Standardized Regulatory Impact Analysis

2026 CCTT Package

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Environment • Resources • Agriculture

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1. Introduction

Since the passage of the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA) in 2017, the California licensed cannabis industry has slowly grown into the largest regulated market in the world. The retail value of sales exceeded $4.6 billion in 2024, despite the licensed industry competing against a persistent illicit market. The licensed industry was generally increasing through 2024 (greater quantity of licensed cannabis sold through the market), although unit prices for retail and wholesale cannabis were decreasing over the same period.

The regulated licensed market includes the cannabis supply chain from seed to production, distribution, manufacturing, laboratory testing, and final retail sales. Laws and regulations governing California's industry have continued to evolve in response to better data, innovations, and evolving market conditions. The Department of Cannabis Control (Department) is the main regulatory agency for the California licensed market and continually adjusts regulations in response to new laws and industry conditions.

One area of concern for regulating the licensed market supply chain is preventing diversions to the illicit market and ensuring accurate product information is available to consumers and the Department. This supports growth in the licensed, regulated industry. All licensed cannabis and cannabis products are tracked in the California Cannabis Track and Trace (CCTT) system. However, there are potential data entry errors and system issues that can be exploited[1], leading to diversions from the licensed market to the illicit market, inaccurate CCTT data, and mislabeled products. In response, the Department, in consultation with other state agencies, has evaluated options for modifying CCTT requirements to remedy these issues.

This Standardized Regulatory Impact Analysis (SRIA) summarizes the economic and fiscal analysis of the Department's proposed regulatory changes (proposed alternative or proposed regulations) and other regulation alternatives considered to modify Department CCTT requirements. The objectives of these changes are to prevent cannabis from being diverted to the illicit market, to improve CCTT data accuracy, and to ensure that cannabis sold in the licensed market meets product safety standards established to protect public health and safety. This supports the licensed industry and protects public health and the environment by further limiting the illicit market.

The Department proposed regulations include the following under Title 4 of the California Code of Regulations (CCR):

[1] This is generally by businesses in the licensed market that may be operating dishonestly or otherwise avoiding regulatory compliance. Some such businesses have been identified, and the Department has taken enforcement action in these specific instances. However, there are other opportunities for avoiding regulatory compliance, which this regulation package addresses. This SRIA refers to these entities as "noncompliant businesses" or "bad actors."

- Chapter 1. All Licensees. Article 6. Track and Trace Requirements
    - Section §15047.1. Definitions
    - Section §15049. Track and Trace Reporting
    - Section §15049.2. Recording Transfers of Cannabis and Cannabis Products
    - Section §15049.4. Track and Trace Requirements for Retail
- Chapter 2. Distributors
    - Section §15304. Testing Arrangements
    - Section §15305. Testing Sample
    - Section §15305.1. Sampling Restrictions
    - Section §15306. Regulatory Compliance Testing Results
    - Section §15307. Quality-Assurance Review
- Chapter 3. Retailers
    - Section §15404.1. Providing Certificates of Analysis (COAs) to Customers
- Chapter 6. Testing Laboratories. Article 3. Sampling Cannabis and Cannabis Products
    - Section §15710. Laboratory Receipt of Samples Obtained from a Distributor or Microbusiness for Regulatory Compliance Testing

The salient features of the regulation that affect economic (and fiscal) impacts are as follows:

- Transporter and destination approvals, section §15049.2:
    - Requires a licensee initiating a transfer to gain approval from the transporter and proposed recipient
    - Establishes a transfer auto-approval mechanism for established business relationships
- Prohibiting second test sample packages, sections §15304, §15305, §15305.1, §15306, and §15710:
    - Requires a distributor to record sampling in CCTT before the laboratory collecting the sample leaves the distributor's premises
    - Prevents a second test sample package from being created when one already exists
    - Prevents a distributor from applying a new production batch to cannabis that is undergoing or has passed testing
- Mandatory use of existing CDTFA sales tax fields, new section §15049.4:
    - Requires retailers to record the following in CCTT for each sale:
        - Receipt or invoice number
        - Retail selling price
        - Excise tax, city tax, county tax, municipal tax, and sales tax

        - Any discounts and the final subtotal
- Retailer disclosure of COAs, section § 15404.1:
    - Requires retailers to provide digital or physical copies of COAs to customers upon request
- Requiring the same units of measurement (UOM) when accepting transfers, section §15049:
    - Receiving licensees must use the same unit of measurement that the sender used
    - Licensees may change unit of measurement by repacking the package after it is in their inventory
- Prohibiting future dating certain activities in CCTT, section §15049:
    - Licensees are prohibited from entering future dates in CCTT when recording the date and time an activity occurred.

The proposed regulations would prevent diversions, improve CCTT data accuracy, and enhance cannabis product safety. These regulations would increase compliance costs for all active licenses, which would cause an increase in operating costs but not substantial changes to capital costs. This would cause market adjustments as these costs are transmitted through the cannabis industry supply chain, ultimately through wholesale and retail cannabis product prices in the licensed market. This also affects and is affected by competition from the illicit market.

The economic impacts of the proposed regulations were quantified by establishing the direct costs to affected market segments. An economic model of the California illicit and licensed industries was then applied to evaluate the impact of these changes on the resulting market equilibrium, including changes in product prices. Lastly, an economic input-output (so-called "multiplier") model was applied to assess indirect and induced economic effects in related industries. The total economic impact (costs, benefits, and direct, indirect, and induced effects) is reported.

The economic analysis of these changes is based on the best available data and information for the California cannabis market, economic parameters, and costs of regulatory compliance. Data for the licensed cannabis industry are limited, and official data regarding the illicit market are nonexistent. Therefore, the economic parameters that characterize the market for licensed and illicit cannabis are estimated based on the best available data. The methods are summarized and, where appropriate, sensitivity analyses are prepared to illustrate the range of potential economic outcomes. Despite data limitations, the findings of this economic impact analysis (e.g., major regulation determination and general magnitude of economic and fiscal impacts) are robust across the range of sensitivity scenarios. All of the costs included in this analysis are itemized so that the reader can understand the individual and total cost of the proposed regulations, and all

economic and fiscal impact reporting requirements under applicable sections of the APA, SAM, DF-131, and STD-399 are addressed.

The California cannabis market is different than other conventional agriculture industries because cannabis is produced and sold widely in both the licensed market as well as the unregulated, illicit market. Accordingly, this economic impact analysis considers that cannabis businesses—from cultivation through final retail—operate in a market where consumer demand is partially met through the unregulated, illicit cannabis market. Cannabis products sold in the licensed and illicit markets are similar and highly substitutable for many consumers. Therefore, regulatory changes have important effects for both the licensed and illicit markets. To isolate the market effects of regulatory changes for producers and consumers in the licensed market, the relationship between the licensed and illicit markets is incorporated in the economic analysis framework.

1.1. Statement of Need for the Proposed Regulation

It is possible for noncompliant businesses in the licensed market to exploit the CCTT system to divert production from other licensed businesses to the illicit market. These products can then be distributed to unlicensed manufacturers and retailers within the state and exported out of state. Products that are diverted to the illicit market evade testing for harmful pesticides and other contaminants, leading to unquantified, but potentially significant human and environmental health consequences. Diverted products also evade taxes and are available in the broader national market, providing a competitive advantage to noncompliant businesses and undermining the regulated market. Requiring transfer approvals would reduce diversions to the illicit market.

Noncompliant businesses may engage in a practice referred to as “lab shopping.” This involves sending product samples to multiple laboratories to receive more favorable cannabinoid content results and to increase the likelihood of passing testing for contaminants. Prohibiting second test sample packages would result in fewer products at retail that are contaminated or have misreported cannabinoid content.

Licensees frequently apply inconsistent data entry practices within CCTT when entering UOM and sales prices. This includes both intentional and unintentional data entry errors pertaining to cannabis volumes and sales. Intentional data entry errors can be used to conceal diversions from the licensed to illicit market. Both types of errors cause CCTT data to be unreliable, making it difficult to accurately identify the quantity and movement of cannabis from harvest to retail. Mandatory use of CDTFA sales tax fields, requiring the same UOM when accepting transfers, and prohibiting future dating of certain activities in CCTT limit the ability of noncompliant businesses to conceal illicit activity. This also contributes to improved CCTT data quality. Proposed changes would improve the accuracy of CCTT data and the traceability of cannabis from harvest to retail.

Retailers are currently not required to provide Certificates of Analysis (COA) to consumers. As a result, consumers do not have access to information necessary to verify the quality and safety of products purchased at retail. Requiring disclosure of COAs at retail would ensure consumers have access to product information and would support consumer confidence in legal cannabis products.

1.2. Major Regulation Determination

Th proposed regulations would exceed the $50 million annual economic impact threshold. The 12-month period in which the economic impact of the proposed regulation would exceed $50 million is defined as the 12 months following full implementation of the proposed regulations. The precise date of full implementation is unknown but is generally expected to be shortly after the regulations are implanted and the market adjusts. The total 12-month economic impact of regulatory costs, measured as changes in direct costs, labor income, value-added, and the value of output, would equal $244.5 million across all affected sectors. This includes total statewide costs to businesses and individuals of $211.6 million, total statewide benefits of $30.6 million, the elimination of 1,078 jobs related to market adjustments and decreased laboratory testing, and the creation of 221 jobs related to increased spending throughout the cannabis supply chain. Additional, potentially offsetting, human and environmental benefits were not possible to quantify or monetize.

1.3. Public Outreach and Input

The economic analysis leverages data, economic models, and information developed for prior rulemaking that has been initiated by the Department and its predecessor legacy agencies. This includes economic data and models that were developed for SRIAs prepared in 2017 and have been updated for various regulations and fiscal and economic assessments developed since.

ERA Economics and the Department conducted targeted outreach in preparing this analysis. This included outreach to stakeholders, industry experts, and some market researchers to understand current market conditions affecting testing laboratories and distributors. This also included assessing the potential effect of components of the regulations on businesses and individuals (e.g., compliance time and associated costs), and discussing potential benefits. The following groups were contacted to support the development of the analysis:

- Laboratories and other industry professionals to review current market conditions, update cost of production information, verify industry data, and receive general insights on industry trends, challenges, and changes.
- Researchers to discuss industry trends and feedback from other outreach/survey efforts.
- Department staff to assess potential effects on laboratories and short- and long-term staff level effort to manage laboratory license changes (fiscal costs).

The Department also conducted outreach to inform licensees about the proposed regulatory changes. Outreach efforts provided interested parties the opportunity to provide feedback on draft regulations. Outreach included but was not limited to communication with potentially interested parties via email and phone, as well as organized events such as Cannabis Advisory Committee meetings and other DCC events.

1.4. Report Organization

The report is structured as follows. Section 2 describes the types of economic and fiscal effects attributable to the proposed regulations, and the analytic approach and data used to quantify (monetize) impacts. Section 3 provides an overview of the cannabis industry, establishing important baseline conditions used to evaluate fiscal and economic impacts of the proposed regulations. Section 4 summarizes the economic and fiscal impacts of the proposed regulations. Sections 5 and 6 summarize two alternatives that the Department considered, and the basis for selecting the proposed regulation over the two alternatives.

2. Analytic Approach and Data

The proposed regulations would result in direct costs to cannabis businesses to modify data entry practices, hire new staff, and invest in new machinery and equipment. These direct costs will affect the entire licensed cannabis supply chain. Since the licensed market competes with the illicit market, cost changes in the licensed market also affect the illicit market. Changes in direct costs and adjustments across the licensed cannabis supply chain will affect other businesses and individuals in ancillary industries. The economic impacts are measured following a standard process: to quantify direct business costs, evaluate how those costs affect the licensed market cannabis, and then evaluate indirect and induced impacts.

The proposed regulations would result in total fiscal costs to the Department of $555,165 for implementation and monitoring, of which $177,200 are additional costs, and the remaining $377,965 have already been paid for. Fiscal costs would be absorbed within the existing Department budget.

The analysis applies public industry data to the maximum extent possible. However, as noted earlier, the licensed cannabis industry is still relatively new, and industry data are limited in many cases. For example, there is no centralized data/information for the illicit market in California, so additional analysis is completed to address this data gap. Where data were unavailable, judgment and reasonable assumptions based on industry outreach were applied. All prices and costs are inflation-adjusted and reported in 2024 dollars.

The following subsections provide an overview of the direct costs, economic framework, baseline conditions, and models—including the Equilibrium Displacement Modeling (EDM) for market effects and IMPLAN model for regional economic impacts—used to measure the shifts in production costs, prices, job creation or loss, and regional economic outcomes resulting from the proposed regulation.

2.1. Overview of Economic and Fiscal Impacts

The proposed regulations would result in quantifiable and unquantifiable (i.e., non-monetized) costs and benefits (collectively, economic impacts) for licensed cannabis businesses and fiscal impacts to the Department.

The economic impacts of the proposed regulations are from increased compliance costs for licensees leading to higher operational costs, potentially decreased reported cannabis potency, increased testing failure rates, and corresponding reductions in cannabis supply and demand in the licensed market. Limiting second sample testing under the proposed regulation would increase the rate of failed testing, initially reducing cannabis in the licensed market. Limiting second testing would also decrease average reported potency, leading to products with lower labelled potency at retail, reducing consumers' willingness to pay for cannabis. This potential reduction in demand may be offset by greater consumer confidence in the legal market and

laboratory testing, especially with the ability to review COAs before making purchases. Limiting diversions to the illicit market would result in reduced supply of illicit cannabis. These supply and demand effects would have counteracting effects on cannabis prices in the licensed and illicit markets.

Market adjustments were quantified using an EDM framework to estimate price and quantity changes, and illicit market substitution. An IMPLAN analysis was applied to estimate the indirect and induced economic effects, such as job losses and changes in industry-wide economic output.

Fiscal effects of the proposed regulations and alternatives were developed using the results of the economic impact analysis (considering how the market adjusts) and estimate of staff time and cost developed by the Department.

In summary, economic and fiscal impacts were quantified using a standard sequential approach:

1. **Direct economic impacts**. These represent direct costs and benefits to businesses and individuals that are attributable to the regulation and can be quantified. For example, additional CCTT training time.
2. **Market economic effects**. The direct economic costs or benefits represent changes in the cost to produce cannabis and/or the quantities of cannabis products being purchased. Industry supply changes in response to direct costs or benefits to producers, while industry demand changes with quantities of products sold. Both can affect the market price and quantity of cannabis produced. These market equilibrium changes affect the broader industry. For example, reduced average reported cannabis potency is expected to reduce the wholesale value of cannabis, which will affect prices throughout the cannabis supply chain up to and including retail prices for consumers.
3. **Indirect and induced economic impacts**. Effects to other businesses and individuals result from the direct costs or benefits and associated changes in the equilibrium market conditions for the industry. For example, businesses employ staff that live in local communities and purchase other goods and services from non-cannabis related business. These measures of economic activity are assessed using a customized version of the multiplier model, IMPLAN®, adjusted to include cannabis business sectors.
4. **Fiscal impacts**. The fiscal impact analysis follows the economic impact analysis by quantifying the fiscal cost of the regulation to the Department and other state/local agencies after accounting for the industry adjustments that are reflected in the economic impact analysis.

The economic impacts of the proposed regulations are established relative to a baseline. The baseline condition, per the California Administrative Procedure Act, is the most cost-effective set of regulatory measures that ensure full compliance with the authorizing statute or other law being

implemented.[2] This ensures that the economic impacts only measure the incremental changes attributable to the regulation. In this case, the proposed regulations are being proposed under the general statutory authority of the Department and not under any specific law requiring the regulations. Therefore, the baseline condition is the no-action alternative (i.e., absence of the proposed regulatory changes) because the baseline condition meets all statutory requirements. All economic impacts are measured relative to this baseline (no action).

A total of three alternatives are summarized in the SRIA: the proposed regulations, Alternative 1 to the proposed regulations that modifies specific requirements (as defined in subsequent sections), and Alternative 2 (no action).

The economic effects/impacts of the proposed regulations are summarized in terms of direct effects (changes in licensee operating costs), market effects (changes in price and quantity of licensed cannabis), indirect effects (changes in related businesses), and induced effects (changes in employee expenditures), which are summarized in the following subsections.

2.2. Direct Effects

Direct impacts are costs and benefits that directly affect the businesses and individuals in the industry. In the case of the proposed regulations, these businesses would be licensed cannabis cultivators, distributors, manufacturers, retailers, laboratories, and other businesses.

The potential monetizable economic impacts of the regulatory changes in the CCTT package include:

- Benefits
    - Compliant businesses in the licensed market would benefit from requiring receiver approval for transfers.
        - Without the regulation, noncompliant businesses may initiate transfers without approval as a mechanism to divert cannabis to the illicit market, thereby increasing illicit cannabis supply, depressing prices, and undercutting the legal market.
        - Compliant businesses would realize higher prices from the reduced supply of illicit cannabis.
        - Licensees would save time and resources by not having to review electronic transfers that they did not want and are not involved in.
        - Transfer approvals would also prevent a distributor's license information from being used for a CCTT transfer without their consent.

[2] Government Code of California, Title 2, Division 3, Part 1, Chapter 3.5, Article 5, §11346.3 (e)

        - A licensee's information could no longer be used in CCTT without their consent or knowledge.
        - Transfer approvals, by requiring the recipient to review and approve the transfer request, would avoid incorrect items from being placed on transfer manifests, reducing the need for licensees to perform costly return transfers due to manifest errors.
        - The playing field between compliant and noncompliant licensees would be levelled by better ensuring all licensees comply with rules designed to protect public health and safety.
    - Compliant businesses in the licensed market would benefit from prohibiting second test sample packages.
        - Without the regulations, noncompliant businesses may send samples to multiple labs to receive more favorable test results in terms of THC potency, or to pass testing for harmful heavy metals, microbial impurities, mycotoxins, pesticides, and residual solvents and processing chemicals. This would result in inflated prices from higher potency results as well as potentially harmful products available at retail.
        - Compliant businesses would benefit from reduced prices paid to noncompliant businesses for cannabis with inflated potency, and the reduced supply of cannabis from noncompliant businesses from increased failure rates.
    - Noncompliant businesses would realize cost savings from paying for fewer lab sample tests, although these savings would be more than offset by the value lost from inflated potency and false test results.
    - Consumers would benefit from the potential reduction of harmful products available at retail and the elimination of potency inflation.
- Costs
    - Licensees would see increases in operating costs for approving transfers, changing unit of measurement recording practices, and training additional staff to input CCTT data.
    - Laboratory revenue from testing would decrease as distributors would be prohibited from sending sample packages to multiple labs.
    - Retailers would have additional small cost increases from providing digital or physical copies of COAs to customers upon request.

2.3. Market Effects

The regulation would affect the marginal cost to produce cannabis. This is the industry supply (the relationship between price and quantity produced by the industry). As supply (cost) changes, market price and quantity produced are affected.

This analysis applies an economic EDM approach to estimate the potential market effects of the proposed regulations. The EDM is widely applied for evaluating the effects of changes in production costs, trade policies, advertising, taxes, and regulation of agricultural commodities. For example, it has been extensively applied to crop and livestock systems such as the dairy sector, beef production, sheep production, marketing, and research and development (Alston et al., 1995; Alston et al., 2006; Atwood and Brester, 2019).

