etc.

Economic benefits

The economic benefits from a legal cannabis industry may be considerable. According to the 2016 report by Deloitte, the base retail cannabis market in Canada is worth between \$4.9 billion and \$8.7 billion, which would rival the size of the Canadian spirits market, which is \$5 billion. When one factors in ancillary markets such as growers, cultivators, testing labs, security, etc., the potential value could approach \$23 billion. These numbers do not include the economic impact of tourism, business taxes, licensing fees, etc., which could drive the potential value even higher. An example of the financial impact of a legal cannabis industry is found in the state of Colorado, which is one-seventh the size of Canada and which, in 2016, collected \$193,604,810 in cannabis taxes, licences, and fees.

¹³ Consumer Information – Cannabis: <https://www.canada.ca/en/health-canada/services/drugs-health-products/medical-use-marijuana/licensed-producers/consumer-information-cannabis-marihuana-marijuana.html>

3 MEDICINAL CANNABIS

This section provides an overview of the existing regime governing medical use of cannabis: what is allowed, what is prohibited, and the roles and responsibilities of the key participants in this regime. In addition, it examines more closely the responsibilities assigned to the Federal and Provincial governments under Bill C-45 to regulate strictly the production, distribution, and sale of cannabis for recreational use.



Overview of the regulations

Since August 2016, the production, distribution, and use of medical cannabis in Canada have been governed by the Federal Access to Cannabis for Medical Purposes Regulations (ACMPR). The regulations contain four parts:¹⁴

- Part 1** Sets out a framework for commercial production by licensed producers responsible for manufacturing and distributing quality-controlled fresh or dried cannabis, cannabis oil, or starting materials (cannabis seeds and plants) in secure and sanitary conditions
- Part 2** Sets out provisions for individuals to produce a limited amount of cannabis for their own medical purposes or to designate someone to produce it for them
- Part 3 & 4** Include:
 - Transitional provisions regarding the continuation of Marihuana Medical Access Regulations (MMPR) activities by licensed producers
 - Consequential amendments to other regulations that referenced the previous set of regulations (MMPR)
 - Provisions repealing the MMPR and setting out the coming into force of the ACMPR on August 24, 2016

¹⁴ Understanding the New Access to Cannabis for Medical Purposes Regulations: <https://www.canada.ca/en/health-canada/services/publications/drugs-health-products/understanding-new-access-to-cannabis-for-medical-purposes-regulations.html>

What is allowed

Persons with a medical need who have the authorization of their health care practitioner may access cannabis in three ways: purchase from a licensed producer, home production of a limited amount, designating someone else to produce for them. Whatever method is used to get cannabis, the possession limit in all cases is a 30-day supply or 150 grams of dried cannabis (or the equivalent in other forms – whichever is less).

Individuals may apply to produce cannabis indoors or outdoors. However, they may produce cannabis outdoors only if they can confirm that their production site is not adjacent to a school, public playground, daycare, or other public place mainly frequented by children. A formula has been established for determining how many plants a registered person can grow and how much cannabis he or she can store based on the daily quantity of dried cannabis authorized in the registered person's medical document. The general formula is as follows: Every gram of dried cannabis authorized will mean the production of five plants indoors or two plants outdoors.

Registered persons and designated persons may alter the dried cannabis they have produced into other products (e.g., oils) as long as they do not use organic solvents (e.g., butane) to do so and they stay within the possession limit prescribed on their registration certificate.

What is not allowed

Any individual conducting cannabis-related activities outside the parameters of the ACMPR, the Narcotic Control Regulations (NCR), or an exemption pursuant to Section 56 of the Controlled Drugs and Substances Act (CDSA) could be illegal. Access to cannabis for medical purposes is permitted only under the terms and conditions set out in the regulations. Any individual registered to produce a limited amount of cannabis for himself or herself may not sell, provide, or give cannabis to another person and it remains illegal to produce in excess of the maximum limits outlined in a registration certificate.

Storefronts selling cannabis (commonly known as “dispensaries” and “compassion clubs”) are not authorized to sell cannabis for medical or any other purposes. These operations are illegally supplied and provide products that are unregulated and may be unsafe. Illegal storefront distribution and sale of cannabis in Canada are subject to law enforcement action. It remains illegal for a company or an individual to advertise cannabis to the general public.

Roles and responsibilities for medicinal cannabis

Several organisations and individuals have a role to play in the system for providing access to medical cannabis. These roles and responsibilities are outlined in Table 4.

Table 4 – Roles and Responsibilities for Medicinal Cannabis

WHO	ROLE AND RESPONSIBILITIES
Health Canada	<ul style="list-style-type: none"> • Licensing and overseeing the commercial industry • Reviewing applications to ensure compliance with the regulations and associated directives • Monitoring licensees and ensuring compliance with the regulations and the CDSA (including inspections) • Registering individuals to produce a limited amount of cannabis for their own medical purposes (or to have another individual produce it for them) • Reviewing applications to ensure compliance with the regulations • Responding to requests from law enforcement to confirm the validity of a registration certificate
Law enforcement	<ul style="list-style-type: none"> • Enforcing the CDSA, including whether individuals who possess, produce, sell, or provide and transport, deliver, or ship cannabis are operating outside of the ACMPR framework • Contacting Health Canada to verify whether a licensed producer is in fact licensed or that an individual is a registered person or designated person • Contacting a licensed producer to verify whether a person is a client of the producer or a person responsible for the client • Where necessary, obtaining proof that the possession or production of cannabis is legal
Licensed producers	<ul style="list-style-type: none"> • Obtaining and maintaining a licence • Undertaking appropriate site and personnel security measures • Performing authorized activities, including good production practices, packaging, shipping, labeling, abiding by import and export requirements, and meeting record-keeping requirements • Meeting client registration and ordering requirements
Health care practitioners	<ul style="list-style-type: none"> • Issuing the necessary medical document to individuals who require cannabis for medical purposes • In hospital settings, allowing fresh/dried cannabis or cannabis oil to be administered to a patient, or sold/provided to a patient or an individual responsible for the patient

4 CANADA: STATUS OF NEW REGULATIONS

Federal requirements

As mentioned in Chapter 1, Bill C-45 assigns to the Federal government the responsibility for setting strict requirements for producers who grow and manufacture cannabis. Bill C-45 includes provisions that relate to some of the rules and standards that will be put in place and these are summarised in Table 5.¹⁵

Table 5 – Summary of federal provisions for cannabis legalization

AREA OF CONCERN	PROVISIONS
Tracking from seed to sale	<ul style="list-style-type: none"> • The Minister of Health shall be responsible for establishing a national cannabis tracking system to: • Track cannabis from seed to sale • Prevent cannabis from being diverted to an illegal market or activity • Prevent illegal cannabis from being a source of product in the legal market • The Minister would be authorized to disclose to certain persons the information contained in the national cannabis tracking system to verify compliance, prevent non-compliance, or meet international obligations. • The Minister would also have the authority to order authorized persons to provide any information relating to their activities, such as cannabis receipts, sales, and disposal.
Products allowed for sale	<ul style="list-style-type: none"> • Initially, cannabis shall be sold only in the following forms: dried cannabis, cannabis oil, fresh cannabis, and seeds and seedlings. • These forms are listed as categories in Schedule 4 of the proposed Act. Additional categories (e.g., edibles) could be added by regulation.
Prohibited ingredients	<ul style="list-style-type: none"> • Cannabis products must not contain ingredients set out in Schedule 5 of the proposed Act (e.g., nicotine or caffeine).
Packaging and labeling	<ul style="list-style-type: none"> • Restrictions would be similar to those for tobacco sales, including restrictions on packaging or labeling that is appealing to young persons, or that includes testimonials, endorsements, or lifestyle promotion. • Labeling and packaging must not contain false, misleading, or deceptive information or use any term, expression, logo, symbol, or illustration prohibited in regulations. • The federal government could require plain packaging. • Unless authorized, a person authorized to sell cannabis must not display cannabis or cannabis accessories, packaging, or labels in a manner that could be seen by young persons.

¹⁵ Legislative Background: An Act respecting cannabis and to amend the Controlled Drugs and Substances Act, the Criminal Code and other Acts (Bill C-45): <http://www.justice.gc.ca/eng/cj-jp/marijuana/c45/toc-tdm.html>

AREA OF CONCERN	PROVISIONS
Promotional activities	<ul style="list-style-type: none"> • Promoting cannabis, cannabis accessories (e.g., rolling papers, pipes, and vaporizers), and services related to cannabis would be prohibited except in limited circumstances. (For example, only informational or brand preference promotion would be allowed and only in a place where young persons are not permitted by law.) • Only factual, accurate information about cannabis products (including ingredients, THC and CBD levels, production methods, and use of pesticides and solvents) would be permitted. This would help the public make informed choices about purchasing cannabis. • Unless authorized under the proposed Act, promotion would not be allowed if there are reasonable grounds to believe that it would be appealing to young persons. • No false, misleading, or deceptive promotion would be permitted. • No promotion through sponsorship, testimonials, or endorsements, or using the depiction of a person, celebrity, character, or animals would be allowed.

It is anticipated that more detailed requirements and prohibitions (such as those on standard serving sizes, potency, and good production practices) will be defined by future regulations. Annex 2 of Bill C-45 further gives the Federal Government responsibility for establishing serious criminal penalties for those operating outside the legal system, especially those who provide cannabis to youth, and creating minimum federal conditions that must be met by all Provincial/Territorial legislation for cannabis distribution and retail sale. This will help to ensure a reasonably consistent national framework to promote safety and will provide guidance for licensing the distribution and sale of cannabis in any Province or Territory that does not enact its own specific legislation. The Federal Government is also responsible for enforcing the law at the international border, while maintaining the free flow of legitimate travel and trade.

Provincial responses

After the Federal Government announced that it would introduce legislation to legalize non-medical cannabis, Provinces and Territories set to work on preparing their jurisdictions for the impact of the new law. Figure 4 summarizes the cannabis legalization frameworks that have been released, as of Dec 13, 2017. The degree of detail that has been provided by each Province/Territory varies as some are more advanced than others in terms of the specific regulatory frameworks they have developed.

	BC	AB	SK*	MB	ON	QC	NB	NL	NS	PE*	YT	NT	NU*
Distribution	BCLDB	AGLC		LGA & MBLL	LCBO	SQC	NB Liquor	Gov't Liquor Board	NSLC		Gov't	NWT Liquor	
Retail Model	P+G	P		P	G	G	G	P+G	G		P+G	G	
Min Age	19	18		19	19	18	19	19	19		19	19	
Personal Cultivation	TBC	4 plants		Not Allowed	TBC	Not Allowed	TBC	TBC	4 plants		4 plants	4 plants	

* Regulatory approach not yet announced
P = private retail stores
G = Government retail stores
(Updated: Dec 13, 2017)

Figure 4. Summary of Provincial Announcements on Cannabis Legalization

Of the thirteen provinces and territories in Canada ten have announced at least parts of their proposed provincial rules for recreational cannabis. Most are still to confirm the specifics of their regulations and legislation. Saskatchewan, Prince Edward Island, and Nunavut have yet to make formal announcements regarding their approach to cannabis legalization.

