

Mill Assessment Study: Recommendations and Proposed Implementation Plan

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Executive Summary

The Department of Pesticide Regulation’s mission is to protect human health and the environment by regulating pesticide sales and use, and by fostering reduced-risk pest management. The department’s primary funding mechanism – a mill assessment on the sale of registered pesticide products – has not been updated in almost 20 years. Over the past two decades, the Department of Pesticide Regulation (DPR) has experienced an expansion of programmatic responsibilities due to legislative mandates and executive priorities. These added programmatic responsibilities coupled with the department’s support for the state’s transition to safer, more sustainable pest management has put additional pressure on its funding condition.

In February 2022, DPR contracted with Crowe LLP (Crowe) to conduct a study on the mill assessment, engage and consult stakeholders throughout the various stages of the study, and issue a final report by June 2023 outlining proposed mill options. This report provides Crowe’s recommendations and proposed implementation plan based on a comprehensive examination of the study’s six (6) objectives, listed in **Exhibit ES-1**.

The recommendations and proposed implementation plan detailed in this report reflect extensive research, analysis, and stakeholder consultation conducted over the course of the last year. Our goal was to maintain a forward-looking focus to identify mill options – based on our research, analysis, and stakeholder consultation – that could adequately and sustainably support DPR, County Agricultural Commissioners (CACs), California Department of Food and Agriculture’s (CDFA) mill-related current and future programmatic needs, and the state’s transition to safer, more sustainable pest management.

Exhibit ES-1 Mill Assessment Study Objectives

	<p>Examine current and future funding needs for DPR while also considering funding associated with CACs’ mill-related responsibilities.</p>
	<p>Examine existing structure and rate of the mill assessment.</p>
	<p>Examine current and future revenues produced by that structure and rate.</p>
	<p>Examine detailed options that incentivize the use of safer sustainable pest management practices across the state of California.</p>
	<p>Examine incentivization options, including “tiering the mill assessment,” to incentivize the use of safer pest management, as well as evaluating strategies for linking how revenues are collected to support the broader mission of DPR.</p>
	<p>Examine long-term sustainable funding that allows DPR to continue to fulfill its mission.</p>

A. Recommended Proposal Options

Based on our comprehensive examination of the mill assessment, we recommend a proposal that includes the options described in **Exhibit ES-2**. Option A generates mill revenue at current rate levels to support DPR, CACs, and CDFA's mill-related responsibilities. Together, Option B and Option C would sustainably and appropriately support DPR's mill-related current and future programmatic needs. Option D would support CACs' future programmatic needs for pesticide usage enforcement workload activities and administration priorities. Option E would support CDFA's future programmatic needs for the Office of Pesticide Consultation & Analysis (OPCA). Option F would fund preliminary sustainable pest management (SPM) programmatic needs to support the state's transition to safer, more sustainable pest management.

Exhibit ES-2
Recommended Proposal Options
Estimated Minimum Revenue and Incremental Rate Requirements¹

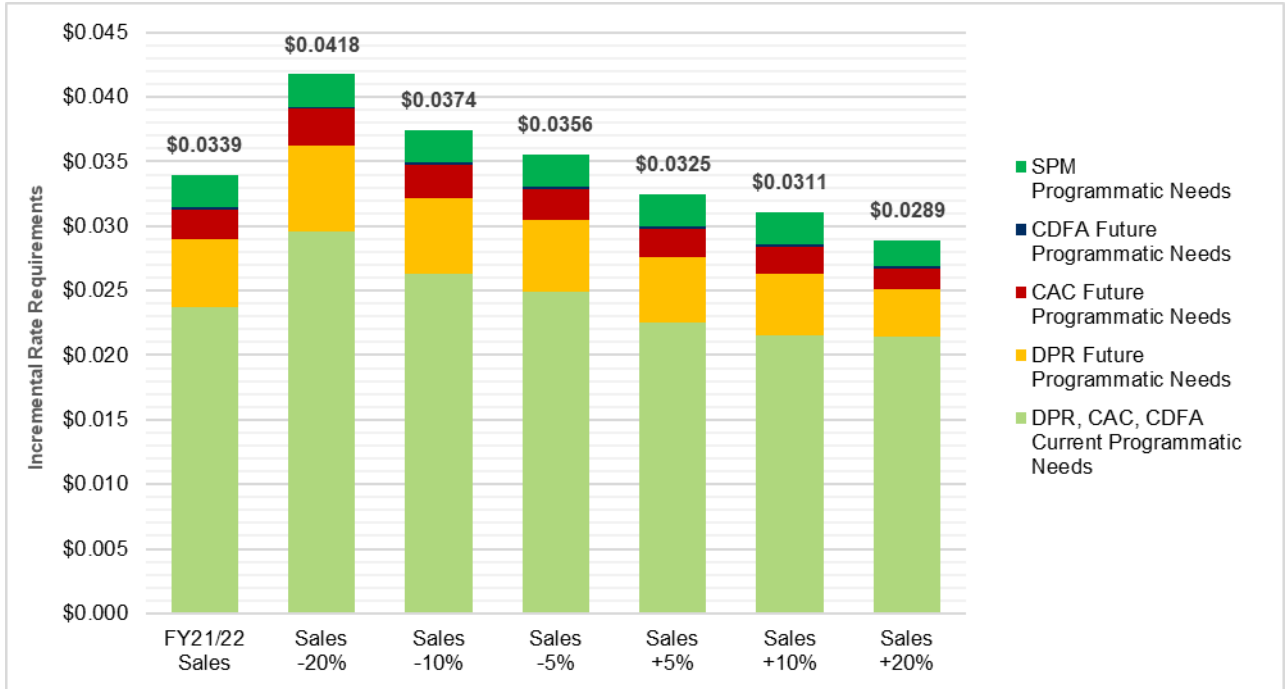
Mill Options	Minimum Revenue Requirements	Incremental Rate Requirements	Descriptions
A. Current Mill	\$94.5 million	\$0.0215	Reflects a combined rate based on \$0.021 applied to all products and an additional \$0.00075 applied to ag products.
B. DPR Current Programmatic Needs	\$9.7 million	\$0.0022	Requires a \$0.0022 adjustment to the existing mill rate to generate \$9.7 million. This additional revenue would fully support DPR's current programmatic needs based on its FY2022/23 budget totaling \$102.1 million, which includes revenue to support CACs existing mill allotment criteria.
C. DPR Future Programmatic Needs	\$23.2 million	\$0.0053	Requires a \$0.0053 adjustment to the existing mill rate to support DPR's future programmatic needs totaling \$23.2 million. This option would support \$16.1 million in resources (including \$2.8 million for SPM-related resources), \$6.1 million in integrated pest management (IPM) grants, and \$1.0 million to support environmental monitoring.
D. CAC Future Programmatic Needs	\$10.2 million	\$0.0023	Requires a \$0.0023 adjustment to the existing mill rate to support up to \$10.2 million in as-needed funding for CAC pesticide usage enforcement workload activities and administration priorities.
E. CDFA Future Programmatic Needs	\$0.8 million	\$0.0002	Requires a \$0.0002 (equivalent to \$0.00029 to ag sales) rate to generate roughly \$800,000 to support CDFA's future programmatic needs for the OPCA. This additional revenue would fully support CDFA's OPCA current and future programmatic needs totaling roughly \$2.9 million.
F. SPM Programmatic Needs	\$11.0 million	\$0.0025	Requires a \$0.0025 adjustment to the existing mill rate to support \$11.0 million in initial additional funding for mill-related SPM programmatic needs identified by/aligned with the Sustainable Pest Management Roadmap for California . ²
Total	\$149.3 million	\$0.0339	<i>Note: this summary presents rounded values</i>

¹ Based on FY2021/22 pesticide product sales revenue totaling approximately \$4.4 billion.

² The Sustainable Pest Management Roadmap for California Roadmap (SPM Roadmap) was developed over the course of nearly two years by a diverse group of stakeholders representing conventional and organic agriculture, urban environments, community and environmental groups, tribes, researchers, and government. The SPM Roadmap charts the course for accelerating the state's systemwide transition to sustainable management and eliminating and replacing of prioritized high-risk pesticides by 2050.

In **Exhibit ES-3**, we provide incremental rate requirements under seven (7) scenarios assuming FY2021/22 pesticide product sales revenue³ up to +/- 20 percent of FY2021/22 pesticide product sales revenue. Based on historical trends, it is likely that the lowest revenue scenario would be that pesticide product sales revenue decrease up to 5 percent in the near term (e.g., five-year period) as market impacts from the pandemic subside.

Exhibit ES-3
Recommended Proposal Options under Different Pesticide Sales Scenarios



³ FY2021/22 pesticide product sales totaled approximately \$4.4 billion.

B. Design, Usage, and Implementation Recommendations

In addition to the recommended proposal options, we recommend the design, usage, and implementation recommendations summarized in **Exhibit ES-4**.

- **Design recommendations** address the legal authority of the mill, how the mill is set initially and, in the future, the structure of the assessment, alignment of the assessment, and approaches to revenue stabilization. In *Section 3*, we provide stakeholder feedback, detailed recommendations, and rationale for mill design options.
- **Usage recommendations** address how revenue from the mill is utilized by DPR, CACs, and CDFR, clarifying the types of programs to be funded, including options that would utilize mill revenues to positively incentivize sustainable pest management practices. In *Section 4*, we provide stakeholder feedback, detailed recommendations, and rationale for mill usage options.
- **Implementation recommendations** address the timing of implementation and how mill revenue is monitored and adjusted over time. Our implementation recommendations account for how mill revenue is integrated with DPR’s other funding sources. In *Section 5*, we provide stakeholder feedback, detailed recommendations, and rationale for mill implementation options.

Exhibit ES-4 Proposed Design, Usage, and Implementation Recommendations

Mill Options	Recommendations
Mill Design Options	
Setting	<p>Legislative Authority We recommend a maximum rate and structure to be set in statute, with the maximum rate set at a level higher than the implemented rate (e.g., up to 10 percent higher than the implemented rate to allow for flexibility and assure revenue stability). We also recommend that the Director have authority to increase the mill rate up to its maximum to support the department’s mission.</p>
	<p>Alignment We recommend funding alignment with the department’s programmatic authorities.</p>
	<p>Revenue Stability We recommend that DPR conduct a regular review of the mill, at a minimum every five (5) years, to adjust within the maximum rate to assure the continuance of a stable revenue source.</p>
Structure	<p>Flat Rate We recommend that the mill assessment is initially set at a flat rate until Priority Pesticides⁴, defined through the process outlined in the SPM Roadmap, have been identified by DPR.</p>
	<p>Tiered Rate We do not recommend implementing a tiered rate at the outset. We recommend that DPR revisit “tiering” as a viable option once Priority Pesticides have begun to be identified as part of the SPM Roadmap process. At that point, DPR could consider establishing higher mill assessments on Priority Pesticides and reduced mill assessments on certain lower-risk products. This tiering option would serve to educate users and manufacturers, and function as a policy signal to incentivize the development and use of safer pest management tools and practices. We provide supporting rationale for this recommendation in <i>Appendix D</i>.</p>
	<p>Reserve Mechanism We do not recommend incorporating a self-correcting funding reserve mechanism into the mill assessment’s structure.</p>

⁴ According to the SPM Roadmap, “Priority Pesticides” refer to pesticide products, active ingredients, and groups of related products within the context of specific product uses or pest/location use combinations that have been deemed to be of greatest concern and warrant heightened attention, planning, and support to expedite their replacement and eventual elimination. The criteria for classifying pesticides as “Priority Pesticides” includes, but is not limited to hazard and risk classifications, availability of effective alternative products or practices, and special consideration of pest management situations that potentially cause severe or widespread adverse impacts.

Mill Options	Recommendations
Mill Usage Options	
Funding for Programmatic Needs	<p>DPR’s Programmatic Needs We recommend that the mill assessment supports DPR’s overall programmatic needs for its mill-related responsibilities totaling approximately \$125.3 million. This supports the department’s current programmatic needs totaling \$102.1 million based on its FY2022/23 authorized budget and future programmatic needs totaling \$23.2 million. We identify DPR’s mill-related responsibilities in <i>Section 2</i>, Exhibit 15.</p> <p>CACs’ Programmatic Needs We recommend maintaining the existing mill allotment criteria and up to approximately \$10.2 million funded by the mill assessment that provides as-needed funding (separate from the existing mill allotment criteria) to support CACs’ pesticide usage enforcement programs and administration priorities.</p> <p>CDFA’s Programmatic Needs We recommend the existing mill assessment level \$0.00075 (0.75 mill), with an additional \$0.00029 (0.29 mill) for a total mill rate of \$0.00104 (1.04 mills) applied to ag-related pesticide product sales to support current and future programmatic needs for the OPCA totaling \$2.9 million.</p>
Funding for Positive Incentives	<p>Support and Incentivize Safer, More Sustainable Pest Management We recommend an option to utilize the mill assessment (e.g., 2.5 mill option) to support actions in alignment with the SPM Roadmap. This option would generate approximately \$11.0 million per year with specific activities aligned with the SPM Roadmap.</p>
Mill Implementation Options	
Timing	<p>Phased or One-Time Change We recommend a phased implementation of a flat rate to allow DPR, CACs, CDFA, and stakeholders to plan accordingly. A phased implementation (e.g., three to five years) of a flat rate would align with the department’s need to support its authorized expenditures for its mill-related responsibilities.</p> <p>Implementation Start We recommend that the phased implementation of a flat rate begins in FY2024/25.</p> <p>Mill Adjustments We recommend an examination of the mill assessment every five (5) years, at a minimum, to review and potentially adjust the maximum mill assessment rate for revenue stabilization purposes, especially as the department’s SPM Roadmap related priorities are determined in the coming years.</p> <p>Continuous Review We recommend that the department analyzes its financial condition during the annual budgeting process to determine whether an adjustment to the mill assessment would be necessary.</p> <p>Stakeholder Involvement in Review Process We recommend that stakeholders are consulted by DPR during recommended adjustment reviews.</p>
Funding Sources	<p>Mill Contribution to Departmental Funding Mix We found that the mill is the appropriate funding source to support the recommended proposal options. In addition, we found that the General Fund is not a sustainable nor appropriate funding source to support recommended proposal options. We provide additional rationale for this finding in <i>Section 2</i> of this report.</p> <p>Mill Revenue Levels and Other DPR Funding Sources We found that additional mill assessment revenues to support the recommended proposal options would only support DPR’s authorized responsibilities, excluding its registration and licensing and certification related responsibilities, and would have no impact on the department’s other revenue sources from registration and licensing and certification fees.</p>

C. Proposed Implementation Plan

We propose the following milestones to successfully implement the recommended proposal options:

- **Pre-Implementation** is the first milestone of the plan and involves all activities leading up to and required for implementation. This includes final recommendation decisions, development of a budget change proposal, consultation with stakeholders and the legislature, and approval and release of a final budget.
- **Implementation** is the second milestone of the plan and involves executing the mill recommendations. To reach this milestone, it is assumed that all requirements for pre-implementation and implementation are met.
- **Post-Implementation** is the last milestone of the plan and includes all activities after implementation has occurred. This includes ongoing stakeholder and legislative engagement, determining the review process, mill adjustment phases, and consideration of Priority Pesticides and future mill tiering options to further alignment with California’s transition to safer, more sustainable pest management.

Exhibit ES-5 provides an anticipated timeline for each milestone. This timeline considers the state’s budget approval process, legislative process, and potential future review and adjustments to mill assessment rate(s) and structure to align with Priority Pesticides to be determined by the process detailed within the SPM Roadmap.

Exhibit ES-5 Implementation Timeline

Milestone and Activities	2023				2024								TBD					
	JAN-AUG	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	TBD
Ongoing																		
Stakeholder Engagement and Outreach	[Dark blue bar with orange dot in Nov 2023]																	
Pre-Implementation																		
Develop Budget Change Proposal	[Dark blue bar with green dot in Feb 2024 and purple dot in May 2024]																	
Implementation																		
Begin Recruitment Strategy																		
Implement Mill Proposal																		
Post-Implementation																		
Phase-in Mill Adjustments																		
Consider Mill Review Process																		
Consider Tiered Mill for Priority Pesticides																		







- Begin notification period (tentative)
- Release of Governor’s FY2024/25 Budget
- Submit May Revision BCP, if necessary
- Implement Mill Proposal July 1, 2024
- * Start depends on determination of Priority Pesticides

1. Introduction

Crowe LLP (Crowe) prepared this report on behalf of the Department of Pesticide Regulation (DPR) as part of the Mill Assessment Study. This report provides Crowe’s recommendations and proposed implementation plan based on our examination of the study’s six (6) objectives, listed in **Exhibit 1**.

Crowe has previously released a Mill Alternatives Concept Paper (Concept Paper) and a Workload Analysis Report (Workload Analysis). The Concept Paper provided initial proposals, including mill design, usage, and implementation related considerations for feedback and review by DPR and interested stakeholders. The Workload Analysis report provided the results of Crowe’s Workload Analysis of DPR’s current and future programmatic needs. The Concept Paper, the Workload Analysis, and this report serve as supporting documents in anticipation of future budget change proposals by DPR.

Exhibit 1 Mill Assessment Study Objectives

	<p>Examine current and future funding needs for DPR while also considering funding associated with CACs’ mill-related responsibilities.</p>
	<p>Examine existing structure and rate of the mill assessment.</p>
	<p>Examine current and future revenues produced by that structure and rate.</p>
	<p>Examine detailed options that incentivize the use of safer sustainable pest management practices across the state of California.</p>
	<p>Examine incentivization options, including “tiering the mill assessment,” to incentivize the use of safer pest management, as well as evaluating strategies for linking how revenues are collected to support the broader mission of DPR.</p>
	<p>Examine long-term sustainable funding that allows DPR to continue to fulfill its mission.</p>

Report Structure

This report is organized into six (6) sections and seven (7) appendices, as described below:

1. **Introduction** summarizes the Mill Assessment Study background, including an overview of the study objectives, profile of the mill assessment, and guiding principles. We then provide an overview of the design, usage, and implementation considerations proposed in the Concept Paper and outcomes from the Workload Analysis.
2. **Proposal Recommendations** describes our recommended proposal options and key assumptions. We present our findings on the sustainability and appropriateness of the mill assessment to support our recommended proposal options.
3. **Design Recommendations** describes our mill design recommended options and rationale.
4. **Usage Recommendations** describes our mill usage recommended options and rationale.
5. **Implementation Recommendations** describes our mill implementation recommendations and rationale.
6. **Proposed Implementation Plan** describes our proposed implementation plan, which includes the identification of key milestones and assumptions, roles and responsibilities, key activities, and challenges and success factors.
7. **Appendix A** provides a detailed summary of our methodology for each of the Mill Assessment Study's project milestones.
8. **Appendix B** summarizes DPR's funding authority for its Pesticide Programs and Administration.
9. **Appendix C** summarizes key findings, background, and detailed analysis supporting our recommended proposal option to support CACs' programmatic needs for mill related responsibilities.
10. **Appendix D** summarizes our additional analysis of the three (3) funding models proposed within the Concept Paper: 1) a flat rate model based on the current mill assessment, 2) a tiered rate model based on levels of pesticide category workload, and 3) a tiered rate based on levels of pesticide product workload. This Appendix also summarizes a fourth proposed model, a tiered rate based on Priority Pesticides to be identified through the process outlined in SPM Roadmap.
11. **Appendix E** summarizes our findings on the sustainability of the mill assessment based on a detailed analysis of historical mill revenues generated from pesticide product sales at the existing rate along with other factors that may potentially impact future mill revenues.
12. **Appendix F** summarizes stakeholder feedback submitted through June 2, 2023, on the mill proposal options, including the mill design, usage, and implementation recommendations described in the *Preliminary Recommendations and Implementation Plan*.
13. **Appendix G** provides the stakeholder feedback letters that we received through June 2, 2023, on the *Preliminary Recommendations and Implementation Plan*.

A. Background

DPR is responsible for the registration of, continuous evaluation of, and mitigation of risks associated with pesticides used in California; oversees statewide enforcement of pesticide laws and regulations and oversees local enforcement carried out locally by CACs; and for facilitating the use of reduced risk pest management. Food and Agriculture Code (FAC) Section 11501 sets forth DPR's six (6) mandates:

1. To provide for the proper, safe, and efficient use of pesticides essential for production of food and fiber and for protection of public health and safety
2. To protect the environment from environmentally harmful pesticides by prohibiting, regulating, or ensuring proper stewardship of those pesticides
3. To assure agricultural and pest control workers of safe working conditions where pesticides are present
4. To permit agricultural pest control by competent and responsible licensees and permittees under strict control of DPR and the County Agricultural Commissioners
5. To assure consumers and users that pesticides are properly labeled and appropriate for the use designed by the label and that state or local government dissemination of information on pesticide uses of any registered pesticide product is consistent with the uses for which the product is registered
6. To encourage the development and implementation of pest management systems, stressing application of biological and cultural pest control techniques with selective pesticides when necessary to achieve acceptable levels of control with the least possible harm to the public health, nontarget organisms, and the environment.

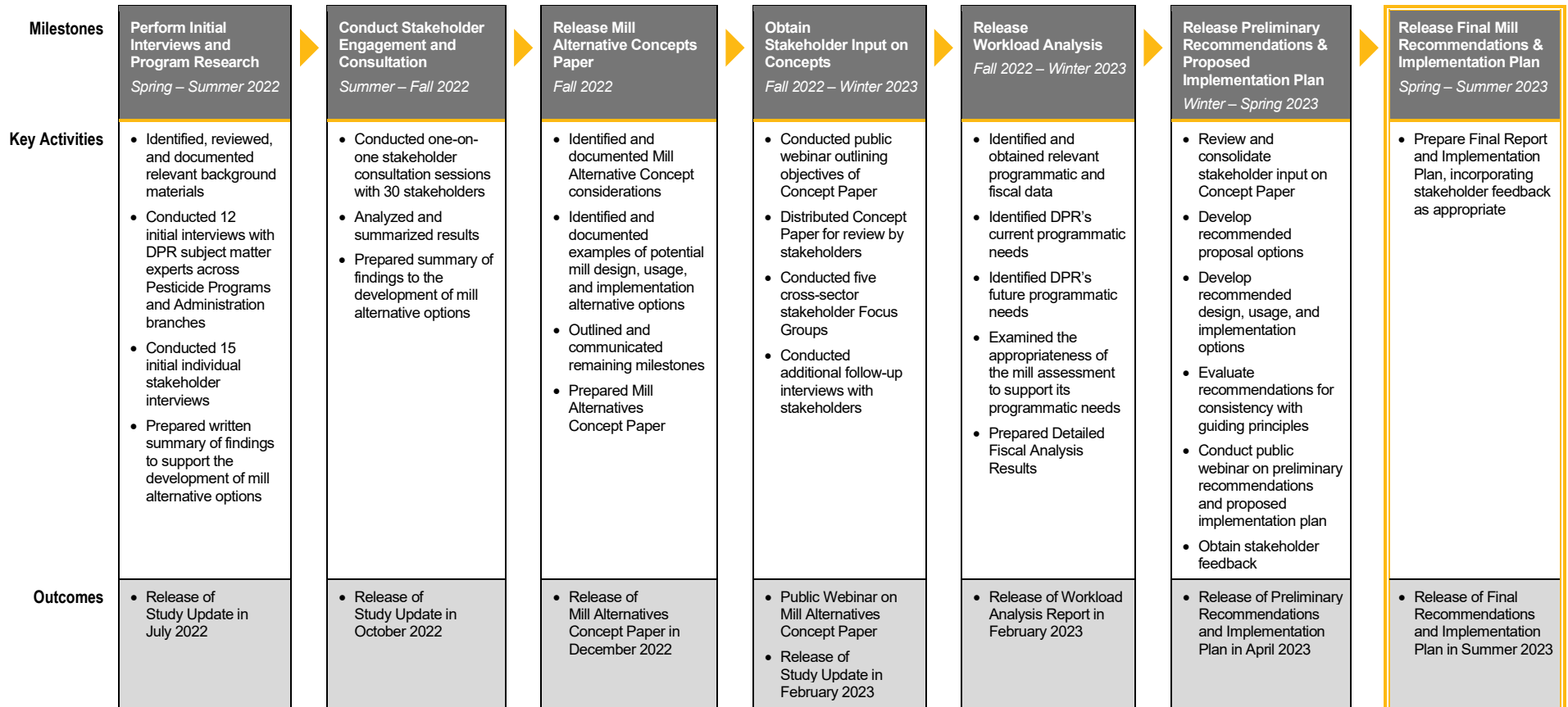
Mill Assessment Study Milestones

In the FY2021/22 state budget, DPR was allocated one-time funding to embark on a comprehensive study of its mill assessment that examines:

- The existing structure and rate of the mill assessment
- Current and future funding needs for DPR, including strategies for linking how revenues are collected to support DPR's broader mission objectives and support for the state's transition to safer, more sustainable pest management
- Existing CAC funding associated with mill related responsibilities and future needs
- Detailed options that incentivize the use of safer, more sustainable pest management across the state of California
- Current and future revenues produced by proposed structures and rates to provide long-term sustainable funding that allows DPR to continue to fulfill its mission.

In February 2022, DPR contracted with Crowe to conduct a study on the mill assessment, engage and consult stakeholders throughout the various stages of the study, and issue a final report outlining proposed mill options. By the end of June 2023, Crowe will provide DPR with a detailed plan including mechanisms to implement the recommended options identified based on the study. **Exhibit 2** provides a summary of the Mill Assessment Study milestones, activities, and outcomes to-date.

Exhibit 2
Overview of Milestones, Key Activities, and Outcomes



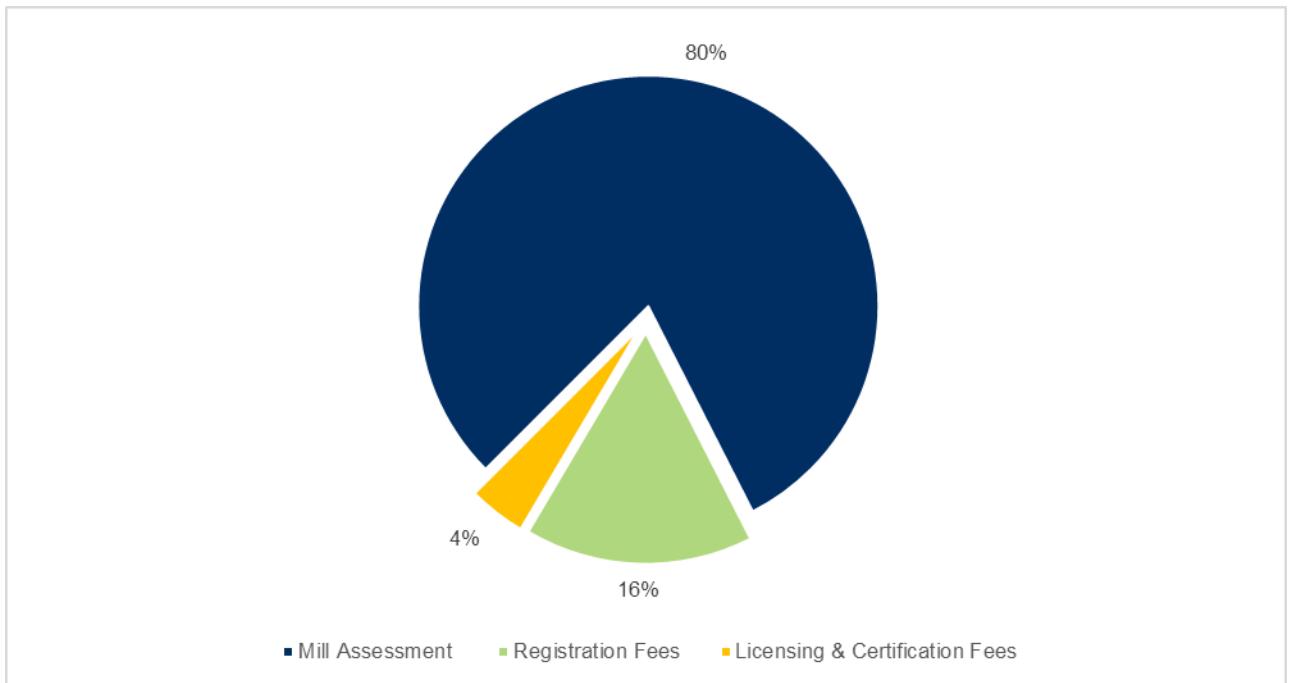
B. Funding the Department of Pesticide Regulation

DPR is primarily funded by the Department of Pesticide Regulation Fund⁵ with limited funding from federal funds, special funds, and reimbursements from other departments to support its Pesticide Programs and Administration. The Department of Pesticide Regulation Fund collects revenues from the following three (3) sources:

- a quarterly mill assessment on pesticide sales
- pesticide registration fees for over 13,750 actively registered products from approximately 1,500 registrants
- licensing and certification fees from individual commercial applicators, pest control pilots and advisers and dealers.

DPR’s mill assessment is the department’s primary funding source accounting for roughly 80 percent of the Department of Pesticide Regulation Fund’s revenues sources, as shown in **Exhibit 3**.

Exhibit 3
Department of Pesticide Regulation Fund
Mill, Registration, and Licensing & Certification Revenue Sources



⁵ The Department of Pesticide Regulation Fund supports roughly 85 percent of the department’s FY2022/23 current programmatic needs (i.e., \$132.6 million out of \$156.3 million total budgeted expenditures from all funds). DPR’s current programmatic needs are also supported by the General Fund (\$27.9 million), California Environmental License Plate Fund (\$653,000), Federal Trust Fund (\$2.4 million), Reimbursements (\$610,000), and Cannabis Control Fund (\$2.7 million). It is important to note funding from the General Fund reflects temporary support.

Status of the Department of Pesticide Regulation Fund

The Department of Pesticide Regulation Fund has operated under a structural deficit⁶ in five out of eight years from FY2014/15 to FY2021/22, as shown in **Exhibit 4**. DPR projects the Department of Pesticide Regulation Fund will operate under a structural deficit in FY2022/23 (budgeted). The fund's structural deficit, as shown in **Exhibit 5**, is driven by the following:

- **Mill Revenues & Expenditures:** From FY2014/15 to FY2021/22, mill revenues and expenditures have increased approximately 4 percent, on average, on an annual basis. In FY2016/17 through FY2019/20, the fund's structural deficit was driven by mill related deficits. In FY2020/21, the fund's surplus was driven by an increase in mill revenues due to pandemic related pesticide sales of disinfectants and antimicrobials along with overall state directed budget cuts as a fiscal response to the pandemic. DPR last raised the mill assessment in 2004.
- **Registration Revenues & Expenditures:** From FY2014/15 to FY2021/22, registration revenues have increased approximately 11.5 percent, on average, on an annual basis and expenditures have increased approximately 12.0 percent on an annual basis. The increases in revenues during this period were driven by increased registration fees in FY2015/16 and again in FY2021/22 to support registration related programmatic needs. The increases in expenditures during this period were driven by increased programmatic costs that support new positions to address workload increases and California Pesticide Electronic Submission Tracking (CalPEST) database development related expenditures. DPR last raised registration fees in 2021.
- **Licensing and Certification Revenues & Expenditures:** From FY2014/15 to FY2021/22, licensing and certification revenues decreased approximately 2.0 percent, on average, on an annual basis and expenditures increased approximately 9.6 percent on an annual basis. The increases in expenditures during this period were driven by increased programmatic costs for new positions to address workload increases. As part of DPR's FY2022/23 budget, the department received 3.0 permanent positions supported by \$1.6 million from the General Fund through FY2024/25, and \$1.3 million going forward. These positions implement responsibilities required by unfunded federal mandates⁷ issued in 2017 and modernize elements of the licensing system. DPR is planning to propose regulations to increase licensing and certification fees to support its future programmatic needs. DPR last raised licensing and certification fees in 2004.

In FY2021/22, the Department of Pesticide Regulation's total expenditures (i.e., DPR's current programmatic needs) increased roughly \$15.0 million from the prior fiscal year due to the following factors:

- Restoration of FY2020/21 budget cut to the fund balance – \$2.5 million
- Restoration of pandemic related budget cuts – \$4.6 million
- Initial CalPEST project funding – \$5 million
- FY2021/22 employee compensation increases – \$3.3 million.

⁶ A structural deficit occurs when actual expenditures are greater than revenues.

⁷ Federal Certification of Pesticide Applicators Rule.

Exhibit 4
Department of Pesticide Regulation Fund
FY2014/15 through FY2022/23

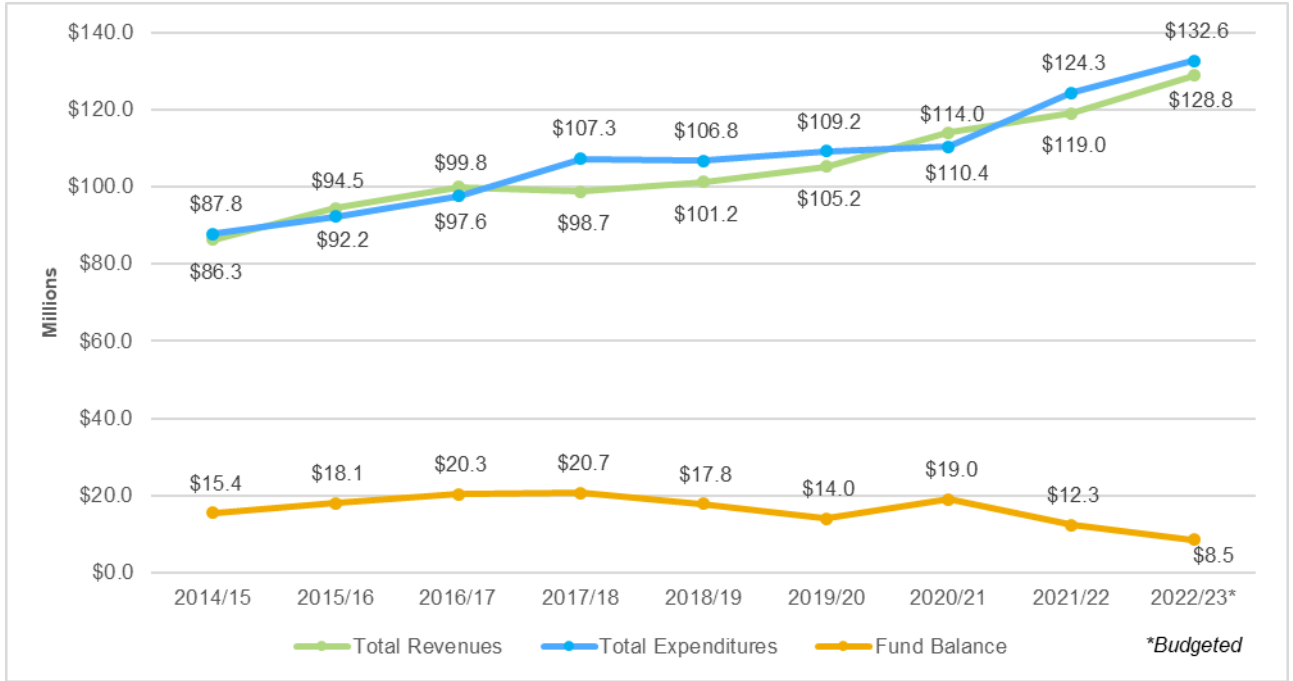


Exhibit 5
Comparison of Mill, Registration, and Licensing & Certification Revenues and Expenditures
FY2014/15 through FY2022/23



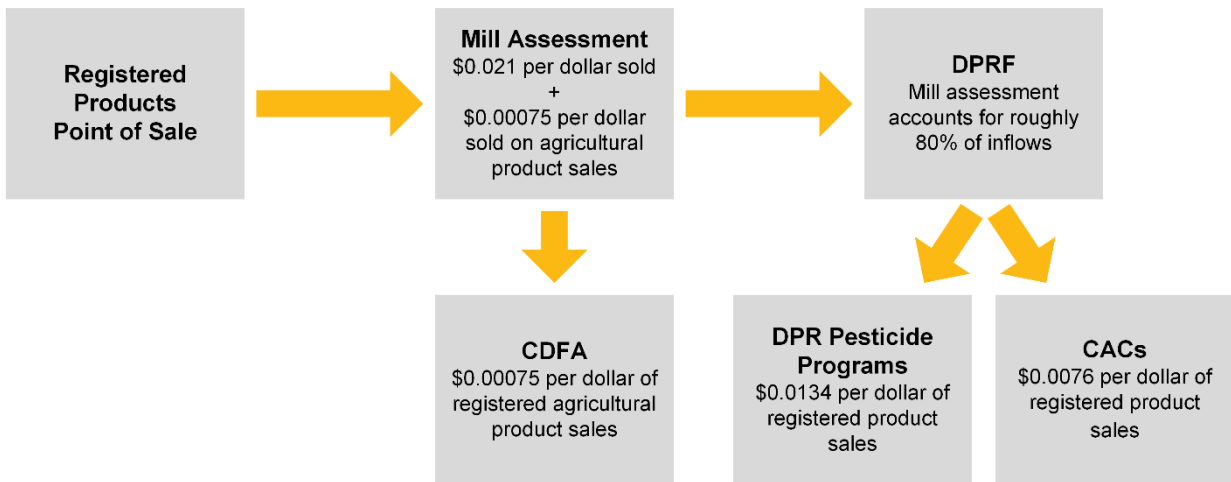
Profile of the Mill Assessment

The current mill assessment was established in 2004 and is currently set⁸ at a rate of 21 mills, or 2.1 cents per dollar of registered pesticide product sales. DPR assesses an additional 0.75 mills, or 0.075 cents per dollar on the sale of agricultural use pesticides.⁹

DPR’s mill assessment revenues flow into the Department of Pesticide Regulation Fund, as illustrated in **Exhibit 6**, pursuant to FAC section 12841(g). Mill assessment revenues primarily support the following:

1. DPR’s Pesticide Programs and Administration: Mill assessment revenues derived from 13.4 out of 21 mills levied on registered pesticide product sales fund the department’s Pesticide Programs and Administrative branches. DPR receives roughly 63.8 percent of mill assessment revenues.
2. County Agricultural Commissioners: Mill assessment revenue derived from 7.6 mills out of 21 mills levied on registered pesticide product sales is distributed to California’s 55 CACs (covering all 58 counties) performing local pesticide enforcement activities pursuant to federal and state pesticide laws and regulations. The CACs receive roughly 36.2 percent of mill assessment revenues.
3. California Department of Food and Agriculture: Mill assessment revenue derived from 0.75 mills levied on the sale of registered agricultural use pesticides funds the CDFA’s Office of Pesticide Consultation and Analysis Unit (OPCA). The OPCA focuses on potential pesticide regulatory impacts and pest management alternatives that may mitigate or prevent such impacts on production agriculture.

**Exhibit 6
Mill Assessment Revenues Flow**



⁸ The maximum assessment rate is set by statutes in California Food and Agricultural Code (FAC) sections 12841/12841.1. The Director sets the actual rate by regulation in Title 3 of the California Code of Regulations (3 CCR) section 6386 (Established Rate).

⁹ FAC section 12841.1(a) requires an additional assessment be collected on sales of all pesticides, except those labeled solely for home, industrial, or institutional use. Therefore, a pesticide label that contains any "agricultural use" sites and applications will be subject to the additional mill assessment.

C. Guiding Principles

Crowe developed principles to guide the development of recommendations and proposed implementation plan presented in this report. Crowe introduced the guiding principles, presented in **Exhibit 7**, to DPR and interested stakeholders earlier in the study. The guiding principles reflect key themes emerging from Crowe’s program analysis, research, and stakeholder consultation over the course of the last year as part of the Mill Assessment Study.