The basic EDM for the aggregate cannabis industry, which modeled both licensed and illicit markets, was developed for the 2017 SRIA following Muth (1964), Gardner (1988), and Wohlgenant (1993). The EDM used in this analysis updates the original version and considers licensed and illicit cannabis supply and demand under current market conditions.

The market effects in this analysis can be summarized as follows:

- Decreased diversions to the illicit market would represent a downward shift in illicit cannabis supply (lower unit cost), resulting in upward pressure on legal cannabis prices.
- Decreased average labelled potency (not actual potency) from restricting lab shopping would represent a downward demand shift (decrease in demand) for licensed cannabis, putting downward pressure on cannabis prices. Consumers would benefit from not paying extra for products with inflated potency, offsetting this downward demand shift.
- The increased rate of failed tests for compliance from preventing lab shopping would represent a downward supply shift (lower cost) of cannabis from noncompliant businesses, putting upward pressure on licensed cannabis prices.

These effects would result in a change in gross economic output.

2.4. Indirect and Induced Impacts

The analysis of indirect and induced impacts evaluates the overall effect of changes in prices and quantities from the market analysis on jobs, income, taxes, and value-added across the State.

The total economic impact is expressed as changes in costs, benefits, and direct, indirect, and induced impacts. The direct impacts in this analysis are 1) changes in spending by licensed cannabis cultivators, distributors, laboratories, retailers, and other businesses (i.e., manufacturers and microbusinesses), and 2) a change in primary production value (gross economic output) resulting from decreased supply. The indirect impacts capture changes in intermediate input purchases by the primary industry from other sectors of the economy. For example, retailers

purchase technology such as POS systems required to run a retail business. Induced impacts capture the change in expenditures of income by proprietors and employees in the primary industry and all linked industries.

This analysis uses the Impacts for Planning and Analysis (IMPLAN®) v3.1 model (MIG. Inc, 2016) with a California county-level 2014 dataset as the baseline year for the analysis.[3] The IMPLAN software is an input-output economic model that estimates the effects of exogenous changes in final demand within a specified geographic region (in this case, California). The model uses a comprehensive dataset of national and regional economic accounts that document purchasing relationships between industries through multiple rounds of spending. The software also incorporates institutional demand and inter-institutional transfers that reflect purchases made by households and government agencies.

A limitation of the IMPLAN model or any input-output model is that the default IMPLAN model data does not include any businesses in the cannabis industry. Three licensed cannabis cultivation sectors, which include Indoor, Outdoor, and Mixed-Light cultivation, were created for the 2017 SRIA using financial data from cultivator surveys and various secondary sources. These customized sectors were adjusted for inflation and indexed to current market conditions and applied to this analysis. For this analysis, customized laboratory testing and retail sectors were also developed (see section 4.4).

2.5. Fiscal Impacts

Fiscal impacts are changes to public agency costs and revenues associated with the regulations. The fiscal impacts of the proposed regulations to the Department may include:

1. Development costs related to transporter and destination approvals, prohibiting second sample testing, mandating CDTFA sales tax fields, and retail disclosure of COAs.
2. Possible minor staff costs from implementation efforts and updating operating procedures, but these costs would be offset by more accurate data and efficiencies in monitoring compliance. System updates will preclude the need for monitoring compliance with UOM and future dating requirements.
3. Reduced license fee revenue from business exits.

Total costs develop system changes to implement the regulatory changes would be $555,165, of which $177,200 are additional costs, and the remaining $377,965 have already been paid for. Existing positions would support successful rollout, implementation, and compliance monitoring

[3] The IMPLAN 2014 data for California counties is used for consistency with the 2017 SRIA and other previous economic and fiscal analyses of the cannabis industry. That data also includes the custom Cannabis sectors created for the SRIA. All dollar values are indexed for inflation and reported in 2024 dollars. A review of IMPLAN data from 2015 to 2022 for the industries identified to be similar to cannabis shows little variation from this 2014 data. That is, the economic multipliers in the 2014 IMPLAN database, with custom cannabis sectors, are appropriate for this impact analysis.

of proposed regulations. These are existing costs, and no additional fiscal resources are anticipated to be required to implement the proposed regulations.

3. Cannabis Industry Baseline Overview

Current relevant baseline conditions for the cannabis industry were developed using cultivation license data, industry data developed for the 2017 SRIA and previous EFIAs developed for the Department, CCTT data, a recent Market Report, and other updated data developed for this analysis. The proposed regulatory amendments would directly affect cultivators, distributors, manufacturers, laboratories, and retailers. These amendments would also indirectly affect other licensed cannabis businesses. This section focuses on the directly affected segments of the licensed cannabis supply chain.

3.1. Cannabis Supply

This section describes estimated licensed production. Production is defined as the weight of cannabis (in terms of dry-flower equivalent[4]) harvested, packaged, and transferred for sale by cultivators. Total production in the licensed market was estimated by combining information from multiple data sources and applying statistical methods. Data include CCTT, production budgets, and cultivation tax receipts.

Cultivation (production) data, stratified by taxes on flower, leaves and other plant material, and fresh plant material, are available from CDTFA through July 1, 2022. Collection of the cultivation tax began in 2018 and was suspended on July 1, 2022. Prior to July 1, 2022, the cultivation tax rate was $10.08 per ounce for dry-weight flowers ($9.65 prior to January 2022 and $9.25 prior to January 2020), $2.87 per ounce for dry-weight leaves ($2.75 prior to January 2020), and $1.35 per ounce for fresh cannabis ($1.29 prior to January 2020). The "dry-weight leaves" category includes leaves and all other dry non-flower plant material, such as trim.

Cannabis leaves and other plant material typically undergo further processing. THC is extracted from this plant material for products such as edibles and vape cartridges. Cannabis trim is also included in the "dry-weight leaves" category. Trim can include sugar leaves and bits of buds, which are highly variable in THC content, but considerably higher in THC content than fan leaves.

Cultivation tax data were used to estimate cannabis production through 2021. CCTT data were used to estimate the quantity of licensed cannabis production sold for adult-use and medicinal consumption in California for 2019–2024. CCTT data were adjusted to account for reporting errors[5].

[4] "Dry-flower equivalent" is the normalization of raw cannabis products, such as trim, leaves, and fresh plants to flower based on approximate THC content. These are also used as inputs for cannabis products sold at retail.

[5] Adjustment methods include a range of statistical analyses and labor-intensive review, cleaning, and flagging of errors. This process is informed by working with the CCTT data for several years and understanding the nuances of reporting and likely errors, which is done in coordination with Department staff.

Table 1 shows estimated total licensed cannabis production distributed to the licensed adult-use and medicinal retail markets for 2020–2024. Production has been increasing since 2020 with 2024 production equal to 1.43 million pounds. Cannabis production distributed to the medicinal market has been decreasing since 2021 from 120.7 to about 92.7 thousand pounds, whereas cannabis distributed to the adult-use retail market has steadily increased year-over-year.

Table 1. Estimated Licensed Cannabis Production, by Year and Medicinal and Adult Use Markets

Year	Adult-use, flower-equivalents	Medicinal, flower-equivalents	Total licensed, flower-equivalents	Year-over-year change
		Pounds, thousands		*%*
2020	734.1	104.7	838.9	N/A
2021	863.3	120.7	984.0	17.3
2022	1,014.5	99.8	1,114.3	13.2
2023	1,184.4	93.7	1,278.0	14.7
2024	1,336.7	92.7	1,429.4	11.8

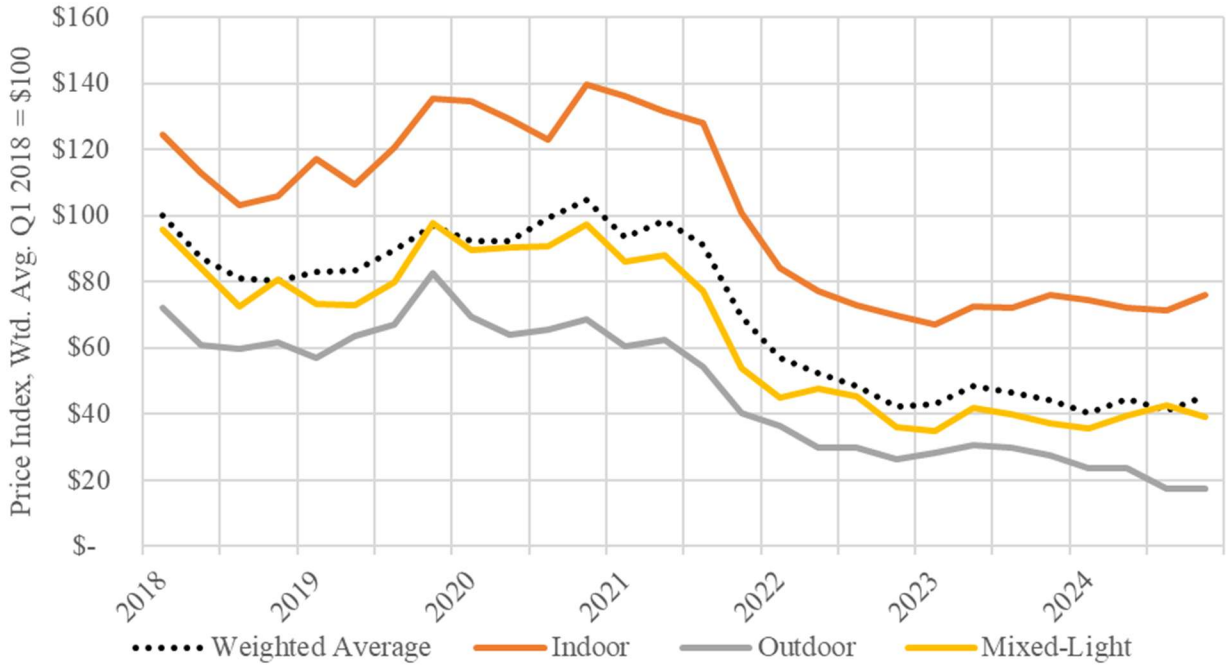
Notes: One pound of trim is equivalent to approximately 1/3 pound of flower.

3.2. Wholesale Prices

Wholesale flower prices have decreased since 2021. Weekly weighted average wholesale prices were between $1,000 and $1,500 per pound in 2018 and as high as $1,600 per pound in 2020. As of Q4 2024, the weighted average of wholesale prices was $769 per pound. This price is applied to the current analysis. Wholesale prices are from Cannabis Benchmarks (2024), CCTT data, and industry wholesale listings, and adjusted for general inflation.

Figure 1 illustrates indexed and inflation-adjusted quarterly average wholesale prices in California by cultivation method from 2018 through 2024, with weighted average quarterly prices in Q1 2018 = $100. Prices have been relatively stable in the past couple years after decreasing substantially in 2021.

Figure 1. Quarterly Wholesale Price Index (2018 = $100) by Cultivation Method, 2015–2024



3.3. Cannabis Demand

Total cannabis consumption is the amount of cannabis consumed in California from both licensed and unlicensed (illicit) production. Since cannabis is consumed in different forms, consumption is normalized to a dry-flower equivalent basis.

Total cannabis consumption is estimated using statewide (and nationwide) survey data. The federal Substance Abuse and Mental Health Services Administration (SAMHSA) conducts the National Survey on Drug Use and Health (NSDUH) quarterly, with a total of 67,625 people surveyed annually (SAMHSA, 2024). Interviewees are sampled from all 50 states and the District of Columbia. Survey responses are weighted by SAMHSA based on census characteristics to be both representative of the nation as well as the 50 states and District of Colombia individually.

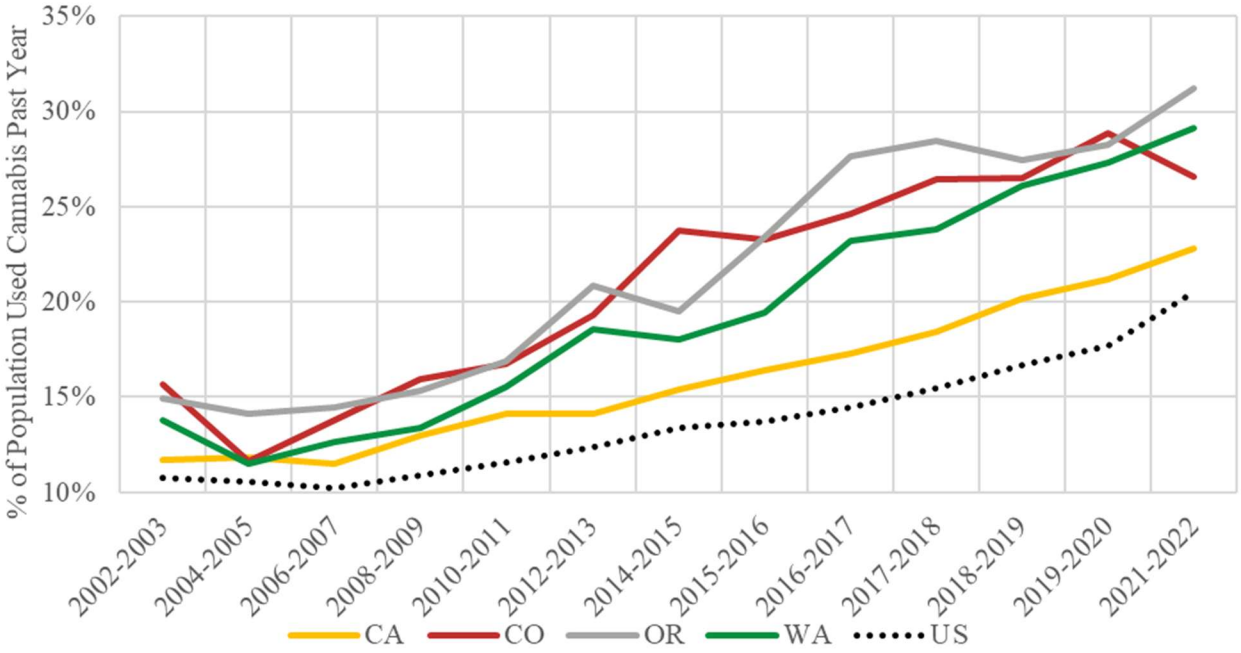
NSDUH survey data (as with all drug use surveys) may underreport cannabis consumption. Respondents may deny use or misreport frequency of use of cannabis products. This analysis applies an econometric model to identify the effects of legalization on underreporting cannabis use. In short, the method applied adjusts for both denial/misreporting issues (as identified by

academic researchers cited[6]) and the effect of legalization/policy change over time, at both state and federal levels. This analysis is completed for all states (including California).

Frequency of use estimates were combined with estimates of cannabis consumption per use-day to calculate total state-level consumption. Grams per use-day values by Light et al. (2015) were applied. Total annual consumption estimates for each year were calculated. The dataset was then used in a reduced form econometric analysis to estimate the effects of underreporting and legalization on consumption. The econometric model estimates grams per capita as a function of factors that affect consumption including market data (e.g., sales), socioeconomic data, and indicators for legalization and other policy changes. Separate regressions are run for heavy users and light users to allow for heterogeneous effects by user type. The model outputs allow for adjustments for underreporting, and to project consumption for 2023–2024 (years for which NSDUH surveys are not yet available).

Figure 2 shows 2-year averages of cannabis consumption prevalence in California compared to the U.S. and other selected states. These are raw survey estimates from NSDUH, prior to adjustments for underreporting. Survey results from NSDUH represent average prevalence of consumption for the adult population, and for teen users who may be using cannabis illegally.

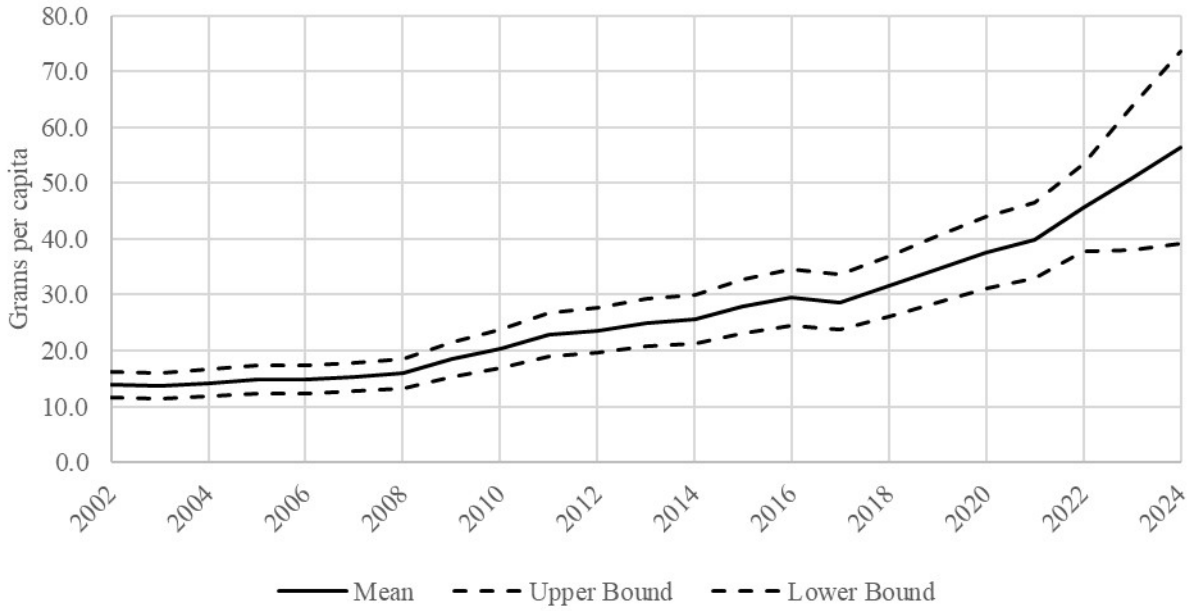
Figure 2. NSDUH Prevalence of Past-Year Cannabis Consumption, Unadjusted



[6] Kilmer et al. (2013), Kilmer et al. (2019), and Caulkins et al. (2019) use an adjustment factor of 1.22 to correct for this issue in Washington; Light et al. (2015) and Orens et al. (2018) use an adjustment factor of 1.11 for heavy users and 1.22 for light users in Colorado; and Canada's Office of the Parliament Budget (OPBO, 2016) and MacDonald and Rotterman (2018) use an adjustment factor of 1.063 for heavy users and 1.125 for light users in Canada. However, none of these studies adjust for how underreporting may change over time.

Figure 3 illustrates estimated per capita consumption in California since 2002. The solid line represents mean estimated per capita consumption, and the dashed lines correspond to a 95 percent confidence interval.

Figure 3. California Per Capita Consumption Estimates, Adjusted for Underreporting



Note: NSDUH data are available through 2022. Per capita consumption for 2023–2024 is estimated using an econometric model.

Table 2 summarizes estimated total cannabis consumption from 2019–2024 for the California population age 18 or older. Total state level cannabis consumption is estimated at 3.80 million pounds in 2024. This is the baseline applied to this SRIA.