The BC Government recently announced its framework for cannabis legalization. Similar to most other provinces and territories BC is raising the minimum age to possess, purchase, and consume cannabis to 19 years old.

Only Alberta and Quebec have so far confirmed they will keep their minimum age at the federal level of 18 years old. A minimum age of 19 is consistent with B.C.'s minimum age for consumption of alcohol and tobacco and with the age of majority.

As with most other provinces BC will have a government-run wholesale distribution model. The BC Liquor Distribution Branch (LDB) will be the wholesale distributor of non-medical cannabis in B.C. however; the retail model will be a combination of both public and private retail. More specific details on the distribution and retail model are expected in early 2018.

The approach to retail sales of cannabis is mixed across the country. 5 provinces and territories are establishing government only retail of cannabis, 3 are developing a hybrid model with both private and government retail operations, and 2 are relying on private retail only.

There are also about 60 retailers operating in Vancouver without a permit/ license. Victoria has approved one Cannabis Business Rezoning application and Cannabis Business License application. Estimates indicate that there are 38 cannabis-related businesses in Victoria, with 35 of these operating as storefront cannabis retailers without a permit/license.

The Provincial/Territorial regulation of personal cultivation is also at different stages depending on the area. Alberta, Nova Scotia, Yukon and Northwest Territory have all announced they will follow the federal guideline for personal cultivation of 4 plants. Manitoba and Quebec have determined they will not allow for personal cultivation and the remaining Provinces and Territories have yet to confirm their approach on the issue.

Most of the Provinces and Territories have undertaken at least some consultation with local governments and/or the public as part of creating their regulatory frameworks. As part of the engagement process in BC, local governments were invited to provide written submissions to the province on nine issues outlined in a Discussion Paper. In addition, a Joint Committee on Cannabis Regulation (JCCR) was struck by the Union of BC Municipalities and is engaged in ongoing consultation to inform the Provincial framework. Alberta and Ontario have published some of the most detailed frameworks for provincial legislation to date. A more detailed overview of the approach to be taken in Alberta and Ontario is included in Appendix 2.

Workplace substance use

Provinces and Territories have authority over workplace substance use regulations and guidelines. Current policies on workplace substance use focus on the individual employee's degree of impairment rather than on the particular substance deemed to cause the impairment. Whether employment contracts are collective agreements or individual contracts for union-exempt positions, substance use in the workplace in British Columbia is governed by the BC Employment Standards Act. WorkSafe BC has processes in place for responding to workplace accidents or injuries that may have resulted from impairment. These processes would remain in effect after cannabis legalization.

Employers (including municipalities) are well advised to put in place, or review existing, workplace substance use policies to ensure that they explicitly set out expectations for employees and supervisors. It is important to ensure that employees understand their roles and responsibilities and that terms such as "substance," "impairment" and "fit for duty" are well defined. Some example definitions are included in table 6 to assist municipalities in creating comprehensive policies and guidelines for employees that account for a new legal status for cannabis.

Table 6 – Sample definition of key terms for substance use policies

TERM	SAMPLE DEFINITION
Cannabis	The intoxicating agents that are found in a cannabis sativa plant, including its preparations and derivatives.
Substance	Any substance that may cause impairment that is ingested, consumed or otherwise taken, and includes alcohol, cannabis, medications and illicit drugs.
Impairment	The state of being unable to fully and safely carry out work duties according to generally accepted performance standards due to either physical or cognitive deficits.
Fit for Duty	The ability to perform work duties with efficiency, competence, and safety in accordance with generally accepted performance standards, and without any limitations due to the use or after effects of consuming substances (both legal and illicit).

Workplace substance use policies and guidelines assist both employees and managers/ supervisors by defining standards of behaviour and competence in the workplace and should focus on the safety rather than set out specific rules for different types/classes of substances. As there is currently no scientifically standardised test for impairment from cannabis use, any assessment of impairment is by definition subjective. Detection of THC or other cannabis related chemicals in the blood or urine should not be directly equated with impairment due to the lack of scientific consensus on this matter. Employers must use caution in equating use of any legal substance (alcohol, medication or cannabis) with impairment. Due to the definitional challenges around impairment, a fair and clear process should be set out the policy to document reporting requirements and disciplinary actions.

Under the BC Employment Standards Act, if an employee is suspected of being impaired due to substance use, an appropriate investigation must be conducted, with a medical professional performing an objective assessment of the degree and cause of impairment. There must also be reasonable cause to request drug testing as part of such an investigation. Employers who simply suspect impairment without direct evidence are prohibited from disciplining the employee or terminating his or her employment without due process.

There is a positive obligation on employees to report signs of impairment in themselves or others in the workplace. They are also required to inform the employer of the use of any medication that may reasonably be expected to cause impairment. For example, employees should report that they are taking a prescription medication that contains warnings on the label against specific activities such as operating heavy machinery/driving.

The BC Human Rights Code states: "A person must not (a) refuse to employ or refuse to continue to employ a person, or (b) discriminate against a person regarding employment or any term or condition of employment, because of ... physical or

medical disability...”¹ It also prohibits employers from making workplace decisions based on stereotypes or stigma alone. Under the Employment Standards Act and the Human Rights Code, employers have a duty to accommodate underlying medical issues for which cannabis is used as treatment.

As with all matters of employment law, municipalities are well advised to seek legal guidance on specific policies and determine their rights and obligations under Provincial laws as to whether they permit consumption of any substance on their premises during work hours.

1 BC Human Rights Code: http://www.bclaws.ca/EPLibraries/bclaws_new/document/ID/freeside/00_96210_01

5 LESSONS LEARNED FROM U.S. JURISDICTIONS

The legality or otherwise of cannabis in the U.S. is a complex issue. There is presently a conflict between Federal and State law resulting in a patchwork of complicated and in some cases conflicting statutes and jurisprudence. The use, sale, and possession of all forms of cannabis is illegal under U.S. Federal law. Cannabis remains a Schedule 1 drug under the Controlled Substance Act (1970) and is considered by the U.S. Federal Government to have no medical use. The only exception to this is the use of cannabis in Food and Drug Administration approved research programs. However, individual states have enacted legislation permitting exemptions from Federal law for various uses. As of 2018, nine states have legalized the sale and possession of cannabis for both medicinal and recreational uses. As well, the District of Columbia has legalized personal use, but not commercial sale of cannabis. On January 22, 2018, Vermont became the first state to legalize recreational cannabis through the legislature rather than by a ballot initiative.

In all, twenty-three states have passed laws allowing some degree of medical use of cannabis and 14 states have additionally taken steps to decriminalize cannabis reducing the number of “possession” offenders sent to jail.

On January 4, 2018 U.S. Attorney General Jeff Sessions announced that the Trump Administration was rescinding the “Cole Memo” put in place in April 2013. This memo reflected the Department of Justice approach to State legalization of cannabis that led to easing of Federal enforcement of cannabis laws in States with legislation on recreational and medicinal cannabis. Since 2014 the Federal budget has also prohibited the Department of Justice from using Federal budget to prosecute medicinal cannabis businesses. This budget provision expired on January 19, 2018. Therefore it is not clear what impact these changes to the budget and the Department of Justice policy will have in the future. Even with Attorney General Session’s announcement, States Attorney’s General still have discretion to direct how and when to enforce federal cannabis laws.

Despite these state and local laws, under the “Supremacy Clause” of the United States Constitution, Federal law pre-empts State and local laws. However, to date the Federal Government has not implemented a comprehensive approach to enforcement of the law in states that have regulated cannabis use. In some cases they have tacitly aligned with these state laws, for example in 2014 issuing banking guidelines to allow cannabis-related businesses in states where they are licensed, to hold bank accounts and pay taxes like any other business. The challenges that U.S. States have had, conflicting with Federal law, will likely not be the case in Canada. The process in Canada for legalization of cannabis is starting at the Federal level and is working through Provincial/Territorial and municipal jurisdictions so there is less potential for jurisdictional conflict.

In states with legalized cannabis, cannabis-related businesses are regulated by each state and/or municipality according to the specific provisions of the local legislation. This means that there is a variety of approaches being developed at the local level for establishment and operation of cannabis-related businesses. In almost all cases however, state and local markets for cannabis products are private sector and are regulated but not owned and operated by state and local government entities.

To prepare for the legalization of recreational cannabis in Canada, the City of Surrey Working Group visited four U.S. cities – Seattle, Washington; Denver, Colorado; Portland, Oregon; and Los Angeles, California – to gain insight into the American experience of legalization. They also examined the cannabis legalization experience in Alaska and Nevada. Based on these visits and a subsequent review of impact reports and other materials, several challenges in the legalization of cannabis have been identified.

Legalization Challenges

- Regulating cannabis consumption in public
- Setting up buffer zones to protect vulnerable populations
- Maximizing revenue and ensuring cost recovery
- Dealing with illegal trade
- Addressing the environmental impact of the cannabis industry
- Preventing increased use of cannabis among young people
- Preventing/responding to cannabis-related crime
- The experience of several U.S. jurisdictions has shown that benefits from cannabis legalization stem largely from sales and tax revenues generated.

Nine states have legalized recreational use, sale and possession of Cannabis as of 2018. In addition the District of Columbia has legalized possession and use but not sale of cannabis. Washington was the first state to move towards legal recreational use after several states had allowed medicinal cannabis use for many years.



Industry snapshot by state

WASHINGTON

- 37/39 Counties have cannabis businesses
- 2,700 licenses issued (by Feb 2017)
- 226,513 pounds of cannabis produced by 2nd year of legalization
- Producers, processors and retailers licensed separately



OREGON

- 260 licensed retailers by January 2017
- Oregon Liquor Control Commission oversees licenses
- 100 cities and counties have opted out of the state cannabis system



COLORADO

- 501 cannabis retail licenses
- 700 cannabis cultivation licences
- 271 infused product manufacturing licences
- 13 testing facilities



ALASKA

- 46 retail stores
- 85 cultivation facilities
- 8 Product manufacturing facilities
- 2 testing/research facilities



Industry snapshot by state

CALIFORNIA

- Recreational usage legal for adults over 21
- Will begin issuing licenses for commercial cannabis businesses in 2018
- Bureau of Cannabis Control and Cannabis Regulatory Authority established to oversee licensing systems



MASSACHUSETTS

- Dec 2016 Recreational usage legal
- Regulated similar to alcoholic beverages
- First retail stores expected to open mid 2018



MAINE

- Recreational use decriminalized in City of Portland 2013
- Legal to grow, possess and use for personal consumption
- Retail stores and commercial production expected to be licensed beginning 2018



NEVADA

- 50 licensed retail stores (3 approved but not operating)
- 32 distribution licenses issued
- 91 cultivation licenses issued
- 9 testing labs
- \$27 million in sales in July 2017



Impacts of cannabis legalization

States in the U.S. have started to monitor and report on the impacts of legalization of recreational cannabis. As the first states to implement legalization, Washington, Oregon and Colorado have the most complete data to understand the potential impacts from legalization.

