

Economic and Fiscal Impact Analysis
2026 Group (Batch) Tagging of Mature Plants
Rulemaking Package

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1 Introduction

The Department of Cannabis Control (Department) is proposing amendments to existing regulations and adoption of additional regulations in California Code of Regulations, Title 4, Division 19. The proposed regulatory amendments are referred to as the “2026 Group Tagging Package”. The proposed regulations include changes to several sections of the regulations affecting licensed cannabis cultivators. The package would relieve cultivators and the Department from burdensome, expensive, and labor-intensive tagging requirements and decrease tag e-waste.

California law requires that a rulemaking agency provide an assessment of the fiscal impacts its regulations would have on state and local governments and assess the potential economic impact on state businesses and individuals. This economic and fiscal impact assessment (EFIA) describes the data, methods, and analytic approach applied to quantify the economic impacts and fiscal impacts of the proposed regulation and alternatives that the Department considered. The methods are consistent with the economic and fiscal impact analyses conducted to support prior rulemaking for cannabis cultivation regulations. This EFIA uses Department data and applies economic frameworks to evaluate various Department policies and proposed regulations.

1.1 Overview of Proposed Regulations

There are several components of the 2026 Group Tagging Package. Many of the changes are to provide clarity and/or create consistency and would not create any measurable fiscal or economic impacts. These include:

- In Section 15000, updating the definition of “unique identifier.”
- In Section 15047.1, updating the definitions of “plant tag” and “package tag.”
- In Section 16301, updating language for clarification of nursery tagging requirements for plants producing seed for distribution.
- In Section 16302, updating language for clarification of tagging requirements for nursery research and development areas.

The regulatory changes in the proposed cultivation package that may affect economic (and fiscal) impacts are as follows:

- In Section 15048.4, revised requirements for tagging cannabis plants.
- In section 15048.5, cultivators will be required to provide updated premises diagrams with unique location names at time of next renewal.
- In Section 15049.1, revised requirements for recording cultivation activities. This includes assigning a unique location name to each distinct canopy and immature plant area, and recording the square footage of that area.

- In Section 16300, updating cultivation site requirements to be consistent with other plant tagging updates, and excluding nurseries from these requirements.

The proposed regulations would simplify plant tagging for cultivators by allowing them to identify groups of plants with a single tag as opposed to physically tagging each individual plant.

1.2 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 cultivation branch under CDFA. This includes economic data and models that were developed for a Standardized Regulatory Impact Assessment (SRIA) prepared in 2017 and have been updated for various regulations and fiscal and economic assessments developed since.

ERA Economics (ERA) and the Department relied on prior outreach and conducted additional targeted outreach in preparing this analysis. This included outreach to researchers, stakeholders, and industry experts to understand current market conditions affecting cultivators. 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. (e.g., reduced labor time for tagging). Outreach to the following groups supported the development of the analysis:

- Industry professionals to review current market conditions, update cost of production information, verify industry data, and receive general feedback on industry trends, challenges, and changes.
- Researchers to discuss industry trends and feedback from other outreach/survey efforts.
- Licensed cultivators and nurseries to develop cost-of-production data, estimate plant tagging labor costs, and update current market information.
- Department staff to assess potential effects on short- and long-term staff level of effort to plant tagging changes and validate California Cannabis Track and Trace (CCTT) data.

These data and feedback were used to develop the economic and fiscal analysis approach.

1.3 Major Regulation Determination

A Major Regulation is a proposed action, amendment, or repeal that would result in an economic impact on businesses and individuals in the State of greater than \$50 million in the 12-month period following full implementation of the regulations. (Gov. Code, § 11342.548).

The total estimated economic impact (including all costs, benefits, market effects, and indirect and induced effects) of the proposed regulations equals \$26.29 million in the 12-month period following full implementation of the proposed regulations. This is defined as approximately fall 2026 through fall 2027. These include:

- Benefits of \$25.91 million to businesses and individuals:
 - \$9.55 million decrease in costs for licensed cultivators from group tagging,
 - \$11.66 million increase in consumer surplus due to lower retail cannabis prices, and
 - \$2.61 million increase in gross output of cannabis products at retail from additional sales, resulting in additional indirect and induced effects to secondary businesses and individuals of \$2.09 million. The overall increase in employment is 56 full-time jobs.
- Costs of \$0.38 million to businesses:
 - Costs of \$0.33 million to cultivators for increased labor and materials from using physical markers to identify plant groups. These costs would be incurred in the first 12-month period following full implementation, and they would recur in the subsequent two years as well.
 - One-time costs of \$0.05 million to cultivators from additional data entry requirements for premise canopy and immature plant areas. These are one-time costs incurred in the first 12-month period following full implementation.

Fiscal costs to the Department would be \$1.12 million in additional costs for implementing regulatory changes in CCTT. This would be absorbed within the Department's existing budget authority

The proposed regulations would result in a modest increase in sales of licensed cannabis. This would result in a small increase in state tax receipts, \$0.58 million, and local tax receipts, \$0.13 million.

The estimated total economic impact in the 12 months following implementation of the regulations, including fiscal impacts, is \$28.12 million. This is below the Major Regulation threshold of \$50 million.

1.4 Report Organization

The report is structured as follows. Section 2 describes the analytic approach and data used to quantify (monetize) economic and fiscal impacts attributable to the proposed regulations. Section 3 provides an overview of the baseline applied to evaluate fiscal and economic impacts of the proposed regulations. Section 4 summarizes the economic and fiscal impacts of the proposed regulations. Section 5 summarizes an alternative to the proposed regulations that the Department considered.

2 Analytic Approach and Data

The analysis applies public and private industry data. When data are not available, professional judgment and input from industry outreach are applied. It is important to note that data for the cannabis industry is limited because the industry is still relatively young and there is no single source of industry statistics. CCTT data are primarily relied upon, along with license data, tax data, and information obtained during outreach. All prices and costs are inflation-adjusted and reported in current (2025) dollars.

2.1 Overview of Economic and Fiscal Impacts

The proposed regulations would result in quantifiable and unquantifiable (i.e., non-monetized) costs and benefits for licensed cannabis businesses. As described under the Overview of the Proposed Regulations section, the regulations would generate monetizable economic benefits for the licensed cannabis industry. Removing plant tagging requirements for individual plants reduces cultivator labor time and costs. Cost savings to cultivators would be partially transmitted to retail through price adjustments in the supply chain. This increases licensed cannabis quantity demanded. These effects are expected to be modest (small change in cannabis prices) but result in substantial economic benefits across the entire licensed market. The proposed regulations would impose some costs on cultivators that need to report group tags and use physical markers to identify groups. However, the cost savings from reduced tagging of individual plants far outweighs these additional costs. The proposed regulations would result in a net economic benefit for the licensed market.