Table 2. California Total Cannabis Consumption Estimates, 2019 – 2024

Year	Lower Bound Consumption	Mean Consumption	Upper Bound Consumption
	Pounds Dry-Flower Equivalent, Millions		
2019	1.92	2.32	2.72
2020	2.08	2.51	2.94
2021	2.20	2.66	3.11
2022	2.52	3.04	3.57
2023	2.55	3.41	4.27
2024	2.64	3.80	4.96

Note: Per capita consumption for 2023–2024 is estimated using the econometric model/analysis described in this report.

Increasing per capita consumption reflects growing demand as well as the shift toward value-added retail products that require more cannabis (dry-flower equivalent) to produce. This is

consistent with the trend prior to MAUCRSA in California, and consistent with trends in other states with licensed cannabis markets and the broader United States.

3.4. Licensed Market Share of Total Consumption

The licensed market share is the estimated share of California cannabis consumption that is met by licensed market production and purchased at licensed retail locations (i.e., excluding homegrown cannabis and diversions from licensed producers to the illicit market). The analysis of licensed market production and total consumption was combined to estimate licensed market share and trends over time.

Table 3 summarizes the estimated share of California cannabis consumption met by licensed market production for 2019–2024. The licensed market share is based on CDTFA and CCTT sales data through 2024 and NSDUH frequency of use survey data that extend only through 2022. The confidence interval (lower bound to upper bound) reflects uncertainty in underreporting consumption in the NDSUH survey, uncertainty in average consumption volumes per use-day, and additional statistical error from estimating consumption for 2023–2024 (missing NSDUH survey years).

Table 3. Licensed Cultivation Share of California Cannabis Demand, Adjusted for Underreporting

Year	Applying Lower Bound Per Capita Consumption	Applying Average Per Capita Consumption	Applying Upper Bound Per Capita Consumption
2019	30%	25%	21%
2020	40%	33%	29%
2021	45%	37%	32%
2022	44%	37%	31%
2023	50%	38%	30%
2024	54%	38%	29%

Notes: Licensed cultivation is a share of survey-based demand estimates, with *ex post* adjustments made for underreporting.

The average market share of licensed cannabis in 2024 is 38 percent, with a statistical confidence interval range of 29–54 percent. The licensed market share increased annually from 2018 through 2021. A share of 38 percent is applied as the baseline for this SRIA.

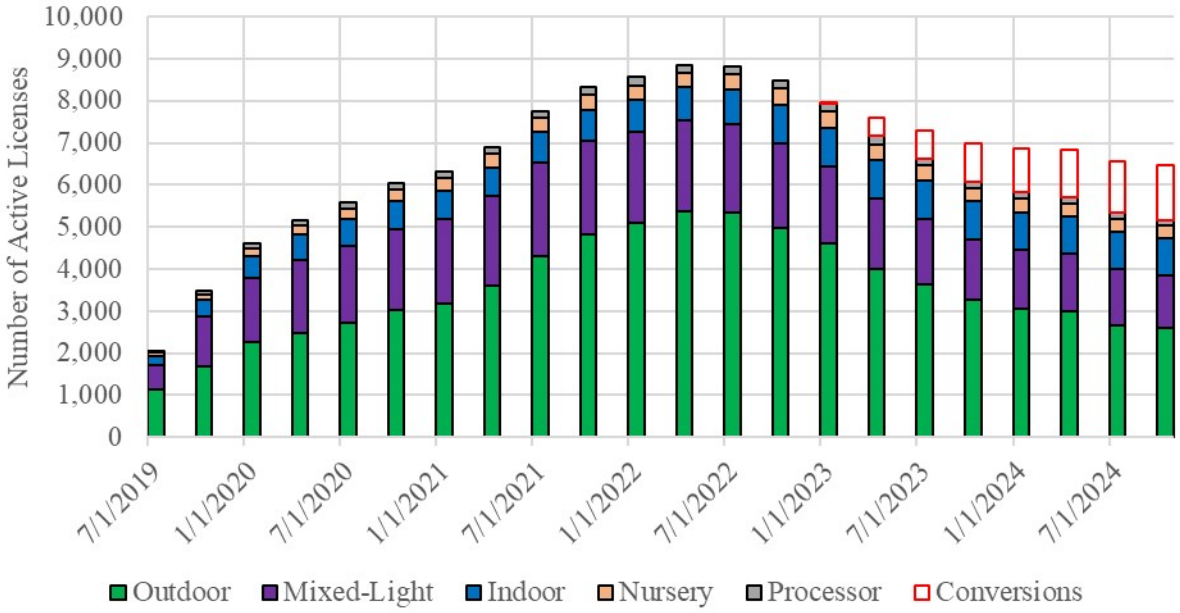
3.5. Cultivators

Figure 4 summarizes active cultivation licenses over the past five years by the three primary cultivation methods – outdoor, mixed-light,[7] and indoor – as well as nursery and processor licenses. Data from 2018 and early 2019 are omitted because cultivation licenses were still being issued. Active cultivation licenses dropped substantially through the end of 2023, and have

[7] In assessing license trends, Mixed-Light Tier 1 and Tier 2 licenses are combined.

continued to decline, albeit at a slower rate, in 2024. However, some of these declines, especially in 2024, are the result of consolidation. The number of licenses converted to a Large or Medium license is also shown. After taking these into consideration, the drop in cultivation licenses is less pronounced. As of Q4 2024, there were 3,870 active cultivation licenses.

Figure 4. Total Active Cultivation Licenses and Licenses Part of Conversions



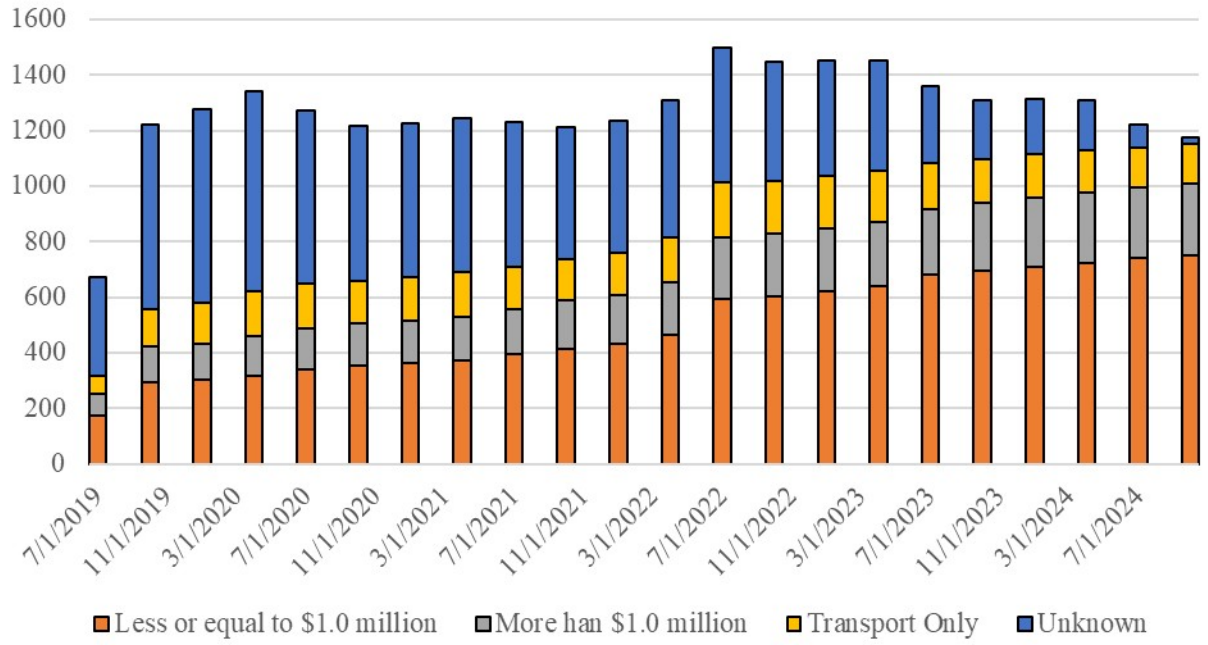
3.6. Distributors

Figure 5 shows the trend in distributor licenses by revenue tier. Data for distributor revenue tiers are only available for currently active licenses. Any licenses that are no longer active are labelled as "Unknown."

Low revenue distributor licenses (i.e., those for distributors with gross revenue under $1 million) have lower associated license fees. These licenses may be used to some extent to facilitate diversions from the licensed to the illicit market, which may contribute to the number of active distributor licensees. However, this section focuses on changes in licenses regardless of underlying factors contributing to trends.

The number of active distributor licenses has generally been consistent over the past five years. There has been a small decline in licenses since 2023. This could be due to consolidation, exits, or it may be cyclical. It is difficult to determine based on the license numbers alone. It is possible that the majority of licenses with an unknown revenue tier were for distributors with less than $1 million in revenue. There has been considerable turnover in distributor licenses as shown by the high number of licenses with unknown revenue tiers. The increase in the number of licenses with low revenue has outpaced the increase in number of transport-only licenses and licenses with more than $1.0 million in annual revenue.

Figure 5. Change in active distributor licenses by revenue tier, 2019 to 2024



The extent of licensees engaging in diversions to the illicit market is uncertain and cannot be identified using available CCTT data. Instead, approximate bounds for potential diversions are informed by low revenue license counts and the number of rejected and returned transfers. These bounds are estimated conservatively to avoid overestimating the potential benefits from reducing diversions.

Businesses engaging in diversions do not report revenue from illicit activity to the Department, and they are likely to acquire a distribution license with the lowest fee. Excluding transport-only licenses, the distributor license type with the lowest fee is for reported revenue less than or equal to $1.0 million. Currently, 75 percent of distributor licenses are in this revenue tier. These licensees may legitimately have revenue less than $1.0 million, they may be attributing their business's revenue to a separate license, or they may be concealing revenue from diversions to the illicit market. The actual revenue of a licensee cannot be identified in the data; however, the other licenses belonging to a business can be. Excluding transport-only licenses, 20 percent of distributor licenses are in the less than or equal to $1.0 million revenue tier and belong to a business with no other licenses. Applying this share to total licensed production (1.43 million pounds) would imply diversions of roughly 286,000 pounds; this is roughly 2 percent of total illicit production (11.4 million pounds). This estimate, as a share of total illicit production, is treated as the upper bound of diversions.

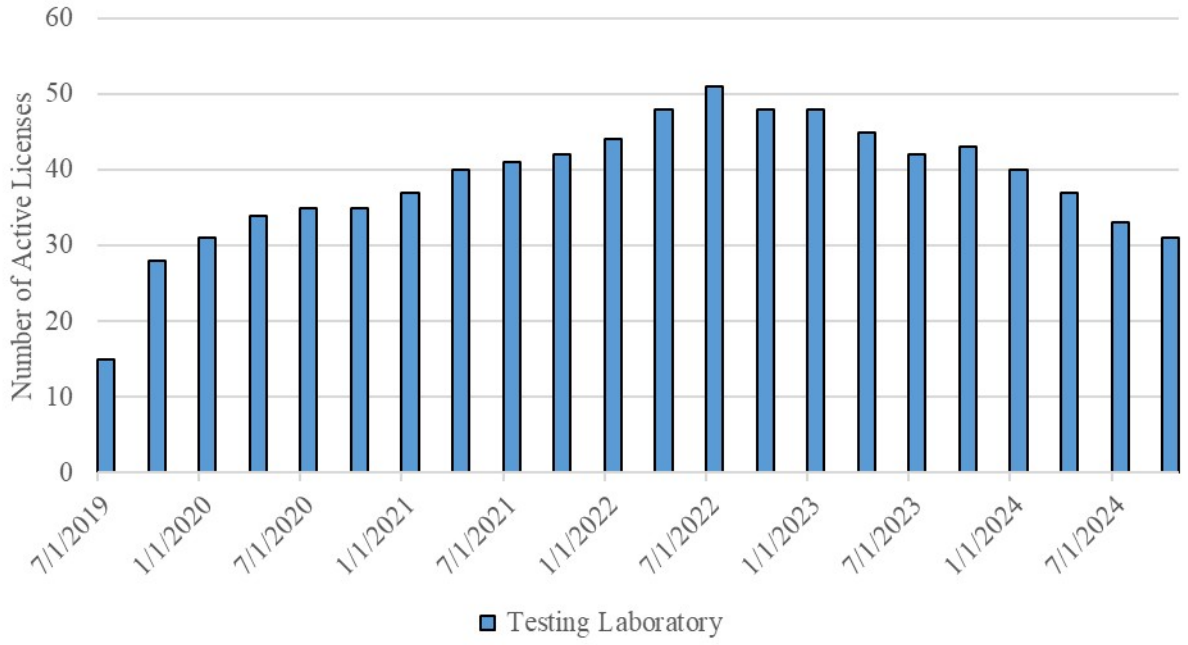
The lower bound estimate of diversions is determined by the actual number of rejected and returned transfers. Transfers may be rejected or returned for legitimate reasons. Conversely, illegitimate transfers may be automatically accepted and not reported as rejected or returned in CCTT. Of the nearly 1.3 million transfers initiated by distributors in 2023, roughly 1,200 were

rejected and 28,000 were returned. These account for 2 percent of total transfers. Applying this share to total licensed production would imply diversions of roughly 29,000 pounds, or 0.21 percent of total illicit production. This estimate, as a share of total illicit production, is treated as the lower bound of diversions to the illicit market.

3.7. Testing Labs

Figure 6 shows license trends for testing labs. The number of testing lab licenses has been decreasing consistently, dropping from a peak of 51 licenses in July 2022 to 26 as of January 2025. Prior to implementation of standardized potency procedures in 2023, labs that provided inflated potency were at a competitive advantage relative to other labs. This may have contributed to labs exiting the market.

Figure 6. Change in active testing laboratory licenses, 2019 to 2024



The rest of this section focuses on the following:

- The adverse outcomes of and incentives for lab shopping (second sample testing),
- The estimated prevalence of lab shopping,
- The estimated effects of lab shopping on potency inflation, and
- The estimated effects of lab shopping on compliance testing failure rates.

DCC regulations implemented in January 2024 to standardize procedures for testing and calculating total THC have greatly reduced the scale of THC inflation. Despite this change, lab shopping persists, leading to inflated THC potency (albeit much less than in 2023) and potentially harmful products at retail that should have failed testing. However, lab shopping

cannot be directly identified in CCTT data. There are two clear economic incentives for lab shopping:

1. Products that would have otherwise failed testing reach the market (i.e., are not destroyed), and
2. Inflated THC potency increases the price received for flower and other cannabis goods.

3.7.1. Prevalence of Lab Shopping

To identify potential lab shopping, ERA employed a suite of statistical tests to detect unusual lab results. ERA specifically examined passed tests for flower (excluding pre-rolls) for all labs with at least three such passed tests for lab tests from January 2023 through September 2024. Table 4 summarizes the subset of CCTT testing data used in the analysis. Low-THC products (less than 10 percent THC) were excluded from analysis. Largely as a result of standardized testing procedures implemented in January 2024, average THC content decreased from 32.0 percent in 2023 to 29.4 percent 2024.

Table 4. CCTT Lab Testing Data, 2023–2024

Year	Labs	Passed Tests	Average THC
		Count	*Percent*
2023	29	41,811	31.97
2024	23	29,880	29.36

The following properties of labs were examined to determine if labs' test results were unusual: average and variance of THC content, test result outliers, randomness of THC content, skewness of test result distribution, and current license status (i.e., if the license has been revoked). Of the 23 labs with sufficient tests for statistical analysis, ten failed at least one of the checks for unusual lab results. This does not necessarily indicate that the lab provides inaccurate test results or has assisted distributors in lab shopping efforts. Table 5 summarizes the number of tests, average THC content, and the percentage of tests that failed compliance testing. These are separated for "normal" labs (i.e., those that passed all checks for unusual lab results) and "unusual" labs (i.e., those that failed at least one check).

Table 5. Checking for Unusual Laboratory Testing Results for Flower, 2024

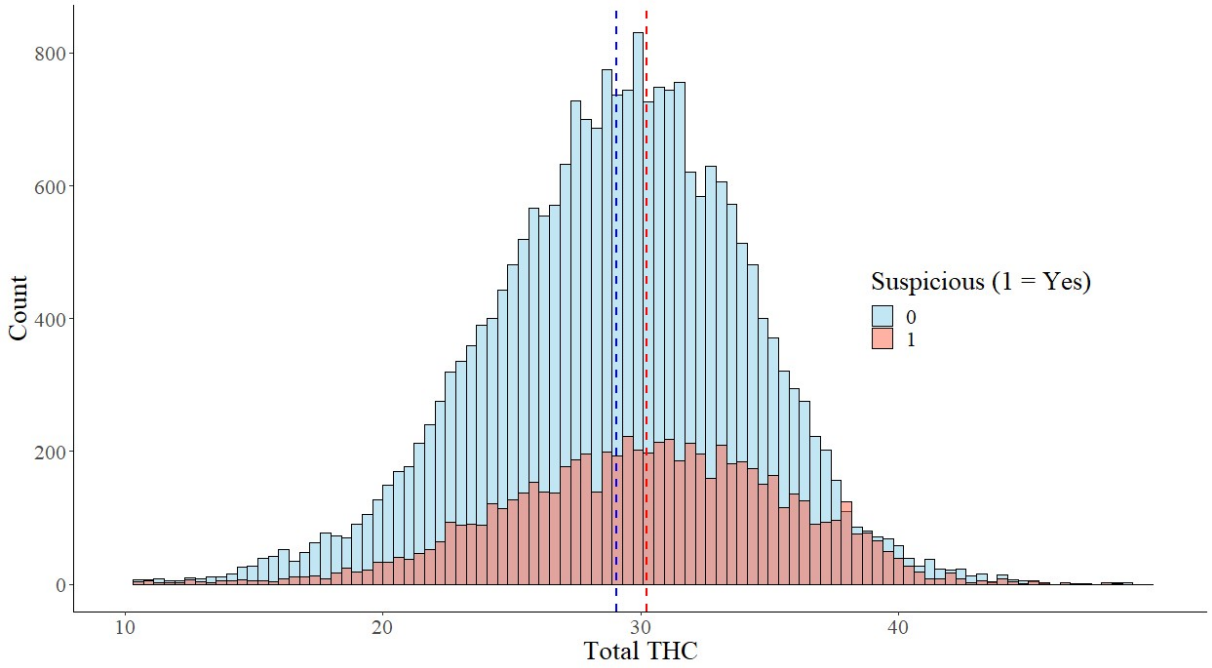
Results	Labs	Observations	Average THC	Compliance Failure
	License Count	*Test Count*	*Percent Weight*	*Percent of Tests*
Normal	13	22,905	29.08	1.16
Unusual	10	6,975	30.25	0.84

The labs with unusual tests results or revoked licenses accounted for 23.3 percent of total tests performed in 2024. This estimate is treated as the mean prevalence of lab shopping in the baseline in this SRIA.

The compliance testing failure rates are not substantially different across labs that do and do not inflate THC content. However, focusing on labs with low and high fail rates for compliance testing, there are 11 labs with a test failure rate below 0.8 percent. These labs account for 30.3 percent of all tests. This estimate is treated as the upper bound estimate for lab shopping for the baseline in this SRIA.