Increase in cannabis-related motor vehicle fatalities

Statistics related to motor vehicle fatalities have started to show a correlation between THC concentration in the blood and fatalities from motor vehicle collisions. In all four states, review of fatal crash data show a statistically significant increase where drivers tested positive for THC and even more so where cannabis and alcohol use was combined. Drivers with active THC in their blood involved in a fatal motor vehicle collision have increased 122.2% from 2010 (16) to 2014 (23) according to the Washington State Traffic Safety Commission.

California's results were the most striking as there was a 12% decrease over all in fatal crashes where the driver tested positive for any substances, however there was a 22% increase from 2005-2014 in drivers in fatal collisions testing positive for cannabis. Colorado saw similar statistics with a 48% increase in cannabis related traffic fatalities in between the periods 2010- 2012 and 2013-2015 after legalization of recreational cannabis.

Increase in cannabis-related hospital admissions and poison control calls especially for children and youth

Since legalization of cannabis in Washington in 2012, youth have made up an increasing proportion of the population making cannabis related calls to Poison Control (35% increase). In California, between the period 2005-2009 and 2012-2014 there was a 64% increase in the number of cannabis-related exposures resulting in hospital admissions for adults (20 and over). In the same period (2012-2014) emergency room visits resulting in cannabis-related hospital admissions grew by 116%.

There may be several reasons why reported hospital admissions, emergency room visits and poison control calls increased following legalization. Users may feel more comfortable reporting adverse health effects without consequences, there may be increased availability of cannabis, potency of cannabis remains unregulated and could mean higher potency levels than in the past, and providers are more aware of cannabis use again leading to higher testing and reporting levels in health providers.

Dr. G. Sam Wang, a pediatric toxicologist at Children’s Hospital Colorado in Aurora, Colorado conducted a study of cannabis related hospital admissions¹⁶. He found that in states where recreational or medical marijuana is legal, the number of pediatric marijuana intoxication cases reported to poison control centers increased by 30% each year from 2005 to 2011. Children in states where marijuana was legal had more severe symptoms and were more likely to be admitted to a critical care unit compared with those in states where marijuana was not legal.

Wang found that in the two years leading up to when recreational marijuana became legally available in Colorado for purchase in 2014 and the two years after, rates of marijuana exposure cases in children increased. On average each year, there was a 34% increase in calls to poison control centers about marijuana exposures in Colorado and a 19% increase across the US. Forty-eight percent of the cases in Colorado were attributed to the ingestion of an edible marijuana product. Several states with legal recreational marijuana, including Colorado, Oregon and Washington state, have made child-resistant packaging a requirement for certain products.

Increase in cannabis-related school expulsions

In Colorado during the 2015-2016 school year 62% of all school expulsions and suspensions as a result of substances were cannabis-related and 73% of referrals to law enforcement were for cannabis violations. Similar rates were seen in Washington State where during the 2014-15 school year 60% of expulsions and 49% of suspensions specifically involved cannabis. This is likely correlated to increased availability as a result of legal recreational cannabis in these states. In California, the number of cannabis-related expulsions has actually decreased over a similar period but this is largely due to implementation of a “Restorative Practices Program” which aims to keep students in school rather than using expulsion as a consequence of cannabis related incidents.

Mixed results regarding cannabis-related crime

Following legalization most states change their enforcement policies and activities and this makes it hard to discern whether changing crime patterns are a result of enforcement policy shifts or rate of incidents. What is clear is that there is a significant drop in arrests and other enforcement and monitoring of simple possession which reduces the burden on police and municipal enforcement systems. At present there is no reliable data on the scale of “black market” sales post legalization in these jurisdictions.

¹⁶ Wang, G, Le Lait, MC, Deakyn. S et al (2016) “Unintentional Pediatric Exposures to Marijuana in Colorado, 2009-2015”, Journal of the American Medical Association (JAMA) Pediatrics, 2016:170(9)

In Oregon the rate of cannabis-related arrests has decreased from 2010-2015 from 35 per 100,000 population to 9 per 100,000 population. In Colorado arrest rates per 100,000 people fell from 248 in 2012 to 109 in 2016. Whereas in Washington state there was an 11% increase from 2012-2016 in incidents related to cannabis sales and manufacturing. This is likely due to changes in inspection and enforcement of new licencing regulations on cannabis businesses. What is most difficult to discern from the existing data is the degree to which legalization had the desired effect of reducing the illicit trade in cannabis and decreasing rates of cannabis-related organised crime. What is clear is that in Washington, Colorado and California at least, seizure of cannabis products destined for states where recreational cannabis has not be legalized has increased. Since 2012 Washington cannabis has been seized in shipments going to 38 states across the U.S. and from 2013-2015 highway patrol seizures have taken approximately 4.5 tonnes of Colorado cannabis out of the market in non-regulated states. As well, in states such as California which have yet to begin issuing licences for cannabis retail stores, it's estimated that over 1,700 illegal dispensaries are currently in operation.

Whereas changes in the U.S. occur on a state-to-state basis, Canada is changing its laws at a Federal level to mitigate the risk of interprovincial illegal trading. However, there will likely be differences in the nature of the regulations adopted by the provinces as well as in the speed with which each Province assumes its jurisdictional responsibilities. As such, diversion might still be a problem. Diversion across international borders is also an issue. In addition, cannabis edibles (which are not yet legal and will not be regulated under the first iteration of Canada's Cannabis Act) might continue to fuel the black market.

Implementation challenges

Based on the visits conducted by City of Surrey staff to these U.S. jurisdictions and a subsequent review of state wide reports and published articles and media, several challenges in the process to implement legalized recreational cannabis have been identified.

Regulating cannabis consumption in public

Neither Portland nor Seattle has a regulatory framework for cannabis consumption in public. In these jurisdictions, it is legal to consume cannabis but only in private. However, reports indicate that, since legalization, consumption in public has become prevalent in bars and other public spaces. (In the Canadian context, clarity is needed regarding the degree to which Bill C-45 will regulate cannabis consumption. BC already prohibits smoking in public places, workplaces, restaurants, and bars through the Tobacco and Vapour Products Control Act.)

Setting up buffer zones to protect vulnerable populations

Local governments use buffer zones to ensure that cannabis-related businesses (and possibly consumption) occur outside a reasonable zone around vulnerable populations (e.g., school children). In Alaska, for example, regulations require a “separation” between cannabis storefronts and protected areas, such as schools, places of worship, recreation centres, youth centres, and even correctional facilities.¹⁷

In Washington State and Oregon, the designation of state buffer zones created issues of inequity and inconsistency. The existing state buffer has been defined as 1,000 feet from sensitive areas. However, local governments are given the authority to decrease this distance to as little as 100 feet, except around schools and playgrounds, where the 1,000-foot zone must be maintained. Both the City of Portland and the City of Seattle took advantage of their authority to reduce buffer zones to as low as 100 feet where possible.

A similar situation has arisen in California. State law requires a default buffer of 600 feet between cannabis businesses and areas such as K-12 schools, licensed daycares, and youth centres. However, while local jurisdictions are empowered to increase this distance and identify other sensitive areas for which buffers are needed, they are also authorized to reduce buffer zones or eliminate them entirely.¹⁸

Setting workplace safety standards

In the U.S., there are no federal workplace safety standards specifically governing the cannabis industry. In such a situation, a key concern is the risk of fire associated with the improper use and storage of flammable gases and substances used in processing cannabis (such as butane and propane).

The City of Portland has developed a Code Guide for Cannabis Businesses and offers “early assistance meetings” to guide industry newcomers through the permitting process. City personnel are assigned to field phone calls involving questions about permitting and building readiness. The overall approach involves consulting with the industry in an effort to make cannabis-related businesses compliant, safe, and successful. The goal is to maintain a focus on public safety while removing barriers to entry into the industry. The city hopes to avoid having businesses revert back to underground operations. Portland recommends that local governments reach out to cannabis associations and have them participate in policy decisions.

¹⁷ National Roundtable – State and County Government, Presentation by Erika McConnell, Director, Alaska Department of Commerce, Community and Economic Development, at the Marijuana Management Symposium 2017

¹⁸ National Roundtable – State and County Government, Commercial Cannabis in California and Los Angeles County, a presentation by Joseph M. Nicchitta, Los Angeles County Cannabis Management Officer, at the Marijuana Management Symposium 2017

The City of Seattle favours civil remedies to address compliance, but criminal sanctions may be imposed if civil remedies are unsuccessful.

In Alaska, regulations provide for a range of penalties to address violations: summary license suspension to protect public health, safety, or welfare; seizure; and civil fines.¹⁹

Maximizing revenue and ensuring cost recovery

The City of Seattle discovered that the cost of overseeing and administering a cannabis business license may far exceed the anticipated revenue. In the City of Denver revenues from cannabis were compared to expenses related to administering the system.

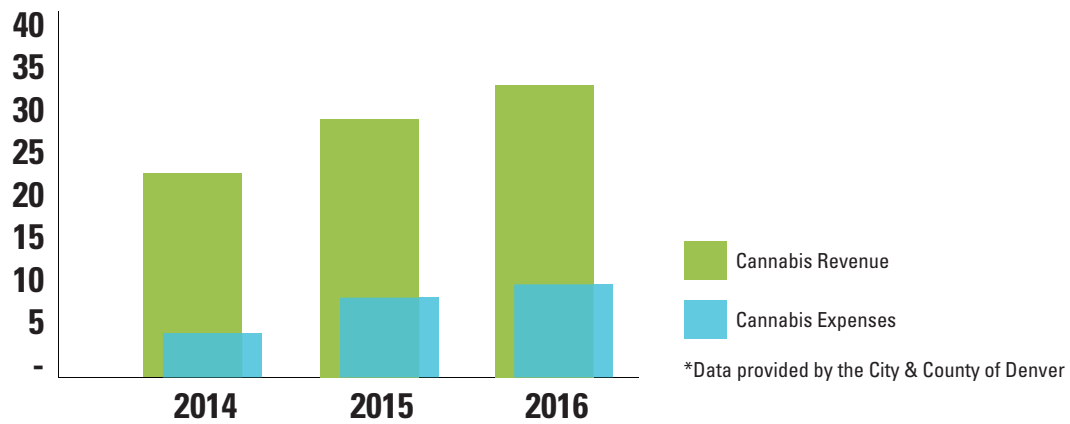


Figure 5. City of Denver cannabis revenue vs. expenses

Most of the revenue shown in Figure 5 comes from sales taxes or municipal taxes put in place as part of legislation. Figure 6 shows the rate of revenue to cost recovery when taxes are removed from the revenue sources. This relates just to licencing and enforcement revenue.

¹⁹ National Roundtable – State and County Government, Presentation by Erika McConnell, Director, Alaska Department of Commerce, Community and Economic Development, at the Marijuana Management Symposium 2017

Figure 6.