The economic analysis follows a standard sequential approach. The direct costs (e.g., additional reporting) and benefits (e.g., reduced licensed cannabis production costs) are quantified. These changes affect the market (supply and demand) for licensed and illicit cannabis. These so-called market effects are quantified using an economic model of the licensed and illicit cannabis markets. This ensures that industry-wide economic costs and benefits attributable to the proposed regulations are captured. Finally, these market adjustments also indirectly affect other businesses (e.g., businesses that sell to or purchase from cannabis firms) and employees. These so-called indirect and induced effects (also called multiplier effects or secondary effects) are quantified using a standard economic model. The total economic impact (including costs and benefits) includes these direct costs, the resulting market effects, and indirect and induced changes in related industries and employee spending.

Fiscal impacts (i.e., costs to the Department or other state and local agencies) are quantified after market adjustments, ensuring that fiscal impacts reflect how the market would change in response to the proposed regulations.

The sequential approach to quantify economic and fiscal impacts is summarized as follows:

1. **Direct economic impacts.** These represent quantifiable direct costs and benefits to businesses and individuals that are attributable to the regulation. These include one-time benefits and costs (e.g., capital investments) as well as ongoing annual benefits and costs.
2. **Market economic effects.** The direct economic costs or benefits can represent a change in the cost to produce cannabis and/or the demand for cannabis products. Industry supply changes in response to direct costs or benefits to producers, while demand changes with consumer preferences. Both can affect the market price and quantity of cannabis produced. These market equilibrium changes affect the broader industry as well as consumers. Market effects are assessed using an equilibrium displacement model (EDM), which is a standard framework for representing market supply and demand for an industry.
3. **Indirect and induced economic impacts.** So-called “multiplier” effects on other businesses and individuals result from the direct costs or benefits and changes in the equilibrium market conditions for the industry. These are assessed using a standard input-output model, Impacts for Planning and Analysis (IMPLAN¹).
4. **Fiscal impacts.** The fiscal impact analysis follows from the economic impact analysis and quantifies the fiscal cost of the regulation to the Department and other state/local agencies. Fiscal costs are calculated after accounting for the industry adjustments that are reflected in the economic impact analysis.

2.1.1 Baseline for Analysis

The economic impacts of the proposed regulations are measured relative to the defined baseline. The baseline condition is the most cost-effective set of regulatory measures that ensure full compliance with the authorizing statute or other law being implemented.² The economic impacts measure the incremental changes attributable to the proposed regulations.

The baseline condition is continuing to require cultivators to physically tag individual cannabis plants. This complies with existing law and is how cultivators are currently required to track plants. Maintaining the status quo baseline would result in no new costs or benefits. Since there would be no new costs or products introduced to the market in this case, the baseline condition is effectively the current market condition. All economic impacts are measured relative to this baseline.

¹ Impacts for Planning and Analysis. MIG Inc.

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

2.1.2 Direct Economic Impacts

Direct economic impacts are costs and benefits for businesses and individuals in the industry. These impacts are summarized in the analysis of market effects in section 2.1.3 and indirect and induced impacts discussed in Section 2.1.4.

The direct economic impacts of the proposed regulations include:

- Benefits
 - Cost savings for licensed cultivators that no longer need to tag individual plants.
 - Estimated based on expected reduction in plant tags needed and time required for plant tagging.
 - Cost savings for cultivators from removing group size limit of 100 individual immature plants per plant tag.
 - Estimated based on the share of immature plant groups at maximum group size. Expected to result in relatively minor cost savings.
- Costs
 - Additional physical indicators to identify plant groups and CCTT data reporting requirements.

In summary, cultivators would save time and costs by not tagging individual plants and incur minor costs to identify plant groups and CCTT reporting. Cultivator cost savings far outweigh the additional costs.

2.1.3 Market Effects

The lower costs to cultivators would lead to small changes in market prices, retail sales, and consumer benefits. These are called market effects. Licensed cannabis price would decrease and quantity sold would increase.

This analysis applies an economic model to estimate the potential market effects of the proposed regulations. This is called an equilibrium displacement model (EDM). 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).

The basic EDM for the aggregate cannabis industry, which modeled both licensed and unlicensed markets, was developed for the 2017 SRIA following Muth (1964), Gardner (1988), Wohlgenant (1993), and Atwood and Brester (2019). It has been updated annually since 2017. The EDM applied in this analysis allows for different supply and demand shifts in different parts of the cannabis supply chain, including manufacturing, distribution, and retail.

Group plant tagging reduces cultivator costs to produce cannabis. As costs decrease, cultivators are able to produce more cannabis at a lower cost to meet consumer/market demand. More cannabis is produced at a lower price. These market effects—changes in price, quantity produced, consumer surplus, and producer surplus—are quantified. The cost savings to an individual cultivator are modest and therefore the market effects are also modest.

2.1.4 Indirect and Induced Impacts

The direct impacts (including market effects) summarized above are inputs into the analysis of indirect and induced impacts. Indirect and induced impacts measure how the direct economic impacts affect other industries and individuals. The indirect impacts capture changes in intermediate input purchases by the primary industry from other sectors of the economy. For example, cannabis retailers purchase inputs from other suppliers in the State. This includes wholesale cannabis products and services from other cannabis businesses (e.g., testing labs), as well as agricultural and manufacturing equipment such as fertilizer, soil amendments, lighting, and irrigation equipment necessary for cultivation. Induced impacts capture the change in expenditures by proprietors and employees in the primary industry and all linked industries.

The total economic impact is the sum of direct, indirect, and induced impacts. This includes changes in income, gross output, jobs, and value-added across the state.

This analysis applies the Impacts for Planning and Analysis (IMPLAN) model with a California county-level 2014 dataset as the baseline year for the analysis³ to calculate indirect and induced effects. The IMPLAN software is an input-output model that estimates the effects of exogenous changes in final demand (e.g., cannabis sales) within a specified geographic region (in this case, California). The model uses a dataset of national and regional accounts that estimate 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 do not include any businesses in the cannabis industry. Customized sectors for cannabis production have been developed by ERA and applied in the analysis.

³ The IMPLAN 2014 data for California counties is used for consistency with the 2016/17 SRIA and other previous economic and fiscal analyses of the cannabis industry. Importantly, this model includes custom cannabis industry sectors. The default IMPLAN model does not have these sectors and is therefore not appropriate to apply for this analysis. All values are reported in current, inflation-adjusted (2025) dollars and therefore reflect current period economic impacts. A review of IMPLAN data from 2015 to 2022 for the industries identified to be similar to cannabis shows little variation in IMPLAN multipliers from this 2014 data. The economic multipliers in the 2014 IMPLAN database, with custom cannabis sectors, are appropriate for this impact analysis.

2.1.5 Fiscal Impacts

Fiscal impacts are changes to state and local agency costs/revenues due to the proposed regulations. Potential fiscal impacts of the proposed regulations to the Department that were identified include:

1. Cost savings from reduced inspection time for Department compliance staff. These are expected to be minimal and are not quantified.
2. There would be a modest increase in licensed cannabis sales. This would be spread across many different businesses and is unlikely to result in a measurable change in local or Department license fee revenue.
3. Costs to the Department for CCTT changes implemented by Metrc and staff training. These costs would be absorbed within the Department's existing budget authority.

Other fiscal impacts to state and local agencies include tax collections from the expected increase in retail sales of licensed cannabis.