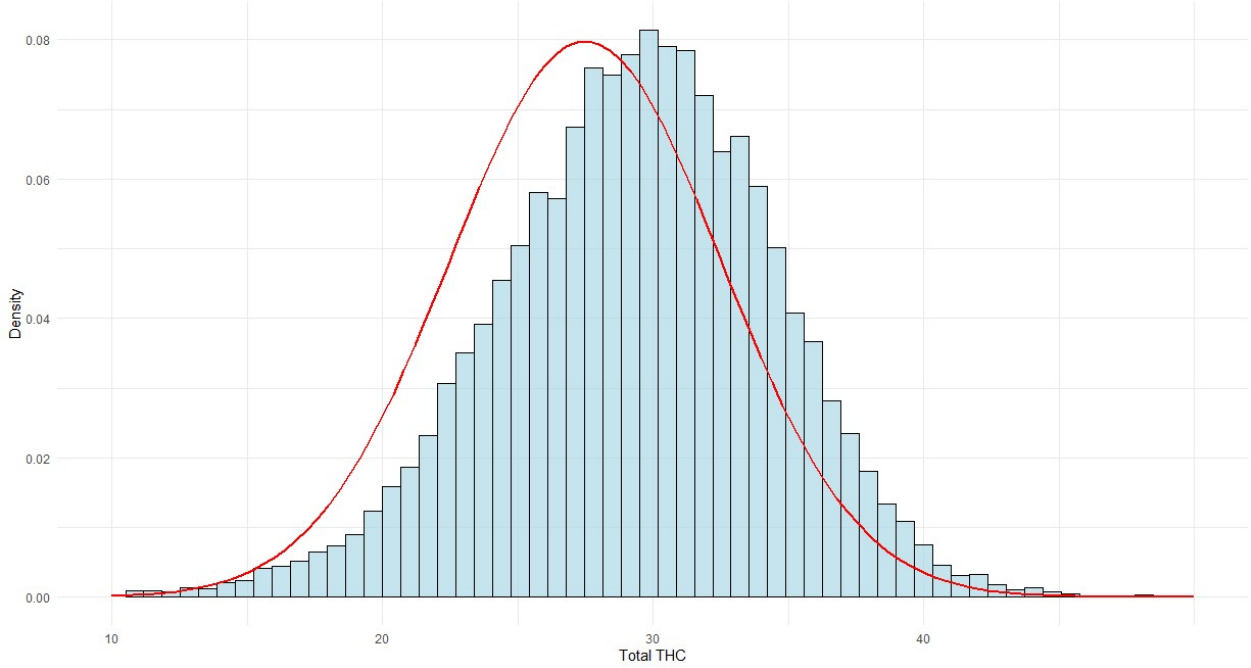
After testing for labs with statistically unusual results, there are still many unusual tests missed, as well as normal tests misidentified as being unusual. The distribution of test results, shown in Figure 7, still shows frequent occurrences of tests with greater than 30 percent THC content for both unusual labs and labs without statistical irregularities.

Figure 7. Distributions of Total THC for Flower, Non-Suspicious and Suspicious Labs



As an alternative approach, a normal distribution was fitted to the data, as shown in Figure 8. The proportion of observations that fell outside the density function of a normal distribution was counted. Applying a mean THC potency of 27.5 percent and standard deviation of 4, it follows that 19.1 percent of observations fall outside the right tail of the expected density function. This estimate is treated as the lower prevalence of lab shopping for the baseline in this SRIA.

Figure 8. Observed vs. Expected Distribution of Total THC for Flower



The statistical tests examining potency and test failure rates inform a plausible range of the extent of lab shopping in 2024. The mean estimate is 23.3 percent with a lower bound of 19.1 percent and an upper bound of 30.3 percent. When conducting the same statistical tests using 2023 data, the mean prevalence of lab shopping is more than 50 percent. The substantial decrease in lab shopping can largely be attributed to the implementation of standardized testing procedures in January 2024.

3.7.2. Effects of Lab Shopping on Potency Inflation

The average THC content at labs that failed checks for unusual testing results was 1.17 percent (in absolute terms) higher than other labs. In relative terms, this represents potential inflation of THC content by 4.0 percent. THC content roughly correlates 1-to-1 with cannabis flower prices. Therefore, the expected effect of lab shopping on current cannabis prices is an increase of 0.92 percent (23.3 percent of testing multiplied by inflation of 4.0 percent). To determine the average market effects of eliminating lab shopping, a wholesale price decrease for flower of 0.92 percent is applied in this SRIA.

The different methods of identifying the potential prevalence of lab shopping described in the previous subsection also result in different degrees of potency inflation. The lower bound method results in potency inflation by noncompliant businesses of 2.0 percent. The upper bound method results in potency inflation by noncompliant businesses of 6.0 percent. To capture the uncertainty in potency inflation and prevalence of lab shopping when estimating market effects, both effects are randomly drawn 10,000 times according to the ranges described in this section, and the market model is simulated for each random draw.

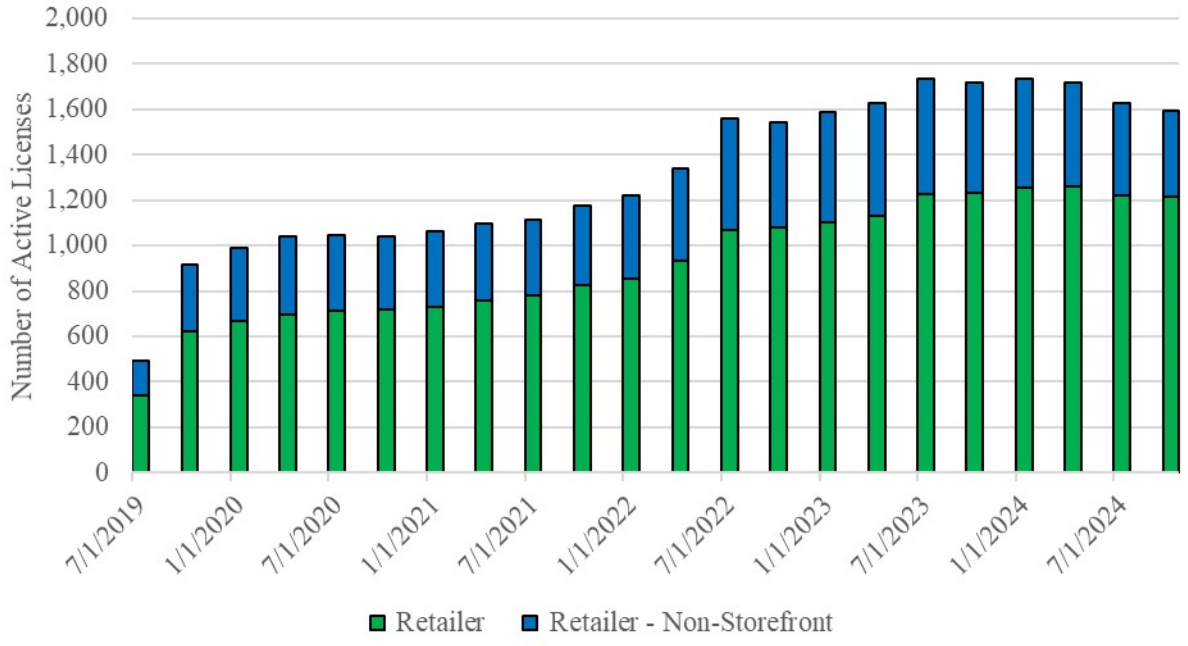
3.7.3. Effects of Lab Shopping on Testing Failure Rates

The weighted average failure rate among the 11 labs with low failure rates (below 0.8 percent) is 0.51 percent. Among the other 12 labs, the weighted average failure rate is 1.35 percent. The mean difference in failure rates between them is 0.84 percent. For purposes of this analysis, labs with low failure rates are assumed to be engaging in lab shopping. When estimating market effects, the failure rate of 1.35 percent is applied to labs that do not engage in lab shopping, and the failure rate of 0.51 percent is applied to labs that do engage in lab shopping. As described above, the prevalence of lab shopping randomly varies according to a distribution with a lower bound of 19.1 percent, a mean of 23.3 percent, and upper bound of 30.3 percent.

3.8. Retailers

Figure 9 shows the trend in retail licenses. Retail licenses had been consistently increasing through the start of 2024 but decreased through the end of 2024. This is driven by a decrease in "Retailer – Non-Storefront" licenses (licenses that conduct cannabis sales only through delivery). Since hitting a relative peak in July 2023, active non-storefront retail licenses have dropped by 25 percent, whereas active storefront retail licenses have only dropped by 1 percent. The decrease in non-storefront retail licenses has mainly been concentrated in Los Angeles, Alameda, and Sacramento counties. As of Q4 2024, there were 1,584 active retail licenses.

Figure 9. Total Active Retail Licenses



3.9. Baseline Conditions Summary

The current baseline industry conditions are used to inform the structure of the economic model and measure the economic impacts from proposed regulation changes in the Market Effects

section. The primary purpose of the proposed regulation is to limit diversions and lab shopping to ensure products are safe for human consumption and accurately labelled. Estimates of diversions, potency inflation from lab shopping, and passed compliance tests from lab shopping are provided in Table 6 and summarized as follows:

- The extent of diversions from the licensed market to the illicit market is unknown. Based on conversations with Department officials, and industry experts, the businesses that are most likely to engage in this activity are likely to hold a low revenue distribution license and no other licenses. In some instances, a legitimate licensee will reject or return a transfer initiated by a noncompliant business attempting to divert products. Based on this information, the upper bound extent of diversions is 2.06 percent, the lower bound estimate is 0.21 percent, and the mean estimate is 1.14 percent (measured as a share of illicit production).
- Lab shopping leads to an average increase in potency of 4.00 percent for noncompliant businesses with a lower bound of 2.03 percent and upper bound of 5.95 percent.
- The mean estimate of the prevalence of lab shopping is 23.3 percent, as determined by the share of tests from licenses that failed statistical testing for unusual results or were revoked in 2023.
    - The lower bound estimate of the prevalence of lab shopping is 19.1 percent, as determined by the share of potency tests that fall outside the expected distribution of flower potency.
    - The upper bound estimate of the prevalence of lab shopping is 30.3 percent, as determined by the share of tests from labs with low compliance failure rates.
- Applying the expected range of potency inflation to the range in the prevalence of lab shopping results in a mean overall potency inflation for products at retail of 0.92 percent, lower bound potency inflation of 0.46 percent, and upper bound potency inflation of 1.42 percent.
- Labs with unusually low test failure rates have an average compliance test failure rate 0.51 percent, and other labs have an average failure rate of 1.35 percent. The difference in compliance failure rates between them is 0.84.

Table 6. Estimates of Diversions, Potency Inflation, and Passed Tests from Lab Shopping

Description	Lower Bound	Upper Bound	Mean
		Percent	
Diversions, as a Share of Total Illicit Production	0.21	2.06	**1.14**
Potency Inflation by Selected Businesses (Noncompliant businesses)	2.03	5.95	**4.00**
Lab Shopping Prevalence (Market Share for Noncompliant businesses)	19.1	30.3	**23.3**
Potency Inflation at Retail, Averaged Across All Products	0.46	1.42	**0.92**
Compliance Testing Failure Rate, Labs with Normal Rates	-	-	**1.35**
Compliance Testing Failure Rate, Labs with Unusually Low Rates	-	-	**0.51**

Note: Lower and upper bounds correspond to 95% confidence interval.

4. Economic and Fiscal Impacts: Proposed Regulations

This section summarizes the direct costs and benefits of the Department's CCTT regulations. The benefits and costs from the proposed regulations would accrue to different businesses and different sectors of the economy. The total impact of the proposed regulations to cannabis businesses and the corresponding total impact to each related sector of the economy are also estimated.

The incremental cost of the proposed regulations (only) is measured. For example, if a proposed regulatory requirement is already part of standard industry production practices, then there is no incremental cost attributable to that proposed requirement. The economic impact analysis considers a point-in-time (annual, 12 month) comparison of the SRIA baseline (defined in Section 3) to conditions with the proposed regulation.

4.1. Direct Economic Benefits

The following sections summarize the estimated direct benefits (cost savings) to licensees and consumers from the proposed regulations. These occur as a result of requiring transporter and destination approvals, prohibiting second sample testing, and reducing potency inflation.

Direct economic benefits are summarized in Table 7. There are other, unquantified human and environmental health benefits from the proposed regulations. Benefits from the supply shifts from the illicit market to the licensed market and reduction of inflated potency are covered in the Market Effects section.

Table 7. Direct Economic Benefits Summary

Description	Sector	Amount ($)
Second Testing Restrictions	Distribution (Noncompliant businesses)	$6,575,000
Reducing Potency Inflation	Consumers	$10,550,000
Total		**$17,125,000**

4.1.1. Transporter and Destination Approvals

The benefit of requiring transporter and destination approvals is an expected decrease in diversions. As discussed previously, there is a wide range in estimated diversions. The mean estimate, as a share of total licensed production, is 11 percent. The lower bound is 2 percent, and upper bound is 20 percent. This translates to a 1.14 percent reduction in illicit cannabis on average, with a range of 0.21 percent to 2.06 percent.

Limiting diversions causes a supply shift from the illicit market to the licensed market. This effect is analyzed in the Market Effects section.

4.1.2. Second Testing Restrictions

There were 114,315 total compliance batch tests entered into CCTT in 2024, of which approximately 99 percent passed laboratory testing for compliance. If close to 23 percent of total tests are submitted to a second location for lab shopping, restrictions on creating a second test sample would imply a decrease of 26,300 tests per year. Based on feedback from active laboratories, testing prices for labs that provide quick and inaccurate tests ($250 per test) are considerably lower than labs that perform more robust compliance testing ($450 per test). A decrease of 26,300 tests per year at an average price of $250 per test would imply cost savings of $6,575,000 per year for cultivators and distributors. However, these benefits apply to selected businesses in the licensed market and are not considered in the major regulation determination. There are also unquantified human and environmental health benefits from the reduced supply of harmful cannabis products, as well as benefits to consumers from accurate potency labelling.

4.1.3. Eliminating Potency Inflation

Consumers benefit from the reduction in potency inflation. Based on average retail prices of $2,252 per pound of flower-equivalents, average potency inflation of 4.00 percent, and 23 percent average licensed market share for noncompliant businesses, consumers overpay for products with inflated potency by $10.55 million. This is the mean estimate of the benefit of eliminating potency inflation. Applying the ranges of expected potency inflation and bad actor prevalence, the lower bound benefit is $4.87 million, and the upper bound estimate is $17.69 million.

4.2. Direct Economic Costs

Direct industry costs measure the incremental effect of the regulation to affected businesses. The direct economic costs include (i) transporter and destination approvals, (ii) testing statuses to reduce lab shopping, (iii) mandatory use of CDTFA sales tax fields, (iv) retailer disclosure of COAs, (v) requiring the same unit of measurement when accepting transfers, and (vi) new requirements for the timeframe that certain activities can be entered into CCTT.

Table 8 summarizes the results of the analyses that are described in the following Direct Economic Costs subsections. The direct economic costs of the proposed regulation equal $12.64 million in the first year of implementation.

In addition to the direct costs and benefits of the proposed regulations, there would be effects on the licensed cannabis market. That is, as industry costs change due to the regulations, the market adjusts and this causes additional economic effects that are quantified in this SRIA. These are summarized in the Market Supply and Demand Effects section.

Table 8. Direct Economic Costs Summary

Description	Cost Type	Sector	Amount ($)
Transporter and Destination Approvals	Labor	Cultivation	$205,000
Transporter and Destination Approvals	Labor	Distribution	$375,000
Transporter and Destination Approvals	Labor	Retail	$1,020,000
Transporter and Destination Approvals	Labor	Other	$330,000
Second Testing Restrictions	Spending on Lab Tests	Testing Lab	$6,575,000
Mandatory Use of CDTFA Sales Tax Fields	New Technology	Retail	$1,280,000
Retailer Disclosure of COAs	Labor	Retail	$940,000
Requiring the Same UOM for Transfers	Labor	Cultivation	$115,000
Requiring the Same UOM for Transfers	Labor	Distribution	$410,000
Requiring the Same UOM for Transfers	Labor	Other	$235,000
CCTT Data Entry Timing	Labor	Distribution	$1,155,000
Total			**$12,640,000**

Note: The 'Other' sector includes microbusinesses manufacturers, and other business types not listed separately.

4.2.1. Transporter and Destination Approvals

The proposed regulations would require approvals by recipients and transporters for all transfers of cannabis products. These would either be "manual approvals" for first-time or single transfers between license holders, or "auto-approvals," which can be used between licensees that have already engaged in a previous transfer.

CCTT transfer data show 116,000 unique combinations of origin and destination licenses. This represents the number of times that a licensee would need to submit an approval, and from there establish an auto-approval. This analysis applies 10 minutes as the amount of time required for licensees to submit approvals and set up auto-approval. A cost of $100 per hour is applied to management time, considering base wage[8] and overhead.

Applying the amount of time required for licensees to submit approvals and set up and auto-approval (10 minutes), the unique number of origin and destination license combinations in CCTT (116,000), and the estimated cost per hour for managerial time ($100), the estimated total cost for transporter and destination approvals is $1.93 million. Based on the share of transfers by sector, the total cost by sector would be $0.21 million for cultivators, $0.38 million for distributors, $1.02 million for retailers, and $0.33 million for other cannabis sectors (i.e., manufacturers and microbusinesses). Large businesses, with high volumes of transfers, would be impacted the most.

Transfer requests will be automatically cancelled if not approved or rejected by the recipient licensee within 72 hours of creation. This time limit is not expected to result in additional costs to licensees.

[8] See, for example, https://www.salary.com/research/salary/position/dispensary-general-manager-salary/ca

4.2.2. Second Testing Restrictions

Eliminating second sample testing has mixed implications for the number of active labs. There will be fewer samples tested, resulting in lower lab revenue, which may lead to some labs exiting the industry. However, standardizing lab testing procedures and eliminating second sample testing makes it more difficult for labs to falsely provide more favorable test results. This reduces incentives to cheat.

There were 114,315 total tests entered into CCTT in 2024, of which 99 percent passed laboratory compliance testing. If close to 23 percent of total tests are submitted to a second location for lab shopping, this would imply a decrease of 26,300 tests per year. A decrease of 26,300 tests per year at an average price of $250 per test would imply lost revenue of $6.58 million per year for testing laboratories. However, this revenue loss only affects laboratories engaging in unlawful activity, and direct effects therefore are not included in the major regulation determination. Market, indirect, and induced effects are included because the businesses supporting potential noncompliant businesses are not noncompliant businesses themselves.

4.2.3. Mandatory Use of CDTFA Sales Tax Fields

The proposed regulations would require licensed cannabis retailers to enter detailed sales tax and discount breakdown fields into CCTT with each purchase. Currently, not all licensed retailers do this, as use of these detailed fields is not explicitly required.