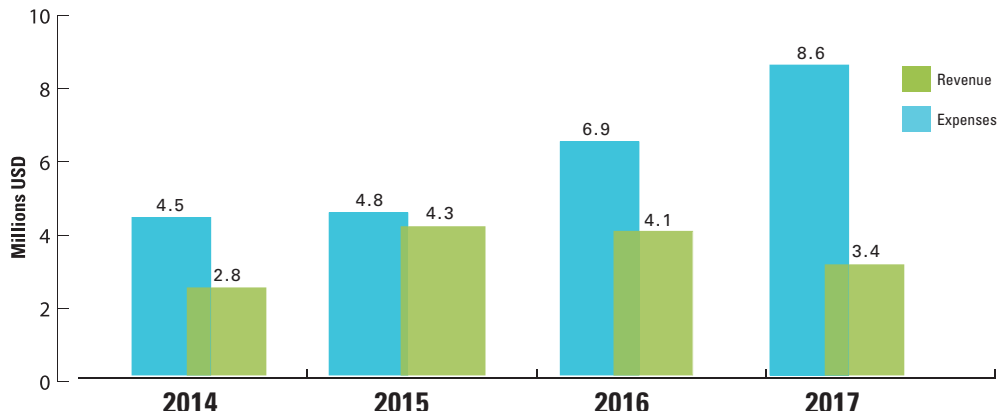
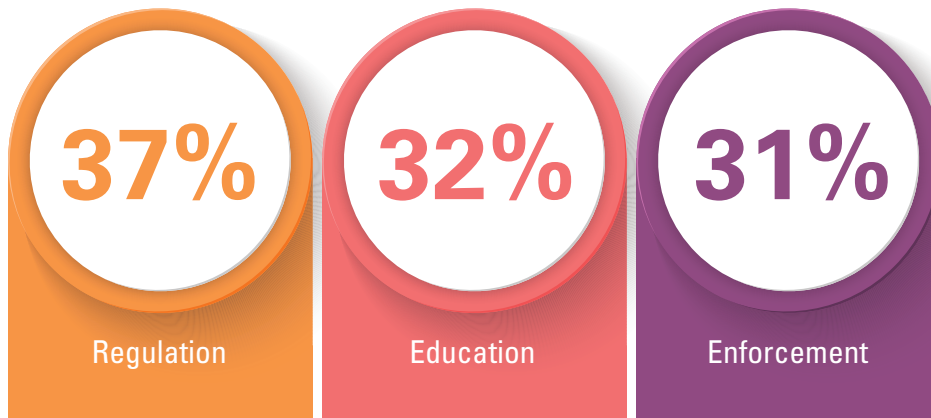


Figure 6. City of Denver Revenue vs Expenses excluding tax revenue.

It is clear that without tax revenue it is very difficult to balance the expenditures related to cannabis legalisation with the available revenue from traditional licencing fees and other cost recovery. When we look further at the expenditures from the City of Denver we can see the relative split of expenditure between regulation, enforcement and education. The figures below are based on a four year average of expenditure by City of Denver.



Cities such as Denver have also had to consider the infrastructure costs in the form of additional full time equivalent staffing to administer the new framework. Data provided by the City of Denver shows that 58 FTEs have been hired for the 2018 fiscal year to support cannabis legalization. Expenditures related to regulation in the City of Denver have grown from \$2.28 million in 2014 to \$2.38 million forecasted in 2018. Similarly enforcement expenditures were \$1.4 million in 2014 and are forecasted to exceed \$2.8 million in 2018. The City of Portland's cannabis program budget was \$370, 010 in 2016 and is anticipated to exceed \$895,000 in 2018.

Denver also assessed the benefit from related tourism revenue in the region. Figure 6 shows the estimated benefits from more positive perceptions of the state as a tourism location.

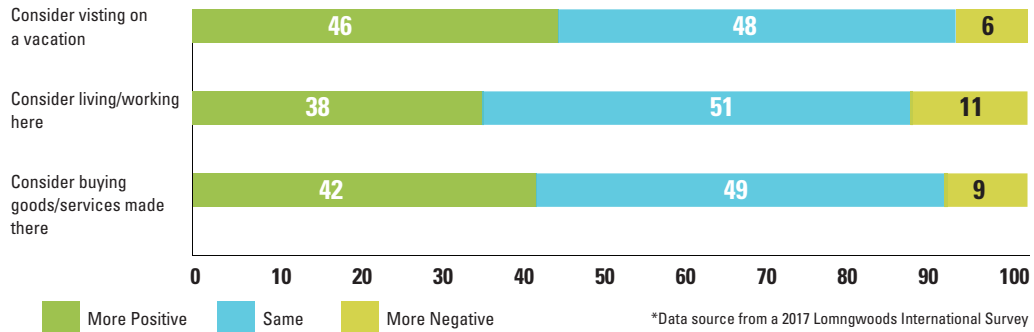


Figure 7. Legalization impact on non-resident tourism in Denver

Addressing the environmental impact of the cannabis industry

Large-scale cannabis-growing operations often have a damaging effect on the environment. They can dramatically increase use of electricity, and consequent production of greenhouse gases. Excessive use of water, can often have a detrimental effect on surrounding fish and wildlife. The use of fertilizers, chemicals, pesticides, and other toxic materials can create occupational hazards and hazards to surrounding property. The presence of trash, irrigation tubing, and other forms of refuse which may not be compatible with existing waste streams, may also increase.

Preventing increased use of cannabis among young people

Jurisdictions agree on the need to prevent an increase in cannabis use among youth. Increased availability of recreational cannabis in states that have legalized has led to increased illicit use of cannabis by youth and increased exposure to cannabis for infants and children. In California in 2015, cannabis was used more than cigarettes by Grades 8, 10, and 12 students. In addition, since 2008, the prevalence of past-month cannabis use for those 12 or older has been higher in California than the national average. California’s largest average increase occurred in 2010-2012 after the proliferation of cannabis dispensaries.²⁰

20 Marijuana’s Impact on California: High Density Drug Trafficking Report, published in 2016

Data from Oregon show that in 2015, 9% of Grade 8 students and about 19% of Grade 11 students reported current cannabis use. In fact, 62% of Grade 11 students reported that they had easy access to cannabis. Youth reported that cannabis was easier to get than cigarettes.²¹ Figure 8 shows the perceived ease of access to cannabis pre and post legalization in Colorado, Washington and Oregon.

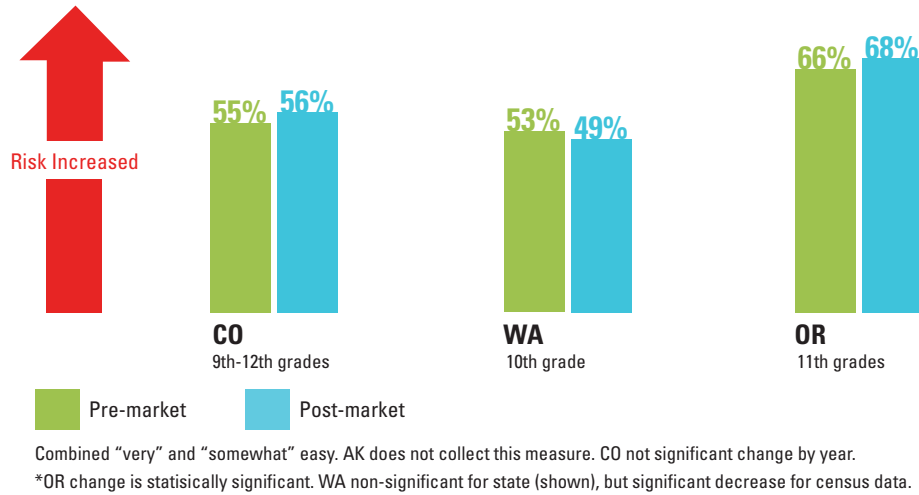


Figure 8. Perception of "easy" access to cannabis pre and post legalization.

These graphs show that there has been little to no change in perception around ease of access to cannabis for youth following legalization. In terms of harms, Colorado youth seem to show a more relaxed attitude to the harms of cannabis following legalization, but the change was not as significant in Oregon and no change was seen in Washington. This may increase the risk for some youth that will underestimate the harms of cannabis after legalization in Canada. As well perceptions of youth regarding the harms associated with cannabis show changes pre and post market development following legalization. Figure 9 shows the data for Colorado, Washington, Oregon and Alaska.

21 Marijuana Report: Marijuana Use, Attitudes, and Health Effects in Oregon, published by the Oregon Health Authority in January 2016

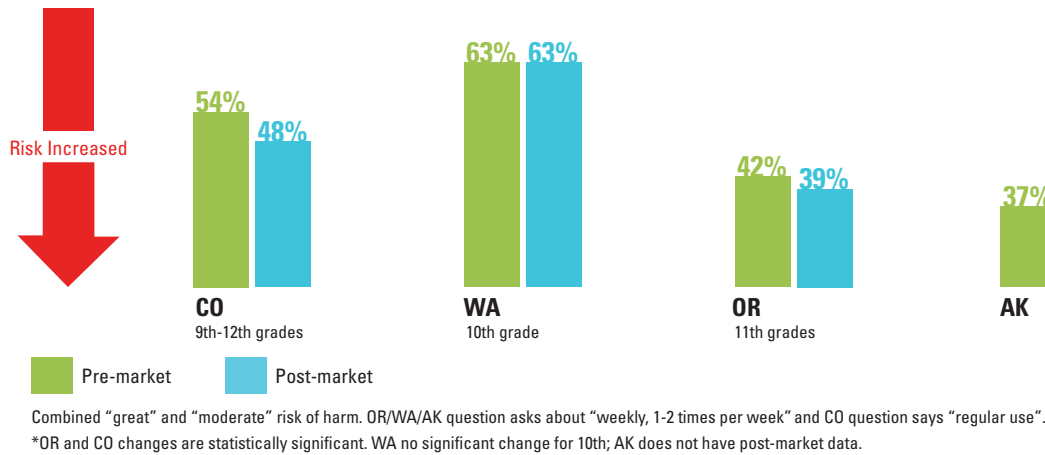


Figure 9. Perception of harms from cannabis use pre and post market legalization

There is also a consensus around the need for an effective public education campaign that will heighten public awareness of the risks associated with cannabis. There is also a need to impose strict restrictions on marketing tools and strategies (signage, displays, and advertising) that could make cannabis use even more attractive to young people. The importance of these efforts for Canada is underscored by the findings of the 2016 study conducted by the Canadian Centre on Substance Abuse on the perceptions that young people in Canada have regarding cannabis.

Legalization benefits

One of the most direct benefits from the legalization of cannabis in U.S. states is the diversion of resources from enforcement of laws prohibiting the sale and use of cannabis. According to research by the American Civil Liberties Union (ACLU)²², cannabis related arrests make up over half of all drug related arrests. Of the 8.2 million cannabis related arrests from 2001 to 2010, 88% was for simple possession of cannabis. As well, the data shows that blacks are 3.73 times more likely to be arrested for cannabis possession than whites. There is an undeniable racial bias in the U.S. arrest data.