Exhibit 7 Mill Assessment Study Guiding Principles

Principle	Description
Provide a sustainable long-term funding source for the department	Our recommendations consider the sustainability of the mill assessment to continue to provide a long-term funding solution for proposed options. In addition, our recommendations account for potential fiscal impacts to DPR, CACs, and CDFA as they work together to support the state’s transition to safer, more sustainable pest management.
Incentivize safer, more sustainable pest management	Our recommendations consider options that support DPR and CDFA’s initial actions to support implementation of the SPM Roadmap. We also consider the behavioral and economic factors that may incentivize pesticide usage decision-making within the marketplace to support the state’s transition to safer, more sustainable pest management.
Align with the department’s mission, emerging priorities, and legal requirements	Our recommendations consider that any changes to the mill rate and structure must align with the department’s mission, emerging priorities, and legal requirements.
Support alignment of the department and CACs’ programmatic activities with appropriate funding sources	Our recommendations consider the alignment of the department and CACs’ workload activities with appropriate funding sources. We reviewed DPR’s funding authorities, current and future programmatic needs based on workload, and the department’s functional accounting methodology to prepare recommendations guided by this principle.
Support the availability of tools, technologies, and practices to address the diverse pest management needs in the State	Our recommendations consider how the mill assessment may affect the availability of effective tools, technologies, and practices to address California’s diverse pest management needs.
Incorporate objective measures	Our recommendations reflect an in-depth analysis of potential alternative criteria to determine the mill assessment rate and structure. Our recommendations reflect the principle that the mill assessment rate and structure should be clear, fair, science-based, and objective.
Minimize the potential for unintended consequences	Our recommendations carefully account for intended and unintended consequences based on research, analysis, and feedback provided by stakeholders over the course of the last year.
Foster transparency	In developing our recommendations, we strived to clearly explain and demonstrate the reasoning and methods for our recommended proposal options, including design, usage, and implementation options.
Minimize administrative burden	Our recommendations account for the feasibility and resource demands through implementation.
Allow for re-evaluation and refinement	The last guiding principle relates closely to providing a sustainable long-term funding source for the department. Our recommendations represent one approach to supporting the DPR, CACs, and CDFA at this time. We recognize the potential need for additional revaluation of the mill assessment once Priority Pesticides are identification has begun as part of the SPM Roadmap process.

D. Mill Alternatives Concept Paper

In December 2022, Crowe released the Mill Alternatives Concept Paper (Concept Paper) outlining mill design, usage, and implementation considerations for review and feedback by DPR and interested stakeholders to support the development of mill recommendations. Below is a description of the considerations described in the Concept Paper:

- **Design considerations** address the legal authority of the mill, how the mill is set initially and, in the future, the structure of the assessment, alignment of the assessment, and approaches to revenue stabilization.
- **Usage considerations** address how revenue from the mill is utilized by DPR, CACs, and CDFA, clarifying the types of programs to be funded, including alternatives that would utilize mill revenues to positively incentivize sustainable pest management activities.
- **Implementation considerations** address the timing of the mill assessment implementation and how mill revenue is monitored and adjusted over time. More broadly, we also consider how mill revenue is integrated with DPR’s other funding sources within implementation.

Exhibit 8 provides an overview of mill considerations raised in the Concept Paper that we asked DPR and its interested stakeholders to provide feedback on. In *Section 3*, we provide our recommendations related to mill design, in *Section 4*, we provide our recommendations related to mill usage, and finally, in *Section 5*, we provide our recommendations related to mill implementation. In each of these sections we summarize stakeholder feedback on these considerations along with our rationale to support recommendations on mill design, usage, and implementation.

Exhibit 8 Overview of Mill Concepts

Design	Setting <ul style="list-style-type: none"> • In Statute and Regulation • Alignment with Statutory Mandates and Regulation • Alignment with Program Expenditures • Alignment with Sustainable Pest Management (SPM) • Revenue Stabilization 	Structure <ul style="list-style-type: none"> • Tiered Rate vs. Flat Rate • Reserve Mechanism
	Usage	Funding for Programmatic Needs <ul style="list-style-type: none"> • Program Core Needs • Program SPM Needs • County Agricultural Commissioner (CAC) Needs • Other Needs
Implementation	Timing <ul style="list-style-type: none"> • Phased In • One-Time • Review, Monitoring, and 	Funding Source <ul style="list-style-type: none"> • Mill Funding • Registration Funding • Licensing and Certifying Funding • General Fund • Other: AB32, U.S. EPA

Mill Design Considerations

- **Setting** – Refers to the mechanism by which the mill is formally established, alignment of the mill, level of the mill, and extent to which the mill provides a stable revenue source. It answers the following questions:
 - Is the mill assessment set in statute, or authorized in statute and set in regulation?
 - Is the mill aligned with statutory mandates, regulation, program expenditures, and incentivizing SPM?
 - Is the mill set to provide a stable revenue source?
- **Structure** – Refers to the basic construction of the mill:
 - Is it set at a single value?
 - Is it set at multiple different values based on established criteria (e.g., tiered)?
 - Does the mill structure provide for a funding reserve?

Mill Usage Considerations

- **Programmatic Needs** – Defines how, and to what extent, mill revenues are utilized to cover DPR's programmatic needs. This includes how mill revenue could be utilized to further DPR's objective of incentivizing safer sustainable pest management:
 - What portion of unbudgeted core programmatic needs are funded by the mill?
 - What portion of future SPM programmatic needs will be funded by the mill?
 - At what level does the mill support CACs?
 - What other needs are funded by the mill?
- **Positive Incentives** – Considers how mill revenue could be utilized to support DPR's goal of safer sustainable pest management:
 - How does mill funding support and/or incentivize safer, more sustainable pest management?
 - How does the mill support research, education, and/or grants to inform new pest management approaches?

Mill Implementation Considerations

- **Timing** – Considers practical aspects of how the mill is implemented, monitored, and adjusted over time:
 - Is there a built-in structure to adjust the mill in the future?
 - Is the mill assessment implemented in a phased approach or as a one-time change?
 - What is the process to review and monitor the mill assessment over time?
 - Is there a mechanism to adjust the mill assessment over time?
 - How are stakeholders involved in the review process?
- **Funding Source** – Considers mill revenue within DPR's overall funding sources, including potential new sources of funding:
 - How does mill revenue contribute to DPR's overall mix of funding?
 - How do changes to mill revenue levels impact other current and potential DPR funding sources?

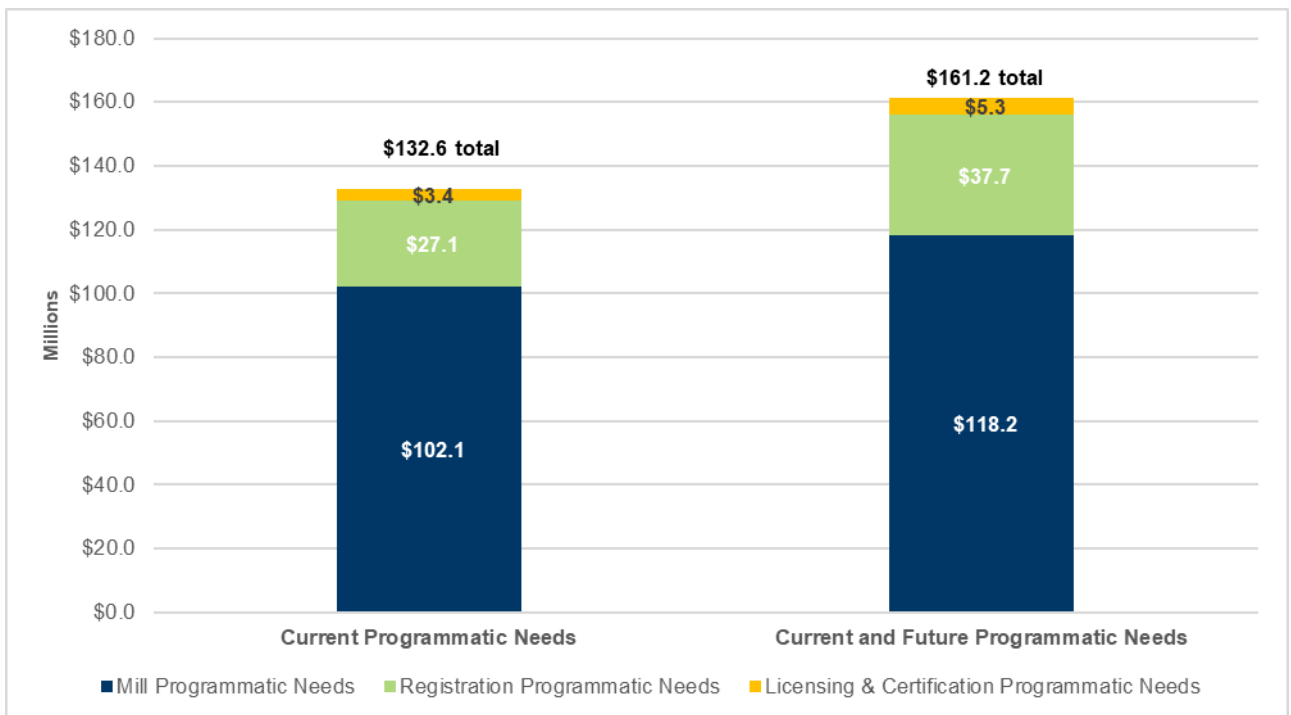
E. Workload Analysis Results

In February 2023, Crowe released a Workload Analysis Report (Workload Analysis) identifying the department’s estimated level of funding to support its overall programmatic needs for mill-related responsibilities, as shown in **Exhibit 9**. Below is a summary of key findings:

- Current Programmatic Needs:** DPR’s current programmatic needs reflected in its FY2022/23 budget for mill related responsibilities total approximately \$102.1 million – nearly 80 percent of \$132.6 million in needs supported by the Department of Pesticide Regulation Fund. This includes approximately \$47.1 million to support personnel services related expenditures (i.e., support for authorized positions) and approximately \$55.0 million to support other expenditures, including CACs (\$34.7 million), operating and equipment expenditures (\$11.8 million), external agency fund users¹⁰ (\$4.4 million), and shares of pro rata and supplemental pension obligations (\$4.1 million).
- Future Programmatic Needs:** DPR’s future programmatic needs based on the Workload Analysis, total approximately \$16.1 million for its mill related responsibilities. This includes approximately \$2.8 million in estimated needs to support the early implementation of the SPM Roadmap.

DPR’s current and future programmatic needs for mill-related responsibilities, including initial estimated programmatic needs to support the implementation of the SPM Roadmap, total \$118.2 million. This equates to a 16 percent increase in overall programmatic needs. It is important to note that Crowe’s Workload Analysis did not account for additional mill funding to support the department’s other future needs, including \$6.1 million for IPM grants and \$1.0 million for environmental monitoring equipment. These are accounted for in Crowe’s proposal recommendations within the next section.

Exhibit 9
Summary Comparison of Estimated Current and Future Programmatic Needs



¹⁰ External agency fund users include California Environmental Protection Agency (CalEPA), California Department of Toxic Substances Control, California Department of Resources Recycling and Recovery, California Office of Environmental Health and Hazard Assessment, California Department of Public Health, and Commission on State Mandates.

2. Proposal Recommendations

This section provides our proposal recommendations based on our comprehensive examination of the mill assessment. This section is organized as follows:

- A. *Recommended Proposal Options and Key Assumptions*
- B. *Sustainability of Mill Assessment Revenue to Support Recommended Proposal Options*
- C. *Appropriateness of the Mill Assessment to Support Recommended Proposal Options.*

A. Recommended Proposal Options and Key Assumptions

We recommend proposal options based on identified mill-related programmatic needs that support DPR, CACs, CDFA, and the transition to safer, more sustainable pest management. In **Exhibit 10**, we identify estimated minimum revenue and incremental rates requirements to support recommended proposal options.

DPR Programmatic Needs

We recommend a proposal option that, at a minimum, supports DPR's overall programmatic needs for its mill-related responsibilities totaling approximately \$125.3 million. This supports the department's current programmatic needs totaling \$102.1 million based on its FY2022/23 authorized budget and future programmatic needs totaling \$23.2 million.

The department's current programmatic needs totaling \$102.1 million supports approximately \$47.1 million for personal services related expenditures (i.e., support for authorized positions) and approximately \$55.0 million for other needs including CACs (\$34.7 million), operating and equipment expenditures (\$11.8 million), external agency fund users (\$4.4 million), and shares of pro rata and supplemental pension obligations (\$4.1 million).

The department's future programmatic needs totaling \$23.2 million includes \$16.1 million in future programmatic needs, including approximately \$2.8 million in estimated needs for the early implementation of the SPM Roadmap, identified by our Workload Analysis. The department's future programmatic needs also include \$6.1 million to support the department's Integrated Pest Management (IPM) grants and \$1.0 million to support environmental monitoring.

CACs' Programmatic Needs

CACs' current programmatic needs for mill-related responsibilities include maintaining the existing mill allotment criteria pursuant to FAC Section 12844 and CCR 6393, which generates nearly \$35.0 million per year to support local pesticide usage enforcement programs. To support CACs' future programmatic needs, we recommend a proposal option that maintains the existing mill allotment criteria and up to approximately \$10.2 million¹¹ that provides as-needed funding (separate from the existing mill allotment criteria) to support individual County authorized needs (e.g., project, personnel, stakeholder engagement support, other funding, etc.) for local pesticide usage enforcement workload activities and administration priorities.

¹¹ \$10.2 million is a rough estimate of potential as-needed funding that could be allocated based on individual County needs, which are to be determined.

Exhibit 10
Recommended Proposal Options
Estimated Minimum Revenue and Incremental Rate Requirements¹²

Mill Options	Minimum Revenue Requirements	Incremental Rate Requirements	Descriptions
A. Current Mill	\$94.5 million	\$0.0215	Reflects a combined rate based on \$0.021 applied to all products and an additional \$0.00075 applied to ag products.
B. DPR Current Programmatic Needs	\$9.7 million	\$0.0022	Requires a \$0.0022 adjustment to the existing mill rate to generate \$9.7 million. This additional revenue would fully support DPR’s current programmatic needs based on its FY2022/23 budget totaling \$102.1 million, which includes revenue to support CACs existing mill allotment criteria.
C. DPR Future Programmatic Needs	\$23.2 million	\$0.0053	Requires a \$0.0053 adjustment to the existing mill rate to support DPR’s future programmatic needs totaling \$23.2 million. This option would support \$16.1 million in resources (including \$2.8 million for SPM-related resources), \$6.1 million in integrated pest management (IPM) grants, and \$1.0 million to support environmental monitoring.
D. CAC Future Programmatic Needs	\$10.2 million	\$0.0023	Requires a \$0.0023 adjustment to the existing mill rate to support up to \$10.2 million in as-needed funding for CAC pesticide usage enforcement workload activities and administration priorities.
E. CDFA Future Programmatic Needs	\$0.8 million	\$0.0002	Requires a \$0.0002 (equivalent to \$0.00029 to ag sales) rate to generate roughly \$800,000 to support CDFA’s future programmatic needs for the OPCA. This additional revenue would fully support CDFA’s OPCA current and future programmatic needs totaling roughly \$2.9 million.
F. SPM Programmatic Needs	\$11.0 million	\$0.0025	Requires a \$0.0025 adjustment to the existing mill rate to support \$11.0 million in initial additional funding for mill-related SPM programmatic needs identified by/aligned with the Sustainable Pest Management Roadmap for California . ¹³
Total	\$149.3 million	\$0.0339	<i>Note: this summary presents rounded values</i>

¹² Based on FY2021/22 pesticide product sales revenue totaling approximately \$4.4 billion.

¹³ The Sustainable Pest Management Roadmap for California Roadmap (SPM Roadmap) was developed over the course of nearly two years by a diverse group of stakeholders representing conventional and organic agriculture, urban environments, community and environmental groups, tribes, researchers, and government. The SPM Roadmap charts the course for accelerating the state’s systemwide transition to sustainable management and eliminating and replacing of prioritized high-risk pesticides by 2050.

CDFA Programmatic Needs

CDFA's overall programmatic needs for its mill-related responsibilities conducted by OPCA total roughly \$2.9 million. CDFA currently receives an average of roughly \$2.1 million annually from the mill assessment and would need roughly \$800,000 in additional mill revenue to support its overall programmatic needs for its mill-related responsibilities conducted by OPCA.

The department's current programmatic needs for its mill-related responsibilities totaling \$1.8 million support approximately \$772,000 for personal services related expenditures, approximately \$800,000 for regulatory analyses¹⁴ and \$184,000 in related department overhead and staff travel, professional development, and equipment.

The department's future programmatic needs for its mill-related responsibilities totaling \$1.1 million support approximately \$156,000 for personal services related expenditures, approximately \$400,000 for regulatory analyses, \$500,000 in competitive grants and direct source for IR-4 reduced risk pesticide tools for specialty crops, and \$36,000 in related department overhead and staff travel, professional development, and equipment.

CDFA is requesting an increase in the ceiling to its mill assessment for future use, but not an immediate increase in assessment revenue. We recommend a proposal option that supports CDFA's current programmatic needs to account for increases in costs of existing CDFA personnel and anticipated increases in costs for University of California regulatory analyses grants, as well as its future programmatic needs to support the early implementation of the SPM Roadmap.

SPM Programmatic Needs

We recommend a proposal option that would provide a funding mechanism (e.g., an additional 2.5 mill generating up to approximately \$11.0 million annually) to support priority actions identified by/aligned with the SPM Roadmap. This option would support the state's transition to safer, more sustainable pest management practices across the state of California. The additional funding could support priority actions implemented by DPR or its partners, including University of California, California State University, CACs, and CDFA, with specific allotments and activities to be determined.

Key Assumptions

Below are key assumptions of our recommended proposal options:

- The recommended proposal options reflect DPR, CACs, CDFA, and initial SPM programmatic needs, which are aligned and authorized with existing funding authorities.
- The existing mill rate of \$0.0210 applied to all products and \$0.00075 applied to agricultural product sales would need to be increased to support the recommended proposal options to generate the minimum revenue requirements.
- For the next several years, DPR would implement a flat rate versus a tiered rate to support the recommended proposal options.
- Adjustments to the flat rate would be phased-in over time to appropriately support programmatic needs authorized through the annual budget process.
- DPR could implement a tiered rate option once Priority Pesticides have been identified as part of the SPM Roadmap process. At that point, DPR could consider establishing higher mill assessments on Priority Pesticides and reduced mill assessments on certain lower-risk products. In *Appendix D*, we provide additional rationale to support this assumption.

¹⁴ To assess the pest management and fiscal impacts of proposed DPR regulations on producers. Awards go to UC Cooperative Extension researchers and UC/CSU agricultural economists who work with OPCA on analyses. As feasible, special awards go to fill areas with information gaps such as the cost and use of non-chemical controls, the potential of pesticides to affect soil emissions, and cost studies for various crops. These costs vary annually.

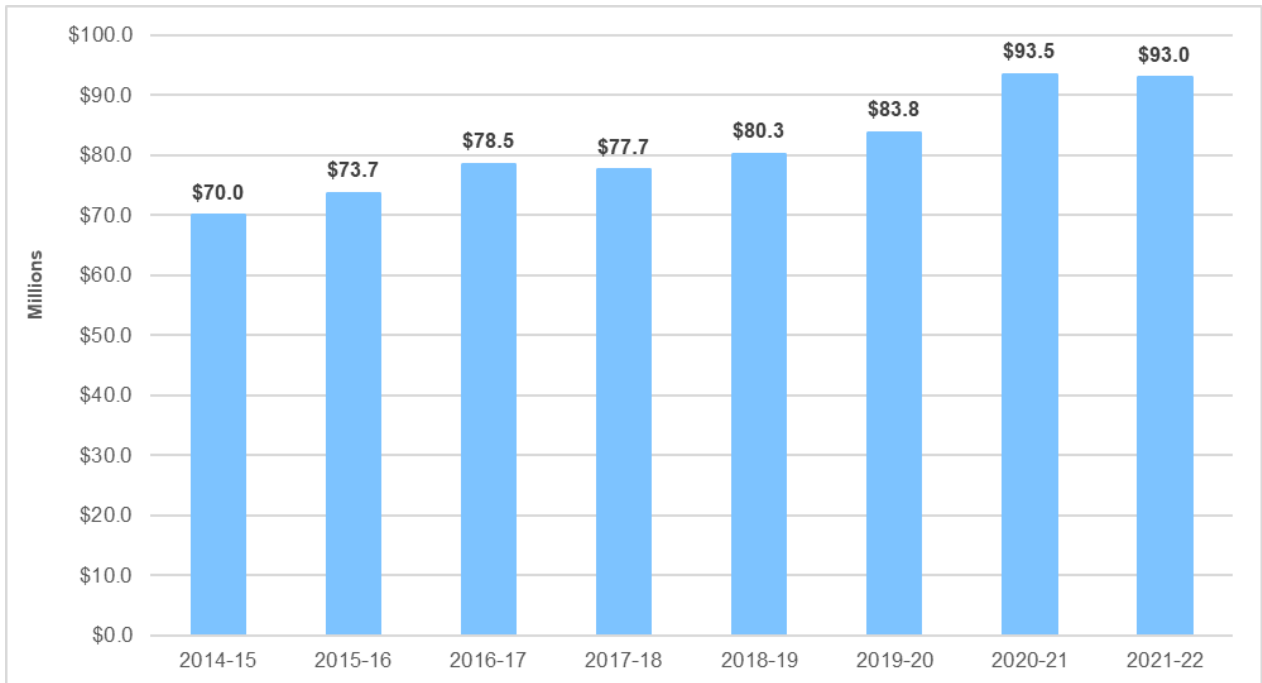
B. Sustainability of Mill Assessment Revenue to Support Recommended Proposal Options

The recommended proposal options outlined in Exhibit 10 require minimum rates that will provide sustainable and long-term funding to support DPR, CACs, CDFA, and the transition to safer, more sustainable pest management. To assure that the mill can continue to sustainably support the recommended proposal options, Crowe examined historical mill revenues generated from pesticide product sales at the existing rate along with other factors that may potentially impact future mill revenues. Below is a summary of our findings:

Historical Mill Revenues

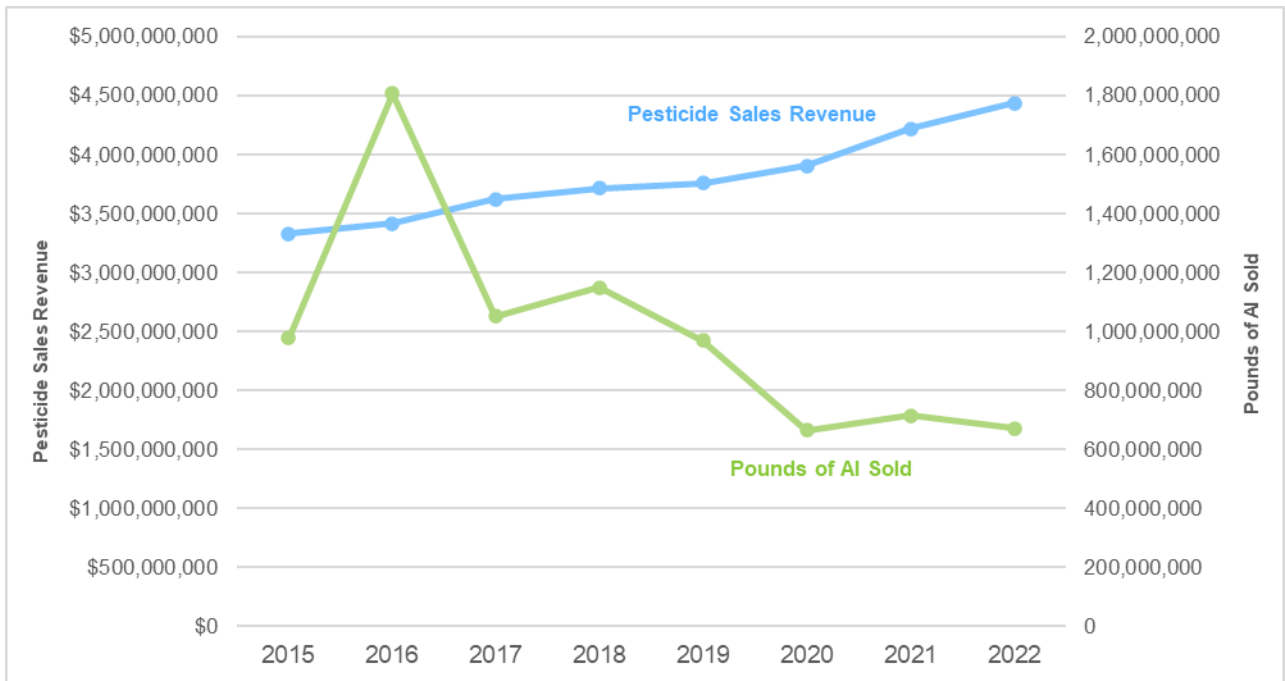
Historical mill revenue trends are consistent with approximately pesticide product sales (dollars) trends. Mill revenue has increased from \$70.0 million to \$93.0 million or 30 percent from FY2014/15 to FY2021/22, as shown in **Exhibit 11**. Mill revenues decreased by a half percent in FY2021/22, which is 16 percent higher than pre-pandemic levels in FY2018/19 and 33 percent higher than FY2014/15 levels. From FY2014/15 to FY2021/22, mill revenues only exceeded the department’s mill related expenditures in FY2021/22. Note the mill revenue trends reflected in Exhibit 11 only account for mill revenue generated at the current mill rate of \$0.021 applied to all products. CDFA generates roughly \$2.1 million per year from the \$0.00075 mill rate applied to ag-related products.

Exhibit 11
Mill Revenue Generated from Pesticide Product Sales
FY2014/15 to FY2021/22



According to MillPay records¹⁵, historical pesticide product sales trends, shown in **Exhibit 12**, demonstrate pesticide product sales revenue continue to increase despite reductions in pesticide quantity sold (measured as pounds of active ingredients). From 2015 to 2022, pesticide quantity (measured as pounds active ingredient sold) has decreased on average, 4 percent each year totaling approximately 30 percent over the course of the last eight calendar years. However, due to increased cost per pound sold, pesticide product sales revenue has increased, on average, 5 percent each year, totaling approximately 30 percent over the course of the last eight calendar years.

Exhibit 12
Pesticide Sales Revenue and Pounds of Active Ingredients Sold
CY2015 to CY2022



¹⁵ Data is based on information obtained from a system of self-reporting.

Future Mill Revenues

Future mill revenues will be dependent on a variety of factors that may impact the supply and demand of pesticide products, which would then influence future sales trends for those pesticide products. Key factors include but are not limited to: pesticide product innovation, new technology, regulatory and policy changes including transitioning to safer and sustainable pest management approaches, consumer preferences, force majeure events (e.g., pandemics, supply chain disruptions, and escalatory inflationary trends), population shifts, climate change, and others.

Economic studies¹⁶ to date have indicated pesticides are inelastic indicating that even when pesticide prices increase, demand remains relatively stable. One of the reasons that pesticide products are inelastic is likely a real or perceived lack of substitutes. As the state fully implements the SPM Roadmap, the knowledge and availability of alternatives could lead to greater elasticity and price sensitivity. While some factors such as regulatory changes, transitioning to safer and sustainable pest management, consumer demand for organic and sustainably produced foods might suggest a decrease in pesticide sales revenue, several other factors (e.g., inflation, population increases, higher crop values, invasive species) may contribute to an increase in revenue.

As a result, we expect that mill revenue will be relatively stable for at least the next five to ten years based on historical trends and expected timeline to fully implement SPM Roadmap priorities. The longer-term impacts of the state's transition to safer and sustainable pest management on mill revenue are uncertain. Therefore, we recommend that the department examine the mill assessment every five (5) years to assure that DPR's primary funding mechanism continues to provide a stable revenue source. It is also a best practice to review regulatory fees on a routine basis.

Sustainability of Mill Revenue

Based on these findings and the detailed analysis presented in *Appendix E*, we found that for the next five to ten years mill revenue is likely a sustainable funding source to support the recommended proposal options using the corresponding minimum rates, shown in **Exhibit 13**, ranging from the existing \$0.0215¹⁷ rate up to a fully phased-in rate of \$0.0339.

In **Exhibit 14**, we provide minimum rate requirements under seven (7) pesticide product sales scenarios assuming FY2021/22 product sales up to +/- 20 percent of FY2021/22 product sales revenue. Based on historical trends, it is likely that the lowest revenue scenario would be that sales decrease up to 5 percent in the near term (e.g., five-year period) as market impacts from the pandemic subside.

¹⁶ Böcker, T. G., & Finger, R. (2017). A Meta-Analysis on the Elasticity of Demand for Pesticides. *Journal of Agricultural Economics*, 68(2). <https://doi.org/10.1111/1477-9552.12198>. This article summarized 31 different studies of pesticide sales elasticity, focusing on pricing changes rather than policy impacts on pesticide demand.

¹⁷ Reflects a combined rate based on \$0.021 applied to all products and an additional \$0.00075 applied to ag products to support CDFA's OPCA.

Exhibit 13
Minimum Rate Requirements to Support Recommended Mill Proposals

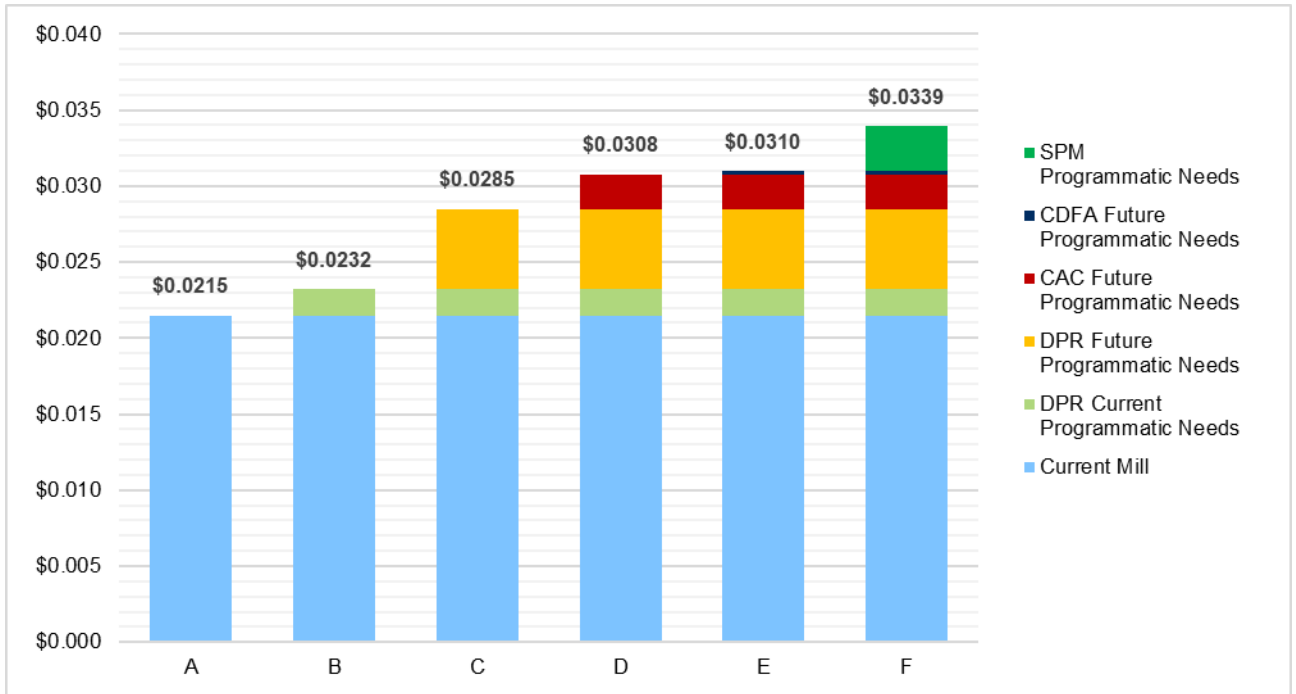
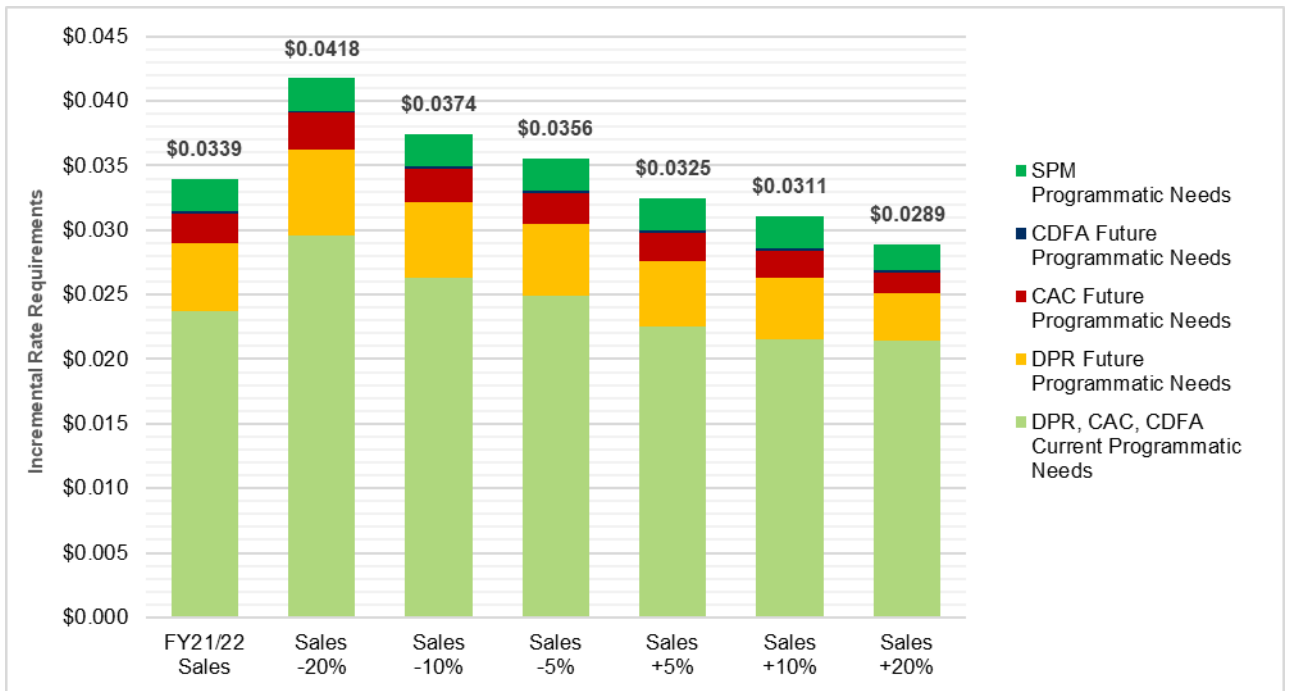


Exhibit 14
Minimum Rate Requirements Under Different Pesticide Sales Scenarios



C. Appropriateness of the Mill Assessment to Support Recommended Proposal Options

In this subsection, we first provide background on the appropriateness of the mill assessment to support DPR, CACs, CDFA, and the state's transition to safer, more sustainable pest management. We then provide specific rationale to justify why the mill assessment is the appropriate funding source to support the recommended proposal options. We conclude by providing additional rationale to justify why the General Fund and other funding sources are not appropriate funding sources to support the recommended proposal options.

Appropriately Funding Pesticide Programs and Administration

Twenty years ago, the Legislature¹⁸ asked DPR and its stakeholders to respond to the following question – *What is the appropriate mix of general funds and special funds, including the pesticide mill assessment, to support the department's activities?* We revisited this question as part of our study to provide context that could assure the appropriateness of the mill assessment to support the recommended proposal options.

In its FY1992/93 review of the DPR's budget, the LAO recommended:

- *“regulatory fees are an appropriate way of financing programs that prevent the use or degradation of public resources by private entities”*
- *“the use of pesticides potentially can result in social costs by harming the public health and the environment”*
- *“to minimize the social costs from the use of pesticides, DPR regulates the use of pesticides in the state. As a result, the costs of regulating the use of pesticides should appropriately be funded from regulatory assessments, not from the General Fund, because it requires the people that potentially damage public resources to pay for regulating the risk that their activities impose on the public.”*

The LAO's recommendations are consistent with the extended producer responsibility (EPR) model. This model is a widely accepted approach for allocating the costs of regulation and is embedded in major pollution control laws, such as the Clean Air Act, Clean Water Act, and the Resource Conservation and Recovery Act. Like DPR, many departments within CalEPA follow this model and assess fees on responsible parties to support state regulatory programs.

The EPR model suggests responsible parties should bear the regulatory costs associated with managing and mitigating the potential harm to human health and the degradation of environmental resources, such as air, water, and soil. Based on our research, we found that the EPR model supports the appropriateness of regulatory fees (i.e., the mill assessment) to support DPR's Pesticide Programs and Administration due to:

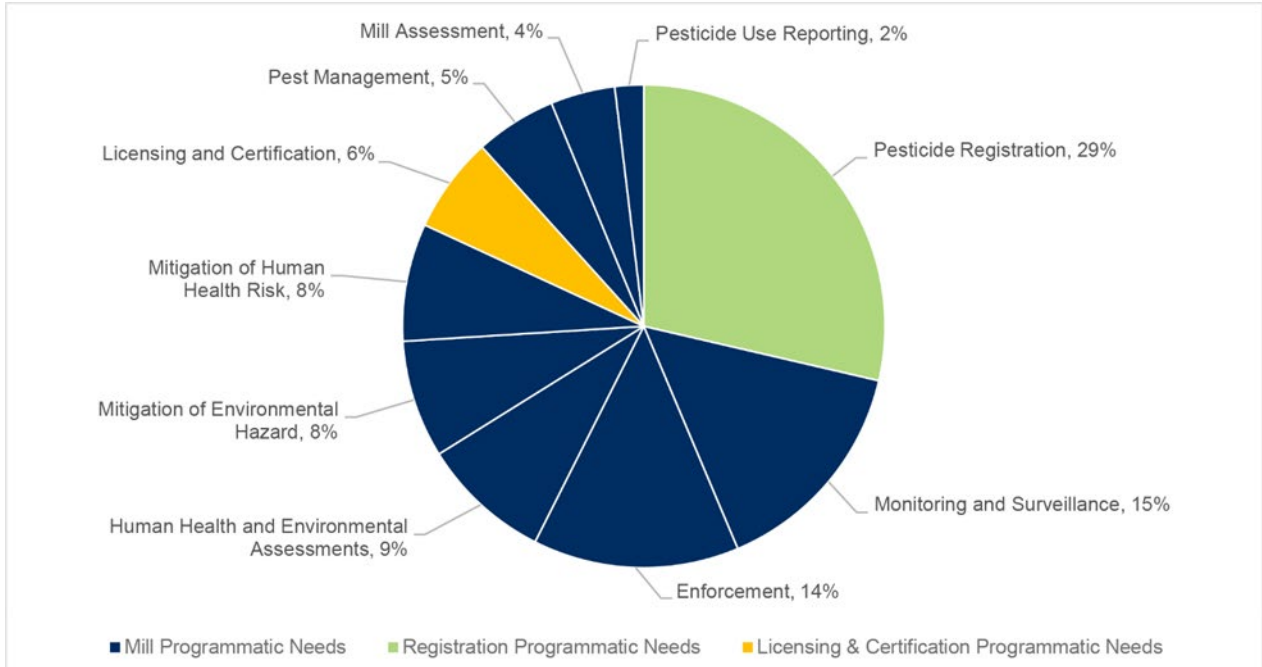
- **Cost internalization:** The EPR model encourages parties to internalize the external costs of health and environmental impacts. By requiring parties to pay regulatory fees, the model potentially incentivizes parties to reduce potential harm to human health and the environment and to invest in cleaner alternatives to minimize their costs.
- **Fairness and equity:** The EPR model promotes fairness by ensuring that those whose products may harm human health or public resources bear the costs of mitigating its effects, rather than passing them on to the public or other stakeholders. This approach prevents non-polluting parties from being unfairly burdened with the costs of environmental regulation.
- **Efficient resource allocation:** The EPR model can lead to more efficient resource allocation by providing a direct economic incentive to reduce the degradation of public resources. This can result in lower overall degradation levels and improved environmental outcomes.

¹⁸ Pursuant to Assembly Bill 780 (Thomson, Chapter 523, Statutes of 2001). In accordance with AB780, the DPR issued a report to the Legislature in January 2003 titled *Funding California's Pesticide Regulatory Program*.

- **Revenue generation for environmental initiatives:** Regulatory fees collected from producers can be used to fund environmental initiatives, such as monitoring activities, research and development of technologies, or enforcement activities. This approach ensures that resources are available for environmental protection and sustainable development.
- **Dynamic incentives:** The EPR model provides an ongoing incentive for businesses to innovate and adopt cleaner technologies, as the cost of degradation remains directly linked to their operations. This can lead to continuous improvements in environmental performance over time.