3 Cannabis Industry Baseline Overview

The baseline conditions for the cannabis industry were developed using cultivation license data, industry data developed for the 2017 SRIA and other previous DCC SRIAs, previous DCC economic/fiscal impact assessments, CCTT data, the Department’s online Cannabis Unified License Search (ULS), and other updated data developed for this analysis. The proposed regulations would directly affect licensed cultivators. Therefore, this section focuses on this part of the licensed cannabis supply chain in California.

3.1 Cultivation Licenses

Cannabis cultivation licenses are defined in MAUCRSA and existing Department regulations. This includes nurseries, processors, and microbusinesses, and four categories of cultivation methods (which are alternatively referred to as technologies). The four cultivation methods are Outdoor, Indoor, Mixed-Light Tier 1, and Mixed-Light Tier 2⁴, each with five sizes of operation: Specialty Cottage, Specialty, Small, Medium, and Large. Sizes are defined by canopy coverage, with the following current maximum canopy by license:

- Outdoor: up to 25 mature plants or 2,500 square feet for Specialty Cottage, 5,000 square feet or up to 50 mature plants on noncontiguous plots for Specialty, 10,000 for Small, and one acre for Medium. Large Outdoor licenses are for greater than 1 acre.
- Indoor: 500 square feet for Specialty Cottage, 5,000 for Specialty, 10,000 for Small, and 22,000 for Medium. Large Indoor licenses are for greater than 22,000 square feet.
- Mixed-Light, Tier 1 or 2: 2,500 square feet for Specialty Cottage, 5,000 for Specialty, 10,000 for Small, and 22,000 square feet for Medium. Large Mixed-Light licenses are for greater than 22,000 square feet.

Table 1 summarizes active cultivation licenses and license fees as of March 2026. These do not include limited operations licenses, i.e., licenses that are effectively inactive for the year but with the intent of becoming active again in future years.

⁴ The Mixed-Light cultivation method is separated into Tier 1, for operations using between 0 and 6 watts per square foot, and Tier 2, for operations using between 6 and 25 watts per square foot.

Table 1. Existing Cultivation License Summary

Cultivation Method	License Type	# Active	Annual License Fee
Indoor	Specialty Cottage	32	\$1,830
	Specialty	315	\$19,540
	Small	372	\$35,410
	Medium	179	\$77,905
	Large	12	>\$77,905 ^a
Outdoor	Specialty Cottage	61	\$1,205
	Specialty	193	\$2,410
	Small	1153	\$4,820
	Medium	731	\$13,990
	Large	73	>\$13,990 ^b
Mixed-Light Tier 1	Specialty Cottage	37	\$3,035
	Specialty	65	\$5,900
	Small	434	\$11,800
	Medium	46	\$25,970
	Large	7	>\$25,970 ^c
Mixed-light Tier 2	Specialty Cottage	13	\$5,200
	Specialty	31	\$10,120
	Small	232	\$20,235
	Medium	44	\$44,517
	Large	4	>\$44,517 ^d
	Microbusiness	349 ^e	Varies ^f
	Nursery	263	\$4,685
	Processor	129	\$9,370
	Total	4,775	

Notes: Data as of March 13, 2026. This data includes existing Large licenses but does not include conversions to Large licenses that are currently in progress. This has a negligible effect on the results of the economic analysis, it is simply described for completeness.

^a Large Indoor annual license fees are \$77,905 per 22,000 square feet plus \$7,080 per additional 2,000 square feet.

^b Large Outdoor annual license fees are \$13,990 per acre plus \$640 per additional 2,000 square feet.

^c Large Mixed-Light Tier 1 annual license fees are \$25,970 per 22,000 square feet plus \$2,360 per additional 2,000 square feet.

^d Large Mixed-Light Tier 2 annual license fees are \$44,517 per 22,000 square feet plus \$4,040 per additional 2,000 square feet.

^e Includes all microbusiness licenses, even those without cultivation activities.

^f Microbusiness license fees vary from \$5,000 to \$300,000 based on the annual gross revenue of the business.

3.2 Cannabis Production

Baseline cannabis production in the licensed market was estimated by combining multiple data sources and applying statistical methods. Sources include cultivation tax receipts, CCTT harvest and sales data, production budgets, canopy area data, and data from other states. This section describes variation in estimated licensed production based on these different sources, and the baseline production estimates used to evaluate economic impacts of the regulatory package.

3.2.1 Tax and Sales Data

Cultivation tax data were used to estimate cannabis production through 2021. 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). California Department of Tax and Fee Administration (CDTFA) tax receipts provided a direct accounting of cannabis harvested and supplied to the licensed market. CDTFA tax receipts in FY 2020-21 show there were 2.4 million pounds of cannabis biomass⁵ harvested by licensed cultivators (prior to conversion to dry-flower equivalent,). CDTFA reports cannabis that was taxed and sold through the licensed market. It does not include illicit (not licensed) production.

CCTT retail sales data were used to estimate the quantity of licensed cannabis production sold for adult-use and medicinal consumption in California for the period after the cultivation tax was suspended, 2022–2025. CCTT data were adjusted to account for reporting errors.

Table 2 summarizes estimated total licensed cannabis production distributed to and sold in licensed adult-use and medicinal retail markets for 2020–2025. Units are dry-flower equivalent. Overall production in 2025 (1.34 million pounds) is estimated to have decreased by 1.4 percent year-over-year (YoY) from 2024 (1.36 million pounds). This follows a YoY increase of 9.2 percent in 2024. Estimates do not include surplus production held in inventory, illicit production, or licensed production that did not pay taxes. Estimated cannabis production of 1.34 million pounds of dry-flower equivalent is used as the baseline quantity in the economic impact analysis.

Table 2. Estimated Cannabis Production by Medicinal and Adult Use

Year	Adult-Use	Medicinal	Total Licensed	YoY Change
	<i>Pounds, Thousands of Dry-Flower Equivalent</i>			<i>%</i>
2020	825.9	96.1	922.1	N/A
2021	959.0	109.4	1,068.4	15.9%
2022	1,115.4	90.2	1,205.6	12.8%
2023	1,172.6	76.5	1,249.0	3.6%
2024	1,293.6	70.1	1,363.7	9.2%
2025	1,287.0	57.9	1,344.9	-1.4%

3.2.2 Plants Canopy Capacity

The proposed regulations would require tagging a group of plants rather than tagging each individual plant. The cost savings to cultivators depends on the baseline cannabis plants that are individually tagged now, and how many groups would be tagged after the regulations are implemented.

⁵ Cannabis biomass encompasses flower, fresh cannabis plants, leaves, and other plant material.

The estimated number of plants established annually is between 3.9 million and 22.4 million. The estimate of 3.9 million plants is based on the typical plant yield and cannabis sold in the licensed market. The estimate of 22.4 million is based on the typical plant yield applying the total harvested weights reported in CCTT. Plant counts and harvested weight in CCTT are subject to data entry errors. A few, but not all, of these errors could be identified and corrected; these corrections reduced the plant count in CCTT from 47.3 million to 22.4 million. The estimate of 22.4 million plants is viewed as a conservative (high) upper bound. The economic analysis applies a value of 13.15 million plants, which is the midpoint of 3.9 and 22.4 million. This accounts for plants that may be tagged and held in inventory or diverted to the illicit market. This conservative estimate is applied to avoid overstating benefits of the proposed regulations.