22 The War On Marijuana In Black and White, ACLU, June 2013, <https://www.aclu.org/files/assets/aclu-thewaronmarijuana-rel2.pdf>

It has been estimated by the ACLU that on average, enforcement of existing federal and state laws that prohibit cannabis use, sale and possession costs \$3.6 billion annually. While it is hard to quantify diversion of resources away from enforcement in states that have legalized recreational cannabis, in Washington State, cannabis related arrests dropped by 90% in 2016. While comprehensive data is currently lacking, a benefit of legalization has been the ability to reprioritize enforcement activities in other areas.

The experience of several U.S. jurisdictions has shown that benefits from cannabis legalization stem largely from sales and tax revenues. For example:

- In fiscal year 2016, total cannabis sales in Washington State amounted to over \$972 million; and through January 2017, it amounted to over \$800 million.²³ In Colorado sales grew from \$699 million in 2014 to \$1.3 billion by 2016.
- For calendar year 2016, Oregon generated cannabis tax receipts totalling \$60.2 million (according to the Oregon Department of Revenue).²⁴
- Nevada’s recreational cannabis market (adult users) reached over \$27 million in sales in the first month.²⁵
- In Colorado, total revenue from cannabis-related taxes, licences, and fees increased from over \$76 million in 2014 to over \$135 million in 2015. Also in 2015, excise tax revenue dedicated to school capital construction assistance was over \$35 million.²⁶
- The Washington Department of Financial Institutions reported that 12 financial institutions are currently serving the cannabis industry in the state.²⁷

California’s Proposition 64 passed on November 8, 2016, and retail sales are set to begin by January 1, 2018. While actual tax revenue will not be realized until 2018, the forecast for California in terms of the economy and tax revenue is already bright: the latest report from New Frontier Data and ArcView Market Research appears to indicate that the total size of the cannabis market could reach \$4.27 billion in 2018, and could grow to \$6.45 billion by 2020.²⁸

23 Washington State Marijuana Impact Report – Vol. 2, published by the Northwest High Intensity Drug Trafficking Area in August 2017

24 Oregon’s Recreational Cannabis Tax Revenue for 2016 Exceeded One Original Estimate More than Six-Fold: <http://www.wweek.com/news/2017/01/21/recreational-marijuana-tax-revenue-for-2016-exceeded-one-original-estimate-more-than-six-fold/>

25 Nevada reports huge first month of recreational marijuana sales: <https://mjbizdaily.com/nevada-reports-huge-first-month-recreational-marijuana-sales/>

26 Marijuana Legalization in Colorado: Early Findings, published by the Colorado Department of Public Safety in March 2016

27 Washington State Marijuana Impact Report – Vol. 2, published by the Northwest High Intensity Drug Trafficking Area in August 2017

28 California just legalized marijuana, and it’s going to have a huge impact on the economy: HJ <http://www.businessinsider.com/marijuana-california-weed-legal-economy-2016-11>

6 FRAMEWORK FOR CANNABIS LEGALIZATION AT THE MUNICIPAL LEVEL

The Federal Task Force on Cannabis Legalization and Regulation has stated that successful implementation of a regulatory framework for cannabis will take time and will require all levels of government to address challenges with respect to capacity and infrastructure, oversight, coordination, and communication.²⁹

Capacity

As with other levels of government, municipalities will need to increase or create capacity to deal with issues arising from cannabis production, distribution, and sale. Success will require leadership as well as the investment of resources required to set up a licensing system and infrastructure, conduct regulatory inspections, develop and implement training for law enforcement and bylaw officers, develop and deliver public education and awareness campaigns, etc.

Oversight

To be satisfied that the system for legalized cannabis is minimizing harms as intended, governments at all levels will need to ensure close monitoring and rapid reporting of results in a number of areas, including regulatory compliance and population health. Local authorities will also need to track the amount of tax revenue generated from cannabis sales and whether this meets the municipality's cost recovery objectives in addition to the effectiveness of policies, systems, and procedures they will have set in place to respond to legalization.

Coordination

All levels of government as well as partner agencies and organizations will need to establish effective data-sharing mechanisms and, where necessary, structures to ensure coordinated implementation of initiatives. The initial Joint Committee on Cannabis Regulation (JCCR) established by the Union of BC Municipalities provides a possible exemplar of a cross- governmental information sharing and coordination mechanism. Consideration should be given to creating similar structures once legislation is in place to aid in implementation and maintenance of new systems.

²⁹ A Framework for the Legalization and Regulation of Cannabis in Canada: <https://www.canada.ca/en/services/health/marijuana-cannabis/task-force-marijuana-legalization-regulation/framework-legalization-regulation-cannabis-in-canada.html>

Communication

The Federal Task Force emphasizes the importance of communicating early, consistently, and often with the general public about cannabis and its effects. Those participating in the new system (employers, educators, law enforcement, industry, healthcare practitioners, and others) should receive information tailored to their specific role. On a municipal level, local authorities will need to develop a comprehensive community engagement and communication plan to inform stakeholders about the changes with regards to cannabis legalization.

A suggested municipal framework

It is clear that cannabis regulation will result in multiple challenges for municipalities, particularly with regards to financial impacts of developing and maintaining an infrastructure for monitoring cannabis. Local governments will need to establish by-laws, business licencing processes, retail oversight structures and public education initiatives. The Federation of Canadian Municipalities is preparing a detailed guide for municipalities including sample regulatory language and advice on policy development. This document will provide valuable guidance for municipalities across Canada and is expected to be released in the first quarter of 2018.

Many decisions still have to be made at the Provincial level regarding Cannabis regulation. However, the broad parameters are in place to map out the required actions that will have to be taken by local governments. To guide this work we have developed a proposed framework (Figure 10) which organizes the various tasks municipalities will be required to undertake around seven key components. Many of the key considerations outlined here may change as the provincial framework is rolled out. In creating these checklists we have made several assumptions, some of which may change over time.



Figure 10 – Components of a municipal framework

Zoning & Land Use

Cannabis legalization will lead to the creation of permits, and authorizations for cultivation and processing. Municipalities will not only have to respond to proposed federal licences but determine the specific land use designations for new cannabis licences in their jurisdiction.

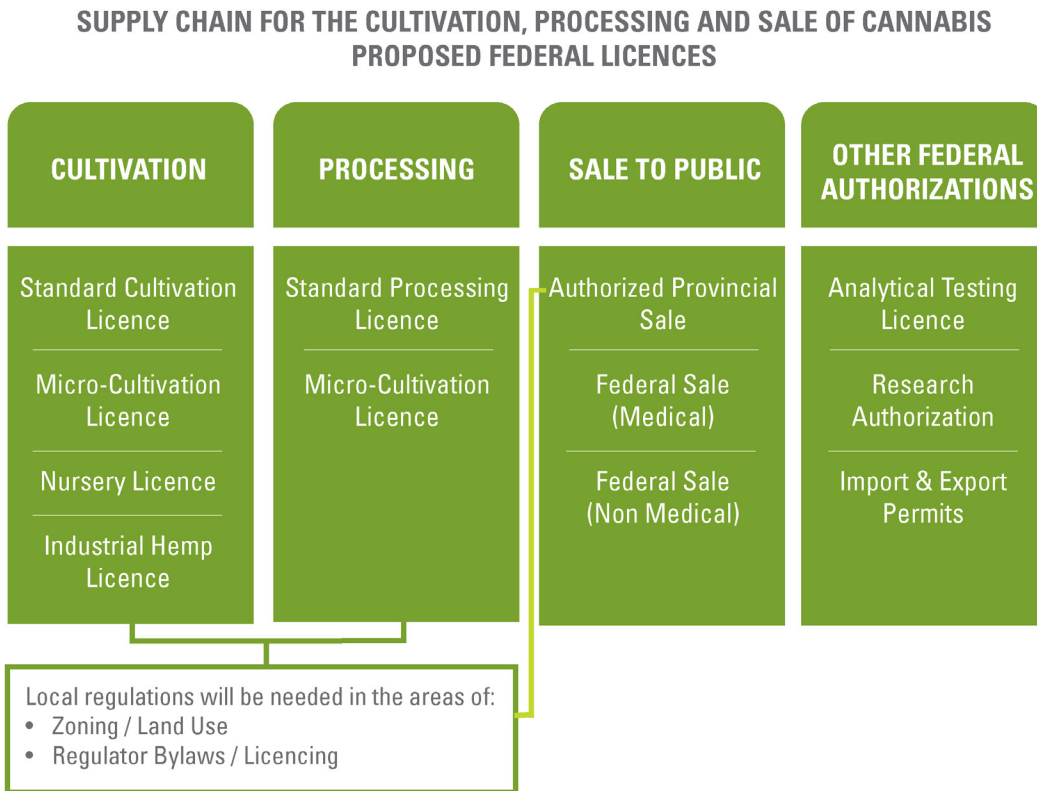


Figure 11 – Supply chain for cultivation, processing and sale of cannabis



- Determine and establish appropriate buffer zones for cannabis operations from schools and other sensitive zones
- Determine land use designation for proposed federal licences and authorizations, including:
 - Standard Cultivation Licence
 - Micro-Cultivation Licence
 - Nursery Licence
 - Industrial Hemp Licence
 - Standard Production Licence
 - Micro-Production Licence
 - Retail Sales (private and/or government stores)

Regulatory Bylaws & Licensing

Several provincial governments have recently announced a number of key decisions related to the anticipated legalization of non-medical cannabis in July 2018. British Columbia anticipates establishing a model that includes both public and private retail sales for cannabis and will share details regarding the model in early 2018.

Under the new legislation, municipalities will need to establish cannabis licencing systems that provide jurisdictional authority for inspection and enforcement. This will require updated bylaws to reflect new Federal laws and local regulation regarding cannabis legalization. While Provinces may have jurisdiction for consumption of cannabis in public, local bylaws will need to be amended to allow for enforcement of these rules in municipal public spaces.

Municipalities have an opportunity to play an important role in advising provincial agencies and other partners on implementation of cannabis regulations given their specific local context. They are also likely to be at the front line in terms of contact for the public and for industry. Mechanisms may need to be established to ensure local concerns inform regulatory implementation and are shared with relevant partners.

It will be necessary to support staff with new training protocols, guidelines and procedures related to regulatory changes and new licensing systems. This will require investment early in the process to ensure effective implementation.

As employers, municipalities also need to work with Provincial regulators to ensure that workplace safety standards accommodate any necessary changes to definitions of impairment, and any concerns around safety-sensitive positions.