Most licensed cannabis retailers use point-of-sale (POS) hardware and software systems. POS systems are capable of automating tax entry and CCTT reporting. Therefore, licensed retailers currently using POS systems would be able to automate this process using their existing resources, possibly incurring a small cost to upgrade their POS software to accommodate this feature. Based on POS utilization data provided by the Department, an estimated 91.6 percent of licensed retailers use a POS system. Based on a review of prices posted online for POS systems offered to licensed cannabis retailers in California, POS software systems range from about $300 to $1,000 per month. POS system hardware costs range from about $1,000 to $3,000 per business.

The potential cost of the new regulations requiring entry of CDTFA sales tax fields is estimated as the cost for businesses to adopt a POS system to automate this process. Applying the midpoint value to the range of POS system costs ($650 per month), the number of active retail licenses as of October 2024 (1,560), and the estimated share of licensees who do not currently use a POS system (8.4 percent), it is estimated that the total potential cost to these licensees would be $1.22 million per year. Applying the midpoint value for hardware and installation costs ($2,000), they would incur an additional one-time cost of $0.26 million.

The resulting total cost to businesses in the first 12-month period following the implementation of new regulations requiring CDTFA sales tax field entry is $1.28 million.

4.2.4. Retailer Disclosure of COAs

The proposed regulations would require licensed cannabis retailers to provide COAs to customers upon request. COAs are uploaded to METRC via testing labs and can be accessed by retailers. Currently, retailers are not required to provide copies of COAs when requested by the customer, and retail staff who have not been trained to access and print COAs will not be able to accommodate this request. Therefore, the cost of the requirement for retailers to provide COAs to customers upon request is estimated to be the cost of training retail staff to access COAs on METRC and print them.

Industry data show there are about 79,000 jobs in the California cannabis industry in 2024, and 23 percent of cannabis jobs are in retail.[9] This implies that there are an estimated 18,000 people working in the licensed cannabis retail sector in California. Customer-facing employees in retail (i.e., "budtenders") typically make about $19/hour[10], with the full cost to the retail business of $26/hour (applying a 40 percent overhead cost). It is estimated that training each employee will take two hours of their time and a manager's time for training. If all of these employees must be trained to query and produce COAs in CCTT (2 hours per employee), then based on the estimated hourly cost for budtenders ($26/hour) and managers ($100/hour), the total cost to retail businesses is $0.94 million. This would be a one-time cost in the first year of implementation of the proposed regulations.

There are no additional annual costs quantified related to providing COAs. They would only need to be provided when requested, which would be for a small share of transactions. Also, the time and resources (e.g., paper) required to provide the COA by a trained staff person would be minimal.

4.2.5. Requiring the Same UOM for Transfers

The proposed regulations specify that received transfers recorded in CCTT would need to be in the same units as listed by the sender. In some cases, different units in CCTT happen as a result of an error. However, based on a review of CCTT transfer data, it is more common for this to occur as a result of one licensee keeping all of their records in different units than those that they interact with. Based on CCTT data from 2022 to 2024, each year about 255 licensees receiving product were recording units differently than the licensees they received the product from. This represents the number of businesses that would need to update inventory accounting systems to accommodate reporting requirements from these regulatory changes. Given the complexity of inventory accounting for many business types, it is estimated that each affected business would require about 30 hours of manager time to update inventory systems.

[9] Vangst. Jobs Report 2024.

[10] https://www.indeed.com/career/marijuana-budtender/salaries/CA

Applying the estimated number of affected licensees (255), estimated manager time per licensee (30 hours), and the estimated cost for manager time ($100 per hour), results in a total cost to affected businesses of $0.77 million. Based on the share of businesses that report transfers using different UOMs, the total cost by sector would be $115,000 for cultivators, $410,000 for distributors, and $235,000 for other cannabis sectors (i.e., manufacturers and microbusinesses).

4.2.6. CCTT Data Entry Timing

The proposed regulations specify that data with future dates cannot be entered into CCTT. Managers often enter CCTT data for future dates as a result of their schedule constraints and lack of support staff who are trained for CCTT entry. The proposed regulatory changes specify that CCTT entry of transfer approvals for licensees within 72 hours, and that recording of sampling for laboratory testing must occur before the laboratory collecting the sample leaves the distributor's premises. The anticipated cost for distributors to comply with these regulatory changes is hiring and training additional support staff to enter information into CCTT. Other licensees are not expected to incur additional costs.

As of January 2025, there are 1,144 active distributor licenses. This analysis considers that all of these businesses could require additional staff training under the proposed regulations. Based on industry outreach, a full day (8 hours) is required for a manager to train a support staff person to enter data into CCTT. Applying the previously identified per-hour wage rates (including overhead) for managers and support staff of $100 and $26, respectively, this results in a total economic cost of $1.16 million. Costs of CCTT data entry timing apply only to licensed distributors.

4.3. Market Supply and Demand Effects

The purpose of the market analysis is to estimate the effects of proposed CCTT regulations on producers and consumers, and the resulting market equilibrium. The driving force of these regulations on the cannabis sector can be characterized as changes to industry supply (horizontal shifts in supply proportional to quantity, and vertical shifts in supply proportional to marginal costs) and consumer demand (decreased willingness-to-pay from lower labelled potency).

The market effects of the proposed regulation were evaluated using an EDM of the California cannabis market. EDM has a well-documented history in analyzing the effects of changes in trade policies, advertising, taxes, and regulation of primary production systems. It has been extensively applied to agricultural systems such as dairy, beef, and lettuce. An EDM is a mathematical representation of the supply and demand for an aggregate market and underlying market segments that is used to assess how the market would respond to a change in market conditions (in this case, changes to marginal production costs and shifts in production).

The EDM model is a set of logarithmic differential equations that characterize the comparative economic statics of the system and is used to measure shifts from one equilibrium to another caused by exogenous effects on supply and demand, such as would result from new regulations.

Since it uses elasticities to measure the change in comparative static equilibria, it can be readily applied to new empirical situations since all the essential relationships are expressed in percentage terms and are not changed by different empirical scales that are required by a more structural modeling approach.

The cannabis market EDM was developed by ERA Economics and initially applied for the 2016/2017 Standardized Regulatory Impact Assessment of the CalCannabis Cultivation Licensing Program (and Medical Cannabis Cultivation Program). The cannabis market structure has changed since the initial assessment in response to new laws, regulations, better industry data, industry interviews, and various economic studies. ERA has developed a series of EDM frameworks to incorporate these changes and evaluate market effects for different segments of the California cannabis market.

The proposed regulations are not expected to have differing effects by cultivation method (outdoor, indoor, and mixed-light) or product segment (flower and manufactured products). Therefore, the EDM used in this report includes the following market segments:

- Licensed production, compliant businesses,
- Licensed production, noncompliant businesses,
- Illicit production,
- Licensed market consumer demand,
- Illicit market California demand, and
- Illicit market export demand.

Inputs to the EDM model are the changes to industry supply (horizontal shifts in supply proportional to quantity, and vertical shifts in supply proportional to marginal costs) and consumer demand caused by the proposed regulation. As described in the previous section, the proposed regulation results in net increased costs to noncompliant businesses, price increases at retail, and decreased supply of cannabis from noncompliant businesses and the illicit market. To implement these changes in the EDM, cost and supply shifts were calculated for licensed and illicit producers. The changes in production costs were calculated relative to the average per-pound wholesale price of cannabis, and the horizontal shifts in supply were calculated as a proportion of the initial equilibrium quantities of licensed and illicit cannabis.

The cannabis market equilibrium is specified as follows.

$$D_L = D_L(P_L^r, P_I^r) \quad \text{[Licensed cannabis demand]} \tag{1}$$

$$D_I = D_I(P_L^r, P_I^r) \quad \text{[Illicit cannabis demand]} \tag{2}$$

$$D_X = D_X\left(\mathrm{P}_{\mathrm{IC}}^{\mathrm{f}}\right) \quad \text{[Export cannabis demand]} \tag{3}$$

$$S_{GL} = S_{GL}(P_L^w) \quad \text{[Supply of good actor cannabis]} \tag{4}$$

$$S_{BL} = S_{in}(P_L^w) \quad \text{[Supply of bad actor cannabis]} \tag{5}$$

$$S_I = S_I(P_I^w) \quad \text{[Supply of unlicensed cannabis]} \tag{6}$$

$$P_L^r = P_L^r(P_L^w) \quad \text{[Market-clearing price licensed cannabis]} \tag{7}$$

$$P_I^r = P_I^r(P_I^w) \quad \text{[Market-clearing price illicit cannabis]} \tag{8}$$

$$D_L = S_{GL} + S_{BL} \quad \text{[Market-clearing licensed cannabis]} \tag{9}$$

$$D_I + D_X = S_I \quad \text{[Market-clearing illicit cannabis]} \tag{10}$$

Equations (1), (2), and (3) define consumer demand for licensed cannabis, within state demand for illicit cannabis, and export demand for illicit cannabis, respectively. Equations (4), (5), and (6) are licensed supply of cannabis from compliant businesses, licensed supply of cannabis from noncompliant businesses, and illicit supply of cannabis, respectively.

The market clearing conditions are represented by equations (7)–(10) and define the relationship between wholesale and retail prices, and they equate market segment supply to market segment demand.

Endogenous variables in the model are cultivator output of licensed and illicit cannabis (S_{GL}, S_{BL}, and S_I), quantity demanded (D_L, D_I, and D_X) for licensed, illicit, and exported illicit cannabis, and the prices of licensed and illicit cannabis at wholesale and retail (P_L^w, P_I^w, P_L^r, and P_I^r).

The equilibrium solutions are derived by taking the total derivatives of the structural model, expressing them in log-differential form, to obtain a solvable system of equations:

$$dlnD_L = \eta_L(dlnP_L^r - \delta_L) + \eta_{LI} dlnP_I^r \tag{11}$$

$$dlnD_I = \eta_{IL} dlnP_L^r + \eta_I dlnP_I^r \tag{12}$$

$$dlnD_X = \eta_X dlnP_I^w \tag{13}$$

$$dlnS_{GL} = \epsilon_L(dlnP_L^w - \gamma_{GL}) \tag{14}$$

$$dlnS_{BL} = \epsilon_L(dlnP_L^w - \gamma_{BL}) + \theta_{BL} \tag{15}$$

$$dlnS_I = \epsilon_I dlnP_I^w + \theta_I \tag{16}$$

$$dlnP_L^r = \tau_L dlnP_L^w \tag{17}$$

$$dlnP_I^r = \tau_I dlnP_I^f \tag{18}$$

$$dlnD_L = \omega_{GL} dlnS_{GL} + (1 - \omega_{GL}) dlnS_{BL} \quad (19)$$

$$dlnS_I = \alpha_X dlnD_X + (1 - \alpha_X) dlnD_I \quad (20)$$

Here, δ_L is the decrease in demand for licensed cannabis at retail from decreasing labelled potency of cannabis; γ_{GL} and γ_{BL} are the increases in marginal production cost for licensed cannabis from good and noncompliant businesses; and θ_{BL} and θ_I are the decreases in cannabis supply for licensed noncompliant businesses and illicit producers, respectively, proportional to quantity supplied. Own-price and cross-price elasticities of demand are represented by η, and elasticities of supply are represented by ϵ. The share of licensed cannabis supply from compliant businesses in total licensed cannabis supply is ω_{GL}; the share of export cannabis demand in total illicit cannabis demand is α_X.

This analysis assumes that the cannabis group is weakly separable from other (non-cannabis) consumption, and therefore the cross-price demand elasticities in (1) and (2) can be decomposed into functions of the overall cannabis group demand elasticity, η, the licensed market share in California cannabis demand, ω_{LC}, and the elasticity of substitution between licensed and illicit cannabis, σ (Edgerton, 1997):

$$\eta_L = \omega_L \eta - (1 - \omega_L)\sigma \quad (21)$$

$$\eta_I = (1 - \omega_L)\eta - \omega_L \sigma \quad (22)$$

$$\eta_{LI} = (1 - \omega_L)(\eta + \sigma) \quad (23)$$

$$\eta_{IL} = \omega_L(\eta + \sigma) \quad (24)$$

Changes in consumer (CS), producer (PS), and total (TS) surplus for the licensed market can be measured as:

$$\Delta\text{CS} = -D_L P_L^r (dlnP_L^r - \delta_L)(1 + 0.5 dlnD_L) \quad (25)$$

$$\Delta\text{PS}_{\text{GL}} = S_{GL} P_L^w (dlnP_L^w - \gamma_{GL})(1 + 0.5 dlnS_{LC}) \quad (26)$$

$$\Delta\text{PS}_{\text{BL}} = S_{BL} P_L^w (dlnP_L^w - \gamma_{BL} + \theta_{BL}/\epsilon_L)(1 + 0.5 dlnS_{LC}) \quad (27)$$

$$\Delta\text{TS} = \Delta\text{CS} + \Delta\text{PS} \quad (28)$$

Producer surplus (PS) is a measure of the benefits producers receive from participating in the market and is measured as the difference between the market price and the minimum amount a producer would accept for a given quantity of a good, as defined by the supply curve. Similarly, consumer surplus (CS) is the benefit consumers receive from participating in the market and is measured as the difference between what consumers are willing to pay (as defined by the demand curve) for a given quantity of a good and the price of the good. Total surplus is simply the sum of PS and CS, or the total surplus for agents participating in the market.

Model parameters are provided in Table 9. The elasticity of supply of licensed cannabis represents an approximate weighted average of outdoor, indoor, and mixed-light elasticities of supply. Outdoor cultivators are assumed to have a relatively inelastic supply—elasticity of supply equals 0.75—as a result of infrequent harvest (usually only once per year). Mixed light production is estimated to have a unit elasticity (1.0) that reflects more frequent harvests. Indoor production is modeled as being slightly elastic with a supply elasticity of 1.25 because of the greater frequency of production (up to four harvests per year based on cultivator surveys). The average of these, weighted by their share in total cultivation, is approximately 1.0.

Table 9. Equilibrium Displacement Model Parameters

Symbol	Description	Value
D_L	Quantity demanded for licensed cannabis, millions of pounds	1.43
D_I	Quantity demanded for illicit cannabis in California, millions of pounds	2.33
D_X	Quantity demanded for export cannabis, millions of pounds	11.39
S_{GL}	Quantity supplied of licensed cannabis, compliant businesses, millions of pounds	1.01
S_{BL}	Quantity supplied of licensed cannabis, noncompliant businesses, millions of pounds	0.42
S_I	Quantity supplied of illicit cannabis, millions of pounds	13.72
P_L^w	Wholesale price of licensed cannabis, dollars per pound	769
P_L^r	Retail price of licensed cannabis, dollars per pound	3,361
P_I^w	Wholesale price of illicit cannabis, dollars per pound	515
P_I^r	Retail price of illicit cannabis, dollars per pound	2,252
η	Own-price elasticity of demand for cannabis	-0.2
η_L	Own-price elasticity of demand for licensed cannabis	-1.32
η_I	Own-price elasticity of demand for illicit cannabis	-0.88
η_{LI}	Cross-price elasticity of demand for licensed cannabis with respect to the price of illicit cannabis	1.12
η_{IL}	Cross-price elasticity of demand for illicit cannabis with respect to the price of licensed cannabis	0.68
η_X	Own-price elasticity of export demand for illicit cannabis	-0.4
ϵ_L	Elasticity of supply of licensed cannabis	1.0
ϵ_I	Elasticity of supply of illicit cannabis	1.5
σ	Elasticity of substitution between licensed and illicit cannabis	2.0
τ_L	Elasticity of price transmission for licensed cannabis wholesale-to-retail	0.5
τ_I	Elasticity of price transmission for illicit cannabis wholesale-to-retail	0.5
ω_{LC}	Share of licensed cannabis in cannabis demand	0.38
α_X	Share of export cannabis in illicit cannabis supply	0.83
γ_{GL}	Cost shift for licensed cannabis, compliant businesses	0.08%
γ_{BL}	Cost shift for licensed cannabis, noncompliant businesses (range)	2.11%, 6.03%
θ_{BL}	Supply shift for licensed cannabis, noncompliant businesses	-0.84%
θ_I	Supply shift for illicit cannabis (range)	-0.21%, -2.06%
δ_L	Willingness to pay shift for licensed cannabis	-0.46%, -1.42%

Other parameters that are fixed in the EDM are established from published studies where available, summarized here, and discussed in previous sections. The weighted average of price per pound of cannabis dry-flower equivalents at retail ($3,361) is estimated based on total expected sales ($4.80 billion) and total expected cultivation (1.43 million pounds) in 2024.

Manufacturing of value-added cannabis products is a major factor contributing the high wholesale-to-retail markup.

The own-price elasticity of demand represents the change in quantity demanded of a good due to a change in price of that good. The cross-price elasticity of demand represents the change in quantity demanded of a good due to a change in price of another good. The elasticity of substitution measures the degree of substitutability between two goods. The elasticity of price transmission represents the percent change in the price of a good downstream the supply chain in response to a price change of the good upstream the supply chain. There is little recent economic literature examining demand elasticities for cannabis. The demand elasticities used in this analysis are drawn from the 2017 SRIA prepared by ERA Economics (CalCannabis, 2017), and they have been updated based on more recent data and internal econometric analysis.

The expected market effects, which were identified in the Direct Economic Costs section, can be summarized as follows:

- Reducing lab shopping leads to an average decrease in reported potency of 4.00 percent for noncompliant businesses with a range of 2.03 percent to 5.95 percent.
- Reducing lab shopping also leads to a cost decrease for noncompliant businesses equal to the cost of testing. This is estimated to be roughly 2.60 percent; this cost decrease is offset by an equivalent revenue decrease to laboratories. Other direct costs to noncompliant businesses are expected to increase by 0.08 percent.
- The net cost change to noncompliant businesses from reducing lab shopping is an increase of 4.08 percent on average, with a range of 2.11 percent to 6.03 percent. This depends on the lost value from potency inflation relative to the decreased spending on retesting.
- The expected decrease in supply from noncompliant businesses from the increased rate of failed tests is 0.84 percent. This effect is the difference in failure rates for good and bad actor labs.
- The average decrease in willingness-to-pay for cannabis at retail is 0.92 percent with a range of 0.46 to 1.42 percent. This effect is a function of the expected loss in potency weighted by the share of cannabis supplied from noncompliant businesses. The decrease in average potency at retail is simulated as a decrease in consumers' willingness-to-pay for cannabis.[11] This effect is more than offset by the benefit to consumers from no longer

[11] For example, consider a product supplied from a bad actor with an inflated THC potency of 30 percent. If eliminating lab shopping decreased potency of this product by 5 percent, to 28.5 percent THC, then the decrease in willingness-to-pay by consumers would be 5 percent. Then, if 50 percent of products were supplied by noncompliant businesses and this was the average decrease in potency for all such products, the average effect at retail would be 0.5*0.05 = 0.025.

overpaying for products with inflated potency. Benefits from increased consumer confidence in the legal market from improved laboratory testing and access to COAs would also offset decreases in willingness-to-pay.

- Requiring transfer approvals results in a decrease of cannabis supplied by the illicit market. The expected decrease is 1.14 percent with a range of 0.21 to 2.06 percent. These bounds are a function of the wide range of possible diversions from the licensed to the illicit market.