The department's funding aligns with the EPR model – it collects regulatory fees to support its Pesticide Programs and Administration, which are required by statute and regulation to enforce, monitor, assess, and mitigate potential degradation to human health, the environment, and the economy due to the use of pesticides. DPR's mill related responsibilities supported by the mill assessment represent 65 percent of the department's estimated distribution of its authorized programmatic functions, as shown in **Exhibit 15**. DPR's authorized programmatic functions for its mill-related responsibilities include: Monitoring and Surveillance (15%), Enforcement (14%), Human Health and Environmental Assessment (9%), Mitigation of Human Health Risks (8%), Mitigation of Environmental Health Risks (8%), Pest Management (5%), Mill Assessment (4%), and Pesticide Use Reporting (2%). DPR's registration programmatic function supported by registration fees accounts for 29% of the department's overall authorized programmatic functions and its licensing and certification function supported by licensing and certification fees accounts for 6% of its overall functions.

Exhibit 15
Pesticide Programs and Administration
FY2022/23 Distribution of Authorized Functions



Appropriately Funding Recommended Proposal Options

In addition to the appropriateness of regulatory fees (i.e., the mill assessment) to support DPR's Pesticide Programs and Administration, we also identified concerns that the General Fund is not a sustainable nor appropriate funding source to support the recommended proposal options for the following reasons:

- **Volatility of General Fund allocations:** The General Fund is highly sensitive to economic fluctuations and can vary significantly from year to year. Depending on the economic climate, the available funds for DPR's mill-related programmatic needs could be severely impacted during downturns, making it difficult to maintain consistent program operations and potentially compromising the effectiveness of the programs.
- **Competition for limited resources:** California agencies compete for the General Fund each year. In FY2023/24, the General Fund is budgeted to decrease funding to seven (7) out of 11 funding groups – general funding for Environmental Protection is budgeted to decrease roughly 7 percent and general funding for Natural Resources is budgeted to decrease nearly 40 percent from FY2022/23. This competition for General Fund can be significant, especially during periods of economic distress or when there are urgent funding priorities in other areas, such as healthcare or education. In such scenarios, DPR may not receive the necessary funding for its mill-related programmatic needs, which could jeopardize program success.
- **Unpredictability of funding:** Relying on the General Fund for DPR's mill-related programmatic needs would subject the programs to the uncertainties of the annual budgeting process. This unpredictability can make long-term planning and resource allocation challenging, potentially hindering the effectiveness of the programs and their ability to achieve their goals.
- **Potential loss of funding priority:** DPR's mill-related programmatic needs might not always be considered a priority for the state, especially when faced with other pressing issues or emergencies. In such cases, the allocation of General Fund resources to higher-priority areas could result in reduced or insufficient funding for DPR's programs, potentially compromising their effectiveness.

Using the General Fund to support the recommended proposal options might negatively impact the stability, effectiveness, and long-term success of DPR's programs. Therefore, we recommend the mill assessment rather than the General Fund as the more appropriate funding source to support the recommended proposal options. In *Section 5*, we provide stakeholder feedback and additional rationale to support this recommendation. Note that different considerations may apply in evaluating the appropriate funding source(s) for full implementation of the SPM Roadmap. The SPM Roadmap notes that its implementation will require significant public funding to implement. Accordingly, Crowe's recommendation to use the mill assessment rather than the General Fund or other sources to support DPR's Pesticide Programs and Administration and related SPM work should not be read as a recommendation not to consider use of other sources to support the full implementation of the SPM Roadmap.

3. Design Recommendations

This section provides our recommendations and justification for those recommendations related to mill design (i.e., how the mill assessment is set and structured). The mill’s design is foundational to how the mill can effectively serve as a sustainable funding mechanism to support the recommended proposal options.

A. Recommended Mill Setting Options

Mill setting addresses how the mill is legally established (e.g., in statute, in regulation), how the mill aligns with DPR’s statutory mandates, regulations, and programmatic expenditures, and at what rate(s) the mill is set to provide a stable revenue source.

Legal Authority

There are two options related to the legal authority of the mill. As illustrated in **Exhibit 16**, these options include: 1) the mill assessment level and structure are set in statute, and 2) the overall directive of the mill is set in statute, but the mill assessment level and structure are set in regulation. In **Exhibit 17**, we provide stakeholder feedback, our recommendations, and rationale for mill setting options.

Exhibit 16
Legal Authority Options for Mill Setting

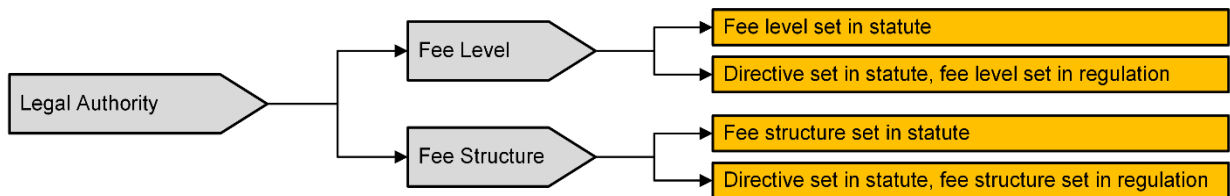


Exhibit 17
Recommended Options for Setting the Mill Assessment

Stakeholder Feedback	Recommendations	Rationale
Is the mill assessment level and structure set in statute, or authorized in statute and set in regulation?		
<p>Some stakeholders recommended that there should be no cap set in statute to provide DPR with the flexibility when setting the mill rate.</p> <p>Some stakeholders felt strongly about the need for Legislative oversight and public engagement. There is concern among some stakeholders that DPR could “fast track” mill assessment increases if the mill was set by regulation. Many stakeholders consider that the mill assessment is a tax that would require a 2/3 vote of the Legislature.</p>	<p>We recommend that the maximum and minimum mill assessment levels be authorized and defined in statute in the Food and Agricultural Code (FAC).</p> <p>We recommend that the mill assessment structure, allowing for a flat or tiered rate, be authorized, and defined in statute in the FAC.</p> <p>We recommend that the Director set the current rate and structure in regulation through the California Code of Regulations (CCR).</p>	<p>Crowe researched government assessment setting best practices and reviewed comments from DPR stakeholders. We found that establishing the mill in statute provides a greater degree of oversight and accountability to the Legislature and Department of Finance. Establishing the mill in regulation provides more flexibility to adjust the mill, although the regulatory process also provides for comment and review.</p> <p>At the federal level, the GAO reports an agency has greater flexibility when they can set an assessment by regulation as compared to when an assessment is set in statute. Conversely, there is more legislative oversight and accountability when the assessment is set by legislation. Those stakeholders that provided input to the question of legislative authority favored that a minimum or maximum mill level and general structure be set in statute with the requirement to set and change the assessment within these boundaries in regulation.</p> <p>The recommended legal authority, with a maximum cap, is consistent with the current mill assessment: FAC Section 12841.1 establishes the maximum rate and a default rate and Title 3 of CCR Section 6368 establishes the rate.</p> <p>Establishing the maximum and minimum mill assessment levels and structure in statute enables legislative oversight and enhanced accountability. The mill assessment would likely require a 2/3 vote under Proposition 26 requirements.</p> <p><i>Our recommendation is consistent with guiding principles to foster transparency and allow for re-evaluation and refinement.</i></p>

Stakeholder Feedback	Recommendations	Rationale
Is the mill assessment aligned with statutory mandates, regulation, program expenditures, and incentivizing SPM?		
<p>Stakeholders hold divergent opinions related to mill alignment. Among some stakeholders, there is a perception that DPR is stepping outside of their regulatory mandate. Among other stakeholders, there is a perception that DPR is well within their regulatory mandate and in fact should be doing more within their mission to protect human health and the environment.</p>	<p>FAC Section 11501 sets forth DPR's six (6) primary mandates, listed in Exhibit 19. Crowe's Workload Analysis confirmed that DPR's current and future programmatic needs are aligned with these mandates and statutory and regulatory requirements.</p>	<p>Crowe's Workload Analysis, released in February 2023, provides a detailed summary of DPR's activities across ten pesticide program functions. Our analysis identified current and future programmatic needs aligned with statute, mandates, regulations, and program expenditures. It also identified future funding needs to be funded by the mill assessment, registration fees, and licensing fees.</p> <p><i>Our recommendation is consistent with the guiding principle to support alignment of the department and CACs' workload activities with appropriate funding sources.</i></p>
Is the mill assessment set to provide a stable revenue source?		
<p>Universally, stakeholders supported a "strong DPR" that is adequately funded to meet program mandates. Stakeholders recognized the importance of a sustainable funding source for DPR.</p>	<p>Historical data on pesticide sales revenue and use trends suggests that the mill assessment will provide a stable revenue source for DPR over the next five to ten years. The future impacts of policy and statutory support for the transition to safer and sustainable pest management on mill revenue are uncertain and will take longer to be understood. Broader policy changes as well as future elimination of Priority Pesticides by transitioning to Sustainable Pest Management by 2050 could result in a reduction in overall sales revenue. Regular evaluation and monitoring of mill revenue and expenditures and establishing a maximum mill assessment level in statute that is higher than current anticipated need will provide mechanisms for DPR to adjust the mill as needed.</p>	<p>Crowe provides a detailed analysis of pesticide quantities (measured as pounds of active ingredient (AI), pesticide sales revenue trends, and support of our determination that the mill assessment will provide a stable revenue source for DPR in the next several years, in <i>Appendix E</i>, with key findings summarized in <i>Section 2</i>.</p> <p><i>Our recommendation is consistent with the guiding principle to provide a sustainable long-term funding source for the department.</i></p>

Alignment

Another decision point to consider as part of mill setting (i.e., rate and structure) is assuring it aligns with DPR’s statutory mandates and regulations, illustrated in **Exhibit 18**. DPR’s overall authority is primarily coded and described within the FAC, Divisions 2, 6, and 7. DPR’s regulations are primarily coded within Title 3 CCR. FAC Section 11501 sets forth DPR’s six (6) primary mandates, listed in **Exhibit 19** along with selected authorized mill-related functions performed by the department’s Pesticide Programs and Administration.

Exhibit 18 Alignment and Revenue Stabilization Options for Mill Setting

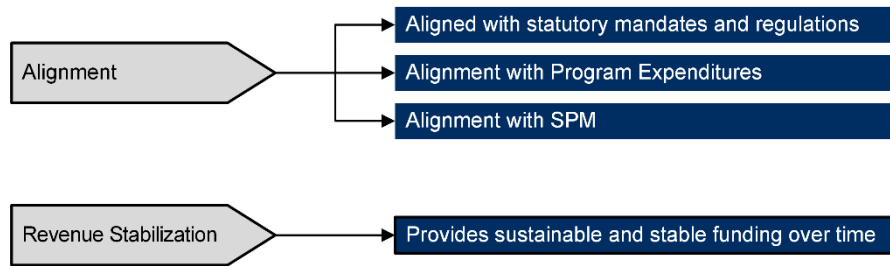


Exhibit 19
DPR’s Primary Mandates Identified in FAC Section 11501 and Selected Functions

FAC Section 11501	Selected Functions
1. To provide for the proper, safe, and efficient use of pesticides essential for production of food and fiber and for protection of public health and safety	<ul style="list-style-type: none"> • Enforcement • Human health and environmental assessments • Monitoring and surveillance • Mitigation of human health risk • Mitigation of environmental hazard • Pest Management • Worker health and safety
2. To protect the environment from environmentally harmful pesticides by prohibiting, regulating, or ensuring proper stewardship of those pesticides	<ul style="list-style-type: none"> • Enforcement • Monitoring and surveillance • Mitigation of human health risk • Mitigation of environmental hazard • Encouraging lower-risk pest management approaches
3. To assure agricultural and pest control workers of safe working conditions where pesticides are present	<ul style="list-style-type: none"> • Enforcement • Mitigation of human health risk • Pest management • Worker health and safety
4. To permit agricultural pest control by competent and responsible licenses and permittees under strict control of DPR and the County Agricultural Commissioners	<ul style="list-style-type: none"> • Enforcement • Mill Assessment
5. To assure consumers and users that pesticides are properly labeled and appropriate for the use designed by the label and that state or local government dissemination of information on pesticide uses of any registered pesticide product is consistent with the uses for which the product is registered	<ul style="list-style-type: none"> • Enforcement • Human health and environmental assessments • Pesticide Use Reporting • Mill Assessment
6. To encourage the development and implementation of pest management systems, stressing application of biological and cultural pest control techniques with selective pesticides when necessary to achieve acceptable levels of control with the least possible harm to the public health, nontarget organisms, and the environment.	<ul style="list-style-type: none"> • Enforcement • Monitoring and surveillance • Pest Management • Human health and environmental assessments

Pesticide Programs protect California’s residents and the environment from adverse pesticide impacts with particular emphasis on the protection of children, vulnerable populations, workers, and communities. DPR’s various branches within its Pesticide Programs, with support from its Administration branches, carry out its mission and mandates, and will be responsible for critical aspects of the SPM Roadmap’s implementation, through ten key programmatic functions, described in **Exhibit 20**.

DPR has utilized these functions for over 20 years to account for the department’s programmatic needs (i.e., personal services, and operating and equipment expenditures) to carry out its statutory requirements. DPR’s programmatic needs for its Administration branches are distributed across these functions. *Appendix B* further profiles key funding authorities for DPR’s Pesticide Programs and Administration.

Exhibit 20
Pesticide Program Functions, Descriptions, and Key Funding Authorities

Function	Description	Key Funding Authorities
1. Pesticide Registration	Pesticides must be registered (licensed) with the state before they can be sold or used in California. DPR uses scientific, legal, and administrative evaluations of a pesticide before its registration. Activities include but are not limited to process and track pesticide product registration and amendment application submissions, coordinate data evaluations, prepare public reports and notices regarding registration decisions and respond to public comments on registration decisions, maintain pesticide label files and data volume archive, maintain pesticide product label database and data index, coordinate human health risk assessment/mitigation process and reevaluations, and provide information on registered pesticides and label instructions to pesticide enforcement agencies and the public.	FAC §12784; FAC §12811; FAC §12812; FAC §12818; FAC §12824; FAC §12825; FAC §12825.5
2. Human Health and Environmental Assessments	Risk assessment including but not limited to the following activities: hazard identification, dose-response assessment, exposure assessment, and preparation of a risk characterization document that assesses potential dietary, workplace, residential, and ambient air exposures.	FAC §11454.1; FAC §13121-13135; FAC §13141-13152; FAC §14004.5; FAC §14021-14027; FAC §12825.5
3. Licensing and Certification	Ensures people selling, possessing, storing, handling, applying, or recommending the use of pesticides are competent and knowledgeable in their safe use. Conducts licensing exams and issues and renews licenses for pest control businesses, pesticide brokers and dealers, dealer designated agents, pest control advisers, pest control pilots, and pesticide applicators.	FAC §11502 and 11502.5; FAC §14006.5-14009; FAC §13186.5; FAC §15201
4. Pesticide Use Reporting	Collects, analyzes, and reports on statewide pesticide use reporting data relating to agricultural use and a subset of non-agricultural use; works with local CACs to ensure data quality; responds to external data inquiries and data requests.	FAC§12979; FAC§13186
5. Monitoring and Surveillance	Pursuant to California law, DPR must continuously evaluate pesticides after they are in use to protect the public and environment. Activities include but are not limited to analysis of hazards and developing pollution prevention strategies, investigation, and evaluation of pesticide illnesses, testing of fresh produce, and various exposure monitoring (including workers and bystanders).	FAC §14006.5-14009; FAC §14010-14015; FAC §12532 and 12534; FAC §12824; FAC §12825.5; FAC §12581; FAC §12671; FAC §12996-13000.1

Function	Description	Key Funding Authorities
6. Mitigation of Human Health Risk	Using scientific data to develop measures that reduce human exposure to pesticides that have unacceptable risks. Activities include but are not limited to reviewing data to assess worker health impacts of pesticide use, developing mitigation strategies, and preparing health and safety recommendations for workers and bystanders for incorporation into regulations and permit conditions.	FAC §11454.1; FAC §13121-13135; FAC §13141-13152; FAC §14004.5; FAC §14021-14027; FAC §12824; FAC §12981; FAC §13129; FAC §14005; FAC §14024
7. Mitigation of Environmental Hazard	Using scientific data to develop measures that protect the environment from potentially adverse effects of pesticides. Activities include but are not limited to developing mitigation strategies, proposing label changes, placing conditions on registration, regulations, and permit conditions.	FAC §13141-13152; FAC §14021-14027; FAC §14005; FAC §14024
8. Pest Management	Pest management assesses the impacts and potential problems resulting from pesticide use, with a focus on preventive solutions that incorporate integrated pest management (IPM). Activities include but are not limited to facilitating adoption of IPM in schools, awarding grants to encourage development and use of alternatives to pesticides, and evaluating pest management practices.	FAC §12841.2; FAC §13183; FAC §13185; FAC §13186.5
9. Enforcement	DPR oversees local enforcement of pesticide use by California Agricultural Commissioners (CACs). DPR's Enforcement Program provides CACs with training, coordination, and technical and legal support. DPR activities also include but are not limited to enforcing federal pesticide tolerances on raw agricultural commodities, issuing enforcement actions, conducting pesticide misuse investigations, developing statewide enforcement priorities and guidance, evaluating CAC performance under annual work plans, and researching and analyzing compliance trends.	FAC §11501.5; FAC §2281; FAC §12581; FAC §12601; FAC §12642; FAC §12991; FAC §12996-13000.1; FAC §11791 and 11792; FAC §11891-11894; BCP §8614 and 8616; BCP §8662
10. Mill Assessment	Ensures pesticide products are registered before sale and use, that they are labeled correctly, and that required assessments have been paid. Activities include but are not limited to inspecting products offered for sale, reviewing labels to ensure they are registered, auditing pesticide sellers, and responding to sellers in violations of requirements	FAC §12841; FAC §12881-12885; FAC §12992; FAC §12993; FAC §12995

B. Recommended Mill Structure Options

Mill structure options for mill design, shown in **Exhibit 21**, account for the basic construction of the mill. In **Exhibit 22**, we summarize stakeholder input, our recommendations, and rationale for mill structure options.

Exhibit 21
Structure Options for Mill Design

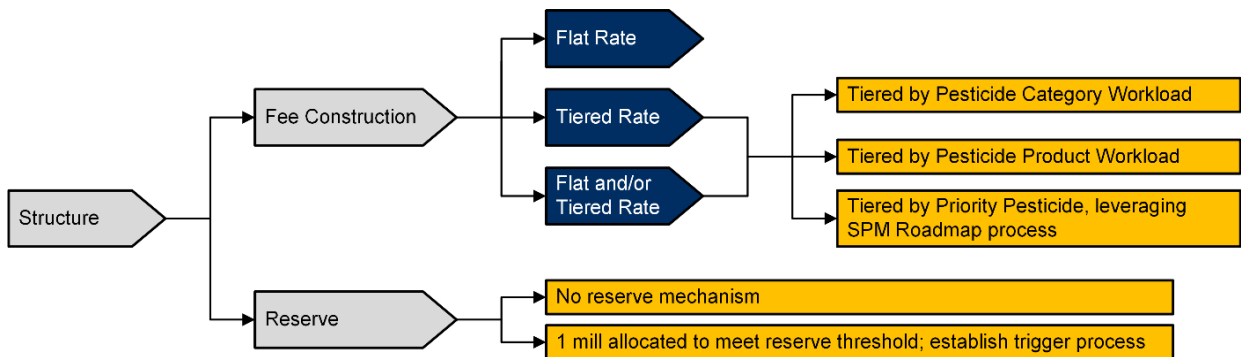


Exhibit 22
Recommended Structure Options for Mill Design

Stakeholder Feedback	Recommendations	Rationale
Is the mill set at a single rate?		
<p>Some stakeholders were strongly in favor of a flat rate mill assessment. These stakeholders felt that a flat rate is fair, simple, and more easily administered based on the pesticide category or pesticide product workload.</p> <p>Some stakeholders oppose a flat rate because it does not incentivize or influence SPM. Some stakeholders also believe that funding DPR through the mill assessment is in conflict with the goal of reducing pesticide use.</p>	<p>We recommend that DPR initially maintain a flat mill assessment rate with an option to utilize a tiered rate in the future once the process of identifying Priority Pesticides through the process outlined in the SPM Roadmap has begun.</p>	<p>Given the recency of the release of the SPM Roadmap and future identification of Priority Pesticides, it is premature to change the mill assessment structure from a flat assessment to a tiered assessment. Maintaining a flat assessment in the near-term will be administratively straightforward and will allow time for policy decisions and funding needs for SPM Roadmap activities to be identified.</p> <p><i>Our recommendation is consistent with guiding principles to foster transparency, support the availability of diverse pest management approaches, minimize administrative burdens, and minimize the potential for unintended consequences.</i></p>

Stakeholder Feedback	Recommendations	Rationale
<p>Is it set at multiple different values (i.e., tiered) based on established criteria?</p>		
<p>Some stakeholders were strongly opposed to a tiered mill assessment. These stakeholders felt that a tiered rate would be “needlessly complex and penalize new innovations.”</p> <p>There was interest among some stakeholders in treating ag and non-ag products differently, resulting in a more equitable distribution of assessments paid into the DPRF versus services provided.</p> <p>There was also strong support among some stakeholders for a lower mill assessment on organic products. Some stakeholders also favored the option to tier based on pesticide product workload, particularly if the approach included health and environmental monitoring and mitigation.</p>	<p>Based on our analysis presented in <i>Appendix D</i>, we do not recommend tiering based on pesticide category workload or pesticide product workload. However, DPR should maintain flexibility to develop a tiered mill structure when the process of identifying Priority Pesticides has begun (note that identification of Priority Pesticides will be an ongoing process). At that point, DPR could consider a higher mill on Priority Pesticides and reduced mill assessments on lower-risk products. Additional revenue generated by a higher mill on Priority Pesticides could be utilized to support research and development of alternatives in support of SPM-related activities.</p>	<p>In <i>Appendix D</i>, we provide a detailed analysis of the tiered models identified in the Concept Paper. A tiered model may be feasible once the process of identifying Priority Pesticides has begun; this process will be a rigorous, comprehensive, ongoing effort. At that point, DPR could consider a tiered assessment with a higher mill assessment on Priority Pesticides. Similarly, DPR could consider a reduced mill assessment on certain clearly-identified lower risk products. This assessment differential would be an educational tool and signal a policy preference and regulatory need for alternatives. However, based on economic analyses, the differential alone would likely not result in an economic incentive to shift to safer alternatives, as shown in the example in Exhibit 23. However, DPR could utilize fees from the higher assessments on Priority Pesticides to support R&D on alternatives.</p> <p>It is premature to use pesticide category or pesticide product workload to determine tiered mill assessments prior to beginning the SPM Roadmap Priority Pesticide process. In addition, the Pesticide Category Workload model is problematic because within any single pesticide category there are products that require high workloads and those that do not. Furthermore, many pesticide products fall under multiple categories, making it difficult to assign any product to a single category. With the Pesticide Product Workload model there would be the ability to distinguish specific products or AIs. However, the data to determine workload levels is subjective and covers a wide range of time periods. Neither method provides for clearly defined, consistent, or objective criteria to select those products or categories assigned to higher mill assessment tiers.</p> <p>The comprehensive process that is proposed to identify Priority Pesticides will be objective and transparent, consistent with the guiding principles. Establishing higher mill assessments on these products will serve to educate users and as a policy signal to registrants and others.</p> <p><i>Our recommendation is consistent with guiding principles to foster transparency, incorporate objective measures, and support the availability of diverse pest management approaches.</i></p>

Stakeholder Feedback	Recommendations	Rationale
<p>Does the mill structure provide for a funding reserve?</p>		
<p>There was concern among many stakeholders that a reserve mechanism that sets aside 1 mill to build a reserve could divert funds that should be spent addressing the core work of DPR. Some stakeholders strongly felt that without clear policies and procedures around how the reserve was defined there would be potential for that money to be diverted to unrelated programs.</p> <p>There were also stakeholders that favored a reserve mechanism in which once the reserve was built the additional mill supported “positive incentives”</p>	<p>We do not recommend incorporating a self-correcting funding reserve into the mill’s structure.</p>	<p>DPR should utilize regular reviews of the required mill assessment, tracking mill assessment revenue and program expenditures to adjust the mill assessment and maintain a reasonable fund balance rather than establish a formal self-correcting fund reserve. In the next five years, pesticide sales revenue is likely to be relatively stable (see <i>Appendix E</i>) and should not result in dramatic swings in revenue. With more frequent review of the mill assessment and adjustments upward, if necessary, DPR can avoid the fund imbalances of recent years.</p> <p><i>Our recommendation is consistent with guiding principles to foster transparency and reduce administrative burden.</i></p>

Exhibit 23 illustrates the implications of pesticide price inelasticity of demand (PED) based on a meta study covering 31 studies resulted in a median PED of -0.28, classifying pesticides as inelastic¹⁹. PED is defined as: % change in demand / % change in price.

An inelastic product indicates changes in price do not result in equivalent changes in demand. In the example, we utilize the known PED (-0.28) and hypothetical changes in price based on assumed changes to the mill and pesticide pricing from our research to calculate the estimated change in demand for the product (% change in demand = PED x % change in price).

Our example shows that a five-fold increase in the mill assessment, from \$0.021 to \$0.105, would result in a demand change of -2.3%. A doubling of the mill assessment, from \$0.021 to \$0.042, would result in an even smaller demand change of -0.6%.

As we describe in Appendix E, there are various factors that impact pesticide sales that could add additional upward or downward pressure on sales. For example, DPR’s broader policy approach to transition to safer, sustainable pest management could create downward pressure on sales. However, this example illustrates that, all other factors held equal, pesticide demand is not sensitive to changes in price (i.e., an upward adjustment to the mill assessment to support our recommended mill proposal options would not likely impact demand). One of the reasons that products are inelastic is a real or perceived lack of substitutes. As the state fully implements the SPM Roadmap, the knowledge and availability of alternatives could lead to greater elasticity (price sensitivity).

Exhibit 23
Example Demand Change Calculations Based on Median Pesticide Price Elasticity of Demand

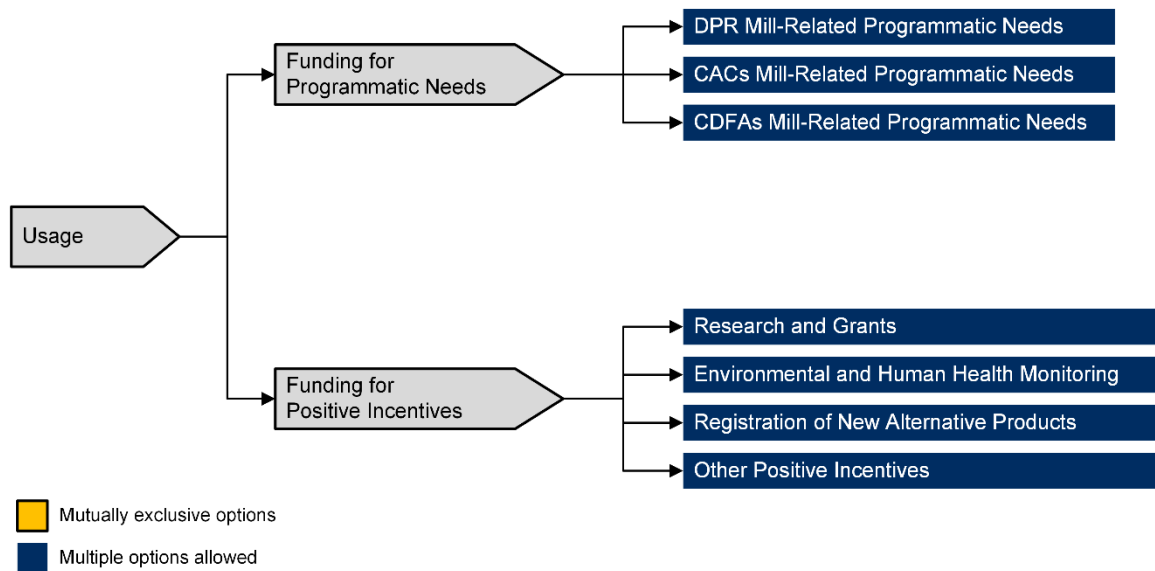
Product	Price	Total mill @\$0.021	Price at Current Mill	Example Mill Increase	Total Mill with Increase	Price at Increased Mill	Price Change	Demand Change
Product A (2.5 gallon)	\$285	\$5.99	\$290.99	5x (\$0.105)	\$29.93	\$314.93	8.2%	-2.3%
Product B (1 gallon)	\$13	\$0.27	\$13.27	3x (\$0.063)	\$0.82	\$13.82	4.1%	-1.2%
Product C (1 gallon)	\$18	\$0.38	\$18.38	2x (\$0.42)	\$0.76	\$18.76	2.1%	-0.6%

¹⁹ Böcker, T. G., & Finger, R. (2017). A Meta-Analysis on the Elasticity of Demand for Pesticides. Journal of Agricultural Economics, 68(2). <https://doi.org/10.1111/1477-9552.12198>

4. Usage Recommendations

In this section, we provide our recommendations and justification for those recommendations related to mill usage. Mill usage considers how mill revenue should be utilized to support DPR, CACs, and CDFA’s mill related responsibilities, and funding for positive incentives. In **Exhibit 24**, we provide the mill usage considerations we proposed in the Concept Paper, which included options related to funding programmatic needs (i.e., DPR, CACs, and CDFA mill-related programmatic needs) and positive incentives (i.e., options to support state’s the transition to safer, more sustainable pest management practices). The options in Exhibit 26 are examples of the types of SPM programs, some of which are already in place, but could be expanded. This is meant to be a placeholder for potential options to be funded by the mill that support SPM Roadmap priorities.

Exhibit 24
Mill Usage Options



A. Recommended Usage Options for Programmatic Needs

Mill usage options for programmatic needs define how, and to what extent, mill revenues are utilized to support DPR, CACs, CDFA, and other programmatic needs. In **Exhibit 25**, we provide stakeholder feedback, our recommendations, and rationale for usage options related to programmatic needs.

Exhibit 25 Recommended Usage Options for Programmatic Needs

Stakeholder Feedback	Recommendations	Rationale
What portion of DPR’s future programmatic needs are supported by the mill?		
<p>Stakeholders generally agreed the mill should be utilized to support DPR’s current and future programmatic needs to carry out its authorized functions.</p> <p>Stakeholders were divided over utilizing the mill to support DPR’s core versus SPM related future programmatic needs described in the Concept Paper.</p> <p>Stakeholders backing the utilization of the mill to support DPR’s SPM related future programmatic needs described in the Concept Paper argued that the department’s identified SPM programmatic needs are aligned with DPR’s primary statutory mandates under FAC Section 11501 and the department’s mission.</p> <p>Stakeholders disagreeing with the utilization of the mill to support DPR’s SPM related future programmatic needs argued that the department’s SPM related future programmatic needs should be funded by the General Fund since identified workload could potentially be seen as benefiting the public.</p>	<p>We recommend \$23.2 million out of \$35.8 million²⁰ in future programmatic needs to be supported by the mill.</p> <p>\$23.2 million would support:</p> <ol style="list-style-type: none"> 1) \$16.1 million in future programmatic needs for DPR’s mill related responsibilities, and 2) \$6.1 million for integrated pest management (IPM) grants, and 3) \$1.0 million to support environmental monitoring. <p>DPR’s \$16.1 million in future programmatic needs for its mill-related responsibilities include approximately \$2.8 million in estimated needs to support the early implementation of the SPM Roadmap (i.e., described as “SPM related future programmatic needs” in the Concept Paper).</p>	<p>Our Workload Analysis identified DPR’s future programmatic needs for its mill related responsibilities totaling \$16.1 million.</p> <p>As part of our Workload Analysis, we examined DPR’s accounting and funding authorities for its resources to perform mill, registration, and licensing and certification related programmatic activities. Based on our examination of DPR’s accounting and funding authorities, we then determined the appropriate funding sources (e.g., mill, registration, licensing, and certification revenues) to support its future programmatic needs for the department’s Pesticide Programs and Administration.</p> <p>The \$16.1 million in future programmatic needs for DPR’s mill related responsibilities support enforcement, integrated pest management, environmental monitoring, human health assessment, worker health and safety, mill assessment, and administration related workload.</p> <p><i>Our recommendation is consistent with guiding principles to provide a sustainable long-term funding source for the department and to align with the department’s mission, emerging priorities, and legal requirements.</i></p>

²⁰ DPR’s estimated future programmatic needs total \$35.8 million. This includes \$23.2 million for mill related programmatic needs, \$10.6 million for registration programmatic needs, and \$1.9 million for licensing and certification programmatic needs.

Stakeholder Feedback	Recommendations	Rationale
<p>At what level does the mill support CACs?</p>		
<p>Stakeholders recognized the importance of supporting CACs' existing and future pesticide usage enforcement workload activities. Stakeholders also emphasized the importance of supporting CACs since they enforce state pesticide use laws at the local level and engage with communities.</p> <p>Some stakeholders expressed that the existing mill apportionment criteria pursuant to FAC Section 12844 and CCR 6393 should not be adjusted because a change could potentially disrupt the CACs balance of funding between other sources, primarily including County general funds and unclaimed gas taxes (UGT).</p> <p>According to CACASA, "It [the mill] was designed to fund a portion of the program in cooperation with funding from County contributions and unclaimed gas tax. To fully fund county pesticide programs through mill funding, would upset the delicate balance of funding that CACs must maintain, to ensure that any additional revenue would not result in a reduction in County General Fund contributions, which would impact a county's ability to meet its Annual Financial Statement Maintenance of Effort to qualify for unclaimed gas tax allocations."</p> <p>Some stakeholders expressed that options to further support CACs should be distinct from the existing mill apportionment criteria and should be voluntary because every County's financial situation due to a number of factors, including but not limited to: availability of County General Funds, availability of UGT funds, increases/decreases in local economies, climate change, population decreases/increases, and others.</p>	<p>We recommend that the existing level of 7.6 mills, at a minimum, should continue to be maintained to support CACs.</p> <p>We also recommend a proposal option that includes a separate fund up to approximately \$10.2 million that provides "as-needed" funding (separate from the existing mill allotment criteria) to support individual County authorized needs (e.g., project, personnel, stakeholder consultation support, other funding, etc.) for local pesticide usage enforcement workload activities and administration priorities.</p> <p>We recommend that this mill proposal option should be programmed in a manner that does not impact the CACs' existing mill apportionment defined in FAC Section 12844 and CCR 6393 to prevent reductions in County general funds and UGT.</p>	<p>Our recommendation is based on a detailed analysis of CACs funding for mill related responsibilities, provided in <i>Appendix C</i>, and on stakeholder feedback.</p> <p>Our analysis identified that mill revenues account for approximately 40% of CACs' total statewide funding for pesticide usage enforcement programs – the remaining 60% is supported by County General Funds, UGT, and other sources. We also identified that funding from the mill assessment is, on average, more stable than funding from County General Fund and UGT sources due to how CACs are reimbursed for its programmatic needs from funding from these sources.</p> <p>Additional mill funding, if not properly administered and implemented, will likely offset needed funding from County General Funds and UGT sources. Therefore, our recommended proposal option must be programmed separately from the existing mill apportionment criteria in a separate fund to avoid disrupting CACs existing balance of funding between primary funding sources: mill assessment, County General Funds, and UGT sources.</p> <p>We also understand each County is unique. CACs across the state are managing a different set of conditions influencing actual needs for additional funds to support pesticide usage enforcement activities. Therefore, we recommend that our proposal option provides "as-needed" funding to support individual County authorized needs (e.g., project, personnel, stakeholder consultation support, other funding, etc.) for local pesticide usage enforcement workload activities.</p> <p><i>Our recommendation is consistent with the guiding principle to support alignment of the department and CACs' programmatic activities with appropriate funding sources.</i></p>

Stakeholder Feedback	Recommendations	Rationale
At what level does the mill support CDFA?		
<p>Stakeholders recognized the importance of maintaining the existing level of 0.75 mill, at a minimum, to support CDFA's existing and future programmatic needs for the Office of Pesticide Consultation and Analysis.</p>	<p>In addition to maintaining the existing mill level \$0.00075 (0.75 mill) in statute,²¹ we recommend an additional \$0.00029 (0.29 mill) for a total mill rate of \$0.00104 (1.04 mills) to support CDFA's current and future programmatic needs. The 1.04 mills would only be applied to ag-related pesticide sales.</p>	<p>Crowe reviewed supplemental information provided by CDFA to support both its current and future programmatic needs for the Office of Pesticide Consultation and Analysis, which currently receives roughly \$2.1 million in mill assessment revenues.</p> <p>The total mill rate of \$0.00104 applied to ag-related sales would support \$927,000 in personal services related expenditures, \$1.2 million for UC Regulatory analysis, and \$500,000 for competitive grants, and \$220,000 for operating and equipment expenditures (OEE).</p> <p><i>Our recommendation is consistent with the guiding principle to support alignment of the department and CDFA's programmatic activities with appropriate funding sources.</i></p>

²¹ Pursuant to FAC 12841: *“The director may only collect up to an additional three-fourths mill (\$0.00075) per dollar of sales, in addition to the rate established pursuant to Section 12841, if necessary to fund, or augment the funding for, an appropriation to the Department of Food and Agriculture to provide pesticide consultation to the department pursuant to Section 11454.2. The necessity of this additional assessment shall be determined by the Secretary of Food and Agriculture, in consultation with the director, on an annual basis after consideration of all other revenue sources, including any reserves, which may be appropriated for this purpose. The secretary's written determination, including a request for a specified additional assessment and the basis for that request, shall be provided to the director by a time and in a manner prescribed by the director.”*

B. Recommended Usage for Positive Incentives

Mill usage options for positive incentives account for how mill revenues could be utilized to support DPR’s goal of safer, more sustainable pest management. In **Exhibit 26**, we provide stakeholder feedback, recommendations, and rationale related to usage options for positive incentives.