Table 3 summarizes the harvested plants and weights reported in CCTT, plant counts and weights based on licensed production sold in the licensed market, plant counts and weights after correcting some errors (partial “cleaning”) in CCTT data and converting to weight to dry-flower equivalent units, and the estimated plant count and weight applied in the EFIA.

Table 3. Summary of Plant Count and Weight Estimates

Description	Plants	Weight
	<i>Count, Millions</i>	<i>Pounds, Millions, (Dry-Flower Equivalent)</i>
Raw CCTT Harvest Plant Counts and Weights*	47.31	45.98
Estimated from Partially Cleaned CCTT Harvest Weights	22.44	7.86
Estimated from Cannabis Sold in Licensed Market	3.86	1.34
Estimates Applied in Economic Analysis	13.15	1.34

*Cannabis weights in raw CCTT data include whole cannabis plants, wet weights, and other plant material that have not been converted to dry-flower equivalent.

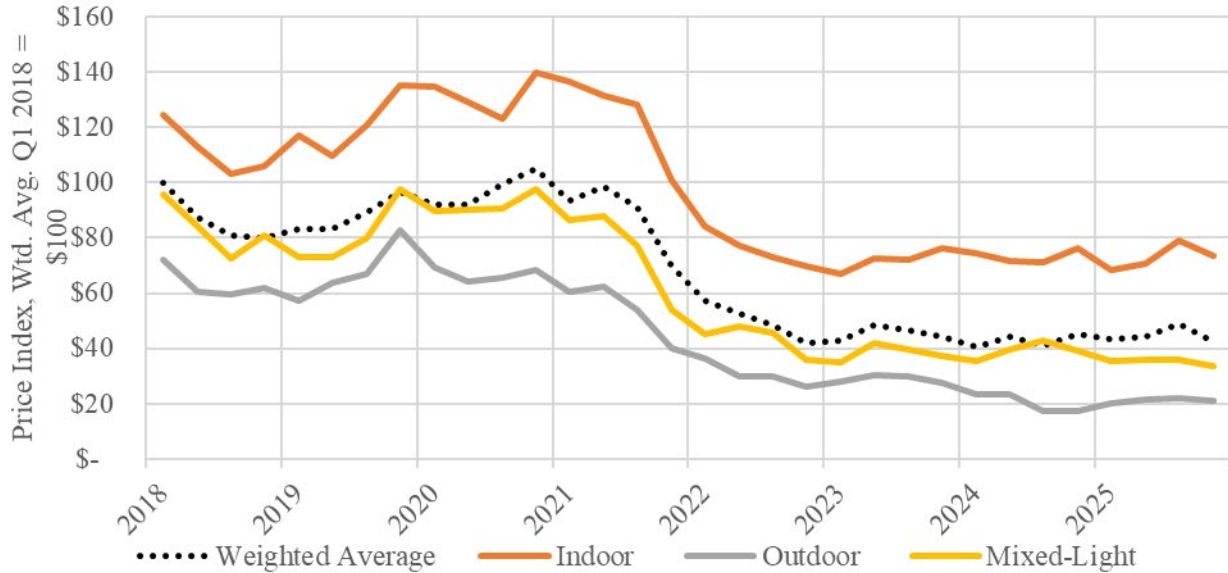
There is substantial variability and errors in reporting in the CCTT plant count data. Plant tags may be issued and lost, incorrectly recorded, double reported, placed on plants that are diverted to the illicit market, or a range of other CCTT data entry errors. Licensees may also be non-compliant with current regulations, opting to scan tags associated with plants without every physically attaching them—in these instances there would be no labor savings to cultivators. Interviews with industry experts confirmed these, and other, data reporting issues with CCTT plant tags. These data entry errors and the general ineffectiveness of tagging individual plants are not surprising. It is one of the reasons for developing the proposed regulation package.

3.3 Wholesale Prices

Wholesale flower prices are used to estimate the baseline value of production when assessing the costs and benefits of proposed regulatory changes for cultivators. Since 2021, wholesale prices have declined substantially, likely contributing to the drop in active cultivator licenses and the increase in exits from the licensed market beginning in 2022.

Figure 1 illustrates indexed and inflation-adjusted quarterly average wholesale prices in California by cultivation method from 2018 through 2025, with weighted average quarterly prices in Q1 2018 = \$100. Prices have been relatively stable after decreasing markedly in 2021. Prices are indexed using Cannabis Benchmarks and additional data gathered from selected wholesale listings. Weighted average price increases in 2025 have been driven by higher outdoor prices and greater volumes of high-price indoor flower.

Figure 1. Quarterly Wholesale Price Index (2018 = \$100) by Cultivation Method, 2015–2025



Outdoor and mixed light cultivators face considerably lower prices than indoor cultivators. This is driven by differences in quality and production costs across cultivation methods. In 2025, indoor prices have been 3.5 times higher than outdoor prices and 2.1 times higher than mixed-light prices on average.

The weight average prices of wholesale cannabis in 2025 was \$775 per pound. Based on weighted-average wholesale prices by method of production, the total wholesale value of licensed production was \$1.043 billion in 2025. These estimates are used as baseline wholesale prices and production values in the economic impact analysis.