- Establish a municipal licensing system for all proposed federal cannabis licences, including analysis and planning for costs and fees to establish and manage the system
- Determine which of the proposed federal cannabis licences require municipality to regulate locally
- Determine licence prices in line with municipal objectives regarding cost recovery, and incentives/disincentives for industry
- Support regulation of appropriate buffer zones determined in land use processes
- Update relevant municipal bylaws, including:
 - Zoning bylaws
 - Business licences bylaws
 - Smoking in public spaces bylaws
 - Nuisance bylaws
 - Cannabis production bylaws

- Determine the following:
 - Type and number of stores
 - Locations
 - Clientele
 - Mode of operations
 - Security protocols
- Ensure policies governing workplace substance use and impairment account for any specific issues related to cannabis (note that scientific standards for testing and definition of impairment with regard to cannabis use have not yet been confirmed in any jurisdiction)
- Regulate personal cultivation (if allowed by the provincial government). Some key considerations on this topic include:
 - Determining whether to permit outdoor cultivation but require that plants not be visible from outside the property and/or require that any outdoor plants be secured against theft
 - Determine how to balance the interests of tenants who wish to cultivate, use, or share cannabis in their homes with the interests of other residents in the building/housing complex and those of the landlord/owner
 - Determine if/how the municipality will manage regular inspections of home cannabis cultivation sites
 - Determine whether to create cannabis smoking bylaws that exceed provincial smoke-free regulations
- Decide whether to ban or restrict cannabis smoking in public places within the municipality's geographic limits
- Decide on restrictions the municipality will impose on the consumption in public of other forms of cannabis (e.g., vaping products or edibles)

Inspections

Municipalities will need to ensure inspections are routinely conducted to confirm that licensed cannabis retailers and cultivation/processing are adhering to the applicable regulations once these are put in place. Inspections will be needed for code compliance, these inspections are critical to establishing a legal cannabis industry as municipal standards and BC building code compliance will be key to successfully implementing the legislation. Inspections will also help to address potential community concerns and nuisance complaints. A very important consideration here will be to determine what inspection responsibilities will be the responsibility of the Province. This will be highly dependent on how the retail environment is put in place after July 2018.

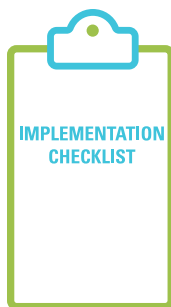


- Determine how and with what frequency the municipality will ensure that cultivation, production, and retail facilities are inspected.
- Assess the budget implication for additional inspection requirements for licensed cannabis businesses.
- Develop and provide additional training for staff in issues specific to cannabis business inspections (e.g., additional ventilation requirements, handling of hazardous materials used in cultivation etc.)
- Work with partner agencies to perform local inspections before final licence approvals.
- Respond to concerns from industry and the community and insure inspection regimes are designed to proactively address these concerns.
- Ensure that first responders will be trained and have capacity to handle public safety challenges that might arise (e.g., fires)

Municipal Enforcement

With Cannabis legalization, municipalities will need to ensure that industry is in compliance with of all municipal and provincial laws. In addition to the compliance enforcement, personnel need to be prepared to address any aspects of illegal operations. Developing an appropriate system for enforcement is critical to the success of legalization regardless of whether municipalities have contracted policing through RCMP, or their own policing departments.

As with other areas of enforcement, coordination between city bylaw enforcement personnel and police will be a key success factor in creating a consistent, transparent and effective approach. Municipalities could consider establishing joint working groups or use existing committees of council to confirm a policing strategy that takes into account all necessary aspects of enforcement of Provincial laws and municipal bylaws and regulations.



- Determine policing strategy and assess cost for enforcement and related training.
- Develop and provide training for enforcement personnel in new bylaws, licensing and inspection systems.
- Ensure appropriate legislative authorities are in place for enforcement based on updates to bylaws, zoning, etc.
- Monitor and record compliance with municipal and provincial laws.
- Confirm transparent and consistent approaches to enforcement of impaired driving given the lack of standardised testing equipment for impairment due to cannabis consumption.

Finance & Revenue

Municipalities already bear many of the costs of enforcing existing prohibitions on cannabis production, distribution, and use. Under the new legislation, they would see some new costs as well as possible shifts in expenditure.

Local governments will need to fund the development of new bylaws, processes, oversight structures, and public education initiatives. There will be direct costs from personnel and procedures for inspecting production and distribution facilities, ensuring regulatory compliance, and responding to public safety concerns.

As well, municipalities will need to consider whether existing infrastructure related to tax collection and administration will be able to absorb oversight of additional taxes/ fees related to cannabis businesses, if these are put in place.

Additional up-front investment may be needed to ensure that the municipality's financial systems and staff can accommodate the additional workload. They may also need to be prepared for a situation in which the cost of administering a cannabis licence far exceeds the revenue generated by that licence. For example, the Seattle Finance and Administrative Services Department recently estimated that the cost of administering each City of Seattle cannabis licence is about \$4,000 per year versus the \$1,500 revenue per licence per year, a \$2,500 deficit per licence per year.

A balance must be struck between a concern for possible harms and costs, and recognition of potential benefits. For example, the possibility of reducing the operations of illegal cannabis trade and its social and economic cost to society; and the potentially substantial economic activity accruing from the sale of cannabis.

A review of U.S. jurisdictions with legal recreational cannabis regimes has demonstrated that design of a system for cannabis legalization must account for the revenue and tax regime that must be put in place. U.S. municipalities have taken a variety of approaches to funding the administrative costs associated with cannabis legalization. In many cases costs have proven to exceed initial estimates creating budget shortfalls in administrative oversight of cannabis regulation. In some jurisdictions (e.g., Denver) tax revenue was tied directly to social programs related to anti-addiction campaigns and education funding.

In Canada, the Federal and Provincial Governments have been negotiating tax sharing agreements for cannabis excise taxes but no decisions have been made on the exact shares of revenues or if these will be tied to specific policy priorities (e.g., anti-addiction programs and education). It is not clear at this stage, whether municipalities will have any access to revenue from taxes related to cannabis sales, however this will likely be an area of advocacy for municipalities to help offset costs.

Municipalities in Canada can levy fees for business licences and fines for breach of bylaws and regulations. Local governments will need to determine a balanced approach to manage the revenue from cannabis businesses to balance community values and local context. Each municipality will need to determine the degree to which the establishment of fees and fines can encourage or discourage industry activity.



- Design a business licensing system for cannabis cultivators, processors, and retailers including the following:
 - Assess the cost of developing, operating, and maintaining the system
 - Maintain a balance between offsetting municipal costs and creating barriers that might discourage businesses from entering the market legally (Higher fees may support a continuation of the black market; at the same time, maintaining a cost-neutral or revenue-positive status for the city is critical.)
 - Determine metrics for tracking and assessing whether revenue is offsetting costs, including possible graduated licensing fee options.
- Advocate for federal and provincial taxation models that ensure revenue-sharing with municipalities.
- Advocate for federal and provincial funding targeted at public education and anti-addiction campaigns to be shared with municipalities.

Engagement & Education

When cannabis is officially legalized in Canada, stakeholders will turn to government for information on the risks and harms of cannabis use and how the regulation of this product will work. Public opinion research has shown that many young people and some adults do not understand the risks of cannabis use. To address this lack of information, national campaigns and in-school programs will be key components of public education on cannabis.

All levels of government must pursue a coordinated approach to public education, delivering information campaigns that are evidence-based, relevant to and respectful of the target audience, and developed with an eye to the successes and failures experienced in other markets. The goal should be to avoid two extremes: the exaggeration of risks and harms and the assumption that cannabis use is a completely benign activity.



- Consult with stakeholders on a model for engagement and education campaigns that address local context and concerns. Potential partners include but are not limited to:
 - Health Canada and provincial and local health authority
 - RCMP and local law enforcement
 - School boards and post-secondary institutions
 - Insurance corporations (e.g., ICBC)
 - Social service agencies and addiction support service providers
 - Business community and chambers of commerce
- Engage with partners to amplify relevant key messaging developed by partners such as the health authority, law enforcement, and the federal and provincial government.
- Advocate for a portion of the revenues realized from legalization be directed to community health and safety initiatives, such as addiction prevention campaigns, health & wellness initiatives, driver education, and ongoing monitoring and data collection for assessment of impact and evaluation of campaigns
- Measure the current awareness of harms and public perception associated with cannabis use
- Support federal and provincial public education campaigns to heighten awareness of the risks associated with cannabis use, placing appropriate emphasis on the damaging effects of cannabis on children and youth and the importance of a zero-tolerance standard on drug-impaired driving and machinery operation
- Determine key areas on which to focus communication efforts (i.e., areas of municipal jurisdiction, such as consumption of cannabis in public, buffer zones etc.)

Economic Development

A newly legalized cannabis industry could offer municipalities unique partnership opportunities to advance research and foster innovation. Specifically there is urgently needed research on the issues of product potency, and impairment from cannabis use. Significant international investment is being directed into the cannabis industry research and development sector and municipalities have an opportunity to attract research to their area. There is currently no scientific, standardised method to test impairment from cannabis use. This creates a major challenge for employment workplace standards and policies and for enforcement of nuisance bylaws and impaired driving. These areas create opportunity for academic and private research institutions to bring new solutions to market.

As well, attraction of new investment in establishment of cultivation, production and retail facilities needs to be managed in the context of local values and perceptions. Tax rates, licensing fees and other mechanisms can all be used to either encourage or discourage economic development of a local cannabis industry. Municipalities need to consider the pros and cons of their approach as systems are put in place in each of the above six areas of the framework.



- Explore opportunities on a municipal level that advance research and drive innovation.
- Determine how the municipality can support cannabis-related research, particularly on public health and safety concerns, such as cannabis impairment.
- Engage in partnership opportunities: Health Canada, Provincial Cannabis Secretariat, post- secondary institutions, cannabis industry, and the scientific community.

APPENDICES

Appendix 1 - Acknowledgements

The City of Surrey gratefully acknowledges the use of resource materials from the following institutions for the preparation of this document.

Adherence Compliance

Alberta Ministry of Justice and Solicitor General

BC Alliance for Healthy Living

British Columbia Association of Municipal Chiefs of Police

British Columbia Automobile Association

British Columbia Ministry of Public Safety and Solicitor General

Business Insider

City of Los Angeles

City of Portland

City of Richmond

City of Seattle

Colorado Department of Public Safety

Colorado Department of Revenue

Deloitte Touche Tohmatsu Ltd.

District of West Vancouver

Federation of Canadian Municipalities

Government of Canada, Department of Justice

Health Canada

Health Link BC

High Density Drug Trafficking Area – California

Northwest High Intensity Drug Trafficking Area

Office of the Representative for Children and Youth for British Columbia

Oregon Health Authority

Rocky Mountain High Intensity Drug Trafficking Area

Smart Approaches to Marijuana

Task Force on Cannabis Legalization and Regulation

The Oregonian/Oregon Live

The Willamette Week – Portland

University of Calgary, Health Technology Assessment Unit

University of the Fraser Valley, School of Criminology and Criminal Justice

University of Victoria, Centre for Addictions Research for BC

Appendix 2 – Additional data on Alberta and Ontario provincial cannabis frameworks

Cannabis in Alberta³⁰

According to a recent survey by the Alberta government, over 55% of Albertans aged 17 and above have tried cannabis for recreation, and about 20% had used cannabis in the past year. A two-month public consultation process revealed that some Albertans viewed the legalization of recreational cannabis as a positive change as it would allow adults to use cannabis legally within a regulated system. They also believed that legalization would enable authorities to address cannabis misuse as a health issue rather than a criminal one. Others in the province were concerned about the public health effects of legalized cannabis, especially the risk of minors accessing and using the substance. They were also concerned about the impact of legalized cannabis on communities and workplaces.