Exhibit 26
Recommended Usage Options for Positive Incentives

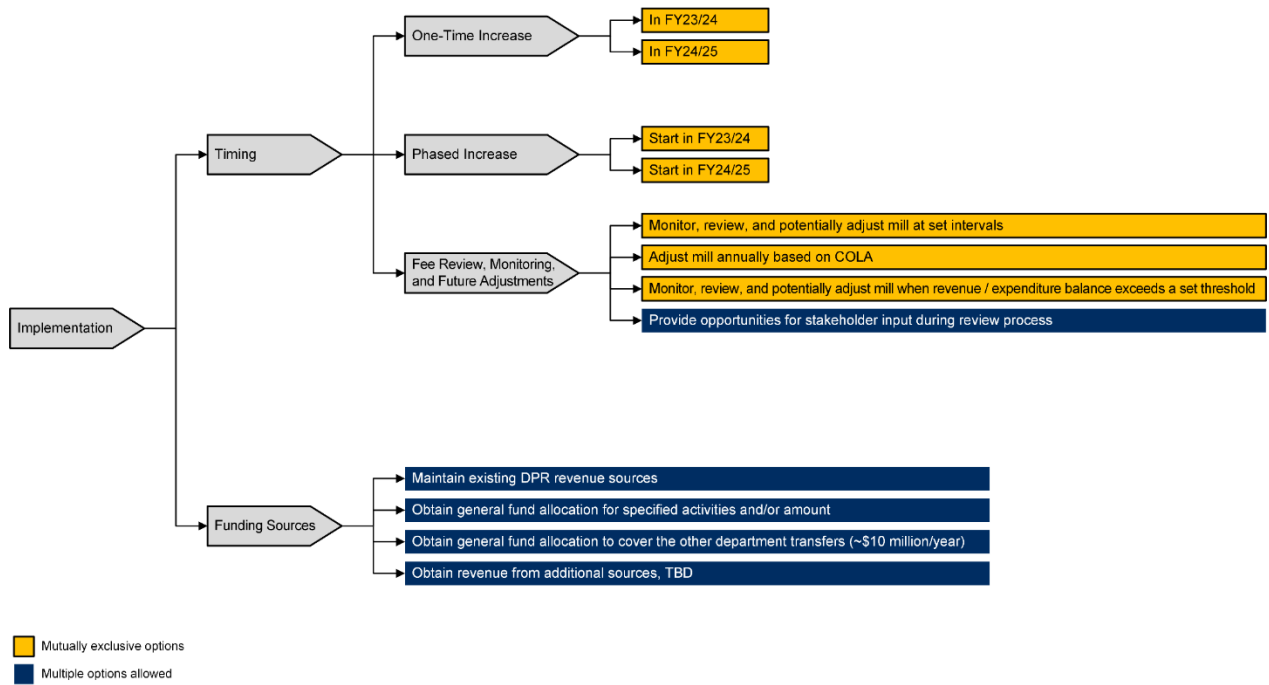
Stakeholder Feedback	Recommendations	Rationale
How does mill funding support and/or incentivize safer, more sustainable pest management?		
<p>Stakeholders provided diverse feedback on how mill funding supports and/or incentivizes safer, more sustainable pest management.</p> <p>Stakeholder responses to this question generally aligned with whether they viewed the state’s goal of accelerating the transition to safer, more sustainable pest management practices, including DPR’s SPM related programmatic needs described in the Concept Paper, as discretionary or authorized and whether DPR should be responsible for this goal.</p> <p>Stakeholders that viewed the State’s goal to accelerate the transition to safer, more sustainable pest management practices as discretionary and exceeding DPR’s mission and mandates expressed that the General Fund would be a more appropriate source should DPR be responsible to carry out this goal.</p> <p>Stakeholders that viewed the State’s goal to accelerate the transition to safer, more sustainable pest management practices as authorized and aligned with DPR’s mission and mandates expressed that the mill would be a more appropriate funding source to support the department’s SPM goals. Further, some stakeholders that held this view expressed that mill revenues should go directly into the General Fund versus the Department of Pesticide Regulation Fund as a symbolic mechanism to “delink” revenues from pesticide sales.</p>	<p>We recommend, at a minimum, that the mill support the department’s estimated needs to support the early implementation of the SPM Roadmap (i.e., SPM related future programmatic needs) totaling \$2.8 million for resources.</p> <p>Any additional funding using the mill to support SPM Roadmap related workload should align with the mill-related priorities identified by SPM Roadmap, such as Option F of our proposal options.</p>	<p>DPR’s mission is to protect human health and the environment by regulating pesticide sales and use, <i>and</i> by fostering reduced-risk pest management. DPR’s broad mandates set in FAC Section 11501 set forth its authority to “encourage the development and implementation of pest management systems” among other mandates.</p> <p>We view DPR’s SPM related programmatic needs as a mechanism, aligned with its mission and mandates, to support and/or incentivize safer, more sustainable pest management.</p> <p>Mill funding is an appropriate funding source to support DPR’s estimated resources for the early implementation of the SPM Roadmap. Note that full implementation of the SPM Roadmap will require significant public funding. The early SPM mill funding is intended to build on DPR’s existing responsibilities that align with priorities identified by the SPM Roadmap.</p> <p>In <i>Appendix D</i>, we elaborate on why we recommend that a tiered mill structure should not be implemented at the outset. DPR should consider a tiered rate once the process of identifying Priority Pesticides as part of the SPM Roadmap decision-making process has begun.</p> <p><i>Our recommendation is consistent with the guiding principle to incentivize safer, more sustainable pest management and to support alignment of the department’s workload activities with appropriate funding sources.</i></p>

Stakeholder Feedback	Recommendations	Rationale
<p>How does the mill support research, education, and/or grants to inform new pest management approaches?</p>		
<p>Stakeholders provided diverse feedback on how mill funding supports research, education, and/or grants to inform new pest management approaches.</p> <p>Some stakeholders were cautious on the appropriateness of the mill to support additional pest management programs that are yet to be defined.</p> <p>Nearly all stakeholders expressed conditional support for research and grants to inform new pest management approaches in both urban and rural settings. In addition, stakeholders expressed that additional mill funding could support DPR’s partners, especially the University of California, which is generally viewed by stakeholders as a respected institution to conduct targeted research that supports that the advancement of pest management in both rural and urban settings.</p>	<p>To support the advancement of safer, more sustainable pest management practices across the state of California, we recommend a proposal option that would provide a funding mechanism (e.g., an additional 2.5 mill generating up to approximately \$11.0 million) to at least support initial priority mill-related actions aligned with the SPM Roadmap. This proposal reflects startup funding for SPM Roadmap priorities – complete implementation of the SPM Roadmap will likely require a more comprehensive funding strategy beyond the mill assessment.</p>	<p>The additional funding generated by our recommended proposal option could support priority programs conducted by DPR or its partners, including the University of California, CACs, and CDFA, with specific allotments and activities to be determined.</p> <p><i>Our recommendation is consistent with guiding principles to incentivize safer, more sustainable pest management and support the availability of tools, technologies, and practices to address the diverse pest management needs in the State.</i></p>

5. Implementation Recommendations

In this section, we provide our recommendations and justification for those recommendations related to mill implementation. Mill implementation addresses the timing of the mill assessment implementation and how mill revenue is monitored and adjusted over time. It also addresses how mill revenue is integrated with DPR's other funding sources within implementation. For reference, in **Exhibit 27**, we provide the mill implementation options described in the Concept Paper.

Exhibit 27
Mill Implementation Options



A. Recommended Timing of Mill Implementation

Timing of mill implementation accounts for the practical aspects of how the mill is implemented, monitored, and adjusted over time. In **Exhibit 28**, we provide stakeholder feedback, recommendations, and rationale related to timing options for mill implementation.

Exhibit 28 Recommended Timing Options for Mill Implementation

Stakeholder Feedback	Recommendations	Rationale
Is the mill assessment implemented in a phased approach or as a one-time change?		
<p>Some stakeholders agreed that a phased implementation versus a one-time change would be optimal to provide sufficient time for legislative authorization and program planning. Further, most stakeholders communicated that a one-time change would be challenging to plan for and absorb.</p> <p>Some stakeholders recommended that DPR should move forward with a one-time change to the mill assessment to support the state’s transition to safer, sustainable pest management.</p>	<p>We recommend a phased implementation approach versus a one-time change.</p>	<p>Because of the time needed to hire qualified resources, DPR will likely require more than a one-time, single-year change to support its future programmatic needs. Therefore, a phased implementation is a more appropriate approach to support DPR’s future programmatic needs.</p> <p>A phased implementation approach (e.g., phasing an increase to the mill over three to five years) should align with the department’s authorized budget to support its mill related responsibilities.</p> <p>Prior to implementing each phase of the increase and associated options (for example, Option F for SPM-related funding), DPR would identify specific program and/or staffing expenditures to be supported by the increase(s).</p> <p><i>Our recommendation is consistent with the guiding principle to minimize potential for unintended consequences and administrative burden, and to foster transparency.</i></p>
When should the phased increase begin?		
<p>Some stakeholders recommended that a phased increase starting in FY2024/25 would be optimal to provide sufficient time for budgeting and planning purposes.</p> <p>Some stakeholders recommended a one-time change starting in FY2024/25 would be optimal to support the state’s transition to safer, sustainable pest management.</p>	<p>We recommend a phased implementation approach over three to five fiscal years with an increase to the mill beginning in FY2024/25.</p>	<p>The minimum mill rate to support DPR’s current and future programmatic needs for its mill related responsibilities is \$0.029 – a 36% increase to the existing rate of \$0.021 applied to all products. This rate does not account for potential mill funding to support CACs, CDFAs, and initial SPM Roadmap priorities. It is imperative that mill payees are given sufficient notice to plan for a future adjustment.</p> <p>In Section 6, <i>Proposed Implementation Plan</i>, we provide three (3) scenarios of a phased-in implementation approach – three-, four-, and five-year phases starting with an increase in FY2024/25.</p> <p><i>Our recommendation is consistent with the guiding principle to minimize administrative burden and to foster transparency.</i></p>

Stakeholder Feedback	Recommendations	Rationale
<p>Is there a built-in structure to adjust the mill in the future?</p>		
<p>Stakeholders generally agreed that DPR should consider the implementation of a built-in structure to appropriately account for future adjustments to the mill.</p> <p>Stakeholders offered the following options:</p> <p>Authorization in statute that specifies an examination of the appropriate mill rate level at least every five years.</p> <p>Authorization in statute that outlines sunseting terms (i.e., identifying in statute when the mill must be reauthorized by the legislature).</p> <p>Additional consultation when DPR plans to move forward with potential mill adjustments to allow for stakeholders to provide feedback and understand the justification for potential mill adjustments.</p> <p>Nearly all stakeholders agreed that the mill should not be adjusted annually based on a cost-of-living adjustment (COLA) given mill revenue is based on pesticide sales, which are already adjusted by inherent market dynamics.</p>	<p>We recommend an examination of the mill every five (5) years, at a minimum, to review the appropriateness of the mill rate level, especially in relation to pesticide sales levels and as the department's SPM Roadmap related priorities are determined in the coming years. This recommendation does not imply a sunset of the mill fee.</p> <p>We do not recommend sunseting as a mechanism to adjust the mill in the future because it could potentially pose problems for the department's funding stability.</p> <p>We do not recommend adjusting the mill in future years based on a COLA, consumer price index (CPI) or another factor; we agree with the responses from stakeholders that pesticide sales are inherently adjusted by market forces (i.e., inflation, supply/demand), which would negate the need to adjust the mill by COLA, consumer price index (CPI) or another factor. See <i>Appendix E</i> for further analysis.</p>	<p>This study is the first time the mill has been comprehensively examined in nearly 20 years. In 2003, AB 780 authorized and directed the department to conduct a holistic examination (like this study) to determine an appropriate rate that could sustainably support the department.</p> <p>It is common for regulatory assessments to be examined on a consistent basis to assure benefactors of revenues generated by the assessments are appropriately and sustainably supported, and that payees are equitably assessed an appropriate rate.</p> <p>An examination of the mill, at least every five (5) years, rather than sunseting or adjusting the mill via an escalatory factor, would assure the department's primary funding mechanism is stable and the department's stakeholders understand how and why some Pesticide Programs and Administration functions are supported by the mill versus other funding sources (e.g., registration or licensing and certification assessments).</p> <p><i>Our recommendation is consistent with guiding principles to allow for re-evaluation and refinement, provide a sustainable long-term funding source for the department, and to foster transparency.</i></p>

Stakeholder Feedback	Recommendations	Rationale
What is the process to review and monitor the mill assessment over time?		
<p>Most stakeholders stressed the importance of the legislative process to authorize DPR’s budget, which allows for stakeholders to engage, review, and monitor the department’s budgeted revenues and expenditures.</p> <p>Some stakeholders expressed that that mill should not be adjusted at set intervals because the legislative process should be the guiding authority to implement potential mill adjustments.</p>	<p>In addition to the minimum five-year review, we recommend that the department continue to analyze its fund condition, with support from the Department of Finance, during the annual budgeting process to support the Legislature’s determination as to whether a mill adjustment up to the maximum amount authorized would be necessary to support its mill related responsibilities. This process can be performed in conjunction with the state’s annual budget process.</p>	<p>The Legislature maintains the authority to approve DPR’s budget. Therefore, the annual budgeting process is the appropriate mechanism to review and monitor the mill assessment over time to support DPR’s budgeted needs for its mill related responsibilities.</p> <p><i>Our recommendation is consistent with guiding principles to allow for re-evaluation and refinement, provide a sustainable long-term funding source for the department, and to foster transparency.</i></p>
How are stakeholders involved in the review process?		
<p>Stakeholders generally agreed that they should be consulted by DPR when the mill is under review.</p>	<p>We recommend that stakeholders are consulted by DPR during mill review processes.</p>	<p>Inclusion of stakeholders in regulatory fee reviews is a recognized best practice (e.g., GAO).</p> <p><i>Our recommendation is consistent with the guiding principle to foster transparency.</i></p>

B. Recommended Overall Funding Sources

Recommended overall funding sources considers mill revenue within DPR’s overall funding sources, including potential new sources of funding. In **Exhibit 29**, we provide stakeholder feedback, recommendations, and rationale related to overall funding sources for mill implementation.

Exhibit 29
Recommended Overall Funding Source for Mill Implementation

Stakeholder Feedback	Recommendations	Rationale
How does mill revenue contribute to DPR’s overall mix of funding?		
<p>Stakeholders generally supported mill revenue to continue to support DPR’s current and future programmatic needs to carry out its authorized functions. Some stakeholders further expressed that mill revenue should flow directly into the General Fund rather than directly into department’s special fund. Those that held this view sought to create a mechanism that unlinked the department’s funding from pesticide product sales.</p> <p>Some stakeholders also expressed that DPR should examine other funding sources, such as the General Fund, to diversify its funding allocation and to become less reliant on the mill assessment.</p> <p>Some stakeholders argued DPR should seek General Funds to support its overall funding mix based on the notion that some of the department’s workload activities (e.g., its SPM programmatic needs) could be viewed as benefitting the public.</p>	<p>We recommend that the mill should continue to support, at a minimum, DPR’s current and future programmatic needs for its mill related responsibilities totaling \$125.3 million. The existing mill rate of \$0.021 applied to all products would need to be adjusted to support DPR’s current and future programmatic needs.</p> <p>We do not recommend that the DPR seek General Funds to support its Pesticide Programs and Administration because of the sustainability and appropriateness concerns noted in <i>Section 2</i>.</p>	<p>Our Workload Analysis identified the appropriate funding sources (i.e., revenue from mill assessment, registration fees, and licensing and certification fees) based on an examination of DPR’s accounting of its authorized functions, workload, and funding authorities.</p> <p>Using the General Fund to support DPR’s mill-related activities could expose the programs to financial volatility, increased competition for resources, unpredictability in funding, and the potential loss of funding priority. These factors might negatively impact the stability, effectiveness, and long-term success of DPR’s Pesticide Programs and Administration that rely on mill funding.</p> <p>This recommendation does not preclude consideration of the use of other funding sources to support implementation of SPM Roadmap recommendations beyond those aligned with DPR’s authorized responsibilities. As noted above, full implementation of the SPM Roadmap beyond those DPR authorized responsibilities will require significant public funding. In <i>Section 2</i>, we provide additional discussion of concerns regarding the use of the General Fund to support DPR’s Pesticide Programs and Administration.</p> <p><i>Our recommendation is consistent with guiding principles to provide a sustainable long-term funding source for the department, support alignment of the department and CACs’ workload responsibilities with the appropriate funding sources, and to minimize the potential for unintended consequences.</i></p>

Stakeholder Feedback	Recommendations	Rationale
How do changes to mill revenue levels impact other current and potential DPR funding sources?		
<p>Some stakeholders expressed interest in mill revenues supporting registration programmatic needs. However, some stakeholders expressed that program funding should be aligned with the appropriate funding source (i.e., registration fees should support registration programmatic needs).</p>	<p>We found that additional mill assessment revenues to support the recommended proposal options would only support DPR's authorized responsibilities, excluding its registration and licensing and certification related responsibilities, and would have no impact on the department's other revenue sources from registration and licensing and certification fees.</p>	<p>Our Workload Analysis identified the appropriate funding sources for the department's current and future programmatic needs. The identified future programmatic needs for DPR's mill, registration, and licensing and certification programmatic needs to align with existing funding authorities, workload, and the department's functional accounting methodology.</p> <p><i>Our recommendation is consistent with guiding principles to support alignment of the department and CAC's workload activities with appropriate funding sources and to provide a sustainable long-term funding source for the department.</i></p>

6. Proposed Implementation Plan

This section provides a proposed plan to support the implementation of recommended options, which would require changes in statute to implement adjustments to the existing mill assessment rate. The implementation plan identifies pre-implementation, implementation, and post-implementation milestones, roles and responsibilities, detailed activities, and potential challenges and success factors.

A. Milestones and Key Assumptions

The proposed plan includes pre-implementation, implementation, and post-implementation milestones, as described:

- **Pre-Implementation** is the first milestone of the plan and involves all activities leading up to and required for implementation. This includes final recommendation decisions, development of a budget change proposal, consultation with stakeholders and the legislature, and approval and release of a final budget.
- **Implementation** is the second milestone of the plan and involves executing the mill recommendations. To reach this milestone, it is assumed that all requirements for pre-implementation and implementation are met.
- **Post-Implementation** is the last milestone of the plan and includes all activities after implementation has occurred. This includes ongoing stakeholder and legislative engagement, determining the review process, mill adjustment phases, and consideration of Priority Pesticides and future mill tiering options to further alignment with California's transition to safer, more sustainable pest management.

This proposed plan assumes the following conditions:

- The final plan will support the proposal options detailed in *Section 2*
- The mill assessment will be set at a flat rate that is phased-in over a specified period (e.g., up to five years)
- Implementation will be effective Budget Year FY2024/25, with budget planning activities occurring in FY2023/24, to allow for planning and additional stakeholder consultation
- DPR will make final decisions, in consultation with its partners and stakeholders, on how to operationalize this plan.

Exhibit 30 provides an overview of the proposed implementation plan, including the three (3) milestones, key activities, and outcomes. **Exhibit 31** shows each milestone of implementation on a potential timeline, considering factors such as the state's budget approval process, legislative process, mill adjustment phases, and others.

Exhibit 30
Implementation Plan: Milestones, Timeline, Activities, and Outcomes

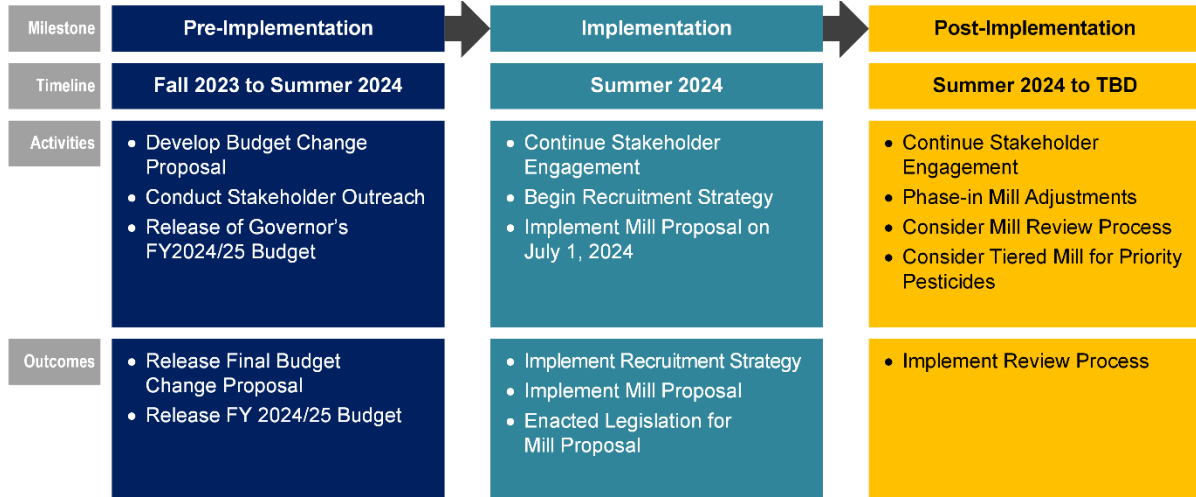
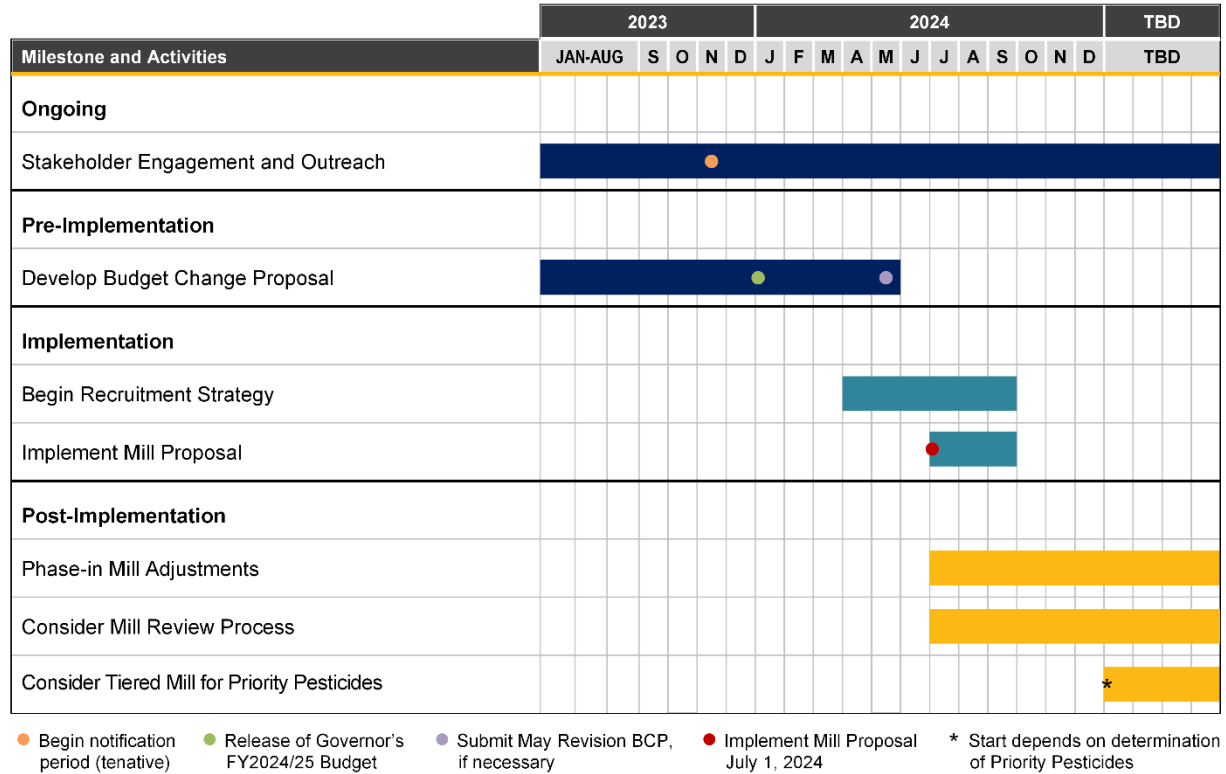


Exhibit 31
Implementation Plan: Detailed Timeline



B. Roles and Responsibilities

DPR along with its partners and stakeholders are integral to executing this proposed implementation plan. The department will be responsible for conducting the key activities within the implementation plan as described in the subsection below. This includes developing the budget change proposal, conducting stakeholder outreach and engagement, including legislative engagement, determining a mill review process, and more. They will need to consult with partner agencies and stakeholders throughout all of the implementation milestones to carry out these activities.

C. Activities

In this subsection, we describe the key activities and outcomes within the three implementation milestones. Some activities may overlap, meaning that not all activities are in chronological order. Again, throughout all milestones of implementation, DPR would engage and consult stakeholders and the legislature and agency partners, to solicit feedback and foster greater transparency and communication.

1. Pre-Implementation

Develop Budget Change Proposal

As part of the pre-implementation process, the department will need to develop a budget change proposal (BCP). In DPR's case, the BCP will be the justification and description of the mill proposal to continue to conduct the department's mission and authorized activities. In order to develop the BCP, DPR would need to determine their final mill proposal based on Crowe's final recommendations, stakeholder consultation, and other considerations.

Throughout development of the BCP, DPR would consult partner agencies such as CDFR, CACASA/CACs, and others, as well as any external stakeholders and the legislature, as necessary. Approved BCPs would be released in early January 2024. If there are any BCP revisions, DPR would submit the May Revision BCP to the Department of Finance (DOF).

Conduct Stakeholder Outreach and Notification

DPR staff developing the BCP would have consulted with external stakeholders and the legislature through the development and the release of the BCP. During this period, DPR would have provided sufficient notice to stakeholders to plan for future mill adjustments.

Governor's Budget Release(s)

The Governor's Budget is generally released three times during the current fiscal year (FY) in Winter, Spring, and Summer for the upcoming FY. For DPR, the budget release timeline informs the activities during pre-implementation for the development of their BCP and stakeholder consultation. The release of the Governor's Proposed Budget for FY 2024/25 will be January 10, 2024. Following this, the Governor's Budget will be revised in May and then finally enacted and finalized in the Summer of 2024.

2. Implementation

Develop and Implement Recruitment Strategy

Before mill proposal implementation on July 1, 2024, DPR would need to develop and implement a recruitment strategy to fill the positions according to their mill proposal BCP and subsequent legislation. This would require DPR to consult with internal stakeholders in programs receiving new positions and administration staff in charge of onboarding and training.

Continue Stakeholder Engagement and Consultation

As part of implementation, we recommend DPR conduct another formal round of stakeholder outreach and communication. For this set of stakeholder consultation, DPR would focus outreach and communication on the details of the mill proposal implementation. This includes clear information on the timing of the implementation (likely starting July 1, 2024), the timing of the phased mill adjustments (3-year, 5-year, etc.), the mill rate(s) for each year it is phased-in, and if the department sees fit, any insight into DPR's recruitment strategy and what stakeholders can expect as a benefit to mill adjustments.

The format of this round of stakeholder outreach and communication would likely be more informative. DPR may provide opportunities for stakeholders to ask questions and may decide to hold a public webinar for stakeholders to learn more about the mill proposal implementation.

Implement Mill Proposal

If the BCP is approved by the full Legislative Budget Committee and full legislative bodies, and the Governor signs the final budget bill that includes funding requested by the BCP, DPR has the authority to encumber and expend the funds as proposed in the BCP as early as July 1, 2024. Assuming the recruitment strategy and stakeholder outreach are both complete, DPR would be prepared to execute the mill proposal starting July 1, 2024.

3. Post-Implementation

Continue Stakeholder Engagement and Consultation

Once the mill proposal has been implemented, DPR would continue to engage and consult stakeholders as part of the post-implementation milestone and beyond to continue to foster transparency, accountability, and open two-way communication. DPR would continue to keep stakeholders informed on any future mill adjustments and review processes and continue to solicit feedback and participation of stakeholder perspectives during any planning and decision-making.

Phasing-In Mill Adjustments

We propose two phases for mill adjustments post-implementation. In the first phase, mill adjustments would be phased-in each year for a determined number of years. The phase-in adjustment time period would be outlined as part of the BCP mill proposal. In the second phase, the mill adjustment would be fully phased-in, and any other mill adjustments would be determined through consideration of a review process.

- Phase 1:** In our mill implementation recommendations, we recommend a phased approach to mill adjustments. The phased timeline (e.g., three, four, or five years) would align with the department’s ability to spend the funds. **Exhibit 32** through **Exhibit 34** show the proposed mill rates in various increments of phasing from a three-year approach to a five-year approach. All three exhibits assume sales are consistent at \$4.4 billion and the mix of agricultural and non-agricultural pesticide sales stays the same.
- Phase 2:** In the second phase, the mill adjustment would be fully phased-in. This could occur after three years, four years, five years, or another time the department determined as part of their BCP mill assessment proposal. We recommend at this phase, DPR consider future mill adjustments based on two factors: 1) development of a formal review process and 2) identification of Priority Pesticides.

Exhibit 32
Three-Year Phase-in of Proposed Mill Rates

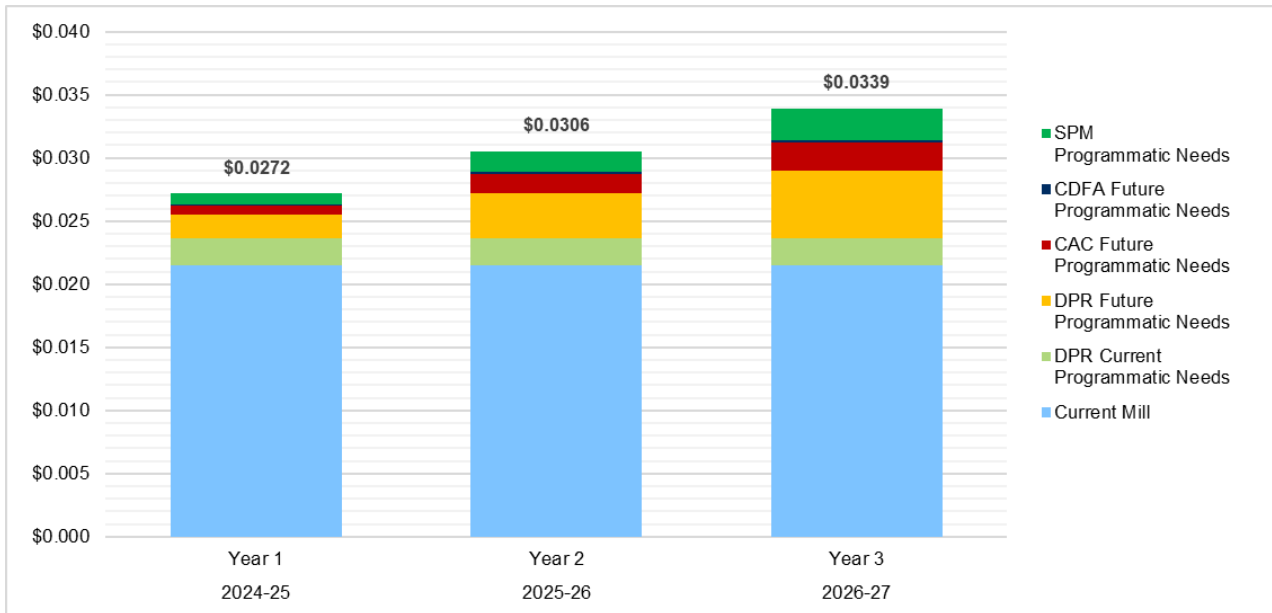


Exhibit 33
Four-Year Phase-in of Proposed Mill Rates

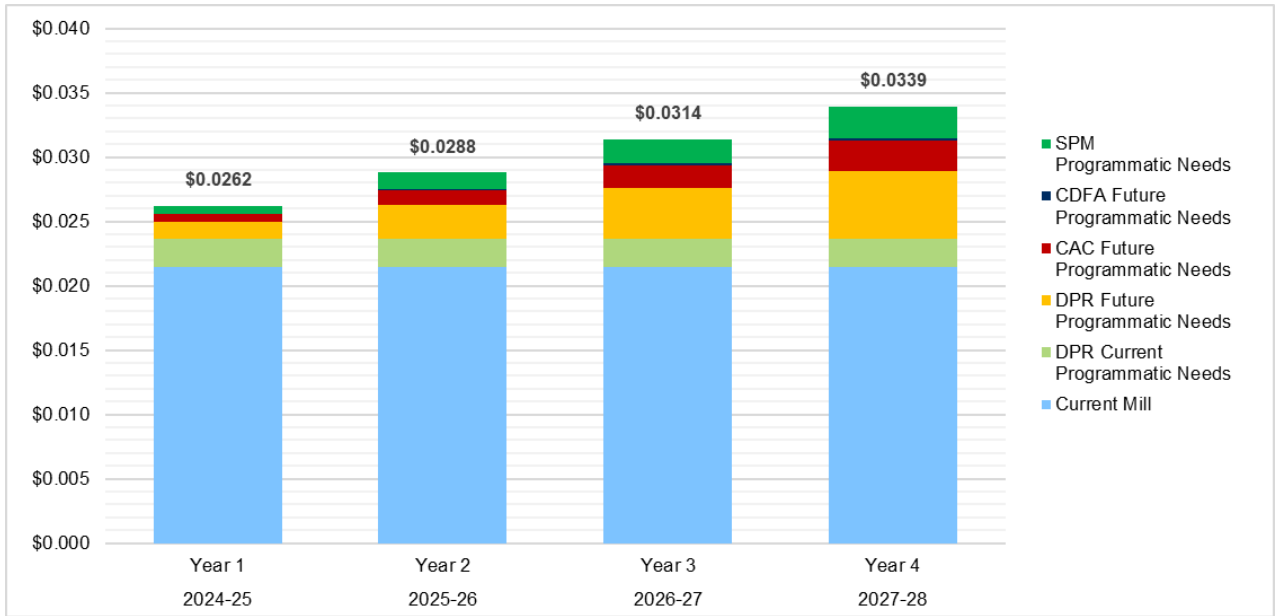
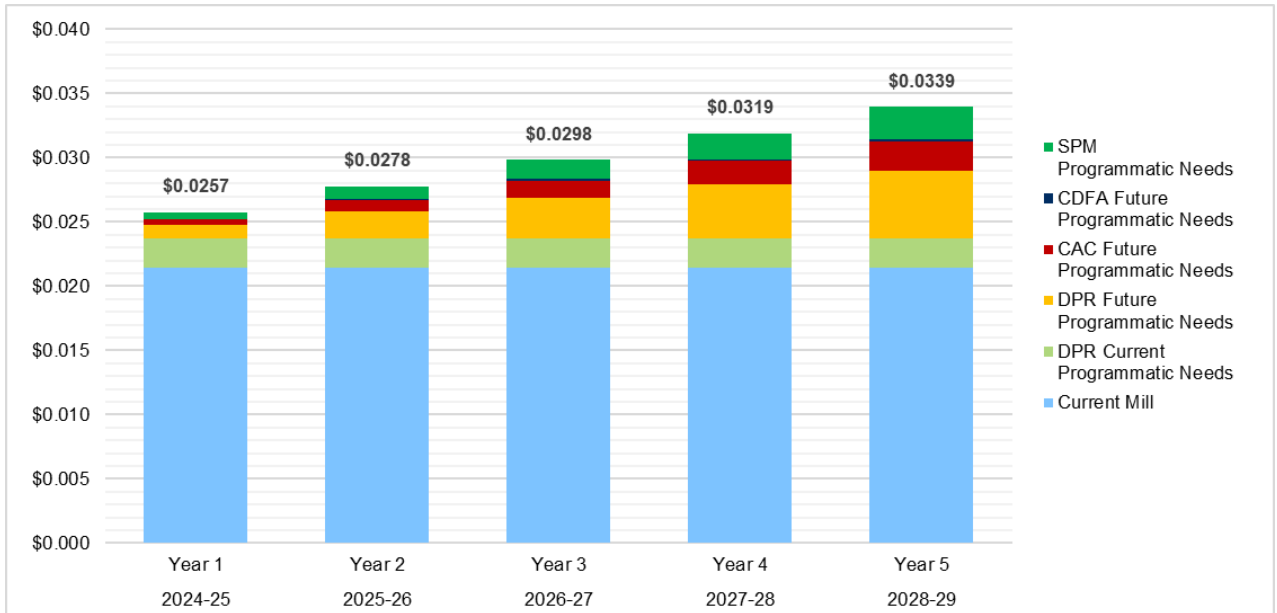


Exhibit 34
Five-Year Phase-in of Proposed Mill Rates



Consider Mill Review Process

Once the mill proposal enters the post-implementation phase, we recommend DPR consider implementing a formal mill review process. As documented in our recommendations, we recommend an examination of the mill every five (5) years, at a minimum, to review and potentially adjust the maximum mill rate. We also recommend that stakeholders are consulted and/or informed during the planning phase of any upcoming adjustments. As part of the review process, DPR would consider the department’s SPM-related efforts, especially as Priority Pesticides and other SPM Roadmap outcomes and/or activities continue to be defined in the coming years.

Consider Priority Pesticides and Other SPM Roadmap Outcomes

In addition to the review process, DPR would consider Priority Pesticides and other SPM Roadmap outcomes for future alignment with DPR’s funding mechanisms. We recommend that once the process of identifying Priority Pesticides has begun, DPR consider and evaluate other mill structure options, such as tiering, for future adjustments. Though we found through our research to-date that a tiered mill structure alone will likely not influence consumer choices due to various factors (inelasticity of pesticides, etc.), the tier structure could help signal policy directives and further alignment with California’s transition to safer, more sustainable pest management.

D. Success Factors and Challenges

We provide a list of potential success factors and challenges in **Exhibit 35**. This is not an exhaustive list, but a summary of potential key success factors and challenges we deem to be critical for implementation based on our comprehensive examination of the mill assessment.

**Exhibit 35
Potential Challenges and Success Factors**

Topic	Challenge	Success Factors
<p>Stakeholder Consultation</p>	<p>During change, it is important to be as transparent as possible. If stakeholders do not have the information they need, they may be frustrated and unprepared for the change. A natural reaction to this lack of control will be resistance as individuals may feel threatened and will fill information gaps with fear-based assumptions.</p>	<p>Maintaining Engagement: To-date, the Mill Assessment Study has involved significant opportunities for stakeholder consultation, providing valuable insight to the study. This engagement should ideally continue through planning, proposal refinement, and through implementation. It will be important to continue to consult stakeholders throughout all stages of the implementation process. This will help prevent future roadblocks to implementation and encourage a stronger foundation to build relationships with stakeholders in the future.</p> <p>Transparency and Communication: Establishing trust through transparency and communication can pave the way for a more collaborative environment, where stakeholders feel empowered to voice their concerns and offer constructive feedback. By actively listening and responding to stakeholders' needs and expectations, the implementation team can demonstrate their commitment to creating a more inclusive and effective change process.</p>

Topic	Challenge	Success Factors
<p>Divergent Viewpoints</p>	<p>In any complex project or initiative, stakeholder diversity is both a challenge and an opportunity. With a range of perspectives and interests at play, finding a universally satisfying proposal can be an elusive goal. While there may be consensus in certain areas, divergent viewpoints are bound to emerge as stakeholders bring their unique experiences, knowledge, and priorities to the table.</p> <p>However, through the SPM Roadmap and other collaborative efforts, stakeholders have demonstrated the ability to hear each other’s perspectives and work to agreements they can all support.</p>	<p>Embracing Diversity: Recognizing diversity is vital for a collaborative, inclusive decision-making process. Engaging stakeholders and facilitating open communication helps build shared understanding and mutual appreciation, fostering ownership and commitment. Finding common ground and focusing on shared goals builds trust and collaboration, while maintaining respectful dialogue enables constructive feedback and problem-solving.</p> <p>Conflict Resolution and Mediation: Addressing diverse perspectives requires conflict resolution and mediation mechanisms. These approaches help manage disagreements, prevent escalation, and promote understanding and compromise. This fosters a collaborative environment, ensuring smooth implementation and building lasting stakeholder relationships, essential for the SPM Roadmap’s long-term success.</p>
<p>Alignment with SPM Roadmap</p>	<p>The mill proposal and implementation of the mill proposal, including any review process, should be in alignment with the SPM Roadmap’s goals, actions, and “North Star.” As part of the SPM Roadmap, DPR, CDFA, and other agencies will be tasked with additional workload, responsibilities, and actions to further the development of safer, more sustainable pest management. It is important that DPR and appropriate funding needs are aligned with the SPM Roadmap.</p>	<p>Monitoring and Evaluation: Implementing a robust monitoring and evaluation (M&E) framework for the revised mill assessment will help ensure that the revised mill and the SPM Roadmap stay on track and achieve their intended outcomes. An M&E framework will enable DPR and other stakeholders to systematically track progress, identify challenges, and make data-driven decisions to improve the project’s effectiveness. Regularly reviewing and updating the M&E framework will also help maintain alignment with the evolving needs and priorities of the stakeholders, as well as any changes in the broader context.</p>
<p>Uncertainty with SPM Roadmap</p>	<p>One challenge with the implementation of the mill proposal is that there is still a level of uncertainty with the SPM Roadmap outcomes and timing. The Roadmap recommends that the state develop a plan, funding mechanisms, and programs to prioritize pesticides for reduction and to support the change necessary to transition to SPM. The Roadmap’s target for the plan, funding mechanisms, and programs to prioritize pesticides is set for 2025. The SPM Roadmap also identifies a goal that by 2024, relevant state agencies and departments (including DPR, CDFA, and others) have the funding, staffing, and mission to advance the goals of SPM. Though the SPM Roadmap outlines 2024 and 2025 as goals, implementation of these changes could depend on various outside factors that are difficult to predict.</p>	<p>Flexibility and Adaptability: Given the potential for uncertainty and changes in circumstances, it is essential for the mill proposal’s implementation strategy to remain flexible and adaptable. As new information becomes available or external factors change, it may be necessary to adjust the approach or timeline to accommodate these developments. A flexible and adaptable strategy will enable the implementation team to respond effectively to new challenges and maintain momentum towards achieving the SPM Roadmap’s goals.</p>

Appendix A: Methodology

The recommendations, options, and proposed implementation plan presented in this report reflect Crowe’s comprehensive examination of the mill assessment over the course of the last year. This Appendix details Crowe’s research, analysis, and stakeholder consultation that contributed to the successful outcomes of the following Mill Assessment Study milestones:

- Initial Interviews and Program Research
- Stakeholder Engagement and Consultation
- Mill Alternatives Concept Paper
- Stakeholder Input on Concepts
- Workload Analysis
- Preliminary Recommendations and Implementation Plan
- Final Recommendations and Implementation Plan.

A. Initial Interviews and Program Research

In Spring to Summer 2022, Crowe performed the first project milestone, *Initial Interviews and Program Research*. The outcome of this milestone was the release of the July 2022 Update. Crowe performed comprehensive research and analysis to understand programmatic data that could potentially inform and support the study. Research and analysis included collection, review, and analysis of key data sources, as listed in **Exhibit 36**.