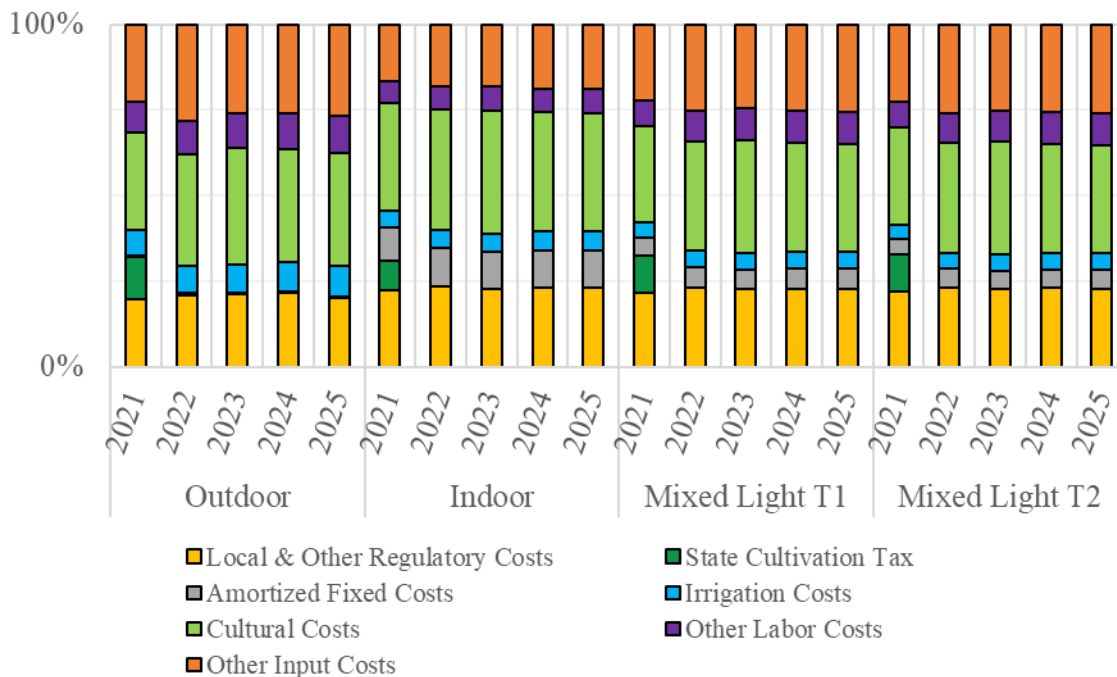
3.4 Cultivator Production Costs

The cost to produce cannabis in California is split into production cost categories (fixed and variable costs), taxes, and other regulatory compliance costs. Production costs have been increasing over the last several years. This is primarily due to ongoing increases in labor and other input costs. Regulatory costs and taxes have been decreasing since 2021 under changes implemented by the Department (especially the elimination of the State Cultivation Tax), as well as other legislative changes.

Figure 2 shows estimated average annual cost shares by cultivation method from 2021 to 2025. Production costs include:

- “Cultural Costs” are variable (generally per-plant) costs primarily associated with acquiring and planting seeds, clones, or transplants.
- “Irrigation Costs” are for the water and energy to irrigate plants.
- “Other Input Costs” include the other, non-labor variable costs associated with cannabis production, such as fuel and fertilizer. These increased substantially from 2021 to 2022 due to supply chain shortages and other inflationary pressures. However, some input costs, such as fuel, have seen slight decreases in the last couple of years.
- “Other Labor Costs” include labor associated with cannabis cultivation, but excludes labor associated with compliance.
- “Local & Other Regulatory Costs,” include labor compliance, local taxes, local licensing fees, State licensing fees, and other compliance costs.
- “Amortized Fixed Costs” are the annualized costs to own fixed assets such as buildings and hoop structures. These are small for outdoor cultivators and most substantial for indoor cultivators.

Figure 2. Average Estimated Cultivation Cost Shares by Cultivation Method, 2021–2025



The reported costs exclude returns to management time, inventory holding costs, certain local business fees and taxes, and additional marketing expenses. Actual cost shares will vary across

cultivation operations. Allowing group tagging would reduce labor costs associated with regulatory compliance, captured under “Local & Other Regulatory Costs.”

Production cost structures and the value of output differ by cultivation method. Accordingly, the cost impacts of the proposed regulations will vary across production types. These relative differences in cost impacts were incorporated into the modeling of market effects associated with the proposed regulations.

4 Economic and Fiscal Impacts: Proposed Regulations

Economic and fiscal impacts were evaluated for the proposed regulations and alternatives to the proposed regulations that were considered by the Department. This section presents the results of the analysis of the proposed regulations. Economic impacts are assessed in terms of direct economic effects (costs and benefits), market effects, and indirect and induced effects.

Total economic impact would be \$26.29 million, and total fiscal impact would be \$1.83 million.

4.1 Direct Economic Benefits

This section summarizes the estimated direct benefits to businesses from the proposed regulations. Licensed cultivators save labor time and costs by tagging fewer plants. The resulting market effects are described in Section 4.3.

4.1.1 Cost Savings for Licensed Cannabis Cultivators

The proposed regulations would allow cultivators to apply a single tag to a group of plants instead of individually tagging each plant. There is no limit to the size of each group, although each group of plants must be uniform in strain or cultivar (if the strain or cultivar of the group is identified in the track and trace system), contiguous to one another, uniform in pesticide application, planted within three days, and fully separated from other plants by a physical indicator. Cultivators may combine multiple strains in an immature plant group, which was previously prohibited and would result in some cost savings. Cultivators may have multiple strains in a mature plant group, which would result in additional savings due to larger plant groups and fewer tags.

Cultivator cost savings were estimated by applying the labor time saved per plant and the fully burdened hourly worker wage.

Fully burdened labor costs for cultivators are estimated at \$21.66 per hour, including overhead costs and workers compensation. Based on prior feedback from cultivators, the time needed to physically tag a plant and enter data into CCTT is estimated to equal 2 minutes per plant. This is a conservative estimate, and some cultivators are likely to operate more efficiently, or not correctly place tags.

The proposed regulations would reduce the number of tags from 13.15 million to the number of unique harvest batches/groups in 2025. There were 54,390 unique harvest batches reported in CCTT in 2025.

The cost of tagging 13.15 million plants is \$9,494,300. The cost of tagging 54,390 batches is \$39,270. The cost savings to cultivators would be \$9,455,030.

Cultivators may save additional labor time and costs by applying plant tags to large groups of immature plants. The proposed regulations remove the 100 immature plant limit. For example,

multiple groups could be transferred to the same location as a single tagged group, instead of being transferred as multiple groups. This would further reduce the number of plant tags and cultivator labor time and cost.

CCTT transfer data were reviewed and applied to estimate immature plant groups. There are around 161,860 immature plant transfers to cultivators per year. Of these, there are 31,510 transfers per year that occur in different months, contain different strains identified in CCTT, and are transferred to different locations. That is, a reasonable estimate of the minimum number of groups is 31,510. If cultivators tagged 130,350 fewer groups ($161,860 - 31,510$) this would result in an additional \$94,110 cost savings to cultivators. These cost savings are conservative because these plants may not meet the contiguity, pesticide, and plant timing requirements.

Cost savings to licensed cannabis cultivators from the proposed regulations would be \$9,549,140 ($\$9,455,030 + \$94,110$).

4.1.2 Other Non-Monetized Benefits

In addition to the cost savings described in the previous section the proposed regulations would create other benefits.

Reducing reliance on physical tags would reduce waste produced by cultivators. This is good for the environment. Metrc announced the launch of new, more eco-friendly tags with 30 percent less plastic in an effort to reduce waste, but the new tags are still considered e-waste due to the Radio-Frequency Identification (RFID) component, and the tags are still not fully recyclable due to the adhesives used.

CCTT data for individual plant tags is prone to errors. Group tags simplify reporting requirements and should address some data entry errors. Recording the square footage of plant groups into CCTT could improve the ability of the Department to track the quantity of cannabis entering the supply chain.

4.2 Direct Economic Costs

This section summarizes the estimated direct costs to businesses from the proposed regulations. These would be entirely offset by the benefits (cost savings) described in the previous subsection.

The proposed regulations would require cultivators to use a physical indicator to delineate or fully separate plant groups. Examples of physical indicators may include, but are not limited to, colored ribbon or tape, labeled stakes, and string. Cultivators would incur one-time costs from adding distinct canopy and immature plant location areas to CCTT, including the square footage of those areas.

Costs were estimated based on the labor time and material needed to identify plant groups and enter additional data. One possible approach would be to use garden stakes and stickers, which

could be achieved at a material cost of \$2.08 per group (4 stakes at \$0.50 each and 4 stickers at \$0.02 each). Labor costs for staking, labelling, and entering plant counts were conservatively estimated at 5 minutes per group. Based on the previous labor costs, an estimated 54,390 groups of mature plants and 31,510 groups of immature plants per year, the total additional cost to cultivators would be \$333,730. This is a conservative estimate of recurring annual costs because licensees may develop cheaper methods, and licensees may reuse materials.