Table 10 summarizes the expected shocks to supply and demand from the policy changes. These were entered as inputs (cost, price, supply, and demand shifts) to the EDM model and used to evaluate the effect on the overall market.

Table 10. Market Effects, Supply and Demand Shifts

Shock	Market Segment	Lower Bound	Upper Bound	Mean
			Percent	
Net Cost Change	Noncompliant businesses	2.11	6.03	**4.08**
Lost Potency Premium	Noncompliant businesses	2.03	5.95	**4.00**
Other Direct Costs	Noncompliant businesses	-	-	**0.08**
Net Cost Change	Compliant businesses	-	-	**0.08**
Supply Shift, Failed Tests	Noncompliant businesses	-	-	**-0.84**
Willingness-to-Pay Change from Deflated Potency	Retail	-0.46	-1.42	**-0.92**
Change in Diversions	Illicit	-2.06	-0.21	**-1.14**

Note: Lower and upper bounds correspond to 95% confidence interval.

Table 11 summarizes the results of the EDM analysis. The proposed regulation affects the price and quantity of licensed and illicit cannabis production. This affects the returns for cannabis businesses throughout the supply chain.

Table 11. EDM Analysis Market Effects Results

Description	Lower Bound	Upper Bound	Mean
	Percent Change		
Quantity demanded of licensed cannabis	-1.63	-0.39	**-0.99**
Quantity supplied of cannabis, compliant businesses	-0.07	0.35	**0.14**
Quantity supplied of cannabis, noncompliant businesses	-6.78	-2.62	**-4.71**
Price of licensed flower, wholesale	0.01	0.43	**0.22**
Price of licensed flower, retail	0.01	0.22	**0.11**

Note: Lower and upper bounds correspond to 95% confidence interval.

The net effect of the regulatory changes on demand for licensed cannabis depend on the magnitude of the effects from reducing diversions and reducing lab shopping, which have opposite effects on licensed cannabis demand.

- The expected net effect on licensed cannabis demand is a decrease of 0.99 percent, with a 95 percent confidence interval for the decrease ranging from 0.39 percent to 1.63 percent.
- Wholesale prices are expected to increase by 0.22 percent, with an upper bound of 0.43 percent and lower bound of 0.01 percent. Retail price increases are expected to be roughly 50 percent of wholesale price increases.

There is a range of outcomes for the supply of licensed cannabis from good and noncompliant businesses and illicit producers.
Figure 10 depicts the distribution of outcomes.

- Supply of cannabis from compliant businesses is expected to increase by 0.14 percent, with an upper bound increase of 0.35 percent and lower bound decrease of 0.07 percent.
- The expected supply decrease for noncompliant businesses is 4.71 percent, with a range of 2.62 percent to 6.78 percent.
- The decrease in supply of cannabis from the illicit market ranges from 0.49 percent to 0.05 percent with an average decrease of 0.27 percent.

Figure 10. Distribution of Supply Changes

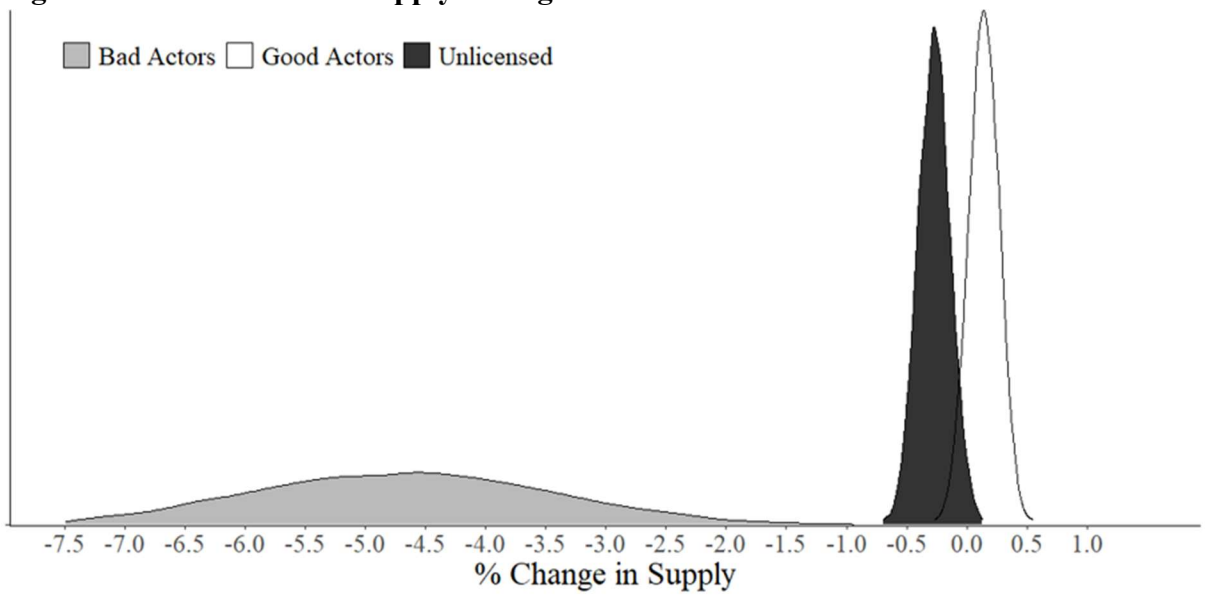


Table 12 summarizes the changes in producer and consumer surplus, gross output at retail, and benefits to consumers from reducing potency inflation. Underlying the change in the net effect to consumers is the consumer surplus change resulting from the market effects and the direct

benefits from reducing potency inflation. These benefits may or may not outweigh losses from price increases.

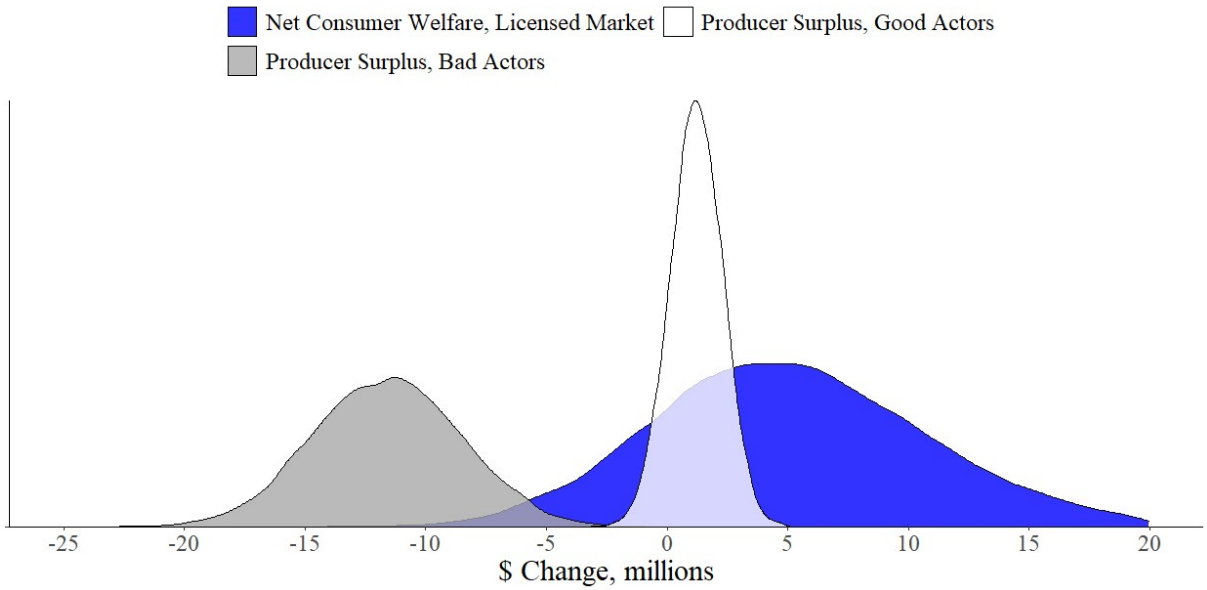
Table 12. Changes in Producer Surplus, Gross Retail Output, and Consumer Welfare

Description	Lower Bound	Upper Bound	Mean
	Dollars, Millions		
Producer surplus, licensed market	-16.48	-4.36	**-10.39**
Producer surplus, compliant businesses	-0.59	2.97	**1.21**
Producer surplus, noncompliant businesses	-16.57	-6.53	**-11.60**
Retail gross output, licensed market	-78.08	-18.77	**-47.43**
Consumers welfare, net effect	-3.67	15.28	**5.24**
Consumer surplus, licensed market	-10.31	-0.25	**-5.33**
Consumer benefit from eliminating potency inflation	4.88	17.58	**10.57**

Note: Lower and upper bounds correspond to 95% confidence interval.

Figure 11 depicts the distribution of consumer surplus and producer surplus (cultivation) changes. The producer surplus for compliant businesses is expected to increase by $1.21 million on average, with a range of -$0.59 million to $2.97 million. Producer surplus for noncompliant businesses decreases by $11.60 million on average, with the decrease ranging from $6.53 million to $16.57 million. Noncompliant businesses in distribution may or may not reflect complicit noncompliant businesses in cultivation, and indirect and induced impacts occur regardless; therefore, we consider the net producer surplus for determining indirect and induced impacts. The net decrease in producer surplus is $10.39 million, ranging from a decrease of $4.36 million to $16.48 million.

Figure 11. Distribution of Consumer and Producer Welfare Effects



The net benefits to consumers are positive on average, but they depend on the extent of price and quantity change relative to the benefits from eliminating potency inflation. The net benefit for consumers is an increase of $5.24 million, which ranges from a decrease of $3.67 million to an increase of $15.28 million.

Due to the considerable uncertainty in potency inflation and diversions to the illicit market, there is a wide range of outcomes for retailers. The expected change in gross output at retail for the licensed market is a decrease of $47.43 million, and the decrease ranges from $18.77 million to $78.08 million.

There are also unquantified human and environmental health benefits from reducing the supply of unsafe cannabis goods. These products pose a significant public health and safety threat, but these effects cannot be quantified owing to the lack of existing research. The benefits from reducing the quantity of these products would likely offset the economic losses from indirect and induced effects described in the following section.

4.4. Indirect and Induced Effects

The total economic impact includes direct, indirect, and induced impacts. Indirect and induced (secondary) economic impacts result from other changes in spending caused by the direct impacts of the proposed regulations. Indirect impacts result from changes in business-to-business spending, and induced impacts result from changes in spending by employees and owners because their income has changed. Indirect and induced impacts are estimated using multipliers from regional economic impact models, also called multiplier models.

Multiplier models are calibrated using national tax data. Since there is no federal licensed cannabis market, these models do not have defined cannabis businesses sectors. To capture the

impacts to the California cannabis market, the model approximates the market through emulating the relationships of existing similar sectors:

- A custom retail cannabis sector was developed using the "Retail - Health and personal care stores" sector in IMPLAN as a base. ERA reviewed IMPLAN sectors and identified this sector as best approximating the spending and employment of a licensed cannabis dispensary. Spending patterns were modified to reflect wholesale purchases of cannabis from custom cannabis cultivation sectors, and from a custom cannabis labs sector.
- Cannabis labs are adapted from the "Diagnostic labs" sector in IMPLAN. This sector best reflects the market relationships, spending, and employment of cannabis labs testing retail products for safety.
- The IMPLAN sector "Tobacco farming" is repurposed (customized) for cannabis cultivation sectors. Custom sectors were developed for outdoor, indoor, and mixed-light cultivators using information provided by cultivators.

The IMPLAN model geographic scope is all of California because the economic impacts of the proposed regulations would apply to the entire state. Economic impacts are summarized in terms of jobs, economic output value (business activity), value added (gross domestic product), and labor income (proprietor income and employee wages).

There are multiple components of the IMPLAN analysis:

- The decrease in gross output for testing laboratories from decreased testing,
- The decrease in gross output at retail resulting from cost increases and additional failed tests, as estimated in the Market Supply and Demand Effects section,
- The change in labor costs by sector, and
- The change in input and equipment purchases by sector.

The direct economic impacts to businesses include costs, benefits, and market effects, as estimated in the previous sections, and are summarized in Table 13.

Table 13. Direct Economic Impacts from Proposed Regulatory Changes

Sector	Description	Mean Impact
		Dollars, Millions
Cultivation	Labor	$0.32
Distribution	Labor	$1.94
Laboratories	Gross Output (Decreased Testing)	$6.58
Retail	Gross Output (Market Adjustment)	($47.43)
	Labor	$1.96
	Other Inputs (Business Management Services)	$1.28

Other Businesses	Labor	$0.57

Note: Direct impacts exclude impacts to consumers and producers in the illicit market.

The decrease in gross output at retail is modeled in IMPLAN as a decline in direct economic output in the retail cannabis sector. In this manner, impacts to other, upstream parts of the cannabis supply chain (e.g., licensed cannabis cultivators) are captured in the indirect impacts. Indirect impacts are net of impacts to cannabis laboratories because these are captured in the second part of the IMPLAN analysis. The decrease in direct economic output is calculated as the change in retail quantity sold (resulting from the EDM analysis) multiplied by the original market price (i.e., the price of cannabis at retail before the EDM shifts). The original market price is used because the structure of the cannabis sector in IMPLAN (e.g., the jobs per million dollars of sales and the set of input-output coefficients linking the cannabis sector to other economic sectors) is based on the original price.

To capture the total effects, these direct economic impacts are analyzed through a series of IMPLAN models imitating the shock of the change of quantity supplied of retail cannabis, and the subsequent structural upstream changes to the industry due to the proposed regulations. The secondary impacts from market adjustments in the cannabis retail sector account for the mean shift in quantity supplied of retail cannabis, the mean change in cannabis prices, and the change in proprietor income. The secondary structural impacts due to direct cost changes are modeled separately for business management services in the retail sector, decreased cannabis testing in the laboratory sector, and increased labor spending across each sector.

Table 14 summarizes the total economic impacts associated with the direct costs and market effects of the proposed regulations. The net market adjustment at retail is based on the mean shifts in price and quantity supplied from the previous section. The change in quantity supplied results in a decrease in gross revenue of $47.43 million. Additional changes in retailer net income from price effects are reflected in the induced effects; these are minor relative to the decrease in quantity supplied.

Table 14. Indirect and Induced Effects

Sector, Effect	Impact Type	Employment	Labor Income	Value Added	Output
		Count		*Millions*	
Retail, Net Market Adjustment	Direct Effect	(766)	($18.54)	($26.46)	($47.43)
	Indirect Effect	(123)	($7.88)	($10.37)	($14.72)
	Induced Effect	(122)	($7.85)	($13.91)	($23.29)
	Total Effect	(1,011)	($34.27)	($50.74)	($85.44)
Retail, Business Management Services	Direct Effect	11	$1.04	$1.05	$1.28
	Indirect Effect	1	$0.10	$0.15	$0.25
	Induced Effect	5	$0.34	$0.60	$1.01
	Total Effect	18	$1.48	$1.80	$2.54
Laboratories, Decreased Testing	Direct Effect	(22)	($2.59)	($2.84)	($6.58)
	Indirect Effect	(24)	($1.93)	($3.06)	($5.06)

	Induced Effect	(21)	($1.34)	($2.38)	($3.98)
	Total Effect	(67)	($5.86)	($8.28)	($15.61)
Industrywide, Labor	Direct Effect	181	$4.79	$0.00	$0.00
	Indirect Effect	0	$0.00	$0.00	$0.00
	Induced Effect	22	$1.43	$2.54	$4.26
	Total Effect	203	$6.22	$2.54	$4.26
Net Impact	**Net Effect**	**(857)**	**($32.43)**	**($54.68)**	**($94.25)**

The indirect and induced effects of direct costs are estimated separately for input purchases for retailers, decreased laboratory spending, and increased labor spending throughout the cannabis industry. The retail sector sees increased spending on business management services by $1.28 million from retailers upgrading POS systems. Cannabis laboratories see output losses of $6.58 million stemming from the reduction in the number of laboratory tests. The increase in spending of $4.79 million on labor across the industry, equivalent to 181 jobs, results in additional induced effects.

Due to the net market adjustment, support industries providing inputs to cannabis retail, including cultivators, see $14.72 million in reduced output. There is an additional $23.29 million output reduction from induced impacts. Secondary effects reduce employment by 245 jobs, labor income by $15.73 million, value added by $24.28 million, and output by $38.01 million. Including direct effects, the net impact to gross economic output would be a decrease of $85.44 million to the California economy.

As a result of upgrading POS systems, industries supporting business management services experience indirect and induced increases in gross economic output of $0.25 million and $1.01 million, respectively. Support industries' labor income sees total indirect and induced increases of $0.44 million, while total indirect and induced value added increases by $0.75 million.

As a result of decreased lab spending, industries supporting cannabis laboratories experience decreases in indirect and induced gross economic output of $5.06 million and $3.98 million, respectively. Support industries' labor income sees net indirect and induced decreases of $3.27 million, while indirect and induced total value added decreases by $5.44 million. Including direct effects, the net impact to gross economic output would be a decrease of $15.61 million to the California economy.

There is an increase in spending on labor of $4.79 million, or 181 additional jobs, across cultivation, distribution, laboratory, retail, and other cannabis business sectors. The induced impact is an increase of 22 additional jobs, $1.43 million in labor income, $2.54 million in value added, and $4.26 million in output.

Overall, direct impacts and market effects on the cannabis industry result in net decreases in employment, labor income, value added, and total output. The California economy experiences a net decrease of 262 jobs, $17.13 million in labor income, $26.43 million in value added, and $41.53 million in output exclusively from indirect and induced impacts. Including direct effects,

the net impact to the California economy from impacts to all sectors is a decrease in employment of 857 jobs, a decrease in labor income of $32.43 million, a decrease in value added of $54.68 million, and a decrease in output value of $94.25 million.

4.5. Economic Impacts Summary

This section summarizes the key economic impacts of the proposed regulations.

4.5.1. Total Costs and Benefits

Total directs costs to businesses are $12.64 million. There would be a decrease in gross output at retail, valued at $47.43 million, based on the change in supply at current market prices. There would also be a decrease in gross output for testing labs of $6.58 million. This leads to a total (direct, indirect, and induced) impact of 1,078 fewer jobs, a $40.13 million decrease in labor income, a $59.02 million decrease in value added, and a decrease in gross economic output of $101.05 million. Increased spending by firms on labor and new technology represent additional direct costs of $6.07 million. Consumers would also experience a $5.33 million decrease in surplus due to market shifts. The total costs therefore are $211.6 million.

Reducing diversions would benefit licensed cannabis businesses by increasing average prices and shifting consumption from the illicit to the licensed market. The net market effect is a decrease in supply of licensed cannabis of 0.99 percent, and an increase in the price of licensed cannabis by 0.22 percent at wholesale and 0.11 percent at retail. The average expected increase in producer surplus for licensed businesses not engaging in diversions is $1.21 million.

Although consumers' willingness-to-pay for licensed cannabis decreases owing to lower labelled potency, they benefit from no longer paying extra for inflated potency. The expected savings to consumers from reducing potency inflation is $10.57 million.