**Exhibit 36
Data Sources**

Area	Description of Data
Pesticide Usage Report (PUR) Data	<ul style="list-style-type: none"> • Key agricultural and non-agricultural pound usage data for Calendar Year (CY) 2018–20
Pesticide Illness Data	<ul style="list-style-type: none"> • Key Pesticide Illness Surveillance Program data for CY2019-21, including data relevant to (1) cases, (2) pesticides, (3) correlations, and (4) symptoms • Key agricultural and non-agricultural pounds sold and revenue data for CY 2018–21 recorded in MillPay
Organizational/ Budget Data	<ul style="list-style-type: none"> • Summary of actual revenues and expenditures for FY2017–18 through FY2020–21 and estimated revenues and expenditures for FY2021–22 through FY2022–23 • Current organizational charts, including County Agricultural Commissioners (CACs) • Approved BCPs over the past four (4) fiscal years and supporting workpapers • Confirmation of the flow into the DPR’s “3540 – Pesticide Programs” from (1) each Branch within the Pesticide Programs Division and (2) DPR’s support and administrative offices (as referenced in the DOF Budget Galley reports) • Breakdown of funding sources (e.g., mill fee revenues, license revenues, registration revenues, general fund, other, etc.) for the Pesticide Programs Division and the Mill Office from FY2016–17 to FY2020–21 • Funding California’s Pesticide Regulatory Program, report to the Legislature (2003) • Documentation on DPR’s function-based accounting methodology, including descriptions of key functions and activities

Area	Description of Data
County Agricultural Commissioner Data	<ul style="list-style-type: none"> • Annual Pesticide Activity Reports from CY2016–21, including activities, costs, and workload • Mill distributions to CACs from CY2016–21 • From CY2016–21, in each county, number of (1) licensed pest control dealers, (2) licensed agricultural pest control advisers, businesses, and aircraft pilots, (3) structural pest control operators providing notice of work, and (4) work hours expended by county personnel who are licensed, or working under the supervision of licensed county personnel, in pesticide regulation or environmental monitoring and investigation • From CY2016–21, in each county, total sum of (1) dollars expended relating to pesticide regulatory activities and (2) private applicator holders
CDFA Data	<ul style="list-style-type: none"> • Lab samples related to Agreement Number 19-C0010 for each relevant Branch, to include (1) number analyzed per year, (2) cost per sample, and (3) sample type
Tiered Assessment Documentation	<ul style="list-style-type: none"> • Calculation support, in Microsoft Excel, for the six (6) tiered mill scenarios documented in DPR Tiered Mill Scenarios PowerPoint
Registration and Licensing Data	<ul style="list-style-type: none"> • From CY2016–21, number of (1) licenses issued annually (agricultural vs non-agricultural), (2), renewals annually (ag vs non-ag), (3) new products with currently registered AI, (4) new CA-only products, (5) new AI-only products, (6) new structural pest devices, (7) product amendments, (8) emergency exemptions, (9) special local need, (10) research authorizations, (11) adverse effects, (12) on-going re-evaluations and risk assessments, (13) total new product submissions, determinations, restricted materials, and (14) average timeline to reach any final action

In addition to research and analysis, Crowe also engaged with stakeholders as part of the first project milestone. Crowe first met with DPR subject matter experts (SMEs) to understand the Pesticide Program’s emerging people, process, technology, and resource related priorities. Subsequently, Crowe met with a sample of stakeholders from various backgrounds in agriculture, industry, environment protection, and environmental justice. Lastly, Crowe met with representatives from the California Department of Food and Agriculture (CDFA) and selected County Agricultural Commissioners (CACs) on the Residual Mill Committee. In total, Crowe conducted nearly 30 initial interviews including both SMEs and stakeholders as part of the initial interviews.

Crowe conducted 12 initial interviews with departmental SMEs. The purpose of the interviews was to gain a comprehensive understanding of the department’s various branches and offices to understand their potential existing and future resource needs to continue to meet DPR’s mission while meeting emerging pressures from additional workload. The SMEs interviews covered the following areas:

- Fiscal, Audits, and Business Services Unit
- Mill Office
- Information Technology Branch
- Enforcement Headquarters Branch
- Enforcement Regional Offices Branch
- Human Resources Branch
- Worker Health and Safety Branch
- Pesticide Evaluation Branch
- Pesticide Registration Branch
- Environmental Monitoring Branch
- Human Health Assessment Branch
- Integrated Pest Management Branch

Crowe conducted 15 interviews with a sample of stakeholders from the various groups as illustrated below. The objective of the interviews was to obtain their perspective on how to appropriately update the existing mill fee to meet DPR's ongoing and long-term needs.

- Agricultural Council of California
- American Chemistry Council
- California Association of Pest Control Advisers
- California Department of Food and Agriculture
- California Farm Bureau Federation
- Californians for Pesticide Reform
- California Institute of Biodiversity
- Community Alliance of Family Farmers
- County Agricultural Commissioners
- Household and Commercial Products Association
- Mosquito and Vector Control Association of California
- National Resources Defense Council
- Pesticide Action Network North America
- Western Plant Health Association

B. Stakeholder Engagement and Consultation

In Summer to Fall 2022, Crowe performed the second project milestone, *Stakeholder Engagement and Consultation*. The outcome of this milestone was the release of the October 2022 Update. Crowe's methodology for this project milestone focused on stakeholder consultation.

As part of the stakeholder consultation, Crowe conducted one-on-one consultation sessions with DPR stakeholders that represented diverse groups including, agricultural, environmental, environmental justice, registrants, applicators, regulatory partners, and others. The objectives of the consultation sessions conducted in July 2022 through September 2022 were to provide an update to stakeholders on the progress of the study and to obtain input on potential mill alternatives. Stakeholders a part of the consultation sessions included:

- Almond Alliance
- American Chemistry Council
- Bayer
- California Agricultural Commissioners and Sealers Association / County Agricultural Commissioners
- California Association of Pest Control Advisers
- California Association of Winegrape Growers
- California Citrus Mutual
- California Department of Food and Agriculture
- California Farm Bureau Federation
- California Rural Legal Assistance Foundation
- California Specialty Crops Council
- Californians for Pesticide Reform
- Center for Biological Diversity
- Central California Environmental Justice Network
- Community Alliance with Family Farmers
- Corteva
- CropLife
- Environmental Working Group
- Household and Commercial Products Association
- Leadership Counsel for Justice and Accountability
- Marrone Bio
- Pesticide Action Network North America
- Reckitt Benckiser
- Syngenta
- University of California, Integrated Pest Management
- Western Plant Health Association

C. Mill Alternatives Concept Paper

In Fall 2022, Crowe performed the third project milestone. The outcome of this milestone was the release of the Mill Alternatives Concept Paper. Crowe utilized research, analysis, stakeholder consultation, and outcomes from the previous project milestones to inform the development of the Mill Alternatives Concept Paper.

- **Research:** Crowe utilized extensive research conducted as part of the first project milestone to develop the Mill Alternatives Concept Paper. In addition, Crowe conducted research on best practices for funding pesticide programs, including but not limited to: benchmarking USEPA and other state and countries' pesticide funding frameworks, reviewing DPR's 2003 report to the legislature, and reviewing the Government Accounting Office's (GAO) various studies and best practices on setting user and regulatory fees. Crowe also reviewed various scientific periodicals and papers on agricultural production, pesticide policies, and regulatory structures.
- **Program Analysis:** At the inception of the Mill Assessment Study, Crowe conducted 14 interviews with DPR's subject matter experts (SMEs) to understand and document the department's overall existing program priorities and needs. Crowe analyzed DPR's historical program data, including but not limited to: pesticide sales data (MillPay), pesticide usage data (Pesticide Use Report (PUR)), and registration and licensing data. Crowe also analyzed DPR's fiscal data (e.g., detailed historical expenditures and revenues by program) and conducted a detailed Workload Analysis to understand and identify the department's existing and future resource needs by program to continue to meet its mission. Crowe evaluated CAC funding over the last eight (8) workload years, conducted a survey of CACs to obtain a general understanding of current and future program needs and conducted several group and one-on-one meetings with CACs.
- **Outreach:** Since the inception of the Mill Assessment Study, Crowe has conducted over forty interview sessions with DPR's stakeholders. The objectives of these interview sessions were to provide stakeholders with an update on the Mill Assessment Study progress, to obtain stakeholders' various priorities and perspectives related to DPR's mission, pesticide regulatory activities, and sustainable pest management activities, and to obtain their input on potential mill assessment evaluation criteria. Crowe utilize the stakeholder interviews and outcomes to help inform and shape development of the Mill Alternatives Concept Paper.

D. Stakeholder Input on Concepts

In Fall 2022 to Winter 2023, Crowe performed the fourth project milestone, *Stakeholder Input on Concepts*. The outcomes of this milestone were the Public Webinar on Mill Alternatives Concept Paper and release of the February 2023 Update. Crowe’s methodology for this project milestone focused on stakeholder consultation. Crowe conducted a public webinar on December 6, 2022, to provide an update on the study and discuss their approach to identifying potential mill assessment alternatives, as detailed in the Mill Alternatives Concept Paper.

Following the release of the Mill Alternatives Concept Paper and the public webinar held in December 2022, Crowe conducted five (5) cross-sector focus group sessions with interested stakeholders from various backgrounds, including agricultural, environmental, environmental justice, registrants, applicators, regulatory partners, research entities, and others. The objectives of the focus group sessions were to obtain additional feedback from interested stakeholders on proposed mill design, usage, and implementation considerations detailed in the Concept Paper, provide a venue for stakeholders across different industries and interest groups to hear other’s perspectives and ideas, and to inform Crowe’s refinement of mill recommendations. Below is a list of focus group session participants:

- Agricultural Council of California
- Almond Alliance
- Almond Board
- American Chemistry Council
- Blue Diamond
- California Agricultural Aircraft Association
- California Agricultural Commissioners and Sealers Association / County Agricultural Commissioners
- California Association of Pest Control Advisers
- California Association of Winegrape Growers
- California Certified Organic Farmers
- California Rural Legal Assistance Foundation
- California Specialty Crops Council
- California Women for Agriculture
- Californians for Pesticide Reform
- Center for Biological Diversity
- Citrus Mutual
- Community Alliance with Family Farmers
- CropLife
- Environmental Working Group
- Household and Commercial Products Association
- Pesticide Management Advisory Committee
- Reckitt Benckiser
- Syngenta
- University of California, Agriculture and Natural Resources
- University of California, Cooperative Extension
- University of California, Department of Biological and Agricultural Engineering
- Western Wood Preserve Institute
- Western Plant Health Association

In addition to the focus group sessions, Crowe also invited interested stakeholders to provide written feedback on the Concept Paper. As of January 2023, Crowe received nine (9) letters and four (4) email submissions representing over forty (40) stakeholders from a broad range of backgrounds, many of which had also attended the focus group sessions. The written feedback largely mirrored the feedback shared by stakeholders during the focus group discussions.

E. Workload Analysis

In Fall 2022 to Winter 2023, Crowe performed the fifth project milestone. The outcome of this milestone was the release Workload Analysis Report. Crowe utilized the outcomes from the initial interviews with DPR's subject matter experts (SMEs) at the beginning of the study process to identify and understand the department's programmatic needs to carry out its mission, mandates, and authorized functions.

Building on the initial round of interviews, Crowe continued to meet with SMEs and other representatives within the branches throughout Summer and Fall 2022 to further identify DPR's overall programmatic needs with a focus on the identification of unbudgeted core and sustainable pest management (SPM) related workload.

We compiled the workload data from DPR Divisions and Branches into a customized Excel workload model. We tied the workload data to state pay scales by classification for roughly 70 classifications across the 13 Divisions and Branches. We included allocations by major activity groups and then calculated workload needs by mill, registration, and licensing and certification programmatic functions.

Crowe also performed program research to meet this project milestone. Crowe's objective with conducting program research was to understand and identify the various programmatic and fiscal data elements that could aid in our examination of DPR's current programmatic needs. Specifically, we reviewed and assessed the following:

- *Funding Environmental Regulation*, report by the Legislative Analyst Office (1995)
- *Funding California's Pesticide Regulatory Program*, report to the Legislature (2003)
- Documentation on the department's function-based accounting methodology²², including descriptions of key Pesticide Programs and Administration related functions and activities
- Authorized positions, including limited term and vacant positions, from FY2014/15 through FY2022/23
- Authorized and actual department-wide revenues and expenditures from FY2014/15 through FY2022/23
- Authorized and actual Department of Pesticide Regulation Fund related revenues and expenditures from FY2014/15 through FY2022/23, including:
 - Mill related authorized and actual revenues and expenditures for mill related workload from FY2014/15 through FY2022/23
 - Registration related authorized and actual revenues and expenditures for mill related workload from FY2014/15 through FY2022/23
 - Licensing and certification related authorized and actual revenues and expenditures for mill related workload from FY2014/15 through FY2022/23
- Budget change proposals (BCPs) over the past four (4) fiscal years and supporting workpapers
- FY2022/23 authorized budgetary details, including personal services, and operating and equipment expenditures (OEE) related expenditures for the department's organizational units.

Together, the SME interviews along with program research, provided a foundation for Crowe's examination of DPR's current programmatic needs, and the development of the Workload Analysis Report.

²² Function-based accounting focuses on the costs and performance of specific program functions rather than those of organizational units.

F. Preliminary Recommendations and Implementation Plan

This report represents the outcome of the sixth project milestone. We developed the report using research, analysis, and stakeholder feedback from all previous project milestones. In this report, we describe Crowe's preliminary recommendations for mill design, usage, and implementation and detail a proposed implementation plan based on those recommendations. We developed our *Preliminary Recommendations and Implementation Plan* in consideration of the following:

- Program research and initial interviews with DPR SMEs and stakeholders as described in the first project milestone
- Consultation sessions with stakeholders as described in the second project milestone
- Mill Alternatives Concept Paper's mill design, usage, and implementation considerations
- Workload Analysis Report findings on DPR's current and future programmatic needs, including preliminary estimates for DPR's initial mil-related responsibilities associated with implementing recommendations included in the Sustainable Pest Management Roadmap for California
- Stakeholder feedback on the Mill Alternatives Concept Paper through the focus group sessions and written comments
- Additional research and analysis of:
 - County Agricultural Commissioner's Funding, as detailed in **Appendix C**
 - Tiered funding models, as detailed in **Appendix D**
 - Current and Future Pesticide Mill Revenues based on trends in pesticide sales and the sustainability of mill revenue, as detailed in **Appendix E**.

After the release of this report, Crowe engaged with stakeholders to solicit additional feedback and explain recommendation justifications and rationale.

G. Final Recommendations and Implementation Plan

In June 2023, Crowe performed the seventh and last project milestone. Crowe used the outcomes from all the previous project milestones to inform the development of the Final Recommendations & Implementation Plan, focusing on stakeholder feedback gathered as part of the *Preliminary Recommendations and Implementation Plan* project milestone.

Appendix B: Funding Authority

Appendix B summarizes DPR’s funding authority for its Pesticide Programs and Administration. The State’s pesticide use laws are primarily codified within the California Food and Agricultural Code (FAC) Divisions 2, 6, and 7; the regulations are in Title 3, California Code of Regulations (3 CCR) Division 6. The laws and regulations include the requirements that support certification and licensing of individuals who make agricultural use recommendations, apply pesticides using an aircraft, or apply or supervise the application of restricted pesticides; as well as the licensing of Pest Control Dealers and Brokers and Pest Control Businesses.

Exhibit 37 provides a summary of DPR’s key mandates and legal authorities supporting funding for DPR’s Pesticide Programs and Administration.

Exhibit 37 Key Mandates and Legal Authorities

Codification	Name/Topic Area	Description
General		
FAC §11456	DPR’s General Powers	Sets forth the general powers of the director to adopt regulations necessary to carry out the provisions of the code, conduct inspections, and issue licenses and certificates of registration.
FAC §11501	DPR’s Statutory Purpose	Sets forth DPR’s statutory purpose: to provide for the proper, safe, and efficient use of pesticides essential for production of food and fiber and the protection of public health and safety; to protect the environment by regulating and ensuring proper stewardship of pesticides; to regulate worker safety; to issue licenses and permits for pesticide use; to protect consumers; and to develop and encourage the use of integrated pest management.
FAC §11501.1	DPR’s Authority over Pesticide Registration, Sale, and Use	Provides that DPR has authority over the registration, sale and use of pesticides and preempts any local regulation.
FAC §11501.5	DPR and County Agricultural Commissioners (CACs) Pesticide Enforcement Authority	Gives the DPR and the commissioner of each county under the direction and supervision of DPR the authority to enforce pesticide laws and regulations.
2 FAC §2281	County Agricultural Commissioners (CACs) Responsibilities	Provides that the county agricultural commissioners are responsible for the local administration of the pesticide enforcement program under the instructions and recommendations of the DPR’s director.
FAC §12841.2	DPR Outreach	Requires DPR to create a program to conduct outreach and education activities for worker safety, environmental safety, school safety, and proper pesticide handling and use (relates to environmental justice).

Codification	Name/Topic Area	Description
Product Registration		
FAC §12811	Pesticide Registration	Requires all products to be registered following the requirements set forth in statute and regulation before they can be offered for sale in California.
FAC §12824	Pesticide Evaluation	Requires the director to evaluate pesticides using specified criteria set forth in statute and regulation prior to registration, and to develop an orderly program for the continuous evaluation of all pesticides registered.
FAC §12825	Pesticide Cancellation, Refusal	Provides authority to the director to cancel or refuse to register any pesticide after a hearing on the grounds specified.
Environmental and Human Health Risk Assessment		
FAC §11454.1	Pesticide Risk Assessment	Requires DPR to conduct pesticide risk assessment as appropriate to carry out its responsibilities under the code and requires the Office of Hazard Assessment to provide a scientific peer review as required by the Health and Safety Code.
FAC §13121-13135	Birth Defect Prevention Act	Gives DPR the authority to require registrants of new or already registered pesticides to submit specified studies related to birth defects and other health effects and to evaluate those studies and take appropriate action (cancellation, suspension, refusal to register).
FAC §13141-13152	Pesticide Contamination Prevention Act	Gives DPR the authority to require specified information about the potential of a pesticide to move to ground water, conduct ongoing monitoring, and establishes a process to evaluate and mitigate the use of any pesticide found to have polluted ground water as a result of legal agricultural use.
FAC §14004.5	Restricted Materials Criteria	Requires the director to evaluate and designate particularly hazardous pesticides as restricted materials based upon certain criteria.
FAC §14021-14027	Toxic Air Contamination (TAC statute)	Requires DPR to evaluate the health effects or pesticides emitted into the air and to determine if they should be listed as a toxic air contaminant and to then determine the need and degree of control measures. For TAC's already listed, to make a determination of the need and degree of control measures after the completion of a risk assessment. Control measures must be implemented within two years of the determination, or a report submitted to the legislature providing the reasons why this obligation has not been met.
Licensing and Certification		
FAC §11502 and 11502.5	Pest Control Licensing, Certification, and Continuing Education	Gives the director the authority to adopt regulations to govern the conduct of the business of pest control and to pass regulations related to minimum requirements, continuing education, and renewal.
Pesticide Use Reporting		
FAC §12979	Pesticide Use Reporting (PUR)	Requires the use of pesticides to be reported to the agricultural commissioner or to DPR as prescribed by the director (regulations and other sections require use reporting to the commissioner for all agricultural and structural pesticide use).

Codification	Name/Topic Area	Description
Restricted Material Use and Permitting		
FAC §14001	Restricted Materials	Requires DPR to regulate the use of restricted materials.
FAC §14005-14006	Restrict Material Authority	Gives the director the authority to adopt regulations to govern the possession and use of restricted material pesticides to protect the environment and human health
FAC §14006.5-14009	Restrict Material Permitting	Requires a permit from the commissioner before any application of an agricultural use restricted material pesticide and sets forth the process of issuance and the process to challenge the issuance or refusal to issue.
FAC §14010-14015	Restrict Material Safe, Purchase, and Use	Sets forth other requirements on sale, purchase and use of restricted materials.
Monitoring and Surveillance		
FAC §12532 and 12534	Pesticide Residue Monitoring Program	Requires DPR to conduct a pesticide residue monitoring program to prevent public exposure to illegal pesticide residues.
FAC §12824	Pesticide Evaluation Program	Requires DPR to develop an orderly program to continuously evaluate all registered pesticides. (3 Cal. Code Reg. section 6220-6226.).
FAC §12825.5	Pesticide Registrant Reporting	Requires registrants to report evidence of any adverse effect or risk of a pesticide to human health and the environment.
Mitigating Human Health Risks		
FAC §12824	Pesticide Restrictions	Requires DPR to eliminate from use any pesticides that endanger the agricultural or nonagricultural environment, to place restrictions on use, and to set up a program to continuously evaluate registered pesticides. It also provides the authority to request applicants and registrants to perform and submit studies needed to evaluate the specific pesticide product.
FAC §12981	Pesticide Worker Safety	Requires DPR to adopt regulations protecting worker safety, basing regulations related to health effects on the recommendations of the Office of Health Hazard Assessment (related sections include 12980-12988).
FAC §13129	Birth Defects Prevention Act Studies	Requires DPR to review health effects studies for possible birth defects or other health effects related to pesticide exposure and act if there is a significant adverse health risk (from Birth Defects Prevention Act, sections 13121-13135).
FAC §14005	Restricted Materials Use Conditions	Requires DPR to establish conditions for the use of restricted materials to mitigate the effects on human health and the environment (related section 14006.5 requires a permit before use).
FAC §14024	Pesticide Emission Control Measures	Requires DPR to develop control measures for pesticides designated as toxic air contaminants to reduce emissions so the public will not be exposed to levels that may cause significant adverse health effects.

Codification	Name/Topic Area	Description
Pesticide Management Programs		
FAC §13183	Voluntary Adoption of Integrated Pest Management (IPM) Programs for School sites	Requires DPR to promote and facilitate the voluntary adoption of integrated pest management (IPM) programs for school sites (related sections include sections 13180-13188).
FAC §13185	IPM Training in Schools and Day Cares	Requires DPR to establish an IPM training program for schools and day care facilities.
FAC §13186	Pesticide Use Reports by Schools	Requires the submission of pesticide use reports by schools (not applied by commercial applicators).
FAC §13186.5	IPM and Safe Use of Pesticides at School Sites Training	Requires any individual applying pesticides at school sites (school personnel and commercial applicators) to receive a training course in IPM and specific training unique to applying pesticides at school sites.
Illegal Residue		
FAC §12581	Illegal Pesticide Residue Inspection Authority	Grants DPR the authority to inspect produce packed, shipped, or sold in California for illegal pesticide residue.
FAC §12671	Excess Pesticide Residue	Prohibits the packing, shipping, or sale of any product carrying excess pesticide residue.
General Enforcement		
FAC §12991	Pesticide Sale, Purchase, and Handling	Generally, sets forth the unlawful acts related to the sale, purchase, and handling of pesticides (Division 7).
FAC §12996-13000.1	Pesticide Enforcement Violations	Sets forth the enforcement options for violations of Division 7 provisions and implementing regulations (criminal, civil, administrative) generally investigated and initiated by DPR at the state level.
FAC §12999.4	Pesticide Enforcement Violations	In lieu of civil prosecution, this section grants authority to DPR to administratively enforce violations for the sale of produce with illegal residues, misbranded pesticide products, and unregistered pesticide products.
FAC §11791 and 11792	Pesticide Use Violations	Generally, sets forth the unlawful acts related to pesticide use violations (Division 6).
FAC §11891-11894	Pesticide Enforcement Violations	Sets forth the enforcement options and penalties for violations of Division 6 and implementing regulations (criminal, civil, and administrative) generally investigated and initiated by the Commissioners at the local level.
FAC §12999.5	Pesticide Enforcement Violations	In lieu of civil prosecution, this section grants the commissioners the authority to administratively enforce pesticide use violations.

Codification	Name/Topic Area	Description
Product Compliance and Mill Assessment		
FAC §12841	Mill Assessment	Gives DPR the authority to collect a mill assessment on the first sale of a pesticide into or within California (related sections include 12841.1-12847).
FAC §12881-12885	Misbranded Pesticides	Defines what constitutes a misbranded pesticide (sale of which is a violation per section 12992).
FAC §12992	Misbranded Pesticides	Provides that it is unlawful to sell a misbranded pesticide product.
FAC §12993	Unregistered Pesticides	Provides that it is unlawful to sell an unregistered pesticide product.
FAC §12995	Unregistered Pesticides	Provides that it is illegal to possess or use a product that has not been registered by DPR.
Structural Pest Control		
FAC §15201	Structural Pest Control Board (SPCB) Authority	Gives joint responsibility to regulate activities or structural licensees to the Structural Pest Control Board, DPR, and the commissioners under the direction of the DPR.
BCP §8616 and 8614 (Business and Professions Code)	Inspections and Disciplinary Action	Designates DPR and the commissioners as the agents to conduct inspections and take any enforcement and disciplinary actions for violations as described in sections 8616.5, 8616.6, 8616.7, 8616.9, 8617.
BCP §8662	Disciplinary Review Committee	Sets up the Disciplinary Review Committee consisting of one member from DPR, one member from the Structural Pest Control Board, and one member from industry to hear appeals from structural administrative civil penalty actions taken by the commissioner.

Appendix C: County Agricultural Commissioners Funding Analysis

An objective of the study is to examine current and future funding needs for DPR while also considering County Agricultural Commissioners' (CAC) funding associated with mill-related responsibilities. To meet this objective, Crowe examined CACs' funding for mill related responsibilities to identify recommended options to support current and future programmatic needs. In the remainder of this Appendix, we summarize key findings, background, and analysis supporting our recommended proposal option to support CACs programmatic needs for mill related responsibilities.

A. Key Findings

We recommend a proposal option that maintains the existing mill allotment criteria pursuant to FAC Section 12844 and CCR 6393, which generates nearly \$35.0 million per year to support local pesticide usage enforcement programs and up to approximately \$10.2 million that provides "as-needed" funding (separate from the existing mill allotment criteria) to support County's authorized needs (e.g., project, personnel, stakeholder consultation support, other funding, etc.) for local pesticide usage enforcement workload activities and administration priorities.

Our recommended proposal option is based on feedback from CACASA/CACs along with an examination of the following:

- **Statewide Total Programmatic Funding Mix** – Mill revenues account for approximately 20 percent of the CACs' statewide total programmatic funding, excluding funding for weights and measures programs.
- **Pesticide Usage Enforcement Programmatic Funding Mix** – Mill revenues account for approximately 40 percent of CACs' statewide total pesticide usage enforcement (PUE) programmatic funding.

Our examination indicates CACs must balance mill assessment revenues generated from the current allotment criteria, County General Funds, and other sources to receive UGT funds due to FAC Section 224(a)(2). Additional mill funding may offset PUE expenditures previously covered by a portion of the County General Funds required to be spent to qualify for UGT allocation. This would require CACs to increase PUE expenditures in proportion of the mill increase to meet annual financial statement requirements. An increase to mill funding could potentially cause a decrease in the other funds available to CACs, which is why we recommend a proposal option separate from the existing mill allotment criteria to avoid this scenario.

B. Background

DPR oversees and partners with CACs' enforcement of state pesticide laws and regulations at the local level. CACs pesticide usage enforcement programmatic activities include, but are not limited to:

- Enforcement of county and state laws and regulations concerning use, storage, and handling of pesticides; licensed agricultural pest control businesses; licensed structural pest control operations; agricultural pest control advisers; pest control dealers; growers/property operators; farm labor contractors and others
- Evaluation of requests for restricted material permits, notices of intent, preapplication site inspections, and issuances or refusals
- Review of pesticide use reports for accuracy and completeness
- Application inspection activities as related to the proper and safe use of pesticides
- Records inspections (including use reports) related to the proper and safe use of pesticides
- Investigation of complaints, illnesses, injuries, damages, or losses resulting from applications of pesticides
- Regulatory activities involving examination of licensee and certificate applicants
- Registration of pest control operators, pilots, pest control advisers, farm labor contractors; issuance of operator identification numbers and structural pest control operator notifications
- Collection, preparation, and submission of enforcement samples for laboratory analysis
- Pesticide regulatory training, outreach activities, and meetings with interested groups and individuals
- Cooperation in policy analysis and evaluation
- Collection, preparation, and presentation of evidence at administrative hearings and prosecutions, preparation of compliance/enforcement actions, and conducting administrative hearings
- Preparation and promulgation of county pesticide regulations authorized under authority of the Food and Agricultural Code
- Other administrative support time specific to the Pesticide Use Enforcement program.

CACs receive funding from the following sources to support PUE programmatic activities: 1) mill assessment pursuant to FAC Section and 12841 CCR 6393, 2) unclaimed gas taxes (UGT) pursuant to FAC Section 224(a), 3) County General Funds, and 4) other sources.

Mill Assessment

Mill funds are apportioned to CAC for specifically PUE programmatic use. According to FAC Section 12841, CACs are entitled to "an amount equal to the revenue derived from 7.6 mills (\$0.0076) per dollar of sales for all pesticide sales for use in this state," in which the total revenues generated are allocated between the state's 58 counties for reimbursement of specific pesticide regulatory and administration costs. CCR Title 3 Chapter 6 further specifies "the criteria to be used in allocating pesticide mill assessment funds to counties based upon each county's costs, pesticide regulatory activities, workload, and performance, pursuant to FAC Section 12844." **Exhibit 38** summarizes CACs' existing reimbursement criteria items and apportionment, as described in FAC Section 12844 and CCR 6393.

**Exhibit 38
Summary of Criteria Items and Apportionment
Pursuant to FAC Section 12844 and CCR 6393**

Criteria Item	Apportionment	Description
1. Inspections	3 percent	The total number of Pesticide Use Enforcement Program inspections completed in accordance with the prioritization plan agreed upon by the Director and the commissioners and the commissioner's negotiated work plans.
2. Lic/Reg/ID	3 percent	The total number of licensed pest control dealers located in each county; licensed pest control advisers, pest control businesses, pest control aircraft pilots, and farm labor contractors registered in each county; structural pest control operators providing notice of work in each county; active operator identification numbers in each county; and any additional similar workload activities approved jointly by the Director and the commissioners.
3. Private Applicator	3 percent	The total number of private applicator certificate holders certified in each county.
4. Work Hours	3 percent	Work hours expended on pesticide related activities that are agreed upon by the Director and the commissioners, provided the work hours are expended by persons holding a Pesticide Regulation and/or Investigation and Environmental Monitoring license or by unlicensed persons qualified to apply for a Pesticide Regulation and/or Investigation and Environmental Monitoring license who are closely supervised by persons holding a Pesticide Regulation and/or Investigation and Environmental Monitoring license.
5. Expenditures	3 percent	Expenditures reported by each county for pesticide-related activities that are agreed upon by the Director and the commissioners.
6. Lbs. of Pesticides	3 percent	The total pounds of pesticides used in the county that have been reported pursuant to Food and Agricultural Code section 12979.
7. Permits/Notice of Intent	21 percent	The total number of restricted materials permits, and permit amendments issued by each county; sites identified on all restricted materials permits and permit amendments issued by each county; and notices of intent reviewed by each county.
8. Lbs. of Non-Ag Pesticides	21 percent	Based on the total pounds of nonagricultural-labeled pesticides sold in this state in relation to each county's population. Pounds of pesticide sold data shall be derived from mill assessment collection information provided to the department. Population data shall be based on the most recent U.S. census information.
9. PUR Data Records	40 percent	Based on each county's pesticide use report data records in relation to the total number of pesticide use report data records submitted to the department by all counties.

Unclaimed Gas Tax (UGT)

According to the Motor Vehicle Fuel Tax Law (MVFT) Section 8352.5 there shall be “money deposited... to the department of Food and Agriculture Fund [for] the portion of receipts in the Motor Vehicle Fuel Account... that were attributable to agricultural off-highway use of motor vehicle fuel.” This funding is then further distributed to support CACs’ programs, including PUE programmatic needs. Of the total UGT funds distributed to CACs, FAC Section 224(a) guarantees that “nine million dollars (\$9,000,000) is hereby appropriated... for payment to the counties for pesticide use enforcement programs supervised by the Director of Pesticide Regulation.” The \$9.0 million is “apportioned to counties in relation to each county’s [net] expenditures to the total [net] amount expended by all counties for the preceding fiscal year for pesticide use enforcement programs,” adjusted to zero when net PUE expenditures are negative.

County General Funds

A significant portion of PUE program revenue also comes from County General Fund dollars as FAC Section 224(a)(2) requires counties to “maintain county general fund support for agricultural commissioner services at least equal to the average amount expended for the five preceding fiscal years” to be eligible for receiving UGT Funds.

Other Sources

Additional revenue sources available to CACs include miscellaneous payments from DPR (primarily assessments for service), State General Funds, and funds from CAC-imposed assessments and penalties.

C. Funding Analysis

The data used in the analysis of CACs’ current funding for mill-related responsibilities was supplied to Crowe by DPR and CACs. The data sets used in the analysis are as follows:

- **CACs Annual Financial Statement Data (FY2018/19 to FY2020/21)** – This data provides statewide total revenue, reimbursements, and expenditures of CAC programs excluding revenues, reimbursements, and expenditures to support its weights and measures programs.
- **Mill Distributions Data (FY2017/18 to FY2020/21)** – The data provides annual mill allotments pursuant to FAC Section 12844 and CCR 6393.
- **DPR Pesticide Use Enforcement Activities 224(a) Distributions (FY2017/18 to FY2021/22)** – This data provides annual PUE program revenues, expenditures, and UGT distributions along with total statewide PUE programmatic revenues, expenditures, and UGT distributions.

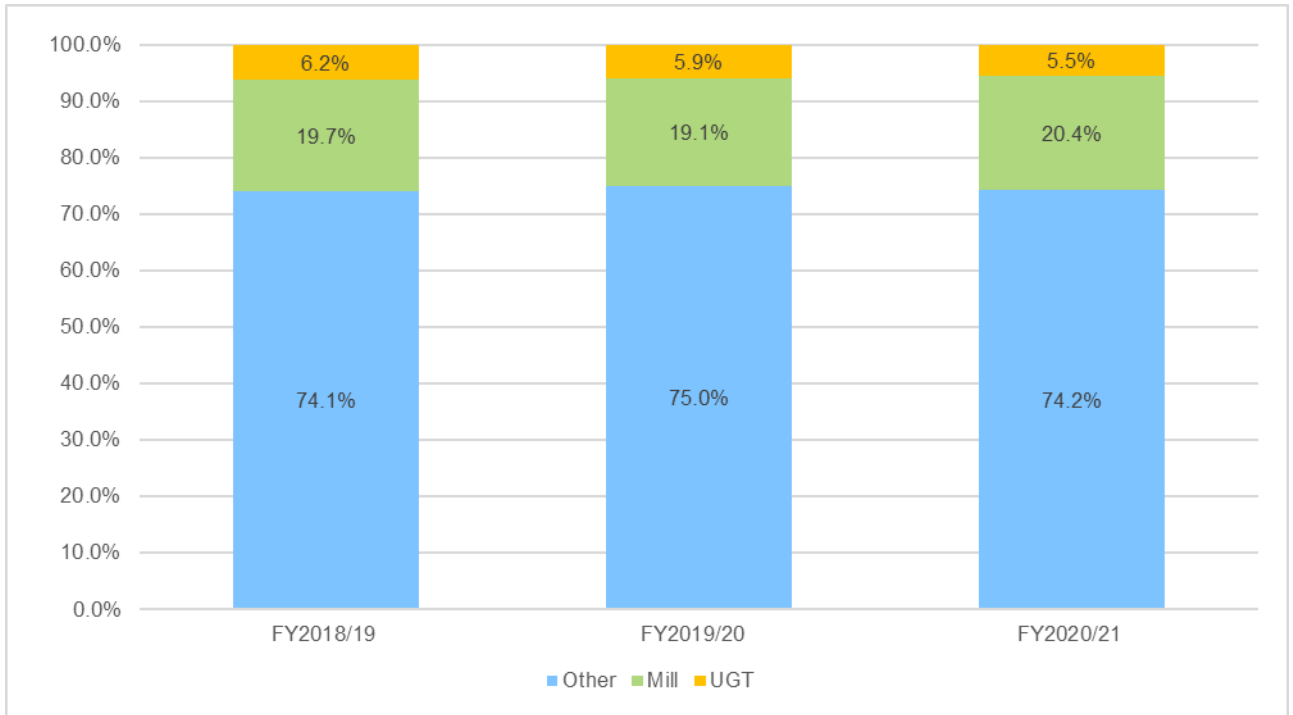
Total Statewide Programmatic Funding Mix

In addition to pesticide use enforcement activities, CACs all perform an array of programmatic workload including, but not limited to:

- Pest Exclusion
- Pest Detection
- Pest Eradication
- Pest Management
- Seed Certification
- Nursery Inspection
- Fruits, Nuts and Vegetables Standardization
- Egg Inspection
- Apiary Inspection
- Crop Statistics

In **Exhibit 39**, we provide total statewide programmatic funding mix prior to County General Fund appropriations in FY2018/19, FY2019/20, and FY2020/21. We distinguish mill and PUE-related UGT funds from all other available programmatic funds, which we grouped into “Other.” Total statewide funding mix includes approximately: 74 percent other funds, and 20 percent mill funds, and six (6) percent UGT funds for pesticide use enforcement activities.

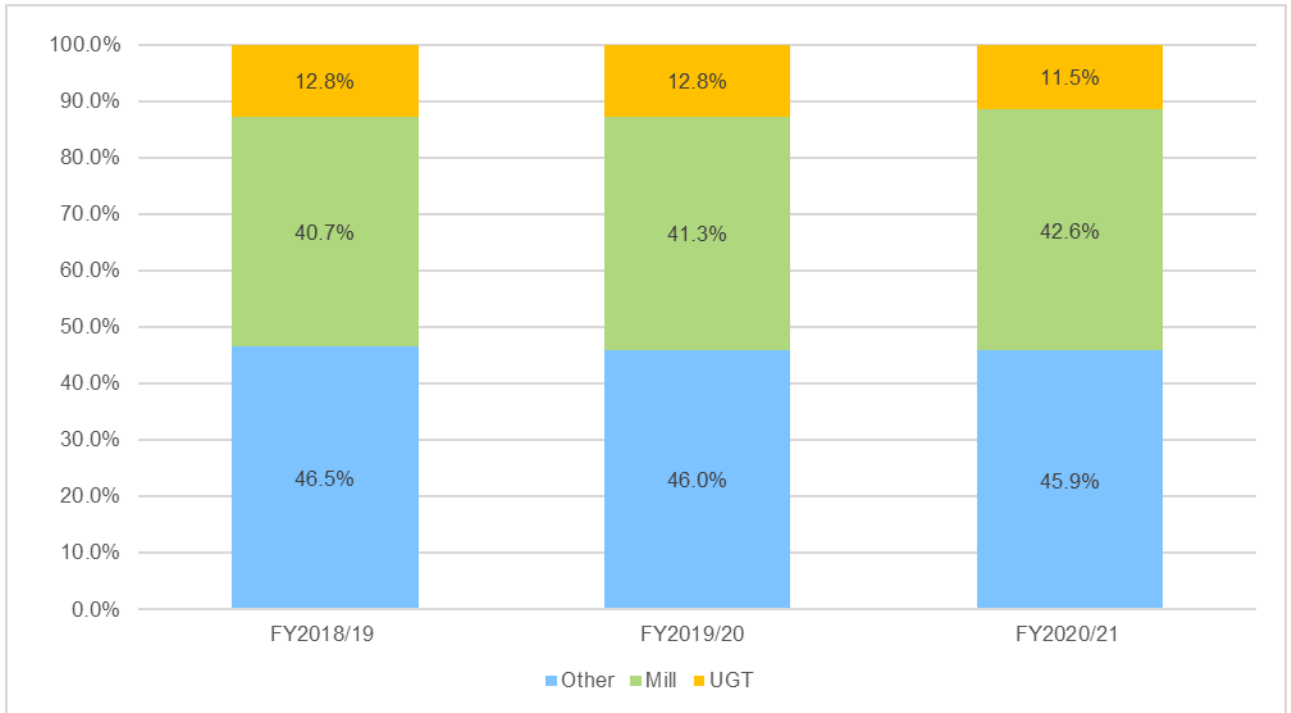
Exhibit 39
Total Statewide Programmatic Funding Mix – FY2018/19, FY2019/20, and FY2020/21



Total Statewide Pesticide Usage Enforcement Programmatic Funding Mix

In **Exhibit 40**, we provide total statewide PUE programmatic funding mix (from other, mill, and UGT sources) in FY2018/19, FY2019/20, and FY2020/21. Total PUE statewide funding mix includes approximately: 46 percent other funds, 42 percent mill funds, and 12 percent UGT funds. UGT funds within this graph are for PUE programmatic activities only.