One-time costs per licensee for measuring and entering canopy area into CCTT for each distinct area were conservatively estimated at 30 minutes per licensee. Applying the same labor rate of \$21.66 per hour for 4,775 licensees results in total one-time direct costs of \$51,710.

4.3 Net Economic Benefits

Table 4 summarizes the costs and benefits of the proposed regulations. Licensed cultivators would realize benefits (cost savings) of \$9,549,140 from allowing group plant tagging. Licensed cannabis cultivators would realize an increase in costs of \$385,440 from additional data entry and costs associated with physical indicators to identify plant groups.

Table 4. Total Costs and Cost Savings

Description	Direct Economic Effect
Cost Savings to Cultivators	\$9,549,140
Additional Cost to Cultivators	(\$385,440)
Net Benefit to Cultivators	\$9,163,700

Net benefit to cultivators would be \$9,163,700. This is roughly 0.88 percent of the wholesale value of cannabis and would result in modest market effects, which are estimated in the following section.

4.4 Market Effects

The EDM evaluates the effect on wholesale and retail market prices and quantities⁶ attributable to the proposed regulations, and the model includes potential changes to the following California market segments due to the proposed regulations:

- Licensed cannabis supply and demand,
- Illicit cannabis supply and demand.

The proposed regulations would modestly decrease the cost to produce licensed cannabis. The cost of production is also known as the industry supply curve. The proposed regulations would result in a modest shift (decrease) in the licensed cannabis supply curve. This is a decrease in

⁶ The EDM evaluates effects at wholesale (farm) and retail. All production is expressed on a dry-flower equivalent basis.

costs, which is evaluated as a percent change⁷. The result is modestly lower prices and greater quantity of licensed cannabis produced.

The cost savings to cultivators was estimated to be 0.88 percent. This is a small cost change, but it does result in small, but measurable, market effects when considered over the entire industry. This percent change in costs was entered as an input to the EDM model and used to evaluate the effect on the overall market.

Table 5 summarizes the results of the EDM market analysis. The proposed regulations would affect the price and quantity of cannabis at the farm and at retail. Effects are less than 1 percent, but due to the large size of the cannabis market, these small changes have measurable economic effects. Quantity of licensed cannabis increases by 0.32 percent and illicit cannabis decreases by 0.19 percent. Wholesale and retail price would decrease by 0.52 and 0.26 percent.

Table 5. EDM Analysis Market Effects Results

Description	Change
	<i>Percent</i>
Quantity of licensed cannabis	0.32%
Quantity of illicit cannabis	-0.19%
Price of licensed cannabis, retail	-0.26%
Price of licensed cannabis, farm	-0.52%

Lower prices are good for consumers. This is measured as “consumer surplus” which is the total benefit of those lower prices across all California cannabis consumers. Lower prices are generally bad for cultivators, however even though price falls, the cost of production falls by a greater amount, so cultivators are better off. The benefit is measured as “producer surplus.”

Table 6 summarizes the market effect changes in terms of consumer surplus, producer surplus, and gross retail sales of cannabis products, in the first year following implementation of the proposed regulations. Producer surplus increases by \$3.72 million and licensed retail sales increase by \$2.61 million. Consumer surplus increases by \$11.66 million.

Table 6. Market Effects Changes in Surplus and Gross Revenue

Description	Change
	<i>Millions</i>
Consumer surplus	\$11.66
Producer surplus	\$3.72
Gross output at licensed retail	\$2.61

⁷ In long-run equilibrium of a perfectly competitive market, price equals marginal cost.

Increases in consumer and producer surplus are the economic benefits to consumers and producers (i.e., cultivators and cannabis businesses) attributable to the proposed regulations. Other businesses are affected in addition to cannabis producers. These are known as secondary (indirect and induced or multiplier) effects. The change in gross output at retail is used in an IMPLAN analysis to estimate secondary effects. For example, changes in retail cause indirect and induced impacts to related businesses through changes in purchases/sales in related businesses (e.g., additional lab testing), employee wages, and similar ripple effects. These effects are described in the next section.

4.5 Indirect and Induced Effects

The total economic impact from a change in retail sales (gross output) is the sum of the direct, indirect, and induced impacts. Indirect and induced (also called secondary) economic impacts include other changes in spending resulting from the direct impacts of the proposed regulations. Indirect impacts are changes in business-to-business spending, and induced impacts are changes in spending related to changes in income to employees and owners. Indirect and induced impacts are estimated using multipliers from regional input-output models, also called multiplier models.

Multiplier models are calibrated using national tax data. Since there is no federally 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 approximation of spending and employment patterns 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 patterns of cannabis labs which test retail products for safety.

The IMPLAN model geographic scope covers all of California because the economic impacts of the proposed regulations would apply to, and are measured for, the entire state. Economic impacts are summarized in terms of jobs, labor income (proprietor income and employee wages), value added (gross domestic product), and gross output (total value of all business activity). Value added is equal to the sum of labor income, other property income, and taxes on production. Gross output is the sum of value added and the value of intermediate inputs.

Table 7 summarizes the results of the IMPLAN analysis. A \$2.61 million increase in retail sales of cannabis results in a total increase (sum of direct, indirect, and induced impacts) of \$4.70

million in gross output, \$2.79 million in value added, \$1.89 million in labor income, and 56 full time equivalent jobs.

Table 7. Indirect and Induced Effects

Sector, Effect	Impact Type	Employment	Labor Income	Value Added	Output
		<i>Count</i>		<i>Millions</i>	
Retail, Demand Increase	Direct Effect	42	\$1.02	\$1.46	\$2.61
	Indirect Effect	7	\$0.43	\$0.57	\$0.81
	Induced Effect	7	\$0.43	\$0.77	\$1.28
	Total Effect	56	\$1.89	\$2.79	\$4.70

4.6 Economic Impact Summary

Table 8 summarizes the economic impacts of the proposed regulations. All values reported in Table 8 were derived in previous sections of this EFIA, and are reported in the accompanying STD 399 Economic Impact Statement. Average costs of \$70 per business incurred in the first 12-months of implementation would also recur annually for two subsequent years.

Table 8. Total Economic Impact Summary

Description	Unit	Value
Total statewide benefits for businesses and individuals	\$, millions	\$25.91
<i>Cost savings to cultivators</i>	\$, millions	\$9.55
<i>Consumer surplus</i>	\$, millions	\$11.66
<i>Gross output at retail</i>	\$, millions	\$2.61
<i>Indirect and induced effects</i>	\$, millions	\$2.09
Total statewide costs for businesses and individuals	\$, millions	\$0.38
Businesses impacted (cultivators and retailers)	Count	6,230
Share of businesses that are small	Percent	97.1%
Businesses eliminated	Count	0
Jobs created	Count	56
Jobs eliminated	Count	0
Initial (one-time) costs per business (cultivators)	\$	\$11
Average annual ongoing costs per business (cultivators)	\$	\$70
Average annual ongoing benefits per business (retailers)	\$	\$1,790
Average annual ongoing benefits per business (cultivators)	\$	\$2,000

Note: Total statewide benefits for businesses and individuals are calculated as the sum of direct benefits (i.e., cost savings, consumer surplus, and retail gross output) and indirect and induced effects. Total statewide costs for businesses and individuals are the total direct costs to cultivators.