Policy priorities and action steps

Based on the outcomes of the public consultation, Alberta set four policy priorities vis-à-vis cannabis legalization. Establishing these priorities set the stage for decision making on a number of specific issues. The priorities and associated decisions are listed below.

Priority: To keep cannabis out of the hands of children

- Ban public consumption in areas frequented by children.
- Set the minimum age for cannabis purchase, consumption, and possession at 18.
- Ensure that all cannabis grown for personal use is grown indoors. (Renters, condo residents, and those who live in multi-family dwellings may be restricted from growing cannabis in their homes based on the provisions of rental agreements or condominium bylaws.)
- Set location restrictions and buffer zones to keep cannabis retail locations away from schools, daycares, and community centres.
- Require that all staff at cannabis retail locations are of legal age (at least 18) and properly trained to sell the product, educate consumers about cannabis potency and risks, and uphold the rules around the purchase of cannabis.
- Continue investigating how those who will engage in online sales and home delivery of cannabis can ascertain the recipient's age.
- In conjunction with other governments and agencies, develop public education initiatives for young people and their parents on the risks and harms of cannabis use by youth.

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The information in this section is taken from Alberta Cannabis Framework, published by the Government of Alberta in October 2017.

Priority: To protect public health

- Provide government oversight of the distribution of legally produced cannabis products. (This will ensure a level playing field for large and craft producers.) In addition, ensure that the products are shipped at the same price no matter the destination. (This means that small communities will not be penalized for delivery costs.)
- Restrict the consumption of cannabis in public to spaces where tobacco smoking is also allowed. Add further restrictions to protect the health of children and limit the public's exposure to cannabis and second-hand smoke.
- In conjunction with other governments and agencies, develop public education initiatives on the risks of cannabis use, particularly for vulnerable groups, including children, youth, and pregnant women.
- Conduct public education to discourage the use of cannabis with other substances, such as alcohol, tobacco, and other drugs.
- Require all retail outlets to display point-of-purchase material promoting responsible use and educating consumers about health risks.
- Prohibit the sale of cannabis in the same place as alcohol, tobacco, or pharmaceuticals.

Priority: To promote safety on roads, in workplaces, and in public spaces

- Ban drivers and passengers from consuming cannabis in vehicles.
- Work with the transportation sector, law enforcement, and the justice system to review the current system for impaired driving and make the changes necessary to address the legalization of cannabis.
- Introduce new tools to expand the ability of police to address drug-impaired driving.
- Deter young people from consuming cannabis and driving by expanding current zero tolerance to include cannabis for young and graduated drivers.
- Work with the federal government to train and equip law enforcement.
- Develop promotional materials and undertake public education and awareness about drug-impaired driving.
- Work with industry and labour to assess current workplace rules that address impairment at work and develop additional regulations and training programs as necessary.

Priority: To limit the illegal market for cannabis

- Establish a distribution system where government has oversight over products entering the province from licensed producers.
- Keep regulatory costs and taxes low enough to compete with the illegal market.
- Provide access for adults to purchase legal cannabis through retail outlets.
- Allow adults to grow up to four plants indoors at home for personal use, using seeds purchased from a cannabis retailer. This will reduce the need for consumers in remote and rural areas to purchase cannabis from the illegal market.
- Promote awareness and public education about the risks and dangers of buying from the illegal market.

Cannabis in Ontario³¹

On November 1, 2017, the Ontario government introduced the Ontario Cannabis Act, whose objectives are as follows:

- To create a new provincial retailer, overseen by the Liquor Control Board of Ontario (LCBO), to ensure safe and socially responsible distribution of recreational cannabis through stand-alone stores and an online order service
- Under the proposed approach, approximately 150 stand-alone stores will be opened by 2020, including 40 stores by July 2018 and rising to 80 by July 2019. Online distribution will also be available to service all regions of the province.
- Through this system, one could buy cannabis in stores under strict retailing standards that meet federal requirements for cannabis sales, or online where products would be delivered securely and safely across the province.
- Cannabis will not be sold in the same stores as alcohol.
- To protect youth by setting a minimum age of 19 to use, buy, possess, and cultivate cannabis in Ontario: This is consistent with the minimum age for the sale of tobacco and alcohol in Ontario.
- To focus on harm reduction by allowing for the diversion of people under the age of 19 from the justice system into programs focused on education and prevention, avoiding unnecessary contact with the justice system
- To ban the use of cannabis in public places, workplaces, and motor vehicles, similar to alcohol: Restrictions have also been proposed on locations where cannabis could be used, including limiting exposure to second-hand smoke and vapour. This would be similar to Ontario's existing laws for alcohol and tobacco. Under the proposed rules, one would be permitted to use recreational cannabis only in a private residence.
- To regulate the smoking and vaping of medical cannabis under the proposed new Smoke-Free Ontario Act, 2017: Those authorized to have and use medical cannabis would be subject to the same rules as those for tobacco smoking and electronic cigarette use. They would not be allowed to smoke or vape medical cannabis in enclosed workplaces, enclosed public places, motor vehicles, and other smoke-free places.
- To help eliminate the illegal market, including illegal storefront dispensaries, by introducing new provincial offences with strict, escalating penalties
- To keep Ontario roads safe by establishing even tougher drug-impaired driving laws, including a zero-tolerance approach for young, novice, and commercial drivers

The government is also developing an integrated prevention and harm reduction strategy to protect young people. It is designed to help educators, health officials, youth workers, and service providers address and prevent substance abuse.

³¹ The information in this section is taken from the Ontario government's cannabis legalization plan posted at <https://www.ontario.ca/page/cannabis-legalization>

Appendix 3 – Health Canada summary of proposed framework for production and cultivation of cannabis

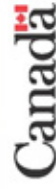


PROPOSED REQUIREMENTS FOR CULTIVATION, PROCESSING, AND FEDERAL SALE LICENCES



REQUIREMENTS	CULTIVATION LICENCES				PROCESSING LICENCES		FEDERAL SALE LICENCES (medical and non-medical)	
	Standard	Micro	Nursery	Hemp	Standard	Micro	Cannabis on-site	No cannabis on-site
LOCATION								
Indoor	✓	✓	✓	✓	✓	✓	✓	✓
Outdoor	✓	✓	✓	✓	✓	✓	✓	✓
PHYSICAL SECURITY								
Perimeter of the site								
Physical barriers (for example, walls or fences with secured entry points) to prevent unauthorized access	✓	✓	✓	✓	✓	✓	✓	✓
Visual monitoring, keep recording for 1 year	✓	✓	✓	✓	✓	✓	✓	✓
Alarm or other intrusion detection system	✓	✓	✓	✓	✓	✓	✓	✓
Indoor areas on-site where cannabis is present, excluding growing areas								
Physical barriers to prevent unauthorized access	✓	✓	✓	✓	✓	✓	✓	✓
Visual monitoring, keep recording for 1 year	✓	✓	✓	✓	✓	✓	✓	✓
Alarm or other intrusion detection system	✓	✓	✓	✓	✓	✓	✓	✓
Access restricted to employees to perform job duties (e.g., key card, key)	✓	✓	✓	✓	✓	✓	✓	✓
Additional requirements for areas where cannabis is stored								
Identity recorded of every person entering or exiting the area	✓	✓	✓	✓	✓	✓	✓	✓
PERSONNEL SECURITY CLEARANCE								
Specified employees must hold a valid security clearance	✓	✓	✓	✓	✓	✓	✓	✓
GOOD PRODUCTION PRACTICES								
Clean equipment	✓	✓	✓	✓	✓	✓	✓	✓
Sanitation of indoor areas	✓	✓	✓	✓	✓	✓	✓	✓
Analytical testing (microbial contamination, heavy metals, pesticides, THC, CBD) (limited requirements for hemp)	✓	✓	✓	✓	✓	✓	✓	✓
Quality Assurance Person	✓	✓	✓	✓	✓	✓	✓	✓
All cannabis will be tested prior to processing, packaging, and sale	✓	✓	✓	✓	✓	✓	✓	✓
REPORTING AND RECORD KEEPING								
Maintain records and report information that, for example, demonstrates compliance with good production practices and describes product recall activities and adverse effects.	✓	✓	✓	✓	✓	✓	✓	✓
CANNABIS TRACKING SYSTEM								
Report information with respect to production levels, inventory amounts, and sales volume.	✓	✓	✓	✓	✓	✓	✓	✓

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Appendix 4 - Additional Data from Western U.S. States

The information in this appendix is based primarily on impact reports published by U.S. state government programs/agencies (see list below). The tables provided present key data points for four Western U.S. states in which cannabis has been legalized for both medical and recreational purposes. A number of themes regarding cannabis legalization run as common threads across the four states, although some reports do highlight certain data points that may be unique to a particular state.

Except where otherwise indicated, the data provided in the tables were taken from the following sources:

- *Washington State Marijuana Impact Report – Vol. 2*, published by the Northwest High Intensity Drug Trafficking Area in August 2017
- *The Legalization of Marijuana in Colorado: The Impact* (September 2016) and the *March 2017 Supplement* to that impact report. Both were published by the Rocky Mountain High Intensity Drug Trafficking Area.
- *Marijuana Report: Marijuana Use, Attitudes, and Health Effects in Oregon*, published by the Oregon Health Authority in January 2016
- *Marijuana's Impact on California: High Density Drug Trafficking Report*, published in 2016

When reviewing this data, the following perspective provided by the Colorado Department of Public Safety may be helpful:

“ It should be noted that the most fundamental challenge to interpreting data related to marijuana over time stems from unmeasured changes in human behavior concerning marijuana. Legalization may result in reports of increased use, when it may actually be a function of the decreased stigma and legal consequences regarding use rather than actual changes in use patterns. Likewise, those reporting to poison control, emergency departments, or hospitals may feel more comfortable discussing their recent use or abuse of marijuana for purposes of treatment. The impact from reduced stigma and legal consequences makes certain trends difficult to assess and will require additional time to measure post legalization. Additionally, for example, the increase in law enforcement officers who are trained in recognizing drug use, from 32 in 2006 to 288 in 2015, can increase drug detection rates apart from any changes in driver behavior. For these reasons, these early, baseline findings should be carefully considered in light of the need to continue to collect and analyze relevant data.³³ ”