Exhibit 40
Funding % of Total PUE Programs Revenue



Appendix D: Funding Models Analysis

Two related objectives of the study are to (1) examine detailed options that incentivize the use of safer sustainable pest management practices across the State of California and (2) examine incentivization options, including “tiering the mill assessment,” to incentivize the use of safer pest management. To meet these objectives, Crowe first proposed three (3) funding models for consideration within the Concept Paper: 1) a flat rate model based on the current mill assessment, 2) a tiered rate model based on levels of pesticide category workload, and 3) a tiered rate based on levels of pesticide product workload. Following the release of the SPM Roadmap in January, we proposed a fourth model, a tiered rate based on Priority Pesticides to be identified through the process outlined in the SPM Roadmap. This appendix provides Crowe’s analysis of the four (4) models and summarizes our key findings.

Based on our analysis, we recommended that DPR initially maintain a flat rate model with an option to utilize a tiered rate model based on Priority Pesticides once they have been identified. The analysis in this Appendix focuses on the structure of the mill assessment rather than the level.

A. Key Findings

We recommend the initial continued use of a flat rate model to support the programmatic needs as identified in the recommended proposal options in *Section 2*. A tiered model may be feasible once the process to identify Priority Pesticides, described in Appendix 9 of the SPM Roadmap, has begun. Once identification of Priority Pesticides has begun, DPR could consider a tiered assessment with a higher mill assessment on the Priority Pesticides and a reduced mill assessment on certain lower-risk products to support the use of safer, more sustainable pest management. This assessment differential would be an educational tool, signal a policy preference and regulatory need for alternatives to Priority Pesticides, and generate revenue that could be utilized to support research and development for alternatives. However, based on economic analyses, the higher mill assessment alone would likely not result in an economic incentive to shift to safer alternatives.

Below we provide our justification for a flat rate model until tiers can be systematically defined, potentially as part of the prioritization process to develop Priority Pesticides defined in the SPM Roadmap process:

- **Administrative simplicity:** A flat rate model can be easily implemented and managed in the interim while tiers are being systematically defined. This allows for immediate action and a straightforward option for DPR and its stakeholders to administer.
- **Allows time to begin to identify Priority Pesticides:** While a flat rate model is in place, it provides time to conduct the process outlined in Appendix 9 of the SPM Roadmap to begin to identify Priority Pesticides and potentially develop a tiered model based on Priority Pesticides.
- **Predictable revenue generation:** A flat rate model can provide a predictable revenue stream to support DPR and its partners during the development of tier classifications. This revenue can be used to support research and administration costs associated with creating a more comprehensive tiered model potentially aligned with Priority Pesticides.
- **Transitional framework:** Implementing a flat rate model initially allows DPR to set a rate necessary to support the recommended funding level proposal options while allowing time for a systematic development of tiers.

We recommend the initial continued use of a flat rate model to support the programmatic needs as identified in the recommended proposal options in *Section 2*. **Exhibit 41** provides pros and cons of a flat rate model that can be implemented immediately. Once identification of Priority Pesticides has begun, DPR could consider a tiered assessment with a higher mill assessment on the Priority Pesticides and reduced mill assessment on certain lower-risk products to support the use of safer, more sustainable pest management.

Exhibit 41
Flat Rate Model - Pros and Cons

Model Type	Pros	Cons
<p>Flat Rate</p>	<ul style="list-style-type: none"> • Simplicity: A flat mill rate is easier to administer and understand, as it applies a uniform rate to all pesticides, regardless of their risk level. • Revenue predictability: A flat mill rate offers a more predictable revenue stream for regulatory agencies, as it does not depend on fluctuations in the use of specific pesticides within different tiers. • Transparency: Without a robust mechanism to identify tiers in place at this time, a flat mill rate is more transparent. • Quick implementation: An increased flat rate can be implemented quickly and efficiently, as it does not require the extensive research and analysis needed to develop appropriate tier classifications. • Lower compliance and administrative costs: With a flat rate, pesticide users and manufacturers face lower compliance costs since they would not need to track and report tier classifications or adjust to changes in tier assignments. Additionally, it postpones the need for MillPay system changes and monitoring that DPR could incur with a tiered rate. 	<ul style="list-style-type: none"> • Does not provide incentives for safer alternatives: A flat mill rate does not differentiate between the risk levels of various pesticides, thus there is no signal for users to switch to safer alternatives. • Does not capture the true cost: A flat mill rate does not account for the varying levels of DPR workload or negative externalities associated with different pesticides, potentially underpricing the true cost of more work-intensive or hazardous substances. • Less targeted: A non-tiered approach does not allow for targeted interventions to reduce the risks and impacts of specific high-risk pesticides or promote the adoption of safer pest management strategies.

B. Tiered Assessment Model Based on Priority Pesticides

A tiered model may be feasible once the process of identifying Priority Pesticides as described in Appendix 9 of the SPM Roadmap has begun. While the option for a tiered mill based on Priority Pesticides is viable, there are numerous factors that would need to be weighed and addressed should such a proposal be implemented by DPR. In **Exhibit 42**, we provide pros and cons of a tiered rate model once tiers are defined within the context of Priority Pesticides.

Below, we identify some of the considerations related to implementing this tiering model and evaluate hypothetical funding models. Note that this analysis is preliminary and is intended to provide insight and demonstrate how Priority Pesticide tiering could be implemented and potential revenue impacts.

Priority Pesticide tiering could include two or three components, as identified below:

- A base mill assessment, applied to any product not identified as either a Priority Pesticide or a lower risk product.
- A higher mill assessment on Priority Pesticides, as identified. This higher assessment would be applied to all sales of those products/active ingredients identified as Priority Pesticides. The mill assessment would be set at the base level plus “X”, an additional amount to be determined. The additional mill revenue generated by the higher mill could be allocated to specific activities in support of SPM, such as research and development of alternatives.
- A lower mill assessment on certain lower risk products. This lower tier could be set at a value of base level minus “X”, to provide a policy and educational incentive to adopt lower-risk products. Depending on how lower-risk products are defined, implementing this lower tiered alternative would likely require an increase in the base mill assessment to ensure adequate overall funding of DPR.

Exhibit 42
Priority Pesticide-Based Tiered Rate Model - Pros and Cons

Model Type	Pros	Cons
Tiered Rate	<ul style="list-style-type: none"> • Potential comprehensive process to identify Priority Pesticides: The SPM Roadmap, Appendix 9, outlines a multi-year process for DPR to identify Priority Pesticides. The proposed level of rigor in this identification effort will provide a degree of objectivity and transparency needed for establishing a differential fee structure. • Encourages safer and sustainable alternatives: A tiered mill rate signals the policy preference and regulatory need of using safer pest management approaches by imposing a higher assessment on more harmful products or active ingredients (Priority Pesticides). To the extent sales of these products decrease (as intended) it could lead to reduced environmental and health risks associated with the use of Priority Pesticides. • Better reflects the true cost: By differentiating between the risk levels of various pesticides, a tiered mill rate could better capture the cost of the higher DPR workload and negative externalities associated with pesticide use, such as environmental damage, public health risks, and clean-up costs. • Supports risk reduction goals: A tiered mill rate could align with DPR’s mission and the SPM Roadmap of reducing the risks and impacts of pesticide use on human health and the environment. • Flexibility: Tiered rates allow for more targeted policy and regulatory interventions, such as focusing on specific high-risk pesticides or promoting the adoption of integrated pest management strategies. 	<ul style="list-style-type: none"> • Minimal impact to demand: Based on economic analyses measuring the inelasticity of pesticides, a higher assessment rate alone on Priority Pesticides would not significantly reduce the demand for Priority Pesticides. Therefore, the additional complexities and uncertainties related to a tiered rate may not be justified. However, as the state implements the SPM Roadmap, the knowledge and availability of alternatives could lead to greater elasticity (price sensitivity). • Complexity/Administrative burden: A tiered mill rate requires a more complex system for registrants to assign and pay different fees to different products. It may also require changes to MillPay and additional enforcement by DPR to accommodate and verify different fee levels. • Subjectivity: Even with the Priority Pesticide process, determining risk levels and assigning appropriate tiers may entail a level of subjectivity, potentially leading to disputes or inconsistencies in classification. • Unintended consequences: A tiered system may lead registrants or pesticide users to make product choices that are counterproductive to other environmental policies such as packaging reduction goals. A commonly cited example is that using more concentrated (and potentially more hazardous) products is beneficial from the lens of reduced material use and reduced fuel required for shipping but problematic from a risk perspective.

A tiering model based on Priority Pesticides would need to be structured and implemented so that total revenue would meet DPR’s budgeted funding needs for its mill-related responsibilities. It is difficult to determine precisely how a tiering model based on Priority Pesticides would work without identifying specific products that would fall in each category. For discussion purposes, we provide two (2) scenarios, shown in **Exhibit 43**, that demonstrate how tiering could be designed to generate the approximately \$149.3 million in revenue required to support recommended mill proposals – Options A through F. We further describe each scenario below:

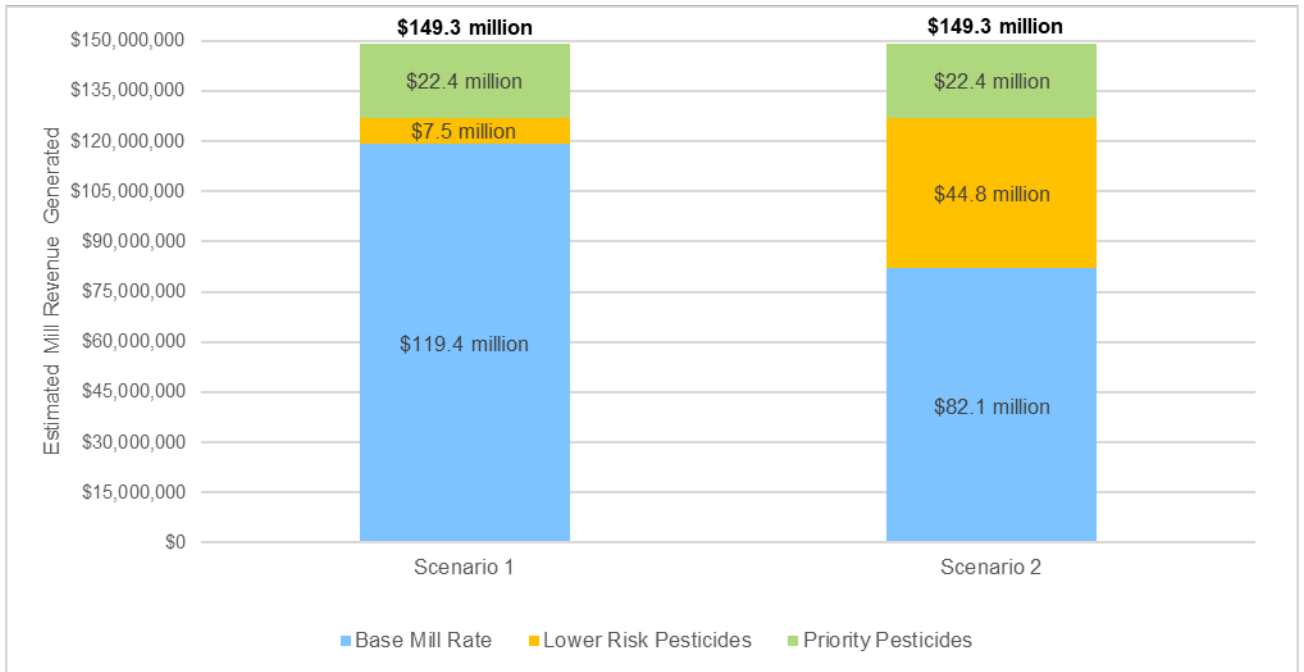
Scenario 1

- Base mill rate (\$0.0339) applies to 80% of pesticide product sales revenue
- Priority Pesticide tier Base (\$0.0509) applies to 10% of pesticide product sales revenue
- Lower-Risk Pesticide tier Base (\$0.0170) applies to 10% of pesticide product sales revenue.

Scenario 2

- Base mill applies (\$0.0339) to 55% of pesticide product sales revenue
- Priority Pesticide tier Base (\$0.0509) applies to 10% of pesticide product sales revenue
- Lower-Risk Pesticide tier Base (\$0.0291) applies to 35% of pesticide product sales revenue.

Exhibit 43
Hypothetical Tiered Fee Revenue Scenarios



C. Tiered Assessment Model Based on Levels of Pesticide Category Workload

Crowe conducted an in-depth analysis of pesticide categories and the implications of a tiered mill based on levels of pesticide category workload. **Exhibit 44** describes the tiered assessment based on pesticide category model and our rationale for including it as a potential mill assessment model for consideration within the Concept Paper.

As we describe below, there are challenges with this approach for several reasons. Primary among those reasons are: 1) a single pesticide product (with one or more active ingredients) may fall into multiple categories, making it difficult to assign a product to a fee level based on a single category, 2) among any given category there are products that require a high degree of work and those that require very little. This approach does not meet guiding principles for incorporating objective measures, transparency, aligning with workload, and minimizing administrative burden.

Exhibit 44
Tiered Assessment Based on Pesticide Category Workload
Description and Rationale

Description	Rationale
Under this tiered assessment mechanism, pesticide categories that result in additional workload for DPR and CACs would be assessed a higher or differential mill assessment than other pesticide categories. Conversely, pesticide categories that require less workload would be assessed a lower mill assessment.	Our rationale for including this approach for consideration is that in general, certain categories of pesticides may require a higher (or lower) degree of focus by DPR, and thus more (or less) time and resources. By grouping pesticides using pesticide categories rather than individual pesticide products or active ingredients, it limits the number of potential tiers.

Crowe first evaluated registration data to determine how registered products could be grouped into categories for this model. DPR registers the following 23 pesticide categories (pesticide categories are based on the type of product and/or how it is used rather than impact):

- Adjuvant
- Algaecide
- Anti-Foulant (Marine)
- Antimicrobial
- Avicide
- Bactericide
- Defoliant
- Desiccant
- Disinfectant
- Fertilizer
- Fungicide
- Growth Regulator
- Herbicide
- Insect Growth Regulator
- Insecticide
- Miticide
- Molluscicide
- Nematicide
- Repellent
- Slimicide
- Special Activity
- Vertebrate Control
- Virucide

Exhibit 45 provides a breakdown of the number of pesticide categories per registered product. Each product has 0 up to 9 pesticide categories, with the most products having between one to five categories. Roughly 43% of products fall under two or more categories. The fact that almost half of the products fall under multiple categories and quite a few have no category identified makes it problematic to utilize categories as a basis for a fee structure. Furthermore, pesticide categories contain a vast range of products, and the workload for enforcing and monitoring these products varies significantly within each category. Consequently, using pesticide categories alone is insufficient to determine the appropriate tiered rate based on DPR workload.

Exhibit 46 describes our recommendation and justification that DPR should not implement this tiered model at this time.

Exhibit 45
Number of Registered Products per Number of Pesticide Categories

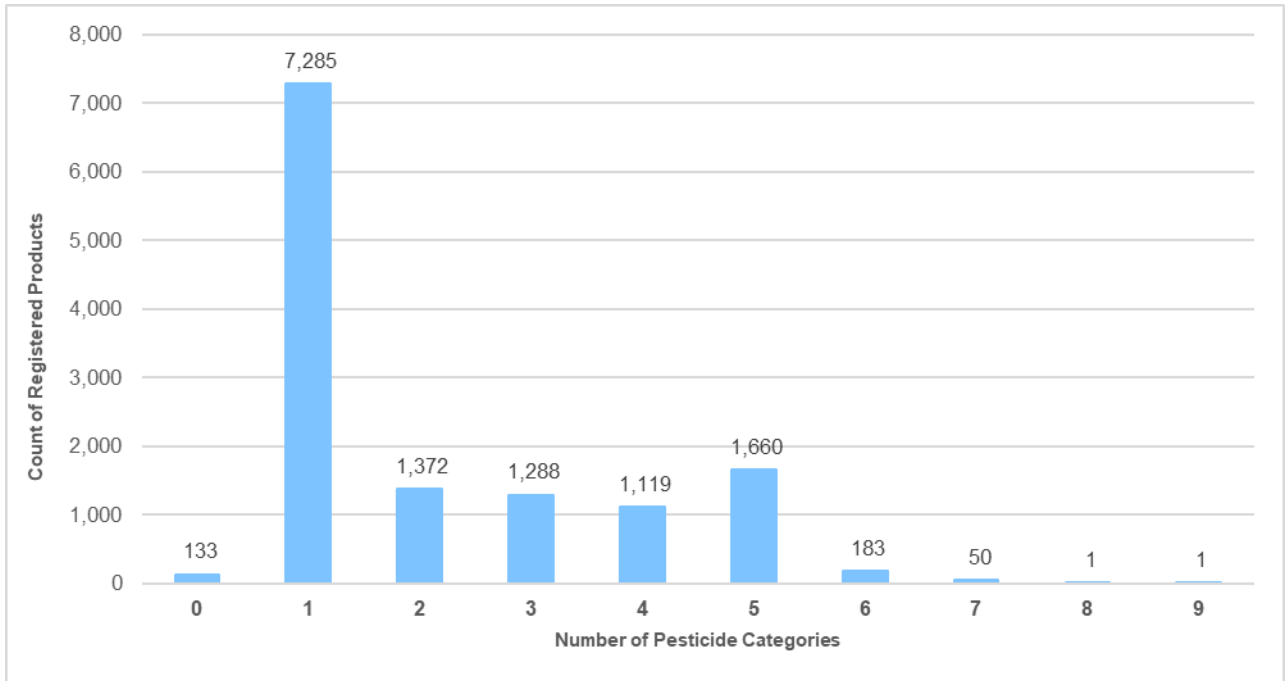


Exhibit 46
Tiered Assessment Based on Pesticide Category Workload
Recommendation and Justification

Model / Recommendation	Justification
<p>Tiered Assessment Based on Pesticide Category Workload</p> <p><u>Recommendation:</u> Crowe does not recommend implementing this tiered model.</p>	<ul style="list-style-type: none"> As shown in Exhibit 44, nearly half (43%) of 13,000 registered products have multiple categories, which creates a challenge for assigning a tiered rate to a specific registered product. For each pesticide category, there are dozens up to several thousand individual products (e.g., 3,967 fungicides, 3,139 insecticides) Within any pesticide category there are varying levels of workload associated with enforcing, monitoring, assessing registered products (e.g., neonicotinoids versus neem oil). Pesticide category is not a distinct enough criteria/identifier to determine level of effort (i.e., workload) on DPR’s part to assign a tiered rate.

D. Tiered Assessment Model – Based on Levels of Pesticide Product Workload Activities

In **Exhibit 47**, we describe the tiered assessment based on pesticide product workload activities model and our rationale for including it as a potential mill assessment model in the Concept Paper. This tiered model would apply higher fees to pesticide products that require increased workload for DPR and/or CACs. The tiering would be based on individual products and/or active ingredients rather than overall product categories. The list of higher activity products would be reevaluated and updated every two to three years, with the additional revenue supporting research, policies, or programs including those identified in the SPM Roadmap. This approach is intended to align with DPR's workload, signaling users about products under greater focus and promoting safer, more sustainable pest management.

Exhibit 47 Tiered Assessment Based on Levels of Pesticide Product Workload Activities Description and Rationale

Description	Rationale
<p>Under this tiered assessment mechanism, those pesticide products that result in additional workload for DPR and/or CACs would be assessed a higher mill assessment than other products. Based on Crowe's assessment, there are 61 AIs that would potentially incur the higher assessment. Because the focus on particular chemicals changes over time, every two to three years, DPR would reevaluate the list of higher activity products and active ingredients to prepare and publish a new list of products that would incur the additional assessment. The additional mill would be applied to the base mill for those products. For example, if the base assessment was 34 mills, the list of higher activity products would incur an assessment of 40 mills (+ 6 mills). The additional revenue would be targeted to support funding for specific positive incentives described in <i>Section 4</i>.</p>	<p>This approach is aligned with DPR's workload because pesticides that require more effort by DPR staff would pay a higher assessment. Based on economic analyses measuring the inelasticity of pesticides, a higher assessment rate alone is not likely to incentivize users to change products; however, it does send a signal to users that this product is subject to additional focus, regulation, and concern by DPR. This approach also supports positive incentives for safer sustainable pest management, consistent with the study objectives.</p>

Crowe conducted an in-depth analysis of mechanisms by which higher-workload products could be identified. We identified a preliminary list of 61 AIs that fell into areas of higher workload and/or regulatory activities such as:

- Reregistration evaluations and consideration of label amendments
- Reevaluations, which can be initiated for one or more reasons, as identified in CCR Section 6221, triggering a multi-year review of existing and potentially new data to carry out the provisions of FAC Sections 12824, 12825, 12825.5, 12826, and 12827
- Toxic air contaminant monitoring for the evaluation and control of chemicals as toxic air contaminants
- Multi-agency coordination on human health and environmental exposure review
- Pesticides subject to data coordination and collaboration
- Development and oversight of mitigation measures when specific pesticide uses of concern are identified
- Environmental monitoring (surface water, groundwater, drinking water contaminants)
- Frequency of incidents report under the Pesticide Illness Surveillance Program (PISP)
- Restricted Materials requiring CACs to issue permits
- Pesticides identified in enforcement investigations and cases
- Pesticides subject to environmental fate reviews.

While this tiered model makes sense conceptually, it would be difficult to effectively implement. The various databases and sources of information that could be used to identify products and/or AIs do not cover consistent time periods and there is no systematic method of determining the extent to which or the amount of additional time these activities require. We can identify potential active ingredients and/or products requiring more of DPR's workload but there is not sufficient data to measure how much additional workload results in order to justify different assessment levels. This approach does not meet guiding principles for incorporating objective measures, transparency, and minimizing administrative burden and may not accurately align with DPR workload.

Exhibit 48 describes our recommendation and justification that DPR should not implement this tiered model.

Exhibit 48
Tiered Assessment Based on Levels of Pesticide Product Workload Activities
Recommendation and Justification

Model / Recommendation	Justification
<p>Tiered Assessment Based on Pesticide Category Workload</p> <p><u>Recommendation:</u> Crowe does not recommend implementing this tiered model.</p>	<ul style="list-style-type: none"> • Quality, scope, and the varying time periods of the workload data (monitoring data, pesticide illness data, etc.) make it difficult to objectively identify a list of products and/or AIs that require a higher workload. • Even if a list of higher-workload products/AIs could be identified through an objective and consistent process, there is no systematic approach to determining the amount of additional time DPR and CAC staff spend on a particular product and/or AI. There is not workload data to transparently and consistently provide the information needed to justify an assessment differential.

Appendix E: Detailed Analysis of Current and Future Mill Revenues

An objective of the study is to examine long-term, sustainable funding that allows DPR to continue to fulfill its mission. To meet this objective, Crowe examined historical mill revenues generated from pesticide product sales at the existing rate along with other factors that may potentially impact future mill revenues. In the remainder of this Appendix, we summarize key findings, background, and detailed analysis to support our findings.

A. Key Findings

The findings and detailed analysis presented in this Appendix supports our overall finding that for the next five to ten years, we expect the mill assessment to be a stable funding source to support the recommended proposal options. However, the long-term implications of transitioning to safer and sustainable pest management and the implementation of the SPM Roadmap on mill revenue are uncertain at this time. Our key findings are based on:

- **Short-term revenue increases, unclear long-term trend:** We see an overall increase in pesticide sales revenue going forward for the next five to ten years based on our examination of various market factors discussed in this Appendix. Several of the factors that contribute to downward trends in pesticide sales revenue will likely require a longer timeframe while those contributing to an upward trend in pesticide sales revenue are more immediate. For example, regulatory and policy changes related to the implementation of the SPM Roadmap reflect a long-term shift in approaches to pest management. Factors such as inflation and supply chain disruptions result in almost immediate upward price changes. Further analysis is provided in subsection B.
- **Increasing revenue with decreasing quantity sold:** Sales trends reveal increasing pesticide sales revenue and decreasing quantity (measured as pounds AI) sold over time. Despite reduced AI pounds sold (0.98 to 0.67 billion), overall pesticide sales revenue increased (\$3.3 billion to \$4.4 billion). This indicates that decreasing pesticide content per quantity sold does not correlate with lower sales revenue. This provides evidence that if pesticide content decreases over time, it does not equate to lower sales revenue to DPR and other factors are at play such as manufacturers selling newer products at higher prices despite lower pesticide content.

From 2015 to 2022, pesticide sales revenue rose 33%, active ingredient (AI) pounds sold dropped 31%, and overall price per pound of AI increased 94%. On average, pesticide sales revenue increased 5% per year, AI pounds sold decreased 4% per year, and the price per pound of AI increased 13% per year. Further analysis is provided in subsection C.

- **Macro-economic factors:** Pesticide sales revenue grew by 4.7% annually from FY2014/15 to FY2021/22, likely influenced by the 6.1% annual growth in producer price index (PPI) for all commodities, 3.4% annual CPI growth, and 0.4% annual population growth in California. Growing costs of consumer goods and services, including pesticides, contribute to sales revenue growth. Further analysis is provided in subsection C.
- **Evolving pesticide landscape:** The relationship between sales revenue and AI pounds sold reflects California's evolving pesticide landscape. Factors to consider include more effective formulations, potentially higher prices for new products, increased demand for alternative, potentially safer pesticides, and changing pest resistance patterns. Further analysis is provided in subsection C.
- **Priority Pesticides impact to revenue:** Based on economic and market principles, the price of alternative products to Priority Pesticides would likely increase with increased demand. The price increases of alternatives could decrease or negate the sales revenue impact of the elimination of Priority Pesticides in the short-term. For the longer term as the state transitions to SPM, it is unclear how alternatives, including alternative approaches that do not utilize pesticides, will impact sales revenue.

B. Potential Factors Impacting Pesticide Sales Revenue

The SPM Roadmap aims for SPM adoption by 2050 as the de facto pest management system in California. The long-term impact on pesticide sales revenue to DPR will depend on the success of this transition, development of new and safer products and practices, and continued support for SPM practices across the state. As product alternatives to Priority Pesticides become available, it is likely that the market will adapt and continue to generate revenue for DPR through the sale of these safer and more sustainable pesticide options. The level of revenue generated through alternatives will depend on the degree in which the alternative is a chemical or non-chemical. It is important to state that the long-term impacts on sales are uncertain at this point. DPR will gain more clarity as the SPM Roadmap plays out to understand how and to what extent the transition to safer pest management approaches will impact mill revenue.

A variety of factors impact the supply and demand of pesticide products. Regulatory changes such as the implementation of the SPM roadmap, consumer preferences, population shifts, climate change, and economic indicators all play a role in determining the volume and types of pesticides sold. Additionally, unexpected events such as pandemics or supply chain disruptions can impact sales revenue for pesticide manufacturers and regulatory agencies. Understanding the factors that influence pesticide sales is essential for effective regulation and management of these chemicals, as well as for generating revenue to support regulatory agencies like DPR.






Exhibit 49 provides the abovementioned list of factors along with an expanded description and short-term trend related to pesticide sales revenue. The summary provides a factor-by-factor analysis, treating each factor individually and not combined with other factors or considerations such as timing. The weight of each factor is not measured against each other. Some factors indicate an increasing trend for sales revenue. Some factors indicate either an increase or decreasing trend for sales revenue. Other factors indicate a decreasing trend. This comparison indicates a likely increase to sales revenue in the short-term.

We see an overall increase in pesticide sales revenue going forward for the next five to ten years based on our examination of various market factors discussed in this Appendix and described in Exhibit 49. Several of the factors that contribute to downward trends in pesticide sales revenue will likely require a longer timeframe while those contributing to an upward trend in pesticide sales revenue are more immediate. For example, regulatory and policy changes related to the implementation of the SPM Roadmap reflect a long-term shift in approaches to pest management. Similarly, consumer demand for organic and sustainably produced foods are longer-term trends. Factors such as inflation and supply chain disruptions result in almost immediate upward price changes.

Overall, our analysis indicates that an increase to sales revenue is likely for the short-term, but longer-term trends, as influenced by the success of the SPM Roadmap, are unclear. As the SPM Roadmap is being implemented, DPR will have an opportunity in the future to better assess potential sales revenue trends.

Exhibit 49
Potential Factors Impacting Pesticide Product Sales

Factor	Description	Short-Term Trend of Sales Revenue
<p>1. Regulatory Changes (including SPM Roadmap)</p>	<p>Changes in pesticide regulations, such as new restrictions on certain products or increased reporting requirements, can potentially affect the demand for pesticides and impact sales. For example, the chlorpyrifos cancellation for agricultural use as of 2020 and the proposal to add regulatory restrictions on the use of neonicotinoids to protect bees.</p> <p>The SPM Roadmap recommends a goal of eliminating the use of Priority Pesticides by 2050 by transitioning to sustainable pest management practices. In the short-term, pesticide sales revenue may not decrease immediately due to increased demand of alternatives. In the longer-term, the impact of the implementation of the SPM Roadmap on the direction of pesticide revenue is unclear. Non-chemical pest management approaches are described within 5. Innovation in Pest Management Practices.</p>	<p style="text-align: center;">↓ ↑</p>
<p>2. Price Elasticity of Demand of Pesticides</p>	<p>Pesticide price elasticity of demand (PED) from a meta study covering 31 studies resulted in a median of -0.28. These results indicate changes in pesticide price yield an insignificant change in demand (inelastic). In other words, pesticide prices can increase with minimal impact to demand. Inelasticity of pesticides indicate that farmers continue to rely on pesticides to protect their crops and maintain their yields despite increasing prices. As a result, an increase in pesticide prices has not led to a significant reduction in pesticide use and pesticide sales may continue to rise.</p> <p>However, as more effective pest management tools and practices become available, farmers will have more choices to secure their livelihoods and ensure the protection of their crops from pests and diseases. With the SPM effort, the pest management landscape is evolving.</p>	<p style="text-align: center;">↑</p>
<p>3. Consumer Demand for Organic and Sustainably Produced Foods</p>	<p>Increased preference for organic and sustainably produced foods are growing. Between 2012 and 2019, the number of organic operations grew by 55% (2,713 to 4,208), organic acreage grew by 58% (679K to 1.07M), and sales of organic products increased by over 200% (\$3.1B to \$10.4B) (Department of Food and Agriculture). This growing trend will lead to a reduction in pesticide demand.</p>	<p style="text-align: center;">↓</p>
<p>4. Population Changes</p>	<p>Food supply demand, antimicrobial use, and construction of new buildings are linked to population changes. If population increases, the demand for food supply, antimicrobials, and new housing/buildings would increase. California's population increased 2.9% between FY2014/15 and FY2021/22, an average of 0.4% per year. According to the department of Finance, California's population is projected grow an additional 9.7% through 2050.</p>	<p style="text-align: center;">↑</p>

Factor	Description	Short-Term Trend of Sales Revenue
<p>5. Innovation in Pest Management Practices</p>	<p>The expansion of integrated pest management (IPM) and the development of new pest management practices, such as precision agriculture, will likely reduce the need for pesticides and decrease sales revenue. IPM combines various pest control methods, prioritizing biological and cultural practices. This holistic approach minimizes pesticide use by addressing pest problems only when necessary, reducing reliance on chemicals.</p> <p>Precision agriculture employs advanced technologies to optimize crop management, enabling efficient, targeted pesticide application. By using data-driven insights, farmers apply pesticides only when and where needed, reducing consumption, costs, and environmental impact. Disruptive agricultural technology promises long-term improvements in sustainability and efficiency for farming, but near-term impact may be limited by factors such as development, manufacturing, costs, and adoption rates. Understanding the state of technology, its potential benefits, and challenges in implementation helps us prepare for the future of agriculture.</p>	
<p>6. Weather / Climate Change</p>	<p>Weather can affect both pest populations and the effectiveness of pesticides. For example, a wet year may lead to increased fungal or bacterial diseases, which may require growers to apply more fungicides or bactericides, leading to higher pesticide use. Whereas a drought could decrease crop yield and therefore decrease pesticide use. Additionally, climate change may alter pest life cycles and impact the establishment of different types of pests.</p>	
<p>7. Commodity Value</p>	<p>When commodity values rise, growers become more motivated to safeguard their commodities, leading to an increase in their willingness to protect them. This rise in commodity value can also result in an escalation of pesticide usage, further enhancing the inelastic nature of pesticides. Additionally, as demand surges due to increased crop values, pesticide prices are likely to see an upward trend in response.</p>	
<p>8. Consumer and Producer Prices</p>	<p>Since pesticide sales are subject to inflation, prices of active ingredients will likely rise. The CPI for western urban consumers increased 24% between FY2014/15 and FY2021/22 (US Census Bureau).</p> <p>A rise in the Producer Price Index (PPI) for all commodities signifies higher production costs, affecting pesticide manufacturing. In response, manufacturers may increase pesticide prices. Despite this, as previously mentioned in the price elasticity of demand, pesticide purchase will continue, potentially leading to increased sales. The PPI for all commodities rose 42% between FY2014/15 and FY2021/22, averaging a 6.1% yearly increase (St. Louis FRED). If this trend persists, pesticide sales are likely to grow.</p>	
<p>9. Pandemic of Infectious Disease</p>	<p>Should we experience another pandemic involving an infectious disease, such as COVID-19, we expect a significant spike in the demand for antimicrobial pesticides. In FY2020/21, DPR's overall pesticide sales increased roughly 12% compared to the prior year, which was largely driven by increased non-agricultural activities (particularly due to increased antimicrobial use and prices).</p>	




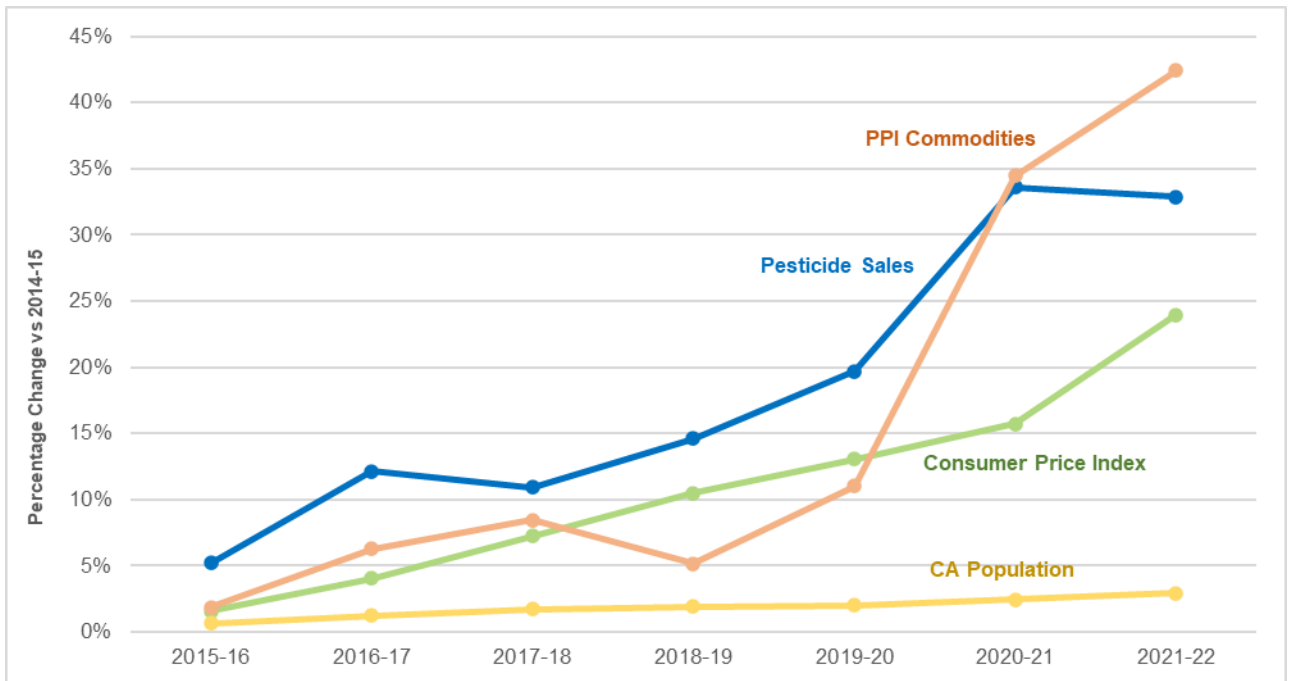
Factor	Description	Short-Term Trend of Sales Revenue
10. Invasive Pests	<p>A 2021 study estimated that invasive species have cost the U.S. \$26 billion per year since 2010 (Crystal-Ornela, R. et al. 2021). Due to California’s Mediterranean climate, access to the largest ports in the nation, and a top travel destination, invasive pests are likely to continue to cause economic impact to the state.</p> <p>Establishment of invasive pests necessitates long-term control programs, often involving pesticides. Regulators and property owners must manage these pests to prevent spread, yield loss, marketability decline, property value reduction, native species and environmental disruption, and interference with critical equipment and water channels. Invasive pests compel the state and citizens to allocate resources continuously toward pesticide usage and other pest prevention practices.</p>	
11. Global Conflicts / Supply Chain Disruption	<p>Global conflicts, like the Russian-Ukraine war, can disrupt the pesticide supply chain. Conflicts may lead to restricted supplies and elevated prices for some products, such as fertilizers and certain pesticides. Users often have no choice but to pay higher prices due to the necessity of pesticides. From 2015 to 2022, the PPI for fertilizer manufacturing rose by 65% (St. Louis FRED).</p>	
12. Free Market Forces	<p>Pesticide prices are unregulated, allowing manufacturers to set prices based on supply and demand. High-demand pesticides may see price increases, while priority pesticides might experience decreases. Related to the SPM Roadmap, prices for non-priority pesticides may be increased due to increased demand and prices for priority pesticides may decrease.</p>	

Exhibit 50 compares the cumulative percentage change since FY2014/15 pesticide sales revenue against CPI for western urban, PPI for all commodities, and California population. Crowe identified these metrics due to their potential impact to pesticide sales revenue, public availability of the data, and general acceptance of the published indices. Pesticide sales revenue experienced an 4.7% average annual growth over the seven years. The increase in sales revenue was likely influenced by the factors listed below:

- PPI Commodities: 6.1% average annual growth. This suggests that the rising cost of raw materials and intermediate goods used in pesticide production likely contributed to the increase in pesticide sales revenue.
- CPI: 3.4% average annual growth. The growing costs of various consumer goods and services, including pesticides, likely contributed to the growth in pesticide sales revenue.
- Population: 0.4% average annual growth. An increasing population drives higher demand for food supply and agricultural products and consequently, likely contributes to the demand for pesticides. Food supply demand, antimicrobial use, and construction of new buildings are linked to population changes. If population increases, the demand for food supply, antimicrobials, and new housing/buildings would increase.

Exhibit 50
Cumulative Percentage Changes
Pesticide Sales Revenue, PPI, CPI, and Population (FY2014/15 to FY2021/22)



C. Trends in Pesticide Product Sales

Approximately 13,000 pesticide products are registered in California. Over one thousand manufacturers produce pesticides, and each have one or more pesticide products registered in California. DPR's mill revenue is generated from each dollar of pesticide sold in the state. We provide detailed highlights:

- **Exhibit 51** compares pesticide sales revenue, and pounds of active ingredient sold²³ between CY2015 to CY2022. Despite reduced active ingredient (AI) pounds sold (0.98 to 0.67 billion), overall pesticide sales revenue increased (\$3.3 to \$4.4 billion), showing that decreasing pesticide use does not correlate with lower sales revenue. The trend reveals increasing pesticide sales revenue and decreasing quantity sold over time.
- **Exhibit 52** provides an eight-year history of the price per pound of active ingredients between CY2015 to CY2022. Due to increased sales revenue and decreased pounds sold, the price per pound of AI increased. Products may be sold at similar or higher prices with less AI, indicating a growing price per pound of AI over time.
- **Exhibit 53** compares the percentage change compared to CY2015 for pesticide sales revenue, pounds of active ingredient sold, and the price per pound of active ingredient. From 2015 to 2022, pesticide sales revenue rose 33%, AI pounds sold dropped 31%, and price per pound of AI increased 94%. On average, pesticide sales revenue increased 5% per year, AI pounds sold decreased 4% per year, and the price per pound of AI increased 13% per year. We illustrate these differentials in **Exhibit 54**.