Other quantified benefits (in terms of change in related industry purchases) are summarized in Table 14. These benefits results from direct regulatory costs to all licensees, which in turn increase purchases and affect economic activity in other industries. The total increase in labor income is $7.70 million, the increase in value-added is $4.34 million, and the increase in terms of output value is $6.80 million. The sum of these impacts is $18.84 million. This plus the increase in producer surplus ($1.21 million) and the increase in consumer surplus from eliminating potency inflation ($10.57 million) implies that the total benefits of the proposed regulations are $30.62 million.

4.5.2. Employment (Job) and Income Estimated Effects

As displayed in Table 14, the direct impact due to the market adjustment is a decrease of 766 full-time equivalent jobs, the direct impact due to increased retailer spending is an increase of 11 jobs, the direct impact from decreased laboratory testing is a decrease of 22 jobs, and the direct effect from industrywide labor spending is an increase of 181 jobs. Including indirect and

induced impacts, the total employment impact is a decrease of 1,078 jobs from the market adjustment and decreased lab spending and an increase of 221 jobs from increased spending on labor and POS systems. The net employment impact, including indirect and induced impacts, is a decrease of 857 jobs.

The net labor income impact is a decrease of $32.43 million. This includes $7.70 million from increased spending on labor and POS systems, and a decrease of $40.13 million from the market adjustment and decreased lab spending.

4.5.3. Gross State Product

The investment in California's gross state product is also known as value added. The net impact on statewide value added is a decrease of $54.68 million (as shown in Table 14), which is significant but still a small share of the total economy. This includes an increase of $4.34 million from increased spending on labor and POS systems, and a decrease of $59.02 million from the market adjustment and decreased lab spending.

4.5.4. Creation or Elimination of Businesses

Some cannabis cultivators would exit the market. The combined market effects result in a 0.99 percent reduction in the supply of licensed cannabis. This is likely to result in an exit of licensed cultivation businesses of a similar magnitude. As of January 2025, there are 2,809 businesses holding cultivation licenses, implying an exit of 28 businesses.

The mean estimate of distributors engaging in diversions is 11 percent. It is expected that these licensees would exit the market within 12 months of implementing transfer approvals, resulting in the exit of 130 businesses. However, these exits represent noncompliant businesses engaging in illicit activity.

Laboratories are expected to exit the market proportionally to the combined decrease in demand for testing from reduced lab shopping and decreased cannabis production. Reducing lab shopping affects compliance testing revenue for labs, which is close to 50 percent of lab revenue for the average lab. Therefore, there is an expected overall exit of roughly 10 percent of labs (9.5 percent decrease from lab shopping and 1.0 percent decrease from market effects), i.e., 3 of the 26 active labs. The expected decrease in laboratories could be offset by increased demand for laboratory testing as consumption shifts from the illicit to licensed market in response to reducing diversions.

Retailers would realize a decrease in gross output of $47.4 million. This represents roughly a 1 percent decrease in the value of cannabis sold at retail ($4.6 billion). There is expected to be an exit of a similar magnitude of cannabis retailers, 16 of the 1,584 active licenses.

Therefore, the total number of businesses potentially eliminated (excluding bad actor distributors) would be 47.

All businesses throughout the cannabis supply chain are expected to be affected, but market exits are only expected for cultivators, laboratories, retailers, manufacturers, and noncompliant distributors as a result of the regulatory changes. Of these 5,463 businesses, an estimated 97.1 percent (5,303 businesses) are estimated to be small businesses.

4.5.5. Expansion of Businesses

Licensed businesses that are able to comply with the regulations and secure the financing needed would expand to meet market demand. Already compliant businesses are expected to expand as the illicit market and noncompliant competitors in the licensed market contract in response to the proposed regulations.

4.5.6. Competitive Advantages or Disadvantages

In general, licensees with higher annual revenues are more likely to have better access to financing compared to small businesses. For this reason, larger businesses are more readily able to comply with the proposed changes. Small retailers that need to invest in new POS systems to comply with regulations would be at competitive disadvantage relative to larger retailers and retailers that do not need to invest in new POS systems.

Already compliant businesses are expected to be at an advantage as they will have reduced competition with the illicit market and their legal market noncompliant competitors, who benefit from engaging in unlawful activity. The proposed regulations are not expected to generate any meaningful competitive advantages or disadvantages for other businesses.

4.5.7. Investment in the State and Taxes

There would be an increase in investment in the state through retailers' investment in new POS systems. This would also result in an increase in taxes collected. The increase in investment in new POS systems would equal $1.28 million. Considering the state sales tax of 7.25 percent, the total taxes paid through these purchases would equal about $0.09 million. This is contingent on POS systems being purchased in-state.

However, as shown in Table 12, there would be a loss in cannabis retail gross output of approximately $47.4 million, which represents a decrease in investment. Applying the same sales tax rate implies that this would result in a decrease in tax revenue of $3.44 million. Additionally, cannabis is subject to an excise tax equal to 15 percent of gross retail sales. This implies an additional decrease in tax revenue of $7.11 million.

The net effect on taxes, therefore, is a decrease of $10.46 million in state sales and excise taxes.

The inclusion of the mandatory CDTFA tax fields at retail would improve CDTFA's ability to properly collect taxes and audit businesses which may result in unquantified tax revenue increases and significant cost-savings.

CDTFA currently receives sales reports from retailers which are cross-checked with the sales recorded by those retailers in CCTT. Sales amounts reported to CDTFA often differ by 25% or more from sales recorded in CCTT, in part because of incorrectly including excise or sales taxes.

When this occurs, CDTFA performs a full audit to determine whether the retailer reported inaccurate information on their tax report (and potentially under- or over-paid on their taxes), or if they simply entered sales differently into CCTT. Due to the widespread nature of this issue, CDTFA is constantly required to perform time consuming and resource intensive audits. Furthermore, the frequency of such data mismatch issues prevents CDTFA from being able to automate data review.

If sales were entered consistently into CCTT, CDTFA could utilize CCTT data and avoid requiring retailers to submit duplicative sales reports.

4.5.8. Incentives for Innovation

There are no incentives for innovation that result directly from the proposed regulations.

4.5.9. Estimated Effects on a Typical Business and Small Business

The total direct cost to businesses, shown in Table 8, is $12.64 million. Of this, $11.62 million are one-time, up-front costs that apply to all businesses, and $1.02 million are recurring costs for retailers. The total decrease in output value equals $94.25 million, including all multiplier effects.

The majority (97.1 percent) of active licensees are estimated to be small businesses. Hence, small businesses are also considered to be typical businesses, and the expected one-time and recurring annual costs are the same for each type.

All licensed businesses are affected by the proposed regulations, although cultivators, distributors, laboratories, and retailers have higher cost increases. The overall one-time up-front cost increase of $11.62 million, spread across all 5,463 licensed cannabis businesses, would be $2,130 per business. Annual recurring costs for retailers of $1.02 million, spread across 130 retailers that need to upgrade their POS system, would be $7,800 per business.

4.5.10. Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

Currently, licensed cannabis cannot be exported to other states or imported from other states. Therefore, the proposed regulations would not affect the ability of businesses in the state to compete with those in other states.

The regulations would have a positive, unquantifiable impact on California residents. Regulations would improve cannabis product safety by increasing the likelihood that unsafe cannabis goods fail testing for harmful contaminants, which has positive implications for

consumer health outcomes and the environment. Public safety would likely improve through reduced access to products containing harmful levels of pesticides, but there are insufficient data to measure this effect.

The proposed regulations are expected to provide benefits to the environment that are not quantified. Increasing the likelihood of testing failure for pesticide residue and other contaminants is expected to result in reduced applications or use of pesticides and other harmful materials, thereby reducing contamination of water, soil, and air.

The proposed regulations would not require additional business reports.

4.6. Department Fiscal Costs

Table 15 summarizes the expected increase in Department costs. Overall, the Department expects fiscal cost changes to be $555,165. Of this, $377,965 has already been paid for; additional upcoming costs are $177,200. Existing positions would support successful rollout, implementation, and compliance monitoring of the proposed regulations. These are existing staff costs and are not anticipated to incur additional fiscal costs.

Table 15. Department Cost Increases

Description	Cost
Transporter and Destination Approvals	$325,000
Second Testing Restrictions	$102,200
Mandatory Use of CDTFA Sales Tax Fields	$25,765
Retailer Disclosure of COAs	$102,200
Total Cost	**$555,165**

4.6.1. Transporter and Destination Approvals

Estimated costs to develop CCTT enhancements for transporter and destination approvals are $325,000, of which $250,000 are already developed and paid for. Implementation of the regulatory change is expected to result in the following efficiencies after rollout:

- Decrease the number of incomplete transfers taking place. Currently DCC staff notify recipients of incomplete transfers and work with them to resolve when possible. This development will decrease the DCC workload associated with resolving incomplete transfers.
- Create more accountability for licensees and assist DCC staff with evidence to show that licensees are working together to divert product.
- Fewer transfers will be rejected due to data entry errors as a receiving licensee must approve the manifest before the product can leave the premises.

- Create efficiencies with licensees as they can review transfers and reject them if they are not expecting the transfer, if it is to the incorrect license location (if they have multiple), or if the wrong product is being sent.
- Assist transporter licensees who have been abused by being placed on a manifest without their knowledge and consent, and when they are not actually transporting the product. Licensees who are self-transporting without the use of a distributor will no longer have the ability to generate a manifest to keep on hand if stopped by law enforcement.

4.6.2. Second Testing Restrictions

Estimated costs to develop CCTT enhancements to prohibit second sample packages and the severance of unwanted test results are $102,200. The system functionality has already been developed and therefore costs have been accounted for. Implementation of the regulatory change is expected to result in the following efficiencies:

- It would prevent lab shopping and severing of unwanted test results because failed or unwanted test results cannot be erased.
- Transfer approvals and the testing changes would reduce the quantity of misbranded and adulterated cannabis reaching retail, therefore reducing the need for recalls and embargoes when DCC staff discover the violations. This would save the Department countless staff hours.
- In instances where recalls and embargoes are required, the proposed transfer approval requirements would benefit DCC staff in performing tracebacks and identifying which licensees hold embargoed or recalled products.

4.6.3. Mandatory Use of CDTFA Sales Tax Fields

Estimated costs to develop CCTT enhancements to mandate the use of CDTFA sales tax fields are $25,765 and are already developed and paid for. Implementation of the regulatory change is expected to result in the following efficiencies after rollout:

- It would be easier for DCC to see how discounts are applied, ensuring disallowed promotional sales are not happening (e.g., buy-one-get-one free).
- The auditing of sales and excise taxes for CDTFA would be more efficient. See section 4.5.7 Investment in the State and Taxes.

4.6.4. Retail Disclosure of COAs

Estimated costs to develop a system to allow licensees to download all of their COAs at once would be $102,200. Implementation of the regulatory change is expected to result in the following efficiencies after rollout:

- Licensees would save time by not individually downloading COAs.

- The Department would save time due to receiving fewer COA requests from consumers.

4.6.5. Requiring the Same UOM for Transfers

There would be no additional costs to implement needed system changes. Existing staff would monitor compliance with the regulatory requirements through CCTT reports. Implementation of the regulatory change is expected to result in the following efficiencies after rollout:

- Transfer reports would be more streamlined, making it easier for staff to identify differences in accepted and sent transfers, i.e., inversion or diversion.
- It would be easier for DCC to differentiate unit of measurement mistakes from attempts to conceal inversion or diversion.

4.6.6. CCTT Data Entry Timing

There would be no additional costs to implement the regulatory change as it does not require system changes. Existing staff would monitor compliance with the regulatory requirement. Implementation of the regulatory change is expected to result in the following efficiencies after rollout:

- It would be easier for staff to identify products licensees have on site. Future dating may result in product inventory differing from what is indicated in the system.

4.6.7. Other State and Local Public Agencies Fiscal Costs

There would be substantial cost-savings for CDTFA, as discussed in section 4.5.7. Local police departments would realize saving from being better able to identify compliant versus noncompliant transfers. This is because distribution licensees or other businesses engaging in unlawful activity would not be able to print out an unapproved transfer manifest to use as justification of transportation if pulled over by law enforcement.

4.7. Total Impact Summary

Table 16 summarizes the key economic and fiscal outcomes of the proposed regulations.

Table 16. Total Economic Impact Summary

Description	Unit	Value
Total statewide benefits for businesses and individuals	$, millions	30.6
Total statewide costs for businesses and individuals	$, millions	211.6
Businesses impacted	Count	5,463
Share of businesses that are small	Percent	97.1
Businesses eliminated	Count	47
Jobs created	Count	221
Jobs eliminated	Count	1,078
Average one-year costs per business	$, thousands	2.1

Total fiscal costs	$, millions	$0.56
Total fiscal savings	$, millions	NA

Note: Total statewide costs for businesses and individuals are calculated as the sum of lost consumer surplus, direct costs to businesses, and decreases in direct, indirect, and indirect effects from decreased laboratory spending and effects at retail. Total statewide benefits are calculated as the sum of direct, indirect, and induced effects from spending on POS systems at retail and labor spending industrywide, producer surplus for compliant businesses, and benefits from eliminating potency inflation.

The economic impacts reported in Table 16 are used to determine whether the proposed regulations reach the threshold of a major regulation. The total economic impact is expected to exceed $50 million in the first 12 months of implementation. All values reported in Table 16 were derived in previous sections of this SRIA, and are reported in the accompanying STD 399 Economic Impact Statement and DF-131 Major Regulations Standardized Regulatory Impact Assessment Summary.

5. Economic and Fiscal Impacts: Proposed Alternatives

The Department considered the proposed regulations (the primary alternative) plus two additional alternatives (three total alternatives were evaluated). The alternatives are summarized as follows:

- Alternative 1 does not allow auto-approvals.
- Alternative 2 requires that transfer requests must be approved or rejected within 24 hours (rather than 72 hours) or else they are automatically cancelled.

5.1. Economic and Fiscal Impacts of Regulation Alternative 1

Under this alternative, licensees would need to manually approve all transfers. Instead of setting up auto-approval for 116,000 transactions industrywide, all 11.7 million transfers would need to be reviewed and accepted or rejected. Although review and acceptance of transfers is generally quick (approximately 1 minute), the high volume of transfers would lead to a substantial increase in industrywide labor costs. Labor costs for transfer approvals would be an estimated $19.5 million compared to $1.9 million under the auto-approval system in the proposed regulations. These would be recurring annual costs as opposed to one-time costs to set up auto-approval.

5.1.1. Alternative 1 Direct Economic Benefits

As in the proposed regulations, consumers benefit from the reduction of potency inflation, and bad actor distributors have reduced expenditures on lab testing from restricting lab shopping. There are other, unquantified, human and environmental health benefits from the proposed regulations. Total direct economic benefits remain the same. Table 17 summarizes these benefits.

Table 17. Direct Economic Benefits Summary

Description	Sector	Amount ($)
Second Testing Restrictions	Distribution (Noncompliant businesses)	$6,575,000
Eliminating Potency Inflation	Consumers	$10,550,000
Total		**$17,125,000**

5.1.2. Alternative 1 Direct Economic Costs

Table 18 summarizes the expected direct economic costs for licensees. Total costs for transporter and destination approvals increase by approximately $17.5 million relative to the baseline. Furthermore, these additional costs are recurring annual costs as opposed to one-time costs. Other costs remain the same.

Table 18. Total Direct Costs per Business and Total Industry Costs

Description	Cost Type	Sector	Amount ($)
Transporter and Destination Approvals	Labor	Cultivation	$2,090,000
Transporter and Destination Approvals	Labor	Distribution	$3,800,000
Transporter and Destination Approvals	Labor	Retail	$10,260,000
Transporter and Destination Approvals	Labor	Other	$3,320,000
Second Testing Restrictions	Spending on lab tests	Testing Lab	$6,575,000
Mandatory Use of CDTFA Sales Tax Fields	New technology	Retail	$1,280,000
Retailer Disclosure of COAs	Labor	Retail	$940,000
Requiring the Same UOM for Transfers	Labor	Cultivation	$115,000
Requiring the Same UOM for Transfers	Labor	Distribution	$410,000
Requiring the Same UOM for Transfers	Labor	Other	$235,000
CCTT Data Entry Timing	Labor	Distribution	$1,155,000
Total			**$30,180,000**

5.1.3. Alternative 1 Market Effects

The one-time costs are annualized over a 10-year period with an interest rate of 7.5 percent. Table 19 summarizes the expected shocks to supply and demand from the policy changes.

Table 19. First-Year Annualized Costs Per Business

Shock	Market Segment	Lower Bound	Upper Bound	Mean
			Percent	
Net Cost Change	Noncompliant businesses	3.86	7.78	**5.83**
Lost Potency Premium	Noncompliant businesses	2.03	5.95	**4.00**
Other Direct Costs	Noncompliant businesses	-	-	**1.83**
Net Cost Change	Compliant businesses	-	-	**1.83**
Supply Shift, Failed Tests	Noncompliant businesses	-	-	**-0.84**
Willingness-to-Pay Change from Deflated Potency	Retail	-0.46	-1.42	**-0.92**
Change in Diversions	Illicit	-2.06	-0.21	**-1.14**

Table 20 summarizes the results of the EDM analysis. The proposed regulations affect the price and quantity of licensed and illicit cannabis. This affects the returns for cannabis businesses throughout the supply chain.

Table 20. EDM Analysis Market Effects Results

Description	Lower Bound	Upper Bound	Mean
	Percent Change		
Quantity demanded of licensed cannabis	-2.31	-1.07	**-1.67**
Quantity supplied of cannabis, compliant businesses	-0.75	-0.33	**-0.54**
Quantity supplied of cannabis, noncompliant businesses	-7.46	-3.30	**-5.39**
Price of licensed flower, wholesale	1.08	1.50	**1.29**
Price of licensed flower, retail	0.54	0.75	**0.65**

Cost increases and supply decreases result in substantial losses to producers and consumers, higher cannabis prices, and quantity demanded for licensed cannabis decreases. Table 21 summarizes the changes in consumer surplus, producer surplus, and retailer revenue for the licensed market segment. Lower bound, upper bound, and mean changes are provided.

Table 21. Changes in Producer Surplus, Gross Retail Output, and Consumer Welfare

Description	Lower Bound	Upper Bound	Mean
	Dollars, Millions		
Producer surplus, licensed market	-23.84	-11.80	**-17.79**
Producer surplus, compliant businesses	-6.33	-2.80	**-4.55**
Producer surplus, noncompliant businesses	-18.17	-8.20	**-13.24**
Retail gross output, licensed market	-110.84	-51.53	**-80.19**
Consumer welfare, net effect	-29.15	-10.09	**-20.18**
Consumer surplus, licensed market	-35.76	-25.62	**-30.76**
Consumer benefit from eliminating potency inflation	4.88	17.58	**10.57**

5.1.4. Alternative 1 Indirect and Induced Effects

Table 22 summarizes the total economic impacts associated with the direct costs and market effects of the proposed regulations. The change in quantity supplied results in a decrease in gross output of $83.75 million. Direct spending on labor increases by $27.80 million as a result of additional transfer approvals. Direct, indirect, and induced effects from POS purchases and decreased testing remain the same.