Cannabis-related driving incidents

WASHINGTON	COLORADO	OREGON	CALIFORNIA
<ul style="list-style-type: none"> • In 2016, 38% of cannabis DUI cases tested by the Washington State Patrol Toxicology Lab were over the legal limit of 5 nanograms per millilitre of blood, and 33.6% tested positive for active THC. • From 2010 to 2014, 10% of Washington drivers involved in a fatal crash were THC-positive. • Fatal crash data showed a statistically significant increase in deceased drivers from 2013 (7.8%) to 2014 (12.8%). These drivers were above the 5 nanograms per millilitre of blood per se limit. • One in five Grade 10 students and one in four Grade 12 students reported riding with a driver who had used cannabis. • 17% of Grade 12 students and 9% of Grade 10 students admitted to driving within three hours of consumption. 	<ul style="list-style-type: none"> • Cannabis-related traffic deaths increased 48% in the three-year average (2013-2015) since Colorado legalized recreational cannabis compared with the three-year average (2010-2012) prior to legalization. During the same time, all traffic deaths increased 11%. • In 2016, 17.2% of DUI cases handled by the Colorado State Patrol showed cannabis or cannabis-in-combination as the impairing substance. This was a 28% increase over 2015. • In 2015, 115 operators³⁴ involved in fatal crashes tested positive for cannabis. (98 were drivers.) This number of operators represents 21.02% of all traffic deaths. 	<ul style="list-style-type: none"> • Between July 1 and December 31, 2015, 50 drivers were charged with driving under the influence of cannabis, compared with 19 for the same time period the previous year, according to the latest Oregon State Police statistics. Another 93 drivers were charged with having cannabis along with other drugs in their systems at the time they were stopped, compared with 44 the previous year. Overall, the agency's data show that driving under the influence of any substance rose by 7% in 2015.³⁵ • Almost 50% of Grade 11 cannabis users who drive a car reported that they drove within three hours of using cannabis in the past month. 	<ul style="list-style-type: none"> • Crash fatalities in California have decreased by 29% from 2005 to 2014, which is consistent with national trends. However, crash fatalities in California involving a driver(s) testing positive for cannabis increased by 17% during the same period. • The number of drivers testing positive for any drugs who were involved in a fatal crash decreased by 12% from 2005 to 2014. However, drivers testing positive for cannabis increased by 22% during the same period.

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The term "operator" in this report refers to anyone in control of his or her own movements, such as a driver, pedestrian, or cyclist.
Legal Pot in Oregon: One Year Later: http://www.oregonlive.com/marijuana/index.ssf/2016/06/oregon_marks_1_year_anniversar.html

Usage rates in youth and adults

WASHINGTON	COLORADO	OREGON	CALIFORNIA
<ul style="list-style-type: none"> • In 2014, 24% of young adults (18-25) used cannabis at least once in the past month; 15% used at least once a week; 5% were daily users. • Past-month cannabis use by young adults (18-25) was 2% higher than the nation's in 2014-2015. For adults, it was over 3% higher. • Past-year use by young adults was 4% higher than the nation's. For adults, it was almost 5% higher. • 93.6% of public safety violation tickets received by recreational licensees involved minors. • In 2015, 64.9% of all state cannabis seizures involved youth (12-17). In 2010, it was 29.9%. 	<ul style="list-style-type: none"> • From 2014 to 2015, an average 31.75% of young adults (18-25) reported past-month cannabis use. The national average that same period was 19.7%. • From 2014 to 2015, an average 14.65% of adults reported past-month use. The national average was 6.55%. • In 2014-2015, an average 11.13% of youth (12-17) reported past-month cannabis use. The national average for that same period was 7.2%. • Youth past-month cannabis use increased 20% in the two-year average (2013-2014) since legalization, compared with the two-year average (2011-2012) before legalization. 	<ul style="list-style-type: none"> • 9% of Oregon adults agreed that they use cannabis more often now that it has been legalized. • Approximately 48% of Oregon adults reported that they had ever used cannabis. 11% reported that they currently used cannabis. • Young adults were the highest reported use age group (18% among ages 18–24 years). • Oregon's adult cannabis use was higher than the nation's adult use. • 51% of Oregon adults had seen cannabis product or store advertising in their community in the past month; only 29% had seen information about health risks of using cannabis. • In 2015, 9% of Grade 8 students and about 19% of Grade 11 students reported current cannabis use. This is comparable to national use patterns. • More youth currently use cannabis than smoke cigarettes. Recent trends in youth use have been stable. 	<ul style="list-style-type: none"> • The past-month cannabis use rate for ages 18-25 was higher than the national average, as was California's past-year cannabis use rate for the same age group.

Illicit usage by youth—and related consequences

WASHINGTON	COLORADO	OREGON	CALIFORNIA
<ul style="list-style-type: none"> In the 2014-2015 schoolyear, 60% of statewide student expulsions and 49% of suspensions related to substance abuse specifically involved cannabis. 	<ul style="list-style-type: none"> In the 2015-2016 schoolyear, 62% of all drug expulsions and suspensions were for cannabis violations. In terms of total expulsions, those for cannabis violations represent 58%; for total suspensions, those for cannabis violations represent 63%. In 2015-2016, 73% of all referrals to law enforcement were for cannabis violations. In 2015, Children’s Hospital reported 16 cases of cannabis ingestion in children under 9. 	<ul style="list-style-type: none"> 62% of Grade 11 students reported that they had easy access to cannabis. Youth reported that cannabis was easier to get than cigarettes. 	<ul style="list-style-type: none"> In 2015, cannabis was used more than cigarettes by Grades 8, 10, and 12 students. Compared with the national average, California youth (12-17) have a lower perception of great risk of smoking cannabis once a month. Since 2008, the prevalence of past-month cannabis use for those 12 or older has been higher in California than the national average. California’s largest average increase occurred in 2010-2012 after the proliferation of cannabis dispensaries. Past-month use for students in Grades 7, 9, and 11 has continued to increase since 2005. From 2005 to 2010, Northern California had the highest rate of past-year use of cannabis for ages 12 and older.

Illicit usage by youth—and related consequences

<ul style="list-style-type: none"> • In the 2014-2015 schoolyear, 60% of statewide student expulsions and 49% of suspensions related to substance abuse specifically involved cannabis. 	<ul style="list-style-type: none"> • In the 2015-2016 schoolyear, 62% of all drug expulsions and suspensions were for cannabis violations. In terms of total expulsions, those for cannabis violations represent 58%; for total suspensions, those for cannabis violations represent 63%. • In 2015-2016, 73% of all referrals to law enforcement were for cannabis violations. • In 2015, Children’s Hospital reported 16 cases of cannabis ingestion in children under 9. 	<ul style="list-style-type: none"> • 62% of Grade 11 students reported that they had easy access to cannabis. Youth reported that cannabis was easier to get than cigarettes. 	<ul style="list-style-type: none"> • In 2015, cannabis was used more than cigarettes by Grades 8, 10, and 12 students. • Compared with the national average, California youth (12-17) have a lower perception of great risk of smoking cannabis once a month. • Since 2008, the prevalence of past-month cannabis use for those 12 or older has been higher in California than the national average. California’s largest average increase occurred in 2010-2012 after the proliferation of cannabis dispensaries. • Past-month use for students in Grades 7, 9, and 11 has continued to increase since 2005. • From 2005 to 2010, Northern California had the highest rate of past-year use of cannabis for ages 12 and older.
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Diversion and illegal trade

WASHINGTON	COLORADO	OREGON	CALIFORNIA
<ul style="list-style-type: none"> • Since 2012, Washington cannabis has been found destined for diversion to 38 different states in the U.S. • Since 2012, 320 pounds of Washington cannabis has been seized in attempted parcel diversion. • From 2012 to 2016, 470 pounds of cannabis was seized on Washington highways and interstates. • From 2012 to preliminary data for 2017, 8,242 kilograms of cannabis was seized in 733 individual seizure events across 38 states. 	<ul style="list-style-type: none"> • Of the 394 seizures in 2015, 36 different states were destined to receive cannabis from Colorado. Most common destinations: Missouri, Illinois, Texas, Iowa, Florida. • In 2016, 854 parcels were found to contain cannabis that was being mailed from Colorado to another state. • In 2016, 1,725 pounds of cannabis was seized by the U.S. Postal Inspection Service. • For the period 2013-2016, the average number of pounds seized was 984. • From 2013 to 2015, highway patrol seizures have resulted in approximately 4.5 tons of Colorado cannabis being seized. 	<ul style="list-style-type: none"> • No data available 	<ul style="list-style-type: none"> • In 2015, California was the origin of 861 of the nation's 3,057 cannabis seizures (highest-ranked state). • Cannabis was the most seized substance at the San Francisco Division U.S. Postal Inspection Service.

Economy and tax revenues

WASHINGTON	COLORADO	OREGON	CALIFORNIA
<ul style="list-style-type: none"> • For fiscal year 2016, total cannabis sales amounted to over \$972 million. Through January 2017, it amounted to over \$800 million. • For fiscal year 2016, total excise tax generated amounted to over \$185 million. For fiscal year 2017, the total is now over \$271 million. • The Washington Department of Financial Institutions reported that 12 financial institutions are currently serving the cannabis industry in the state. 	<ul style="list-style-type: none"> • Colorado annual tax revenue from the sale of recreational and medical cannabis was over \$115 million (calendar year 2015) or about 0.5% of Colorado's total statewide budget (fiscal year 2016). • Total revenue from taxes, licences, and fees increased from over \$76 million in 2014 to over \$135 million in 2015. Also in 2015, excise tax revenue dedicated to school capital construction assistance was over \$35 million.³⁶ 	<ul style="list-style-type: none"> • For calendar year 2016, cannabis tax receipts totaled \$60.2 million (according to the Oregon Department of Revenue).³⁷ • For calendar year 2016, Oregon collected \$14.9 million in tax revenues from sales of recreational cannabis.³⁸ • Cannabis sales are taxed at 25%, though medical cannabis remains untaxed.³⁹ 	<ul style="list-style-type: none"> • California's Proposition 64 passed on November 8, 2016, and retail sales are set to begin by January 1, 2018. Tax revenue will not be realized until 2018. When it does, California may see an additional \$1.5 billion flooding into the cannabis market.⁴⁰ • That number grows to just shy of \$3 billion in 2019, and nearly \$4 billion by 2020, based on the latest report from New Frontier Data and ArcView Market Research. That is on top of the already booming medical cannabis market — the total size of the cannabis market could reach \$4.27 billion in 2018, and could grow to \$6.45 billion by 2020.⁴¹

36 *Marijuana Legalization in Colorado: Early Findings*, published by the Colorado Department of Public Safety in March 2016

37 *Oregon's Recreational Cannabis Tax Revenue for 2016 Exceeded One Original Estimate More than Six-Fold*:

<http://www.wweek.com/news/2017/01/21/recreational-marijuana-tax-revenue-for-2016-exceeded-one-original-estimate-more-than-six-fold/>

38 *Legal Pot in Oregon: One Year Later*:

http://www.oregonlive.com/marijuana/index.ssf/2016/06/oregon_marks_1_year_anniversar.html

39 *Legal Pot in Oregon: One Year Later*:

http://www.oregonlive.com/marijuana/index.ssf/2016/06/oregon_marks_1_year_anniversar.html

40 *California just legalized marijuana, and it's going to have a huge impact on the economy*:

<http://www.businessinsider.com/marijuana-california-weed-legal-economy-2016-11>

41 *California just legalized marijuana, and it's going to have a huge impact on the economy*:

<http://www.businessinsider.com/marijuana-california-weed-legal-economy-2016-11>