These results provide a summary of the dynamics between pounds sold, price per pound, and pesticide sales revenue. These comparisons make it clear that both price and pounds, and not just one or the other, should be considered when thinking about overall pesticide sales revenue and resulting revenue generated by the mill assessment.

The decrease in active ingredients in pesticides sold while overall sales revenue continues to increase, thus increasing average price per pound, could be attributed to several factors:

- **Development of more effective formulations:** Pesticide manufacturers are continuously researching and developing new formulations that require lower quantities of active ingredients while maintaining or improving their effectiveness. As a result, the total amount of active ingredients sold may decrease, but the value-added nature of these new formulations can lead to higher sales revenue.
- **Higher prices for newer products:** As newer, more effective, and safer and sustainable pesticide products enter the market, they may command higher prices compared to older, less effective formulations. This can lead to an increase in overall sales even if the total amount of active ingredients sold is decreasing.
- **Increasing demand for biopesticides and other alternatives:** Biopesticides and products with potentially less impact to the environment and public health may have lower active ingredient concentrations, but their demand is increasing as consumers and regulators push for safer and sustainable agricultural practices. The higher sales of these products can contribute to the overall increase in pesticide sales, even though the active ingredient content is lower.
- **Changes in pest resistance patterns:** As pests develop resistance to certain pesticides, there is a need for new products with different active ingredients or modes of action. This can lead to an increased demand for alternatives that may have lower active ingredient content but still result in the same or higher sales.

These factors indicate that the decrease in active ingredients in pesticides can be due to more effective pesticides, safer and more sustainable formulations, and the higher or similar prices for these products compared to pesticides with higher application rates, and the increasing demand for alternatives. These factors contribute to the overall increase in sales revenue despite a decrease in active ingredient content.

²³ Data is based on information obtained from a system of self-reporting.

Exhibit 51
Pesticide Sales Revenue (Dollars) and Pounds of AI Sold (CY2015 to CY2022)

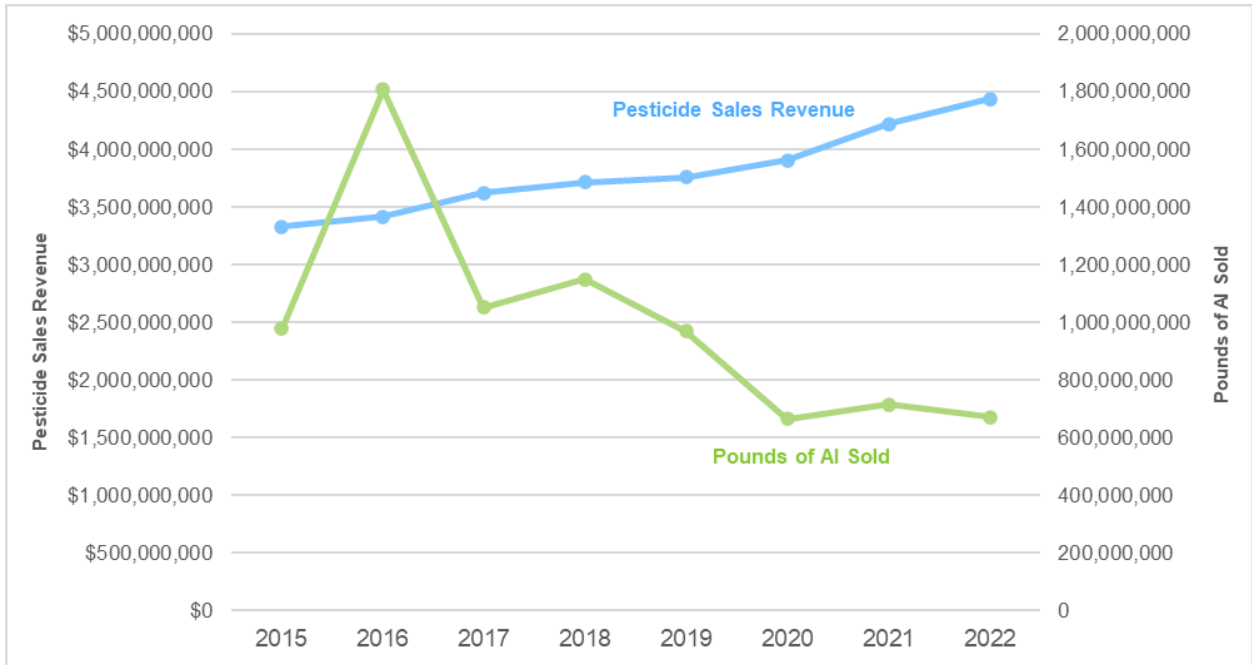


Exhibit 52
Price per Pound of Active Ingredient (CY2015 to CY2022)

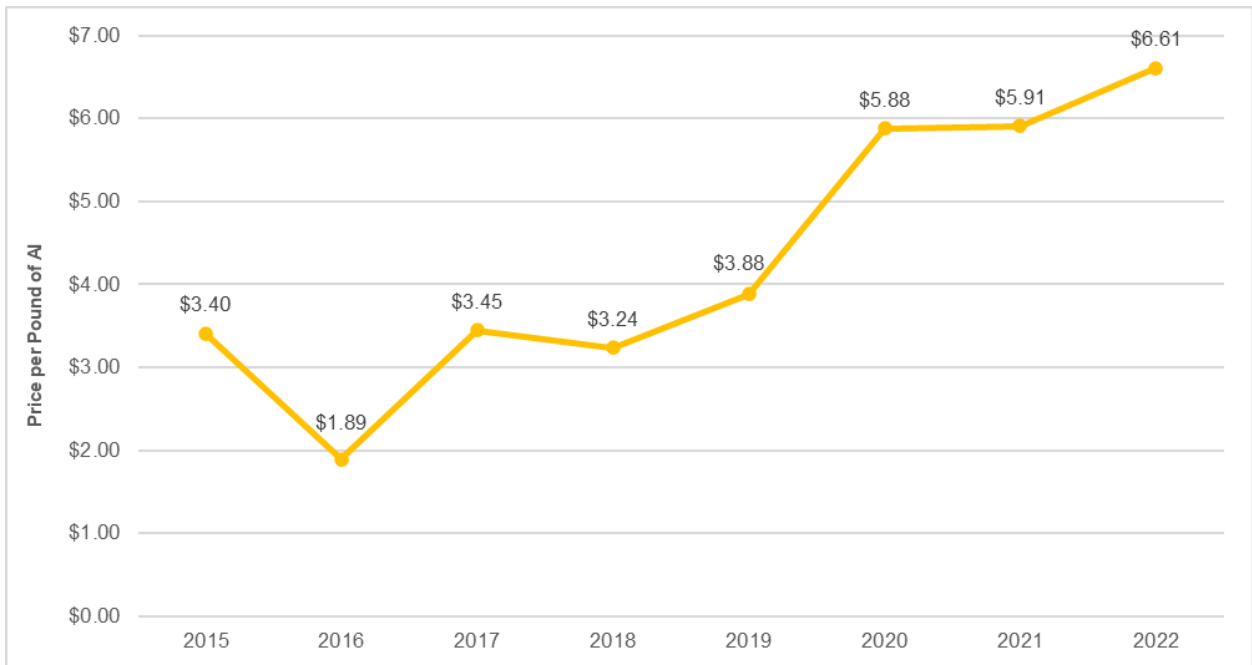


Exhibit 53
Pesticide Sales Revenue, Pounds of AI Sold, and Price per Pound of AI (CY2016 to CY2022)
Percentage Change Versus CY2015

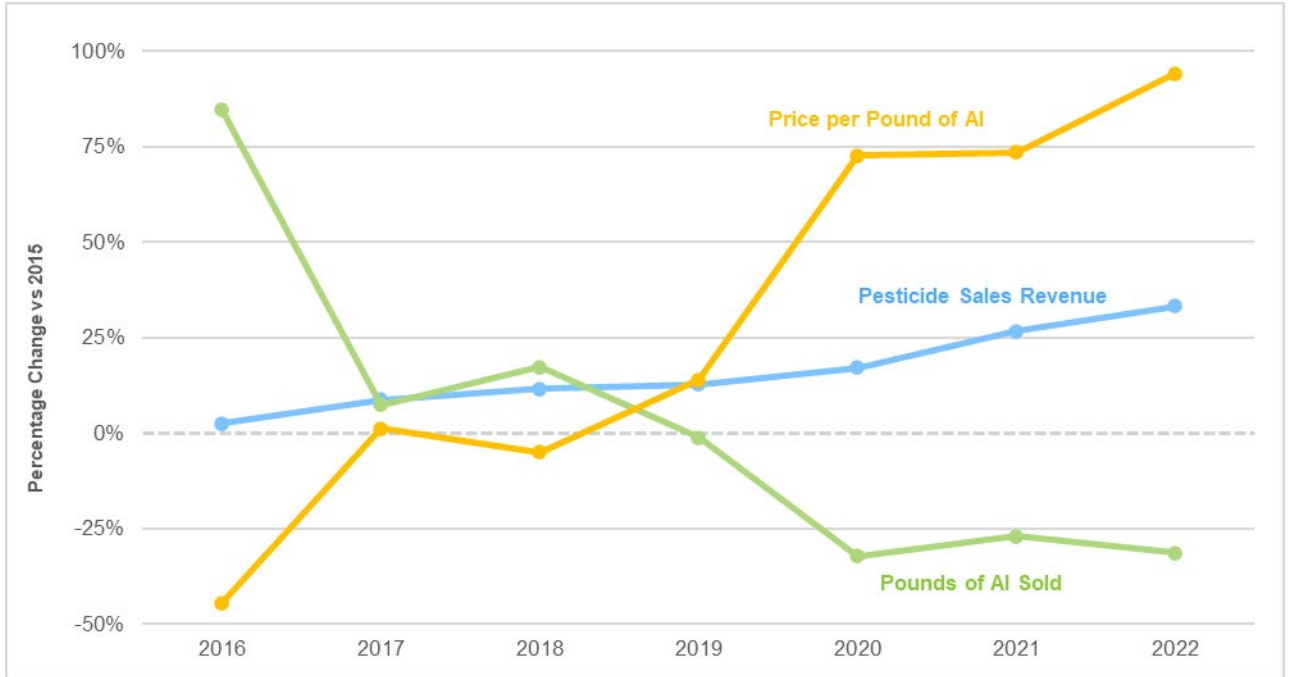
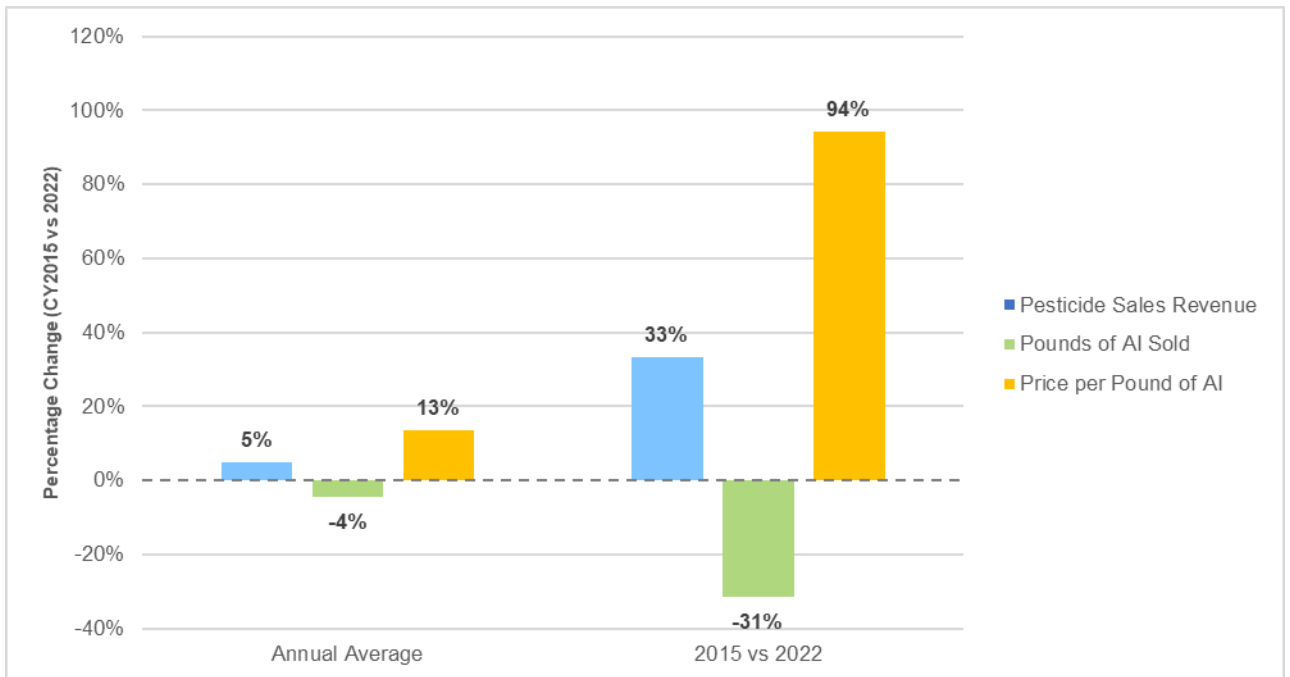


Exhibit 54
Pesticide Sales Revenue, Pounds of AI Sold, and Price per Pound of AI (CY2015 to CY2022)
Average Annual Change and CY2015 Versus CY2022



D. Price Elasticity of Demand for Pesticides

Price elasticity, in the context of pesticides, measures how sensitive the demand for pesticides is to changes in their prices. If the price elasticity of demand for pesticides is inelastic, it means that users are not highly sensitive to price changes and will continue to purchase pesticides even when prices increase. This is because, historically, pesticides have been viewed as an effective tool for protecting crops, maintaining yields, and ensuring farm productivity. In such cases, changes in pesticide prices have a limited impact on the quantity demanded, leading to relatively stable pesticide sales. One of the reasons that products are inelastic is a real or perceived lack of substitutes. As the state implements the SPM Roadmap, the knowledge and availability of alternatives could lead to greater elasticity (price sensitivity).

The effectiveness of increasing the mill assessment of all or certain pesticides depends on the price elasticity of demand for pesticides. Understanding the elasticity of pesticide demand can provide insights into the potential impact of increased mill assessments on pesticide sales under the DPR's regulatory framework. Below provides a summary of the results meta study covering 31 studies ranging from 1948 to 2012 that were conducted across Europe and North America.²⁴

- Pesticide demand is inelastic with a median price elasticity of -0.28. This means that changes in price have a limited effect on the quantity demanded, as farmers continue to use pesticides to protect their crops despite price increases. For example, the overall price of a product would need to increase by 100% to result in a 28% reduction in demand. However, because the mill currently represents only 2.1% of the price of a product, it would require a 50-fold increase to the mill to see demand drop by 28% (doubling the total price of a product). Further, if the goal is to reduce demand of a product by 50%, it would require a 90-fold increase in the mill assessment.
- Compared to other types of crops, the demand for pesticides for specialty crops is less elastic, indicating that price changes have an even smaller impact on pesticides used on specialty crops.
- The demand for herbicides is more elastic than for other types of pesticides, suggesting that changes in herbicide prices have a larger impact on the quantity demanded compared to other pesticide categories.
- Pesticides tend to be less elastic in the short-term, and more elastic over a longer term. In the short-term, the demand for pesticides might be inelastic due to factors such as crop cycles and existing contracts. Over the long-term, the demand may become more elastic as farmers can adjust their production practices or adopt alternative pest management strategies in response to price changes.
- More recent studies conducted over the last decade identify lower pesticide price elasticities of demand, indicating that the demand for pesticides has become less responsive to price changes over time.
- Peer-reviewed studies find more inelastic results compared to grey literature, suggesting that the demand for pesticides might be even less sensitive to price changes than previously thought.

Pesticides (and their price elasticity) are unique and cannot be equitably compared to other products. Below are key factors that make benchmarking against other products misleading:

- Unique market dynamics: Pesticides are effective tools for agricultural production, and their demand is closely tied to factors like crop yield, pest infestations, and weather conditions.
- Limited substitutes: Historically, pesticides often have few or no direct substitutes, as they are designed to target specific pests and diseases. However, through implementation of the SPM Roadmap, chemical and non-chemical substitutes are expected to be more widely available.
- Seasonality and regional factors: Pesticide demand is highly influenced by seasonal and regional factors such as climate, planting cycles, and local pest populations.
- Heterogeneity of pesticide products: Pesticides encompass a wide range of chemical formulations, each targeting different pests and serving different purposes.

²⁴ Böcker, T. G., & Finger, R. (2017). A Meta-Analysis on the Elasticity of Demand for Pesticides. *Journal of Agricultural Economics*, 68(2). <https://doi.org/10.1111/1477-9552.12198>

Appendix F: Summary of Stakeholder Feedback on Preliminary Recommendations and Implementation Plan

Appendix F provides a summary stakeholder feedback submitted through June 2, 2023, on the mill proposal options, including the mill design, usage, and implementation recommendations described in the *Preliminary Recommendations and Implementation Plan*. Below are key activities Crowe performed to obtain stakeholder feedback:

- Released the *Preliminary Recommendations and Implementation Plan*, on April 27, 2023, and conducted a public webinar on May 4, 2023, to provide an overview of recommended mill proposal options, including mill design, usage, and implementation recommendations detailed within the report
- Facilitated three (3) listening sessions in May 2023 with interested stakeholders from various background to answer questions on the *Preliminary Recommendations and Implementation Plan*
- Collected, reviewed, and synthesized written feedback on the *Preliminary Recommendations and Implementation Plan* through June 2, 2023, to inform the development of the Final Recommendations and Implementation Plan.

Stakeholder Q&A Sessions

Following the release of the *Preliminary Recommendations and Implementation Plan* and the public webinar, Crowe conducted three (3) Q&A sessions in May 2023 with interested stakeholders from various backgrounds, including agricultural, environmental, environmental justice, registrants, applicators, regulatory partners, research entities, and others. The objective of the Q&A sessions was to provide a venue for interested stakeholders to ask Crowe questions on the proposed mill options, design, usage, and implementation recommendations detailed within the *Preliminary Recommendations and Implementation Plan*.

Most of the questions raised by stakeholders during the Q&A sessions were focused on the recommended mill proposal options (*Options A through F*) detailed in the *Preliminary Recommendations and Implementation Plan*. Stakeholders generally asked questions on the mechanics, methodology, and rationale for each of the options. Below is a list of Q&A session participants.

Q&A Session Participants:

1. American Chemistry Council
2. California Agricultural Commissioners and Sealers Association / County Agricultural Commissioners
3. California Rural Legal Assistance Foundation
4. Community Members
5. CropLife America
6. Household and Commercial Products Association
7. Kahn, Soares, and Conway LLP
8. Responsible Industry for a Sound Environment
9. Western Plant Health Association.

Stakeholder Feedback on the Preliminary Recommendations and Implementation Plan

In addition to the Q&A sessions, Crowe also invited interested stakeholders to provide written feedback on the *Preliminary Recommendations and Implementation Plan* by June 2, 2023. Crowe received 12 letters, representing over 40 stakeholders from a broad range of backgrounds. In **Exhibit 57**, we summarize selected stakeholder feedback on the recommended proposal options and mill design, usage, and implementation recommendations. Below is summary of the stakeholder feedback letters we received through June 2, 2023:

- One (1) letter from CACASA/CACs
- Agricultural Groups: one (1) letter from the Agricultural Coalition representing 24 stakeholders, one (1) letter from Community Alliance with Family Farmers (CAFF), one (1) letter from California Certified Organic Farmers (CCOF)
- Environmental Groups: one (1) letter from the Environmental Coalition representing 12 stakeholders from environmental, environmental justice, biodiversity, and health backgrounds
- Registrants: one (1) letter from Western Plant Health (WPH), one (1) letter from Center for Biocide Chemistries (CBC), one (1) letter from Crop Life and Responsible Industry for Sound Environment (RISE), and one (1) letter from Household and Commercial Products Association (HCPA)
- Other: one (1) letter from California Stormwater Quality Association (CASQA), one (1) letter from Bay Area Clean Water Agencies (BACWA), and one (1) letter from California citizen.

Summary of Changes to Final Recommendations and Implementation Plan

Exhibit 55 provides a summary of changes Crowe made to this report based on stakeholder feedback. This exhibit provides summarizes the stakeholder comment and describes the changes made to the report.

Exhibit 55 Summary of Edits to Final Recommendations

Comment	Changes Made
References to a 5% drop in pesticide sales revenue as a “worst case” scenario.	Crowe’s utilization of the term “worst” was in consideration of revenue impacts. We understand this meaning is easily misconstrued and have changed these references to “lowest revenue scenario.”
Incorrect reference to over 13,750 registrants	Corrected bullet point to read: Pesticide registration fees for over 13,750 actively registered products from approximately 1,500 registrants.
Reference to 1.0 position per County for CACs, at roughly \$175,000, as a basis for the \$10.2 million for CACs future needs.	Crowe is recommending a total of \$10.2 million for as-needed funding for CAC pesticide use enforcement workload activities and administration priorities, <u>not</u> 1.0 new position per County. Changed reference to: \$10.2 million is a rough estimate of potential as-needed funding that could be allocated based on individual County needs, which are to be determined.
Clarification on Option F and funding for SPM Programmatic Needs. There were several comments regarding the use of General Fund for SPM programmatic needs as well as concern that that there were no specifics on how the approximately \$11.0 million would be utilized.	Clarified under Option F that the \$11.0 million would be for additional initial mill-related SPM programmatic needs. Added a statement on the potential to utilize General Fund for SPM Roadmap recommendations as those are prioritized. Updated these concepts in several locations in the report. Also clarified that the phasing-in of the mill would be aligned with identifying specific SPM-related expenditures.
Concerns on how Priority Pesticide tiering might work and concerns that Priority Pesticide tiering could be delayed.	Summarized a proposed tiered model based on Priority Pesticides within <i>Appendix D</i> . Provided two (2) scenarios of how additional revenue from a higher mill assessment on Priority Pesticides could generate revenue to support research and development of alternatives.

Views on Tiering the Mill and Use of the General Fund

Crowe recognizes that stakeholders provided feedback on many concepts addressed in our preliminary report. We also recognize it is imperative to highlight two (2) concepts – tiering the mill and using the General Fund to support DPR’s mission and programmatic needs – given that most if not all stakeholders expressed feedback on these concepts within their letters. For discussion purposes, in **Exhibit 56**, we summarize the views on these two (2) concepts.

Exhibit 56 Summary of Opposing Views on Key Concepts

Concepts	Summary
Tiering the Mill	<p>Stakeholders continued to express opposing views on tiering the mill to support DPR’s mission and programmatic needs. Below is a summary of the views in support and against tiering the mill:</p> <ul style="list-style-type: none"> Stakeholders that support tiering the mill view this concept as a critical mechanism to support the state’s transition to safer, sustainable pest management. Stakeholders that support tiering the mill primarily see a tiered mill on workload and/or a tiered mill on Priority Pesticides as viable options that DPR should continue to explore and/or implement immediately. Stakeholders with this view provided the following rationale for tiering the mill: it signals a transformation in the department’s primary funding source aligned with the state’s SPM goals, it may incentivize the use of organic pesticides, and it may provide additional funding to support SPM Roadmap actions. Stakeholders that do not support tiering the mill view this concept as having many unintended consequences, including but not limited to: difficulty in budgeting for and administering a tiered fee structure, inequities in assessing a tiered based on disputed criteria, and challenges with using Priority Pesticides as an option to assess a tiered mill rate due to perceived ambiguity on how they are defined within the SPM Roadmap.
Using the General Fund	<p>Most stakeholders generally agreed, though expressed different rationale, that the department should seek alternative funding through the General Fund to support some of its programmatic needs. Key rationale included: the department’s reliance on regulatory fees to support its programs may lead to unintended budgetary risks, the department should transition to becoming less reliant on regulatory fees tied to the sale of pesticides, and regulated entities should not be responsible for all of the state’s SPM goals that may be eventually implemented by the department.</p>

**Exhibit 57
Selected Stakeholder Feedback**

Stakeholder Group	Proposal Options	Design	Usage	Implementation
<p>CACASA / CACs</p>	<ul style="list-style-type: none"> Does not support Option D, CACs' future programmatic needs. Concerned with term "as-needed funding" due to its ambiguity; concerned mill funding would support "non-statutory, non-mandated priorities that are outside the scope of intent for the mill assessment." CACs' staffing models make it difficult for CACs to fund one (1) position solely for pesticide use enforcement (PUE) workload. CACs' mill related responsibilities are based on the needs of the respective county (i.e., a new position would likely perform some not all of the responsibilities detailed in the report based on county need). Some CACs are constrained by hiring abilities and would need legal guarantees that funding would be needed to move forward with the hiring process. Proposed employee value of \$175,000 does not reflect consistent cost of one (1) PUE related position across counties. Unclaimed Gas Tax Maintenance of Effort balance may become an issue if mill funding is increased. CACs may decline funding if it came with restrictions "that directed the work of that staff member with extensive DPR oversight." 	<p>N/A</p>	<p>N/A</p>	<p>N/A</p>

Stakeholder Group	Proposal Options	Design	Usage	Implementation
<p>Agricultural Groups</p>	<p><u>CAFF</u></p> <ul style="list-style-type: none"> “We encourage you to fund all scenario options – Options A through F (emphasis on F)” <p><u>CCOF</u></p> <ul style="list-style-type: none"> On revisiting tiering once Priority Pesticides have been evaluated through the SPM Roadmap process: “This scenario delays decision-making and creates regulatory uncertainty, making it difficult for producers to plan for the future.” 	<p><u>Coalition</u></p> <ul style="list-style-type: none"> Agrees with many of the recommendations as they relate to mill design. Does not agree with the recommendation that the department should entertain future tiering proposals based on Priority Pesticides as defined in the SPM Roadmap. “Should this recommendation be carried with validity, the complexity and complications of tiering mill assessment rates for certain pesticides or groups of pesticides “in the context of specific product uses or pest/location use combinations” as the definition requires would be immense and would not conform with the elasticity of pesticide costs to consumers.” <p><u>CAFF</u></p> <ul style="list-style-type: none"> Remove or increase the statutory cap on the mill fee to provide flexibility to meet the goals DPR has outlined for the next 27 years. <p><u>CCOF</u></p> <ul style="list-style-type: none"> Recommends that DPR tier the mill fee based on pesticide product workload to create a clear path forward.” A flat fee disincentivizes SPM practices. DPR should “tier the mill fee this year to reflect the greater regulatory burdens posed by the most dangerous pesticides and to encourage the adoption of organic, safer pesticides.” A tiered structure should assess pesticides approved for use in organic production at the lowest fee. The USDA, DHHS, and US EPA must determine that organic-approved pesticides are not harmful to human health or the environment and are necessary to farmers because natural substitutes are unavailable. 	<p><u>Coalition</u></p> <ul style="list-style-type: none"> “While the workload analysis released in February has some bearing to the request for an additional \$9.7 million in “current programmatic needs” there is not detail on how the department and Crowe LLP determined “future funding needs” for themselves and the CDFA. It is unclear how a “separate account” for CACs would be used in conjunction with current mill revenues. Strong reservations for the SPM Programmatic needs totaling \$11 million – “it is not coupled with any detail of which Roadmap priorities it will effectuate or how the remaining items in the roadmap are to be resourced.” 	<p><u>Coalition</u></p> <ul style="list-style-type: none"> Supports a mill adjustment that is phase-in over time. “Should the department pursue a more conservative increase to the mill, as we would recommend, these increases could be phased in over a shorter, 3-year timeline.” Appreciates the recommendation for a five-year review of the mill assessment for revenue stabilization purposes. However, there should be a public review of the efficiencies and responsiveness of DPR’s programs. <p><u>CAFF</u></p> <ul style="list-style-type: none"> Encourage DPR to consider phasing in the fee more quickly as the subsequent investments will lag; “it will take years to sufficiently begin or stand-up new programs and partnerships, begin new research or see the benefits through expansive extension, or bring more sustainable pest management to market.”

Stakeholder Group	Proposal Options	Design	Usage	Implementation
<p>Environmental Groups</p>	<ul style="list-style-type: none"> On Option F, SPM Programmatic Needs: “We welcome the emphasis in the recommendations on implementation of the SPM Roadmap... however, the final recommendations must go further in linking mill fee funding to the SPM Roadmap’s implementation and specifically in accelerating the selection of Priority Pesticides...” “The report’s discussion of the EPR model...excludes discussion of the perverse incentive inherent in such a model.” “We urge you to reconsider Crowe’s key recommendations and give full consideration to other proposals for structural reform of the mill fee.” 	<ul style="list-style-type: none"> Recommends a tiered structure based on workload (i.e., tiering based on “higher fees for pesticides known to be highly hazardous or associated with a high workload”). For example, “the 61 high-workload pesticides already identified by Crowe, DPR’s previous mill fee reform proposal to tier chemicals based on US EPA signal words, or the 132 agricultural pesticides identified by OEHHA’s rigorous selection criteria for inclusion in CalEnviroScreen for their combination of hazard and volatility.” “Our coalition recommends DPR commit to completing its list of Priority Pesticides by 2025, which will provide certainty and a fixed timeline for this critical task of the SPM Roadmap.” Recommends no statutory ceiling in statute to retain flexibility to adapt as needed during the SPM Roadmap implementation period. 	<ul style="list-style-type: none"> Recommends a mill rate/structure that generates sufficient revenue to achieve SPM implementation goals. 	<ul style="list-style-type: none"> Recommends no-phasing in period Recommends “consideration of the General Fund as a complementary funding source along with the mill...this approach is reflected in Governor Newsom’s May 2023 Budget Revise, which proposes general fund resources to support activities related to SPM Roadmap implementation.” “We also urge you to consider a diversified funding stream that ensures departmental resilience for the planned transition away from harmful pesticide use.”

Stakeholder Group	Proposal Options	Design	Usage	Implementation
<p>Registrants</p>	<p><u>CBC</u></p> <ul style="list-style-type: none"> “The proposal does not consider differentiation in fees for agricultural and other types of pesticides.” On Option C, DPR Future Programmatic Needs: “Other identified DPR programmatic needs, such as \$6.1 million in IPM grants, also do not directly involve antimicrobial pesticides.” On Option F, SPM Programmatic Needs: CBC does not believe that mill assessment funding should be used to fund SPM activities, which should be appropriated via the general fund. <p><u>CropLife / Rise</u></p> <ul style="list-style-type: none"> Concerned about the level of increase recommended (e.g., the \$13.8 million for SPM activities “without outlining precisely how that value was calculated and what the money will exactly fund.”) <p><u>HCPA</u></p> <ul style="list-style-type: none"> A small group of registrants “bear the entire burden of the proposed \$149.3 million, plus an additional amount beyond the implemented rate.” 	<p><u>CBC</u></p> <ul style="list-style-type: none"> Mill rate should be set in statute and regularly reviewed to assess whether adjustments are needed. <p><u>CropLife / Rise</u></p> <ul style="list-style-type: none"> Support a flat-rate model. Agree with recommendations that maximum rate and structure should be set in statute. “It makes little sense to levy the mill assessment on products like a hard-surface disinfectant, a crawling insecticide, or household fly abatement if there is no connection between the products and the program expenditures.” <p><u>WPH</u></p> <ul style="list-style-type: none"> Supports a flat rate – “it is the fairest and most easily administered with a simple fee increase and would provide for the strongest budget stability.” Supports mill authorization through legislature. Opposes the establishment of the mill assessment through regulation. Does not support automatic adjustments based on COLA. 	<p><u>CropLife / Rise</u></p> <ul style="list-style-type: none"> “The study does not appear to evaluate what the appropriate level of funding for DPR programs is so the department can fulfill its regulatory function; rather it simply relies on the department to determine what programmatic funding levels it needs. A more precise accounting of how and where current mill revenues are being spent, and specifically what additional funding is needed along with why the funding is needed is crucial to assuring payers of the mill that the dollars are being spent prudently and appropriately.” <p><u>HCPA</u></p> <ul style="list-style-type: none"> Mill revenues should not be solely responsible for funding every component of the SPM Roadmap, which “would reach billions of dollars and demand decades of financing.” <p><u>WPH</u></p> <ul style="list-style-type: none"> Will refrain on commenting “until we can have more informed discussion on these activities”. “DPR must provide more detailed financial information”. 	<p><u>CBC</u></p> <ul style="list-style-type: none"> Support phased-in approach of 3 to 5 years. A regular 5-year assessment in consultation with stakeholders would help assure the mill is regularly reevaluated and refined in a transparent and sustainable manner. <p><u>CropLife / Rise</u></p> <ul style="list-style-type: none"> Supports phased-in approach. <p><u>HCPA</u></p> <ul style="list-style-type: none"> Supports the study’s recommendation to phase in the adjustment to allow for planning/budgeting. The General Fund should not be overlooked as a potential funding source “simply because it is subject to fluctuations based on economic activity and a concomitant benefit to the people of California.” <p><u>WPH</u></p> <ul style="list-style-type: none"> Supports a phased-in increase: “Allowing a multi-year planning process for agricultural stakeholders would better allow them to incorporate these types of unexpected costs into their long-term budgets.” Agrees mill revenues and expenditure should be reviewed on a regular basis in coordination with the department, Department of Finance, and impacted stakeholders.

Stakeholder Group	Proposal Options	Design	Usage	Implementation
Other	<p><u>CASQA</u></p> <ul style="list-style-type: none"> Strongly agrees that DPR must increase their funding to meet its mission, including moving forward with SPM Roadmap initiatives Fully supports the mill assessment fee as outlined in the recommendations <p><u>BACWA</u></p> <ul style="list-style-type: none"> Supports Option F, SPM Programmatic Needs: funding could support “research, grants, environmental and human health monitoring, registration of new alternative products, and other incentives.” Supports DPR’s multi-year effort to develop the SPM Roadmap and strongly supports its implementation. Supports the EPR Model: “we concur that much of DPR’s work aligns with the EPR model, and that funding from mill fees should be utilized for this work.” 	<p><u>BACWA</u></p> <ul style="list-style-type: none"> Supports a higher mill fee for priority pesticides. 	N/A	N/A

Appendix G: Stakeholder Feedback Letters

In *Appendix G*, we include the stakeholder feedback letters that we received through June 2, 2023, on the *Preliminary Recommendations and Implementation Plan*. Below is a summary of the feedback letters we received:

- One (1) letter from CACASA/CACs
- Agricultural Groups: one (1) letter from the Agricultural Coalition representing 24 stakeholders, one (1) letter from Community Alliance with Family Farmers (CAFF), one (1) letter from California Certified Organic Farmers (CCOF)
- Environmental Groups: one (1) letter from the Environmental Coalition representing 12 stakeholders from environmental, environmental justice, biodiversity, and health backgrounds
- Registrants: one (1) letter from Western Plant Health (WPH), one (1) letter from Center for Biocide Chemistries (CBC), one (1) letter from Crop Life and Responsible Industry for Sound Environment (RISE), and one (1) letter from Household and Commercial Products Association (HCPA)
- Other: one (1) letter from California Stormwater Quality Association (CASQA), one (1) letter from Bay Area Clean Water Agencies (BACWA), and one (1) letter from California citizen.

California Agricultural Commissioners and Sealers Association



June 2, 2023

ProjectMillStudy@cdpr.ca.gov

RE: Preliminary Recommendations and Implementation Plan

Dear Crowe LLP,

The California Agricultural Commissioners and Sealers Association (CACASA) appreciates the opportunity to comment on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan.

First and foremost, CACASA recognizes that the original intent of the mill assessment fee was designed to cover the costs of regulating the use of pesticide products. The need to fund new programs, not mandated or in statute, seems to defeat the original intent of the mill assessment. It is our hope that the mill assessment continues to be based on regulatory program needs and the costs associated with the enforcement of those programs.

In reference to Exhibit ES-2, Item D: CAC Future Programmatic Needs, neither CACASA nor individual County Agricultural Commissioners (CAC) are requesting this increase in funding for our programs. CACASA continues to emphasize the point that no additional funding is needed for Commissioners to perform their enforcement and oversight of current statutory mandates and programs. Future programs discussed in this plan reference non-statutory, non-mandated programs which are outside the intended scope of the mill assessment fee, as referenced earlier.

In reference to CACs' Programmatic Needs on page 21, CACASA continues to be concerned with the undefined term of "as-needed funding," as this is not thoroughly explained and provides a potential imbalance of funds with varying allocations from county to county and year to year. Additionally, the reference that this supports individual county 'authorized' needs based on a selection of criteria, that are largely undetermined, for 'workload criteria and administration priorities' leads, again, to further speculation of non-statutory, non-mandated priorities that are outside the scope of intent for the mill assessment. Without the explicit definition of these terms, too much gray area remains for CACASA to be in any position to responsibly support the allocation and use of these funds.

Further, the footnote 11, on page 21 that references "\$10.2 million equates to roughly 1.0 position at \$175,000 per County, though the as-needed funding could be allocated based on individual County needs, which are to be determined" is highly problematic in a realistic implementation of this recommendation. The remainder of this comment letter reflects the nature of how this recommendation would not be well-received for County Agricultural Commissioners due to the varying needs of counties, project imbalances this funding would impose on varying county budgets and their Maintenance of Effort in coordination with Unclaimed Gas Tax funding, and the vastly different staffing abilities of counties across the state, among other reasons.

In preparation for the final release of the Mill Alternatives Study, CACASA conducted a thorough internal survey of our members on their current staffing levels, staffing models, Pesticide Use Enforcement (PUE) programs and their potential ability to hire and assume the proposed additional funding. Our findings are identified below.



Current Office Staffing/PUE Program staffing/Staffing Model

Current staffing of our CAC offices vary widely across the state, with some of our smallest counties having only 2 employees, to our largest county having over 400 employees. While this is a wide range, the majority of our small to medium counties more accurately range between 2-40 employees overall. Large counties are considered any with total employees exceeding 50, of which we have a few meeting that criteria.

Of our small to medium counties, nearly all have their employees cross-trained to perform work across all programs within the department. While some may have a select few dedicated to their respective PUE program, by and large, many employees (if not all in some circumstances) participate in PUE activities throughout the year in some capacity.

Therefore, it is our interpretation that, for the majority of our counties, any new employee would be utilized in many more capacities other than just PUE related functions. This makes it difficult and impractical for CACs to have an increase in the mill fund one position dedicated solely to PUE program work.

Mill-related Responsibilities

From the list provided in the funding analysis of mill-related responsibilities document, all of these activities are currently being addressed in various forms in nearly all counties. The frequency and intensity of participation in these activities does vary from county to county, based on the needs of the community, but all of these functions are addressed, even if on an as needed basis.

Therefore, it is our interpretation that, for the majority of our counties, any new employee would not be dedicated to these activities directly, but may participate in some or all of them based on the needs of the respective county.

Current County Hiring Abilities

The majority of our counties are not currently in a formal hiring freeze, but many are under restrictions from adding new employees, unless it is demonstrated that the funding does not come from their General Fund. Therefore, any funding would need to be legally guaranteed in a manner acceptable to their county legal counsels in order to hire an employee outside of general fund liabilities. There is a hesitancy that was shared to commit to hiring a position on funding that is an indeterminate amount each year, as pesticide mill largely has been.

Therefore, it is our interpretation that some legal guarantee of this funding would be needed in order for the majority of counties to move forward with any hiring process.

Proposed Employee Value of \$175,000

This figure was given as a sample figure to all counties to consider the level of staffing to which this would equate and the responses varied drastically. For some of our smaller counties, this amount exceeded what the Commissioner was paid; for many other medium counties, this amount was more in line with a Biologist/Inspector level position. Other nuances included abilities to fund two positions in some counties while only covering a portion of overall start-up expenses for a new employee in other counties.

Therefore, it is our interpretation that this value is extremely hard to deem equitable across the board for counties. Additionally, it is nearly double the FY 2023/24 county base mill allotment at \$90,000. So, finding some sense of uniformity of this figure is nearly impossible based on the drastic differences in county size, scope, and staffing.