4.6.1 Estimated Effects on a Typical Business and Small Business

Retailers increase sales (gross output) by \$2.61 million per year (Table 7). Most retailers have fewer than 100 employees or annual gross receipts of \$15 million or less and therefore qualify as

small businesses. Therefore, a small business is a typical business in the industry, and the expected recurring annual benefits are the same. The average benefit to the 1,455 retailers active as of March 2026 would be \$1,790 per business (\$2.61 million divided by 1,455 businesses).

The total benefit for cultivators is \$9.55 million per year (Table 4). Most cultivators have fewer than 100 employees or annual gross receipts of \$15 million or less and therefore qualify as small businesses. Therefore a small business is a typical business in the industry, and the expected recurring annual benefits are the same for each type. The average benefit to the 4,775 cultivators as of March 2026 would be \$2,000 per business (\$9.55 million divided by 4,775 businesses).

Cultivators would incur annual costs of \$0.33 million for complying with new physical indicator and CCTT data entry requirements. There are 4,775 cultivators. The average cost per business equals \$70. These costs would be incurred annually and for two subsequent years as well. There are \$11 in one-time costs per cultivator incurred in the first year of implementation.

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

The proposed regulations may encourage expansion of licensed cannabis businesses in the State by lowering cultivator production costs, thereby increasing retail sales of cannabis, and increasing secondary business activity. However, the market analysis shows that while the proposed regulations would cause an increase in gross sales of cannabis-based products, the increase is modest relative to the size of the licensed market in California (increase of 0.06 percent)⁸. It would be a modest expansion of existing businesses but would not significantly increase the number of businesses in operation.

The proposed regulations would not result in the elimination of businesses in California.

The proposed regulations are not expected to benefit consumers beyond the increase in consumer surplus from lower prices at retail.

The proposed regulations would not negatively affect the ability of businesses in the State to compete with those in other states. Cannabis-derived products made in other states cannot be sold in California and therefore there is no competition.

The proposed regulations would not require additional business reports or the use of specific technologies or equipment.

The proposed regulations would not impact housing costs.

⁸ The increase in value of the licensed market at retail is estimated from the percent changes in retail price and quantity from the EDM: $(1 + \% \Delta P) * (1 + \% \Delta Q) - 1 = (1 - 0.0026) * (1 + 0.0032) - 1 = 0.0006$, or 0.06%.

The investment in California's gross state product is called value added. State value-added would increase by \$2.79 million (Table 7).

The proposed regulations would benefit the State's environment. Individual plant tags are a source of both plastic and metal waste. On larger grow sites, licensees have been observed to fill up multiple dumpsters worth of plant tags after harvest. Tags are typically not recycled due to RFID components and adhesives used. Allowing for group plant tagging would reduce waste produce from plant tags, providing environmental benefits to the State.

4.7 Department Fiscal Impacts

The fiscal impact of the proposed regulations follows from the estimated economic impacts of the proposed regulations. The economic analysis measures how the industry would adjust and quantifies defined economic impacts, and the fiscal impact evaluates the resulting changes to state and local budgets.

The fiscal impact estimated by the Department is \$1.12 million. Metrc costs for system updates would be \$1.1 million, and internal costs to the Department for training would be \$20,000. These costs would be absorbed within the Department's existing budget authority.

Metrc charges the Department \$0.348 per plant tag ordered, and licensees pay for tags indirectly through license fees. The cost is around \$21 million annually, which reflects additional tags and other Metrc contract costs. Fewer tags needed may decrease Metrc costs, but Metrc is expected to set the price of a single group tag equal to the equivalent number of tags that would have been needed for individual plant tagging (i.e., the number of plants under a group tag), resulting in no immediate change in Metrc tag costs to the Department.

4.7.1 Other State and Local Public Agencies Fiscal Impacts

The proposed regulations may modestly increase local sales tax revenue from increased sales of cannabis products as estimated in the Market Effects section. Relative to the size of the licensed cannabis market, the increase in retail sales would be small, and these would be spread across the State's large number of local agencies that regulate and tax cannabis.

Considering the state sales tax of 7.25 percent, and the cannabis excise tax of 15 percent, the total state tax revenue from an additional \$2.61 million in cannabis retail sales would be \$0.58 million in the first 12 months of implementation.

Local taxes are highly variable, and can apply to both cultivation and retail. The average effective local tax rate is close to 5 percent. Assessing this rate to the increase in cannabis sales at retail implies a local tax collection increase of \$0.13 million in the first 12 months of implementation.

5 Economic and Fiscal Impacts: Proposed Alternative

This section presents the results of the economic and fiscal impact analysis of two alternatives to the proposed regulations that was considered by the Department. The alternatives are summarized as follows:

- **Alternative 1:** Instead of having no plant limit for groups, groups would be limited to 100 plants.
- **Alternative 2:** Group plant tags would be ordered in pre-defined denominations (e.g., 1, 5, 10, 25, 50, and 100, as in Oregon).

5.1 Economic and Fiscal Impacts of Regulation Alternative 1

Alternative 1 is generally anticipated to result in lower net benefits and overall impacts than the proposed regulations, as described in the following sections. Total economic impacts would be \$24.95 million and total fiscal impacts would be \$1.74 million.

5.1.1 Alternative 1 Direct Economic Benefits

Based on the plant counts of unique harvest batches in CCTT, capping group sizes at 100 plants would reduce the number of plant tags needed from 13.15 million to 300,667.

Based on the same labor cost savings per plant tag used in section 4.1, total cost savings would be \$9,277,220. There would be no cost savings for groups of immature plants.

5.1.2 Alternative 1 Direct Economic Costs

Based on the same cost estimates used in section 4.2, total costs to cultivators from identifying plant groups would be \$1,290,510, and one-time costs of additional data entry would be \$51,710.

5.1.3 Alternative 1 Market Effects

The net cost savings would be \$7,896,710, representing a 0.77 percent decrease in costs to cultivators. Using the economic market model described in section 4.4 results in a consumer surplus increase of \$10.20 million and an increase in gross output at retail of \$2.29 million.

5.1.4 Alternative 1 Indirect and Induced Effects

Table 9 summarizes the results of the IMPLAN analysis. As shown, the \$2.29 million increase in retail sales of cannabis results in a total increase (sum of direct, indirect, and induced impacts) of \$4.13 million in gross output, \$2.45 million in value added, \$1.65 million in labor income, and 49 jobs.