Table 22. Indirect and Induced Effects

Sector, Effect	Impact Type	Employment	Labor Income	Value Added	Output
		Count		*Millions*	
Retail, Net Market Adjustment	Direct Effect	(1,294)	($31.34)	($44.74)	($80.19)
	Indirect Effect	(208)	($13.32)	($17.54)	($24.89)
	Induced Effect	(207)	($13.27)	($23.51)	($39.37)
	Total Effect	(1,709)	($57.94)	($85.79)	($144.45)
Retail, Business Management Services	Direct Effect	11	$1.04	$1.05	$1.28
	Indirect Effect	1	$0.10	$0.15	$0.25
	Induced Effect	5	$0.34	$0.60	$1.01
	Total Effect	18	$1.48	$1.80	$2.54
Laboratories, Decreased Testing	Direct Effect	(22)	($2.59)	($2.84)	($6.58)
	Indirect Effect	(24)	($1.93)	($3.06)	($5.06)
	Induced Effect	(21)	($1.34)	($2.38)	($3.98)
	Total Effect	(67)	($5.86)	($8.28)	($15.61)
Industrywide, Labor	Direct Effect	843	$22.33	$0.00	$0.00
	Indirect Effect	0	$0.00	$0.00	$0.00
	Induced Effect	104	$6.69	$11.85	$19.84
	Total Effect	947	$29.02	$11.85	$19.84
Net Impact	**Net Effect**	**(811)**	**($33.30)**	**($80.42)**	**($137.68)**

Due to the net market adjustment, support industries providing inputs to cannabis retail, including cultivators, see $24.89 million in reduced output. There is an additional $39.37 million output reduction from induced impacts. Secondary effects reduce employment by 415 jobs, labor income by $26.59 million, value added by $41.05 million, and output by $64.26 million.

There is an increase in spending on labor of $22.33 million, or 843 additional jobs, across cultivation, distribution, laboratory, retail, and other cannabis business sectors. The induced impact is an increase of 104 additional jobs, $6.69 million in labor income, $11.85 million in value added, and $19.84 million in output.

Overall, direct impacts and market effects on the cannabis industry result in net decreases in employment, labor income, value added, and total output. The California economy experiences net decreases of 350 jobs, $22.73 million in labor income, $33.89 million in value added, and $52.20 million in output exclusively from indirect and induced impacts. Including direct effects, the net impact to the California economy from impacts to all sectors is a decrease in employment of 811 jobs, a decrease in labor income of $33.30 million, a decrease in value added of $80.42 million, and a decrease in output value of $137.68 million.

5.2. Alternative 1 Economic Impacts Summary

This section summarizes the key economic impacts of Alternative 1.

5.2.1. Employment (Job) Estimated Effects

As displayed in Table 22, the total employment impact from spending on POS systems and labor, including indirect and induced impacts, is an increase of 965 jobs. The total employment impact from decreased lab spending and licensed cannabis supply, including indirect and induced impacts, is a decrease of 1,776 jobs.

The total labor income impact is an increase of $30.50 million from increased POS system and labor spending and a decrease of $63.80 million from decreased licensed cannabis supply and lab spending.

5.2.2. Gross State Product

The investment in California's gross state product is called value added. The net impact on statewide value-added is a decrease of $80.42 million, which is significant but is still a small share of the total economy. Increases in valued added of $13.65 million are attributed to increased POS system and labor spending, and decreases to value added of $94.07 million are attributed to decreased lab spending and supply of licensed cannabis.

5.2.3. Creation or Elimination of Businesses

Some cannabis cultivators would exit the market. The combined market effects result in a 1.67 percent reduction in the supply of licensed cannabis. This is likely to result in an exit of licensed cultivation businesses of a similar magnitude. As of January 2025, there are 2,809 businesses holding cultivation licenses, implying an exit of 47 businesses.

The expected change in laboratory exits is the same as under the proposed regulations, 3 of the 26 active labs.

Retailers are expected to realize a decrease in gross output of $80.19 million. This represents roughly a 1.7 percent decrease in the value of cannabis sold at retail ($4.6 billion). There is expected to be an exit of a similar magnitude of cannabis retailers, 28 of the 1,584 active licenses. Therefore, the total number of businesses potentially eliminated is 78.

5.2.4. Expansion of Businesses

Businesses that are capable of complying with the regulations and securing financing are likely to expand substantially to meet the demand for laboratory testing.

5.2.5. Competitive Advantages or Disadvantages

Competitive advantages and disadvantages are the same as described in section 4.5.5.

5.2.6. Investment in the State and Taxes

The increase in investment in the state through retailers' investment in new POS systems would remain the same as under the proposed regulations, about $0.09 million.

There would be a loss in cannabis retail gross output of approximately $80.2 million, which would result in a decrease in tax revenue of $5.81 million. Additionally, cannabis is subject to an excise tax equal to 15 percent of gross retail sales. This implies an additional decrease in tax revenue of $12.03 million.

The net effect on taxes, therefore, is a decrease of $17.75 million in state sales and excise taxes.

5.2.7. Incentives for Innovation

Incentives for innovation are the same as described in section 4.5.7.

5.2.8. Estimated Effects on a Typical Business and Small Business

The majority (97.1 percent) of active licensees are estimated to be small businesses. Hence, small businesses are also considered to be typical businesses, and the expected one-time and recurring annual costs are the same for each type.

All licensed businesses are affected by the proposed regulations, although cultivators, distributors, laboratories, and retailers have higher cost increases. The overall one-time up-front cost increase of $10.71 million, spread across all 5,463 licensed cannabis businesses, would be $1,960 per business. Annual recurring costs for businesses of $19.48 million would be $3,565 per business.

5.2.9. Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

Other economic impacts are the same as described in section 4.5.10.

5.2.10. Department Fiscal Costs

Department fiscal costs are the same as described in section 4.6.

5.2.11. Other State and Local Public Agencies Fiscal Cost

Other State and local public agency costs are the same as those described in section 4.6.7.

5.2.12. Total Impact Summary for Alternative 1

Table 23 summarizes the key economic outcomes of Alternative 1.

Table 23. Total Economic Impact Summary

Description	Unit	Value
Total statewide benefits for businesses and individuals	$, millions	77.1
Total statewide costs for businesses and individuals	$, millions	376.8
Businesses impacted	Count	5,463
Share of businesses that are small	Percent	97.1
Businesses eliminated	Count	78
Jobs created	Count	965
Jobs eliminated	Count	1,776
Average one-year costs per business	$, thousands	5.5
Total fiscal costs	$, millions	0.56
Total fiscal savings	$, millions	NA

Note: Total statewide costs for businesses and individuals are calculated as the sum of producer surplus for compliant businesses, consumer surplus, direct costs to businesses, and decreases in direct, indirect, and indirect effects from decreases laboratory spending and effects at retail. Total statewide benefits are calculated as the sum of direct, indirect, and induced effects from spending on POS systems at retail, labor spending industrywide, and benefits from eliminating potency inflation.

5.2.13. Basis for Rejecting Alternative 1

Alternative 1 was rejected because it would result in higher costs for licensed businesses in California than the proposed regulations to achieve the same outcome as the proposed regulations.

5.3. Economic and Fiscal Impacts of Regulation Alternative 2

Under this alternative, licensees would be required to approve or reject transfers within 24 hours instead of 72 hours. This would likely require additional employee time to check for transfers outside of normal business hours (i.e., weekends), resulting in expected increase of 10 minutes of labor per license per week. These would be recurring annual costs to licensees.

5.3.1. Alternative 2 Direct Economic Benefits

As in the proposed regulations, consumers benefit from the reduction of potency inflation, and bad actor distributors have reduced expenditures on lab testing from restricting lab shopping. There are other, unquantified, human and environmental health benefits from the proposed regulations. Total direct economic benefits remain the same. These benefits are summarized in Table 24.

Table 24. Direct Economic Benefits Summary

Description	**Sector**	**Amount ($)**
Second Testing Restrictions	Distribution (Noncompliant businesses)	$6,575,000
Eliminating Potency Inflation	Consumers	$10,550,000
Total		**$17,125,000**

5.3.2. Alternative 2 Direct Economic Costs

Table 25 summarizes the expected direct economic costs for licensees. Total costs from CCTT data entry timing increase by approximately $9.1 million relative to the baseline. Furthermore, these additional costs are recurring annual costs as opposed to one-time costs. Other costs remain the same.

Table 25. Total Direct Costs per Business and Total Industry Costs

Description	Cost Type	Sector	Amount ($)
Transporter and Destination Approvals	Labor	Cultivation	$205,000
Transporter and Destination Approvals	Labor	Distribution	$375,000
Transporter and Destination Approvals	Labor	Retail	$1,020,000
Transporter and Destination Approvals	Labor	Other	$330,000
Second Testing Restrictions	Spending on Lab Tests	Testing Lab	$6,575,000
Mandatory Use of CDTFA Sales Tax Fields	New Technology	Retail	$1,280,000
Retailer Disclosure of COAs	Labor	Retail	$940,000
Requiring the Same UOM for Transfers	Labor	Cultivation	$115,000
Requiring the Same UOM for Transfers	Labor	Distribution	$410,000
Requiring the Same UOM for Transfers	Labor	Other	$235,000
CCTT Data Entry Timing	Labor	Distribution	$10,250,000
Total			**$21,735,000**

5.3.3. Alternative 2 Market Effects

The one-time costs are annualized over a 10-year period with an interest rate of 7.5 percent. Table 26 summarizes the expected shocks to supply and demand from the policy changes.

Table 26. First-Year Annualized Costs Per Business

Shock	Market Segment	Lower Bound	Upper Bound	Mean
			Percent	
Net Cost Change	Noncompliant businesses	2.81	6.73	**4.78**
Lost Potency Premium	Noncompliant businesses	2.03	5.95	**4.00**
Other Direct Costs	Noncompliant businesses	-	-	**0.78**
Net Cost Change	Compliant businesses	-	-	**0.78**
Supply Shift, Failed Tests	Noncompliant businesses	-	-	**-0.84**
Willingness-to-Pay Change from Deflated Potency	Retail	-0.46	-1.42	**-0.92**
Change in Diversions	Illicit	-2.06	-0.21	**-1.14**

Table 27 summarizes the results of the EDM analysis. The proposed regulations affect the price and quantity of licensed and illicit cannabis. This affects the returns for cannabis businesses throughout the supply chain.

Table 27. EDM Analysis Market Effects Results

Description	Lower Bound	Upper Bound	Mean
	Percent Change		
Quantity demanded of licensed cannabis	-1.90	-0.66	**-1.26**
Quantity supplied of cannabis, compliant businesses	-0.34	0.08	**-0.13**
Quantity supplied of cannabis, noncompliant businesses	-7.06	-2.89	**-4.98**
Price of licensed flower, wholesale	0.44	0.86	**0.65**
Price of licensed flower, retail	0.22	0.43	**0.33**

Cost increases and supply decreases result in substantial losses to producers and consumers, higher cannabis prices, and quantity demanded for licensed cannabis decreases. Table 28 summarizes the changes in consumer surplus, producer surplus, and retailer revenue for the licensed market segment. Lower bound, upper bound, and mean changes are provided.

Table 28. Changes in Producer Surplus, Gross Retail Output, and Consumer Welfare

Description	Lower Bound	Upper Bound	Mean
	Dollars, Millions		
Producer surplus, licensed market	-19.43	-7.34	**-13.35**
Producer surplus, compliant businesses	-2.89	0.66	**-1.10**
Producer surplus, noncompliant businesses	-17.21	-7.20	**-12.26**
Retail gross output, licensed market	-91.19	-31.87	**-60.54**
Consumer welfare, net effect	-13.88	5.11	**-4.95**
Consumer surplus, licensed market	-20.50	-10.41	**-15.52**
Consumer benefit from eliminating potency inflation	4.88	17.58	**10.57**

5.3.4. Alternative 2 Indirect and Induced Effects

Table 29 summarizes the total economic impacts associated with the direct costs and market effects of the proposed regulations. The change in quantity supplied results in a decrease in gross output of $60.54 million. Direct spending on labor increases by $13.88 million as a result of data entry timing requirements. Direct, indirect, and induced effects from POS purchases and decreased testing remain the same.

Table 29. Indirect and Induced Effects

Sector, Effect	Impact Type	Employment	Labor Income	Value Added	Output
		Count		*Millions*	
Retail, Net Market Adjustment	Direct Effect	(977)	($23.66)	($33.77)	($60.54)
	Indirect Effect	(157)	($10.05)	($13.24)	($18.79)
	Induced Effect	(156)	($10.02)	($17.75)	($29.72)
	Total Effect	(1,290)	($43.74)	($64.77)	($109.05)
Retail, Business Management Services	Direct Effect	11	$1.04	$1.05	$1.28
	Indirect Effect	1	$0.10	$0.15	$0.25
	Induced Effect	5	$0.34	$0.60	$1.01
	Total Effect	18	$1.48	$1.80	$2.54
Laboratories, Decreased Testing	Direct Effect	(22)	($2.59)	($2.84)	($6.58)
	Indirect Effect	(24)	($1.93)	($3.06)	($5.06)
	Induced Effect	(21)	($1.34)	($2.38)	($3.98)
	Total Effect	(67)	($5.86)	($8.28)	($15.61)
Industrywide, Labor	Direct Effect	524	$13.88	$0.00	$0.00
	Indirect Effect	0	$0.00	$0.00	$0.00
	Induced Effect	65	$4.16	$7.37	$12.33
	Total Effect	589	$18.04	$7.37	$12.33
Net Impact	**Net Effect**	**(750)**	**($30.08)**	**($63.88)**	**($109.79)**

Due to the net market adjustment, support industries providing inputs to cannabis retail, including cultivators, see $18.79 million in reduced output. There is an additional $29.72 million output reduction from induced impacts. Secondary effects reduce employment by 313 jobs, labor income by $20.07 million, value added by $30.99 million, and output by $48.51 million.

There is an increase in spending on labor of $13.88 million, or 524 additional jobs, across cultivation, distribution, laboratory, retail, and other cannabis business sectors. The induced impact is an increase of 65 additional jobs, $4.16 million in labor income, $7.37 million in value added, and $12.33 million in output.

Overall, direct impacts and market effects on the cannabis industry result in net decreases in employment, labor income, value added, and total output. The California economy experiences net decreases of 287 jobs, $18.74 million in labor income, $28.31 million in value added, and $43.96 million in output exclusively from indirect and induced impacts. Including direct effects, the net impact to the California economy from impacts to all sectors is a decrease in employment of 750 jobs, a decrease in labor income of $30.08 million, a decrease in value added of $63.88 million, and a decrease in output value of $109.79 million.

5.4. Alternative 2 Economic Impacts Summary

This section summarizes the key economic impacts of Alternative 2.

5.4.1. Employment (Job) Estimated Effects

As displayed in Table 22, the total employment impact from spending on POS systems and labor, including indirect and induced impacts, is an increase of 607 jobs. The total employment impact from decreased lab spending and licensed cannabis supply, including indirect and induced impacts, is a decrease of 1,357 jobs.

The total labor income impact is an increase of $19.52 million from increased POS system and labor spending and a decrease of $49.60 million from decreased licensed cannabis supply and lab spending.

5.4.2. Gross State Product

The investment in California's gross state product is called value added. The net impact on statewide value-added is a decrease of $63.88 million, which is significant but is still a small share of the total economy. Increases in valued added of $9.17 million are attributed to increased POS system and labor spending, and decreases to value added of $73.05 million are attributed to decreased lab spending and supply of licensed cannabis.

5.4.3. Creation or Elimination of Businesses

Some cannabis cultivators would exit the market. The combined market effects result in a 1.26 percent reduction in the supply of licensed cannabis. This is likely to result in an exit of licensed cultivation businesses of a similar magnitude. As of January 2025, there are 2,809 businesses holding cultivation licenses, implying an exit of 35 businesses.

The expected change in laboratory exits is the same as under the proposed regulations, 3 of the 26 active labs.

Retailers are expected to realize a decrease in gross output of $60.54 million. This represents roughly a 1.3 percent decrease in the value of cannabis sold at retail ($4.6 billion). There is expected to be an exit of a similar magnitude of cannabis retailers, 21 of the 1,584 active licenses. Therefore, the total number of businesses potentially eliminated is 59.

5.4.4. Expansion of Businesses

Businesses that are capable of complying with the regulations and securing financing are likely to expand substantially to meet the demand for laboratory testing.

5.4.5. Competitive Advantages or Disadvantages

Competitive advantages and disadvantages are the same as described in section 4.5.5.

5.4.6. Investment in the State and Taxes

The increase in investment in the state through retailers' investment in new POS systems would remain the same as under the proposed regulations, about $0.09 million in tax revenue.

There would be a loss in cannabis retail gross output of approximately $60.54 million, which would result in a decrease in tax revenue of $4.39 million. Additionally, cannabis is subject to an excise tax equal to 15 percent of gross retail sales. This implies an additional decrease in tax revenue of $9.08 million.

The net effect on taxes, therefore, is a decrease of $13.38 million in state sales and excise taxes.

5.4.7. Incentives for Innovation

Incentives for innovation are the same as described in section 4.5.7.

5.4.8. Estimated Effects on a Typical Business and Small Business

The majority (97.1 percent) of active licensees are estimated to be small businesses. Hence, small businesses are also considered to be typical businesses, and the expected one-time and recurring annual costs are the same for each type.

All licensed businesses are affected by the proposed regulations, although cultivators, distributors, laboratories, and retailers have higher cost increases. The overall one-time up-front cost increase of $15.07 million, spread across all 5,463 licensed cannabis businesses, would be $2,760 per business. Annual recurring costs for businesses of $6.67 million would be $1,220 per business.

5.4.9. Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

Other economic impacts are the same as described in section 4.5.10.

5.4.10. Department Fiscal Costs

Department fiscal costs are the same as described in section 4.6.

5.4.11. Other State and Local Public Agencies Fiscal Cost

Other State and local public agency costs are the same as those described in section 4.6.7.

5.4.12. Total Impact Summary for Alternative 2

Table 30 summarizes the key economic outcomes of Alternative 2.

Table 30. Total Economic Impact Summary

Description	Unit	Value
Total statewide benefits for businesses and individuals	$, millions	54.1
Total statewide costs for businesses and individuals	$, millions	279.1
Businesses impacted	Count	5,463
Share of businesses that are small	Percent	97.1
Businesses eliminated	Count	59
Jobs created	Count	607
Jobs eliminated	Count	1,357
Average one-year costs per business	$, thousands	4.0
Total fiscal costs	$, millions	$0.56
Total fiscal savings	$, millions	NA

Note: Total statewide costs for businesses and individuals are calculated as the sum of producer surplus for compliant businesses, consumer surplus, direct costs to businesses, and decreases in direct, indirect, and indirect effects from decreases laboratory spending and effects at retail. Total statewide benefits are calculated as the sum of direct, indirect, and induced effects from spending on POS systems at retail, labor spending industrywide, and benefits from eliminating potency inflation.

5.4.13. Basis for Rejecting Alternative 2

Alternative 2 was rejected because it would result in higher costs for licensed businesses in California than the proposed regulations to achieve the same outcome as the proposed regulations.

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