Table 9. Indirect and Induced Effects, Alternative 1

Sector, Effect	Impact Type	Employment	Labor Income	Value Added	Output
		<i>Count</i>		<i>Millions</i>	
Retail, Demand Increase	Direct Effect	37	\$0.90	\$1.28	\$2.29
	Indirect Effect	6	\$0.38	\$0.50	\$0.71
	Induced Effect	6	\$0.38	\$0.67	\$1.12
	Total Effect	49	\$1.65	\$2.45	\$4.13

5.1.5 Alternative 1 Economic Impacts Summary

Table 10 summarizes the key economic outcomes of the proposed regulations.

Table 10. Total Economic Impact Summary, Alternative 1

Description	Unit	Value
Total statewide benefits for businesses and individuals	\$, millions	\$23.61
<i>Cost savings to cultivators</i>	\$, millions	\$9.28
<i>Consumer surplus</i>	\$, millions	\$10.20
<i>Gross output at retail</i>	\$, millions	\$2.29
<i>Indirect and induced effects</i>	\$, millions	\$1.83
Total statewide costs for businesses and individuals	\$, millions	\$1.34
Businesses impacted (cultivators and retailers)	Count	6,230
Share of businesses that are small	Percent	97.1%
Businesses eliminated	Count	0
Jobs created	Count	49
Jobs eliminated	Count	0
Initial (one-time) costs per business (cultivators)	\$	\$11
Average annual ongoing costs per business (cultivators)	\$	\$270
Average annual ongoing benefits per business (retailers)	\$	\$1,265
Average annual ongoing benefits per business (cultivators)	\$	\$1,940

Note: Total statewide benefits for businesses and individuals are calculated as the sum of direct benefits (i.e., cost savings, consumer surplus, and retail gross output) and indirect and induced effects. Total statewide costs for businesses and individuals are the total direct costs to cultivators.

5.1.5.1 Alternative 1 Estimated Effects on a Typical Business and Small Business

The direct gross output increase for retailers would be \$2.29 million per year. The average benefit to the 1,455 retailers active as of March 2026 would be \$1,265 per business.

The total benefits for cultivators would be \$9.28 million per year. The average benefit to the 4,775 cultivators as of March 2026 would be \$1,940 per business.

Cultivators would incur annual costs of \$1.34 million for complying with new physical indicator and CCTT data entry requirements. These costs would be split among the 4,775 cultivators,

implying an average recurring cost per business of \$270 and one-time cost of \$11. These would be annual, on-going costs. There are no separate one-time costs to businesses.

5.1.5.2 Alternative 1 Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

These impacts are expected to be the same as under the proposed regulations.

5.1.6 Alternative 1 Department Fiscal Impacts

Department fiscal impacts are expected to be the same as the proposed regulations (\$1.12 million). Additional state and local tax impacts of \$0.62 million bring the total fiscal impact to \$1.74 million.

5.1.6.1 Other State and Local Public Agencies Fiscal Impacts under Alternative 1

The total state tax revenue from an additional \$2.29 million in cannabis retail sales would be \$0.51 million in the first 12 months of implementation.

The local tax collection increase would be \$0.11 million in the first 12 months of implementation.

5.1.7 Basis for Rejecting Alternative 1

Limiting group sizes to 100 plants would not provide any additional fiscal or economic benefits. It would increase the cost of compliance for licensees, reducing the overall net economic benefit. Existing law limits immature plant lots to 100 plants. However, this threshold was established prior to the development of the legal market and reflected the Department's initial estimate of a manageable quantity for site inspections, verification of data entered into the track-and-trace system, and traceability to the source. The Department has since determined that maintaining a limit of 100 plants does not effectively serve these purposes. During inspections, staff count individual plants on the premises and will continue to do so regardless of whether plants are grouped or the size of any group. As such, imposing a numerical limit on group size does not meaningfully enhance compliance, oversight, or traceability. Alternative 1 is therefore rejected because it increases costs without providing additional benefits.

5.2 Economic and Fiscal Impacts of Regulation Alternative 2

Alternative 2 would result in the same benefits and costs to businesses as the proposed regulations, as described in the following sections.

Department fiscal costs would be higher because licensees would continue to over order tags. Total economic impacts would be \$25.96 million and total fiscal impacts would be \$6.33 million.

5.2.1 Alternative 2 Direct Economic Benefits

Direct economic benefits would be the same as the proposed regulations.

5.2.2 Alternative 2 Direct Economic Costs

Direct economic costs would be the same as the proposed regulations.

5.2.3 Alternative 2 Market Effects

Market would be the same as the proposed regulations.

5.2.4 Alternative 2 Indirect and Induced Effects

Indirect and induced effects would be the same as the proposed regulations.

5.2.5 Alternative 2 Economic Impacts Summary

Table 10 summarizes the key economic outcomes of the proposed regulations.

Table 11. Total Economic Impact Summary, Alternative 2

Description	Unit	Value
Total statewide benefits for businesses and individuals	\$, millions	\$25.91
<i>Cost savings to cultivators</i>	\$, millions	\$9.55
<i>Consumer surplus</i>	\$, millions	\$11.66
<i>Gross output at retail</i>	\$, millions	\$2.61
<i>Indirect and induced effects</i>	\$, millions	\$2.09
Total statewide costs for businesses and individuals	\$, millions	\$0.38
Businesses impacted (cultivators and retailers)	Count	6,230
Share of businesses that are small	Percent	97.1%
Businesses eliminated	Count	0
Jobs created	Count	56
Jobs eliminated	Count	0
Initial (one-time) costs per business (cultivators)	\$	\$11
Average annual ongoing costs per business (cultivators)	\$	\$70
Average annual ongoing benefits per business (retailers)	\$	\$1,790
Average annual ongoing benefits per business (cultivators)	\$	\$2,000

Note: Total statewide benefits for businesses and individuals are calculated as the sum of direct benefits (i.e., cost savings, consumer surplus, and retail gross output) and indirect and induced effects. Total statewide costs for businesses and individuals are the total direct costs to cultivators.

5.2.5.1 Alternative 2 Estimated Effects on a Typical Business and Small Business

Effects on a typical and small business would be the same as the proposed regulations.

5.2.5.2 Alternative 2 Other Economic Impacts to Businesses, Individuals, Worker Safety, and the State's Environment

These impacts are expected to be the same as under the proposed regulations.

5.2.6 Alternative 2 Department Fiscal Impacts

Licensees currently over order tags by 28 percent, resulting in additional fiscal costs to the Department of \$4.5 million per year. Setting group tag orders in pre-defined denominations is expected to result in similar levels of over ordering, leading to fiscal costs of about \$4.5 million per year.

Other Department fiscal impacts are expected to be the same as the proposed regulations (\$1.12 million), increasing total Department fiscal impacts to \$5.62 million per year.

5.2.6.1 Other State and Local Public Agencies Fiscal Impacts under Alternative 2

State and local tax collections would be the same as the proposed regulations.

5.2.7 Basis for Rejecting Alternative 2

Establishing pre-defined denominations for group tags would not lead to a change in economic benefits, but it would increase Department fiscal costs by \$4.5 million due to the incentive for cultivators to over order tags. Furthermore, excessive ordering of tags would cause the same data validation issues of harvest entries that over ordering individual plant tags currently causes. Alternative 2 was rejected because it would increase fiscal costs, would not fix data entry issues addressed by the proposed regulations, and would not provide additional economic benefits.

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