Maintenance of Effort Justification Impact

As we have discussed previously, any increase in mill revenue for counties plays into the overall funding balance with the Unclaimed Gas Tax Maintenance of Effort balance. When asked if this additional



revenue would impact their ability to adequately meet their MOE, nearly all counties said it would drastically impact their ability to do so. They would need to offset this increase with additional expenditures in other areas to balance out, which their ability to do so is unknown at this time. Some offered that with adequate planning they could prepare for this adjustment, but that it may take a couple of years before getting to a stable balance of funding.

Therefore, it is our interpretation that this increase in funding would cause an MOE issue for nearly all of our counties, at least in the beginning, until other funding streams could catch up to this increased revenue. This could create additional scrutiny and oversight from CDFA regarding UGT disbursements as well.

Restricted vs. Unrestricted Funding Allotments

Additionally, we asked counties about how funding for a position would be utilized in their counties and there was concern about whether these funds would be given in a restricted or unrestricted capacity. If funding were restricted to hiring an employee to only focus on identified PUE activities, that would be very challenging for counties to adhere to, based on the nature of their various staffing models.

When we asked about receiving this funding in an unrestricted capacity, that was more appealing, as the needs of the counties vary regarding what their PUE program needs are and how to address them. There were several questions and areas of concern on how this funding would be distributed, any 'string attachments' to prescribed work that would come with the funding, and the reporting of that work product.

Therefore, it is our interpretation that nearly all Commissioners would want to decline the funding if it came with such restrictions that directed the work of that staff member with extensive DPR oversight.

Overall, this concept was met with many questions and much trepidation at the thought of having prescribed oversight from DPR regarding a county employee's workload and PUE program involvement. While many Commissioners appreciated the thought and concept of funding a position to add to their departments, the logistics of incorporating this new employee on potentially fluctuating funding, the need/request to have this employee focus on particular DPR-focused activities, and the volatility of the MOE justification, most Commissioners elected that the risk outweighed the reward at this time.

While we understand that this is simply a recommendation proposal for further consideration, we hope this feedback will be thoroughly and sincerely considered before it is accepted as a plausible solution to adequately support County Agricultural Commissioners. Again, we appreciate the opportunity to provide feedback to this mill assessment proposal and implementation plan and look forward to sharing additional data, thoughts, and considerations around this proposal, if needed.

Thank you,

A handwritten signature in blue ink that reads "Lisa Herbert". The signature is fluid and cursive, with a long horizontal stroke at the end.

Lisa Herbert
President



June 2, 2023

Director Julie Henderson
 Department of Pesticide Regulation
 1001 I Street
 Sacramento, CA 95814

Re: Mill Study Assessment—Preliminary
 Recommendations and Implementation Plan

Dear Director Henderson:

Thank you for the opportunity to provide comment on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan produced by the Department of Pesticide Regulation (DPR) and Crowe LLP released on April 27, 2023. This coalition represents a broad array of industries and businesses in the agricultural sector and respectfully offers our collective response to the recommendations and their impact on California food sector and farming communities.

This coalition believes that a strong DPR is necessary and appropriate to provide for the proper and safe use of pesticides that are essential to produce food and fiber, protect natural and made ecosystems, and provide for safe and healthy communities. Though the Department’s strength is predicated on many factors, budgetary stability is a necessity to deliver on DPR’s mission. To

that end, this coalition recognizes the need to adjust the mill in accordance and appreciates the review and recommendations by Crowe LLP.

Prior to commenting on the substance of the recommendations, this coalition would like to note that the study is not a financial or programmatic audit of the Department. While we appreciate the detail Crowe LLP relayed about its methodology, there is little detail about what those who pay the mill and regulated entities can expect in Departmental process improvements from increasing the mill. Moreover, the study does not identify variables stakeholders can use to determine the appropriateness of the assessed rate. Beyond the conceptual recommendations provided, greater discussion must be had before a full proposal is sought. We are also concerned that the budget change proposal released in May was not a recommended early action within this study and will constitute an ongoing liability impacting future mill discussions with stakeholders. As the Department pursues a fundamental change to their major fund source, it is crucial that mill discussions are comprehensive, and stakeholders have the opportunity to provide comments holistically. In the interim, we would encourage DPR to actively pursue programmatic improvements and manage its finances in a transparent and judicious manner.

Design Recommendations and Mill Structure

This coalition agrees with many of the recommendations provided as they relate to the mill design. Maintaining the current mill structure, with a maximum rate set in statute and assessed rate set in regulations, strikes an appropriate balance of flexibility and accountability. DPR has the capacity to work within a range to adjust the mill based on anticipated year-over-year changes or unanticipated outlier events whereas the Legislature can exercise proper oversight of DPR by authorizing maximum rate values and evaluating performance through the State budget process. Users of products subject to the mill can expect the associated fiscal impact and can budget appropriately and make other business decisions with relative confidence. We concur that a sunset clause and reserve policy are unnecessary to add to the current assessment structure.

As noted in the recommendations, a flat rate is most appropriate to ensure that no product, product category or agricultural system would bear the largest share of supporting DPR's budget. Cost burden can be equally shared in a manner that does not penalize a particular user base that could not adapt practices due to the inelastic nature of pesticide purchasing. DPR can also budget for relatively stable and consistent mill revenues annually and forecast expected revenues based on use data. This coalition, however, does not agree with the recommendation that the Department should entertain future tiering proposals based on "priority pesticide" status, as defined in the Sustainable Pest Management Roadmap.¹ Per the Roadmap, "Priority Pesticides" refer to pesticide products, active ingredients, and groups of related products within the context of specific product uses or pest/location use combinations." Should this recommendation be carried with validity, the complexity and complications of tiering mill assessment rates for certain pesticides or groups of pesticides "in the context of specific product uses or pest/location use combinations," as the definition requires would be immense and would not conform with the inelasticity of pesticide costs to consumers. We encourage the Department to dismiss this recommendation for potential future action.

¹ https://www.cdpr.ca.gov/docs/sustainable_pest_management_roadmap/

Finally, this coalition supports a mill adjustment that is phased-in over time. Current inflationary pressures, an impending economic recession and continuing goods movement issues have caused significant cost increases to on-farm inputs, including pesticides. It is likely these cost trends will continue in 2024. Any subsequent costs to food producers, including the mill, will further constrain markets, increase consumer prices, and push farms towards insolvency. Any subsequent increases to the mill and associated impacts should be phased in so users can budget accordingly while they manage the current input challenges. A phased in approach would also allow the regulated community and the public to ensure DPR is utilizing initial revenues consistent with its core activities and advise on future expenditures. Should the Department pursue a more conservative increase to the mill, as we would recommend, these increases could be phased in over a shorter, 3-year timeline.

Mill Usage Recommendations

This coalition appreciates the willingness of Crowe LLP to engage with stakeholders in developing their recommendations. However, we do not agree with the proposed rate of the mill to increase from 21 mills (\$0.0215) to 33 mills (\$0.0339). An additional \$54.8 million in generated revenue would constitute a 57% increase above the current rate. Regardless of if this rate increase is phased in over the longest interval proposed, this level of rate increase is untenable and excessive for the agricultural community to incur.

This coalition disagrees with the proposed increases for the Department and the Department of Food and Agriculture, including those Crowe LLP identified as “future programmatic needs.” While the workload analysis released in February has some bearing to the request for an additional \$9.7 million in “current programmatic needs” there is no detail on how the Department and Crowe LLP determined “future funding needs” for themselves and the Department of Food and Agriculture. It is also unclear how a “separate account” for County Agricultural Commissioners would be used in conjunction with or separate from the current mill assessment revenues distributed to Commissioners. The study does not specify if these funds would be complimentary or supplementary to current resources provided to Commissioners and is silent on what would constitute “Administration priorities.”

Finally with respect to the \$11 million proposed for Sustainable Pest Management programmatic needs, this coalition approaches this recommendation with strong reservations. Per the Roadmap, “no one recommendation...will, on its own, bring about systemic change...the full breadth of the Roadmap must be implemented.” The proposed mill funding for Sustainable Pest Management is not coupled with any detail of which Roadmap priorities it will effectuate or how the remaining items in the Roadmap are to be resourced. We encourage the Department to pursue alternative funding sources for these “positive incentives.” In short, without greater detail about how this additional \$54.8 million would be expended, for what functions, if the Departments would require additional positions, and what are the results and performance improvements stakeholders can expect, we cannot support this significant of a fund increase.

Mill Implementation Recommendation

This coalition appreciates the recommendation for a five-year review of the mill assessment for revenue stabilization purposes, however, we would recommend an addendum. A five-year review of the mill, in addition to having value for the Department to determine the appropriateness of

the rate, should also be used to publicly review Departmental programs. This review would allow the Department to evaluate whether funds have given them the opportunity to improve responsiveness to ratepayer needs (such as improved registration timelines), and identify internal and external process improvements. As the mill constitutes the revenue source supporting the majority of the Department's costs, annual budget reviews should be complimented by periodic evaluations of the Department's efficiency and effectiveness.

Thank you for the opportunity to provide feedback on the mill recommendations. We look forward to having constructive conversations with the Department and encourage you to utilize this coalition as an early resource to discuss any mill proposal prior to January 2024.

Respectfully,



Aubrey Bettencourt, President and CEO
Almond Alliance of California



Brooke Palmer, Executive Officer
California Association of Wheat Growers



Terry Gage, President
California Agricultural Aircraft Association



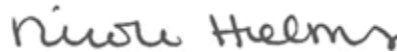
Todd Sanders, Executive Director
California Apple Commission
California Blueberry Association
California Blueberry Commission
Olive Growers Council of California



Michael Müller, Director of Government
Relations
California Association of Winegrape
Growers



Ruthann Anderson, President/CEO
California Association of Pest Control
Advisers



Nicole Helms, Executive Director
California Alfalfa and Forage Association



Jane Townsend, Executive Officer
California Bean Shippers Association



Roger Isom, President/CEO
California Cotton Ginners and Growers
Association
Western Agricultural Processors Association



Christopher Reardon, Director of Legislative
Affairs
California Farm Bureau Federation



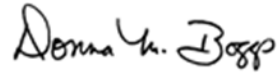
Ian LeMay, President
California Fresh Fruit Association



Chris Zanobini, Chief Executive Officer
California Grain & Feed Association



Debra Murdock, Executive Officer
California Pear Growers Association



Donna Boggs, Associate Director
California Seed Association



Rick Tomlinson, President
California Strawberry Commission



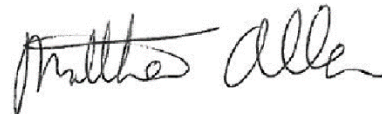
Mike Montna, President/CEO
California Tomato Growers Association



Robert Verloop, Executive Director/CEO
California Walnut Commission



Manuel Cunha, Jr., President
Nisei Farmers League



Matthew Allen, Vice President, State
Government Affairs
Western Growers Association

cc: Secretary Karen Ross, California Department of Food and Agriculture
Secretary Yana Garcia, California Environmental Protection Agency
Joe Shea, Office of Governor Gavin Newsom



May 31st, 2023

Director Julie Henderson
California Department of Pesticide Regulation
1001 I Street
Sacramento, CA 95814
via email: ProjectMillStudy@cdpr.ca.gov

Dear Director Henderson,

On behalf of Community Alliance with Family Farmers (CAFF) and our 8,000 family-scale farmer members, I'm writing to provide comments on the *Mill Assessment Study: Preliminary Recommendations and Implementation Plan*; we want to thank you, Department of Pesticide Regulation (DPR) staff, and Crowe LLP for advancing this opportunity to update and modernize the mill fee and enable DPR to perform its mission so that California farmers may thrive.

While we remain concerned about any potential increased fees borne by farmers, we encourage you to advance the most comprehensive and dynamic mill fee, that allows DPR, California Department of Food and Agriculture (CDFA) and county agricultural commissioners to fulfill their responsibilities and to advance goals outlined in the *Sustainable Pest Management (SPM) Roadmap for California*. It's clear the status quo is not enough — without significant investments, the pest problems that follow increased climate change-exacerbated disasters and global trade will further threaten California's vulnerable growers. Modest changes in the fees assessed on pesticide sales to support farmer adaptations are necessary.

A mill fee should not only adapt to needs in the coming years, it needs to help make up for decades of underinvestment and disinvestment in pest management research, extension, technical assistance and incentives programs. We encourage you to fund all scenario options — Options A through F (*emphasis on F*) — and to remove or increase the statutory cap on the mill fee to provide flexibility to meet the goals DPR has outlined for the next 27 years.

DPR can't wait another 17 years to reconsider an increase to fund when it already has a clear plan and path to advance sustainable pest management. We encourage you to consider phasing in the fee more quickly as the subsequent investments will lag; it will take years to sufficiently begin or stand up new programs and partnerships, begin new research or see the benefits through expansive extension, or bring more sustainable pest management products to market.

We build sustainable food and farming systems through policy advocacy and on the ground programs

P.O. Box 363 Davis, CA 95617-0363

530.756.8518 | info@caff.org | www.caff.org

We appreciate your ongoing commitment to a transparent and participatory process.
Please feel free to reach out with any additional questions.

Sincerely,

A handwritten signature in black ink that reads "Paul Towers". The signature is written in a cursive, slightly slanted style.

Paul Towers
Executive Director



CCOF

Advancing organic agriculture through certification, education, advocacy, and promotion.

May 30, 2023

Director Julie Henderson
Department of Pesticide Regulation
1001 I Street
Sacramento, CA 95814

Re: CCOF Comment on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan

Sent via email: ProjectMillStudy@cdpr.ca.gov

Dear Director Henderson:

California Certified Organic Farmers (CCOF) appreciates the opportunity to comment on the Department of Pesticide Regulation's (DPR) Mill Assessment Study: Preliminary Recommendations and Implementation Plan (Preliminary Recommendations). CCOF is a farmer-led nonprofit representing more than 3,000 organic farms, ranches, processors, and retailers across California. Our mission is to advance organic agriculture for a healthy world through certification, education, and advocacy.

We appreciate DPR's efforts to balance a fair fee structure for industry with establishing a stable and adequate funding source to execute core department functions and implement the state's Sustainable Pest Management (SPM) Roadmap. However, we are concerned that the Preliminary Recommendations create regulatory uncertainty and misalign with the SPM Roadmap. **CCOF recommends that DPR tier the mill fee based on pesticide product workload to create a clear path forward.**

The Preliminary Recommendations include a flat fee percentage of pesticides sales with an increase to be phased in over 3-5 years. DPR is recommended to revisit tiering the mill fee once Priority Pesticides have been evaluated through the SPM Roadmap process. This scenario delays decision-making and creates regulatory uncertainty, making it difficult for producers to plan for the future. There is no clear timeline for establishing Priority Pesticides and this process is likely to be contentious. CCOF anticipates that organic-approved pesticides will not be listed as Priority Pesticides and will be in the lowest fee band when DPR revisits tiering the mill fee. In the interim, the organic industry is left with little clarity on how the mill assessment will impact their bottom line. If the full cost of doing business is unclear, organic producers and input companies may be hesitant to expand acreage or bring new products to market. This can ultimately stunt the growth of the organic sector.

Moreover, a flat fee disincentivizes SPM practices. Treating all pesticides the same disincentivizes the sale and use of biological and cultural pest control techniques, which can be time-consuming and require a shift in mindset to adopt. Organic producers and those employing biological and cultural methods are disadvantaged by taking on these challenges in addition to purchasing safer pesticides with the same mark up as the most toxic pesticides due to the equivalent mill fee assessment. Instead, DPR should tier the mill fee this year to reflect the greater regulatory burdens posed by the most dangerous pesticides and to encourage the adoption of organic, safer pesticides. A tiered structure should assess pesticides approved for use in organic production at the lowest fee. Organic-approved pesticides are reviewed every five years. The United States Department of Agriculture, in consultation with the Department of Health and Human Services and the Environmental Protection Agency, must determine that organic-approved pesticides are not harmful to human

health or the environment and are necessary to farmers because natural substitutes are unavailable.¹ To avoid unnecessary duplication of this federal review, DPR should categorize organic-approved pesticides as the lowest workload burden and assess these pesticides at the lowest fee.

Thank you for the opportunity to comment. We look forward to continuing to engage on this important issue.

Sincerely,

A handwritten signature in black ink, appearing to read 'Rebeka Weber', with a horizontal line extending to the right.

Rebekah Weber
Policy Director
CCOF

¹ 7 USC 6517(c)(1)(A)(i) and (ii).





CA·NURSES
FOR ENVIRONMENTAL HEALTH & JUSTICE



CENTER FOR FOOD SAFETY



NRDC
NATURAL RESOURCES
DEFENSE COUNCIL



May 25, 2023

Julie Henderson, Director
California Department of Pesticide Regulation
Via email: ProjectMillStudy@cdpr.ca.gov

Comment on the Crowe Preliminary Recommendations and Implementation Plan for Reform of the Pesticide Mill Fee

Dear Director Henderson,

Thank you for the opportunity to comment on the draft [Preliminary Recommendations and Implementation Plan](#) for a revised pesticide mill fee proposal. The undersigned coalition of environmental, environmental justice, biodiversity and health organizations submits these comments for your consideration.

We agree that the Department of Pesticide Regulation (DPR) requires a stable and adequate funding source to support their core mission to protect human and environmental health. We agree with the inclusion throughout the recommendations of implementation of the state's

Sustainable Pest Management (SPM) Roadmap, as well as the conclusion that activities that incentivize or support safer pest management are central to the core mission of the Department and therefore appropriately funded by the mill fee. Roadmap implementation should be integrated into DPR's core workload rather than siloed out with a separate mill allocation. As Crowe acknowledges, the proposed mill allocation set-aside for SPM Roadmap implementation is inadequate for the task ahead.

We recommend that DPR adopt a tiered mill fee, with no phase-in period and no statutory ceiling, sufficient to fully fund and achieve the goals of DPR's SPM Roadmap. We recommend tiering based on higher fees for pesticides known to be highly hazardous or associated with a high workload.

Our coalition is united in opposing Crowe's recommendation for DPR to adopt a flat fee percentage of pesticide sales with an increase to be phased in over 3-5 years and with a ceiling set in statute.

Tiered fee structure based on workload

The recommendations state that, because of the inelasticity of pesticide sales, a tiered fee structure would not influence use, and conclude that this is a primary reason it should therefore not be recommended. This conclusion does not follow. Given Crowe's finding that a higher mill fee will not suppress or change use, it follows that a tiered mill fee with increased fees for more hazardous pesticides would bring in more revenues and would therefore allow DPR to meet its goal of increasing and stabilizing the Department's revenues, regardless of whether it also achieves the goal of reducing hazardous pesticide use. The same can be said for a flat rate increase, and is therefore not a basis for rejecting a tiered proposal.

In fact, in Exhibit 42, Crowe acknowledges that tiering would in fact i) encourage safer and sustainable alternatives; ii) better reflect the true cost; iii) support risk reduction goals; and iv) allow for more targeted policy interventions. These are essential outcomes needed to protect the public and ought to be a driving factor in decision-making around funding structures.

- In light of these acknowledged likely outcomes, the coalition strongly supports a tiered mill fee structure.

A tiered mill fee proposal based on workload should be analyzed and offered

Crowe suggests that, once DPR has identified Priority Pesticides as part of the SPM Roadmap process, DPR "could consider" a tiered fee for those pesticides. However, because the recommendations fail to offer a tiered proposal, DPR's consideration will have to be based on a future study. We find this to be a serious omission, given Crowe's remit to fully analyze a variety of fee structures and make a recommendation from among them. DPR is left with no other proposal to consider, which represents an opportunity wasted in this current fully-funded effort.

To enable the serious consideration and eventual adoption of a tiered mill structure based on priority pesticides, the final recommendations should include an analysis of a tiered fee based on a known category of high risk pesticides, such as: the 61 high-workload pesticides already

identified by Crowe; DPR's previous mill fee reform proposal to tier chemicals based on US EPA signal words; or the 132 agricultural pesticides identified by OEHHA's rigorous selection criteria for inclusion in CalEnviroScreen for their combination of hazard and volatility. Along with a tiered proposal, Crowe's final recommendations should provide a detailed analysis of the likely revenues and sustainability of such a concept.

In its justification for rejecting a tiered proposal based on workload, the Crowe analysis states that "there is not workload data to transparently and consistently provide the information needed to justify an assessment differential" (p.85). However, relatively straightforward assessments or studies could be conducted to estimate the workload for these AIs.

Additionally, as Crowe acknowledges, workload data does not currently exist to justify a flat fee either: "A flat mill rate does not account for the varying levels of DPR workload or negative externalities associated with different pesticides, potentially underpricing the true cost of more work intensive or hazardous substances" (p.80).

Instead of a detailed tiered proposal and analysis, the recommendations include a table of pros and cons of a fixed versus a tiered mill (pp.80-81), which include unchallenged assumptions, such as noting as an argument against tiering that "[a] commonly cited example is that using more concentrated (and potentially more hazardous) products is beneficial from the lens of reduced material use and reduced fuel required for shipping but problematic from a risk perspective." This "commonly cited example" should be subjected to a complete and accurate assessment. This and other assumptions should be analyzed by comparing risks, revenues, use type, transportation costs and other factors resulting from a range of fixed and tiered proposals.

It would be instructive, too, to conduct analysis of the contribution to DPR's budget of sales of specific highly hazardous classes/types of pesticides, such as fumigants, organophosphates, pyrethroids and neonicotinoids. Key questions the analysis could address include: Are these chemicals more or less expensive per pound than others? Is the contribution to DPR's budget of the extremely heavily used class of fumigant pesticides preventing policy action that might reduce or eliminate them? What is the reason for the enormous spike in pesticide sales shown in Exhibit 12, and why did it have no effect on DPR's revenue?

Crowe's recommendation is to phase in a flat fee increase between 2024 and 2027-2029 (3-5 years), with review of the mill fee slated for 2029 and then every 5 years thereafter. We believe a reasonable timeline for DPR's development of a list of Priority Pesticides is 2 years (by 2025), well within the currently proposed phase-in period for a revised mill fee. We believe it is a mistake to propose a timeline that ignores the concurrent opportunity for a tiered proposal presented by the Priority Pesticide list.

- Our coalition recommends that DPR adopt a tiered mill fee based on AIs already known to be highly hazardous or associated with a higher workload
- Our coalition recommends that DPR commit to completing its list of Priority Pesticides by 2025, which will provide certainty and a fixed timeline for this critical task of SPM Roadmap implementation.

Sustainable Pest Management Roadmap recommendations

We welcome the emphasis in the recommendations on implementation of the Sustainable Pest Management Roadmap, and agree that the state must begin to move down the path charted by the roadmap on an expeditious timeline.

However, the final recommendations must go much further in linking mill fee funding to the Roadmap's implementation and specifically in accelerating the selection of Priority Pesticides and other critical implementation steps.

Among Crowe's recommendations is a 2.5 mill increase to support SPM Roadmap implementation, with an acknowledgement that this represents start-up funding, and that "complete implementation of all SPM Roadmap priorities will likely require a more comprehensive funding strategy beyond the mill assessment" (p.47).

The transition to SPM is central to DPR's mission, and activities that achieve this transition are core activities, not a sideline. The reform of the mill fee and implementation of the SPM Roadmap should be coordinated and mutually supportive. It is disappointing to see a mill fee reform proposal that is acknowledged to be insufficient to achieve full Roadmap implementation.

The report states:

"Given the recency of the release of the SPM Roadmap and future identification of Priority Pesticides, it is premature to change the mill assessment structure from a flat assessment to a tiered assessment. Maintaining a flat assessment in the near-term will be administratively straightforward and will allow time for policy decisions and funding needs for SPM Roadmap activities to be identified." (p.38)

We disagree. Reform of the mill fee is a once-in-a-generation undertaking, and the opportunity to transition California agriculture toward a more sustainable pest management system may not be repeated. We urge Crowe to match this moment with ambitious recommendations that catalyze and fully support an expedited SPM Roadmap implementation process.

- We recommend that DPR adopt a mill fee that generates sufficient revenue to achieve its SPM implementation goals.

Mill fee ceiling set in statute

The Crowe recommendations include a statutory ceiling on the mill fee, set 10% above the recommended implementation amount. Our recommendation is that the mill fee be reformed in explicit support of DPR's SPM Roadmap implementation, acknowledging that the hoped-for result of Roadmap implementation is the transition away from harmful chemical pesticide use, with obvious implications for DPR's future revenue.

We oppose the adoption of a statutory ceiling because of the anticipated transformation of DPR's responsibilities and workload as the SPM Roadmap is implemented. The recommendations as currently drafted do not meet DPR's future funding needs. This reality is acknowledged in Crowe's report, as noted above.

Given the historic rarity both of reforming the mill fee and of planning for a transition to sustainable pest management, we urge Crowe to recommend structural reform of the mill fee that meets this moment.

- Our coalition recommends not including a mill fee ceiling in statute, in order to retain the flexibility to adapt as needed during the roadmap implementation period.

DPR's budgetary reliance on pesticide sales

The report's discussion of the "Extended Producer Responsibility" (EPR) model, in which regulatory bodies are funded by fees from the entities they regulate, excludes discussion of the perverse incentive inherent in such a model. Although Crowe revisited the advisability of this model (pp.28-29), their analysis omits examination of the structural and existential disincentive for DPR to reduce pesticide use when their funding depends on maintaining or increasing sales. Although stakeholders from our coalition raised this issue repeatedly, our input was ignored in this analysis. This omission should be corrected in the final recommendations.

In practice, DPR's EPR funding model has tracked with a remarkably consistent level of agricultural pesticide use by pounds of active ingredient over 30+ years since Pesticide Use Reporting began - at roughly 200 million pounds per year.

Dismissal of General Fund as a funding source

Crowe's rejection of the General Fund as a "sustainable or appropriate funding source to support the recommended proposal options" (p.30) warrants further examination. The noted concern regarding "volatility of General Fund allocations" does not suffice as a legitimate reason to dismiss consideration of integrating state resources from the General Fund into mill fee structural reform. With implementation of the SPM Roadmap, a structural reliance on pesticide sales to fund DPR programming will be equally volatile, if not more so. Diversifying DPR's funding sources with tax-payer dollars is precisely the integrated approach needed to shift DPR away from relying on pesticide sales to fulfill its institutional obligations. Raised mill fee funds could go into the general fund instead of directly into DPR's budget to be distributed to a range of California agencies and programs, breaking the direct link between pesticide sales and the department's budget.

The planned transition away from harmful pesticide use, as guided by the SPM Roadmap, challenges the mill fee's structural dependence on pesticide sales and the predictability of its revenue stream. It is therefore an opportune time to set up safeguards for DPR's resilience through transformation of its funding structure that ensures adequate and sustainable funding for a planned future free of harmful chemical pesticides, which is the Roadmap's North Star.

- Our coalition recommends consideration of the General Fund as a complementary funding source along with the mill fee. This approach is reflected in Governor Newsom's May 2023 Budget Revision, which proposes general fund resources to support activities related to SPM Roadmap implementation.

Crowe's industry affiliation

As an allied member of the Agricultural Council of California along with pesticide giants Bayer, Corteva and Syngenta, the impartiality of Crowe's recommendations is compromised by its industry affiliations. Indeed Crowe repeatedly refers to a 5% drop in pesticide sales as a "worst case" scenario without clarifying whether a "better" scenario would be higher or lower pesticide use. For industry and for DPR's revenue stream, clearly more pesticide use would be better, and we take that to be Crowe's meaning. For community members and other stakeholders impacted by pesticide use, that inference is disturbing and perhaps revealing of inherent bias.

Conclusion

The signatories to this letter are DPR's primary stakeholders, given the Department's mission to protect human and environmental health. We urge you to reconsider Crowe's key recommendations, and give full consideration to other proposals for structural reform of the mill fee.

Our coalition recommends that DPR adopt a tiered mill fee, with no phase-in period and no statutory ceiling, sufficient to fully achieve the goals of DPR's SPM Roadmap, with tiering based on higher fees for pesticides known to be highly hazardous or associated with a high workload.

In addition, we request that the discussion of the EPR model include rigorous analysis of how and whether the mill fee incentivizes continued high use of hazardous pesticides. We also urge you to consider a diversified funding stream that ensures Departmental resilience for the planned transition away from harmful pesticide use.

Our coalition is unable to support DPR's adoption of Crowe's recommendations as currently drafted.

Sincerely,

Daniel Gluesenkamp, Executive Director, **California Institute for Biodiversity**

Vanessa Forsythe RN MSN, Leadership Council Member, **California Nurses for Environmental Health and Justice**

Anne Katten, Pesticide and Work Health and Safety Specialist, **California Rural Legal Assistance Foundation**

Jane Sellen & Ángel Garcia, Co-Directors, **Californians for Pesticide Reform**

Jonathan Evans, Environmental Health Legal Director, **Center for Biological Diversity**

Rebecca Spector, West Coast Director, **Center for Food Safety**

Grecia Orozco, Staff Attorney, **Center on Race, Poverty, and the Environment**

Nayamin Martinez, Executive Director, **Central California Environmental Justice Network**

Laura Deehan, State Director, **Environment California**

Bill Allayaud, California Director of Government Affairs, **Environmental Working Group**

Lena Brook, Acting Director - Food and Agriculture, **Natural Resources Defense Council**

Asha Sharma, Organizing Co-Director, **Pesticide Action Network**



June 2, 2023

Julie Henderson, Director
California Department of Pesticide Regulation (DPR)
1001 I St.
Sacramento, CA 95814
ProjectMillStudy@cdpr.ca.gov

RE: Crowe Mill Tax Assessment Recommendations

Dear Director Henderson:

On behalf of the Western Plant Health Association (WPH), I am submitting these comments in response to Crowe LLP's (Crowe) recently released recommendations on potential options for managing funding requirements for DPR. WPH appreciates having been included in the group discussions held earlier this spring, as well as the opportunity to provide feedback on the recommendations. WPH represents pesticide and fertilizer manufacturers, agricultural biotechnology providers, and agricultural retailers in California, Arizona and Hawaii.

WPH appreciates DPR and Crowe's ongoing commitment to engaging in interactive discussions with all stakeholders on future DPR funding and the pesticide mill tax. WPH must note that any discussion or suggestion of support for a mill rate increase in the following sections is strictly theoretical. DPR nor Crowe has provided any fiscal information demonstrating a need from which WPH can base actual support for requested increases at this time. After having reviewed the Crowe Mill Tax Assessment report and participating in the discussions this spring, WPH has the following observations regarding the Crowe recommendations.

Mill Tax Authorization

WPH continues to strongly support the current system of establishing the mill tax through legislative action. This system authorizes the legislature to utilize its oversight responsibility in establishing a mill tax level, and offers an opportunity for the public to engage with the legislature on establishing an appropriate rate and structure. The pesticide mill tax has been clearly identified as a tax by the Legislative Analyst's Office as recently as 2021, therefore it is the responsibility of the legislature to approve any proposed tax increase.

WPH opposes the establishment of a mill tax rate directly through regulation, or having the legislature approve an increase but allowing DPR to establish the amount of that increase through regulation. Again, our members have had repeated experiences where fee increases that are established by DPR are proposed through “emergency regulations” which only allows stakeholders 30 days or less to respond to the proposal. We are concerned that DPR will ultimately default to this same system, which will disenfranchise stakeholders from the mill rate process.

WPH agrees that mill revenue and expenditures should be reviewed/evaluated on a regularly identified periodic basis by DPR, the Department of Finance, and impacted stakeholders as a matter of good governance. However, we do not agree that stakeholders cede authority for future adjustments without proper oversight and accountability measures, including legislative authorization. We are opposed to the use of automatic increases based on interval rates and budget ratios as they could perversely encourage unbridled departmental spending to substantiate mill increases. We are also opposed to the incorporation of an annual adjustment variable, such as a COLA. Because the mill is assessed on a per dollar sales basis, it is self-adjusted for inflation. We believe this makes the use of a COLA inappropriate, and is not recommended for the mill assessment.

If DPR is concerned that pesticide mill tax levels are not adequate for required program reserves, then we believe that this should be demonstrated through an evaluation process with stakeholders where if an increase to support a reserve was found, appropriate stakeholders could support it through a legislative process.

Timing of Rate Increases

The study includes two options for how a potential mill adjustment could take place - immediately or phased in over several years. If a mill increase is demonstrated as necessary, WPH continues to support a phased in mill increase. This option provides the advantage of offering time for registrants or users to adjust to an increase in the mill tax. California agriculture does not have the flexibility to simply raise prices to absorb new costs, and must be able to plan in advance. Again, agriculture is already having to absorb record increases in the cost of labor, transportation, and regulatory fees from other agencies, as well as manage the consequences of ongoing drought and the record flooding this year that has taken hundreds of thousands of acres out of production. Allowing a multi-year planning process for agricultural stakeholders would better allow them to incorporate these types of unexpected costs into their long-term budgets.

We also believe that a phased in process is the more responsible mechanism for DPR. This would allow DPR to conduct program planning and, most importantly, implementation in a thoughtful and resource-efficient manner. This would also allow for appropriate oversight by the

legislature to measure milestones for DPR's meeting mill increase objectives, and help determine if the next authorized increase should move forward.

Mill Structure

The Crowe report proposed three methods of assessment: a flat rate, a flat rate with a tiered rate based on product category workload, and a flat rate plus a tiered rate based on pesticide product workload.

WPH supports the flat rate proposal. This would be a continuation of the current manner of assessment. It is the fairest and most easily administered with a simple fee increase, and would provide for the strongest budget stability. We continue to oppose any form of a tiered mill tax, either as a flat rate with some form of tiering built in, or restructuring the mill tax system into a tiered system.

DPR Activities

DPR developed a list of activities, both budgeted and unbudgeted, including development of the Sustainable Pest Management system, positive incentives, and other funding needs. Stakeholders have repeatedly requested budget estimates for these activities as well as current budget information from which to better provide feedback. WPH will refrain from commenting on DPR activities until we can have a more informed discussion on these activities prior to a full mill tax discussion this winter.

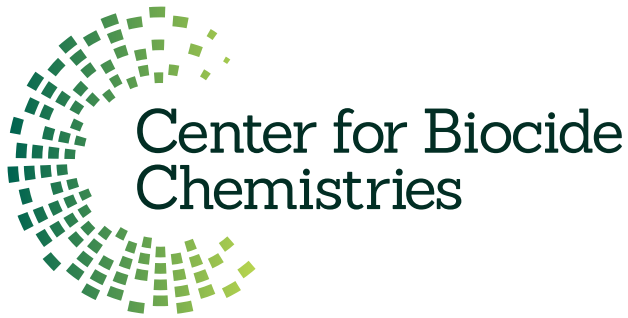
Conclusion

As we have stated repeatedly, WPH supports DPR being adequately funded to support their core responsibilities and functions. We strongly believe that in order to have a thoughtful discussion on future funding, DPR must provide more detailed financial information. We thank you for your consideration of our comments, and WPH looks forward to continuing to discuss funding with DPR and other stakeholders going into 2024.

Sincerely,



Renee Pinel
President/CEO



June 1, 2023

Submitted Electronically to ProjectMillStudy@cdpr.ca.gov

RE: Mill Assessment Study: Preliminary Recommendations and Implementation Plan

The American Chemistry Council Center for Biocide Chemistries (CBC)¹ appreciates the opportunity to provide comments on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan (Study), published by Crowe LLC on behalf of the California Department of Pesticide Regulation (DPR). CBC appreciates Crowe and DPR's stakeholder engagement throughout the Mill Assessment Study process.

I. General Comments

Antimicrobial registrants are extremely concerned with the continued DPR backlog in processing pesticide registration actions. Though antimicrobial registrants and users provide significant funding to DPR through the mill assessment and registration, licensing, and certification fees, delays in DPR reviews and approvals are stifling the industry's ability to bring new products to market or make other important changes to registered pesticide products. Antimicrobial products are critical to nearly every California industry, including healthcare, school disinfection, food processing, construction material preservation, antifouling coatings, etc. Delays in DPR actions create ripple effects through these supply chains.

CBC recognizes that DPR requires additional funding to address its current workload. However, we note that additional funding through the mill assessment is not the only solution to improving DPR's resource constraints. We suggest that a transparent audit of DPR's current processes and operations, examining where process efficiencies and other changes could improve performance without simply continuing to increase fees, is a critical part of the consideration as to the future mill assessment needs. There are critical process inefficiencies, such as a lack of ability to process electronic payments, that create additional costs for DPR and registrants alike.

While CBC supports an increase in the mill to meet DPR's expressed current programmatic needs, we strongly urge that future mill rate adjustments be authorized only by the legislature to ensure a transparent review of DPR's needs and whether the agency is fulfilling current obligations.

¹ ACC's Center for Biocide Chemistries represents 47 manufacturers and formulators of antimicrobial pesticides.

II. Recommended Mill Proposal Options

The Study outlines six proposal options to increase the mill rate for various DPR, County Agriculture Commissioner (CAC), California Department of Food and Agriculture (CDFA) and Sustainable Pest Management (SPM) programmatic needs. Though most of these programmatic needs support activities surround the use and management of conventional pesticide products, rather than antimicrobial pesticides, the proposal does not consider differentiation in fees for agricultural and other types of pesticides, except for the existing additional fee on agricultural pesticide sales to support CDFA. CBC notes that programs such as SPM do not have an antimicrobial pesticide component, therefore increasing the mill on antimicrobial sales to support this activity is inappropriate. Other identified DPR programmatic needs, such as \$6.1 million in Integrated Pest Management Grants, also do not directly involve antimicrobial pesticides. Further, CBC does not believe that mill assessment funding should be used to fund SPM activities, which should be appropriated via the general legislative fund.

In the Study, Crowe notes that the department's funding aligns with an Extended Producer Responsibility (EPR) model. However, the proposed mill adjustment is inconsistent with EPR principles. Under this EPR system, antimicrobial product producers are paying for regulatory and other activities that do not involve antimicrobial pesticides.

If the mill is adjusted to include all the proposals listed in the proposed options, CBC strongly encourages an increase to the mill that establishes further differentiation in mill assessment rates based on the type of pesticide. We strongly encourage the adoption of a separate approach for various types of pesticides that may be adjusted in the future as priority pesticide products are established.

III. Mill Design & Implementation Recommendations

A sustainable, long-term funding source for DPR is a priority. CBC agrees that the mill rate should be set in statute and regularly reviewed to assess whether adjustments are needed. Allowing DPR to adjust the rate without legislative oversight eliminates an important check on DPR processes and performance, helping to provide oversight to ensure that the mill fee levied is appropriate and that DPR is meeting its obligations. The Legislature has the ultimate authority to authorize DPR's budget and set taxes and fees. A regular 5-year assessment of the mill that includes consultation with stakeholders would help ensure the mill is regularly re-evaluated and refined in a transparent and sustainable manner.

We also support a phased in implementation period of 3-5 years to allow stakeholders to adjust to the increase. A phased increase starting in FY2024/25 would be appropriate.

IV. Conclusion

CBC appreciates DPR and Crowe's commitment to stakeholder consultation in the Mill Fee Assessment Study process and will continue to provide comments as the alternative concepts are

Comments on Mill Assessment Study: Preliminary Recommendations and Implementation Plan
June 1, 2023

Page 3

further developed and refined. CBC and its members support the project's goals and want to ensure DPR has the necessary resources to fulfil its obligations. If you have any questions, please contact me (Anastasia_Swearingen@americanchemistry.com; 202-249-6505).

Sincerely,

A handwritten signature in cursive script that reads "Anastasia Swearingen".

Anastasia Swearingen
Executive Director
American Chemistry Council's Center for Biocide Chemistries



2 June 2023

Honorable Julie Henderson, Director
Department of Pesticide Regulation
1001 I Street
Sacramento, CA 95814

Dear Director Henderson,

CropLife America (CLA) and RISE (Responsible Industry for a Sound Environment) appreciate the opportunity to provide comments on the *Mill Assessment Study: Preliminary Recommendations and Implementation Plan* ("Study"). There are recommendations within the Study that we support and others that we have concerns with.

In our comments submitted in January of this year regarding the Mill Tax proposal, CLA and RISE supported a flat-rate model and asked that any increase be implemented over several years. We were happy to see that Crowe LLP recommended both of those in the Study. We are concerned however, that the Study recommends a possible change to the tiered model in the future and continue to urge the Department of Pesticide Regulation (DPR) to treat all pesticides equally when it comes to Mill Tax assessment. The study indicates that a tiered model would act as an incentive to change pesticide user behavior, but there are many other considerations pesticide applicators use when implementing an Integrated Pest Management (IPM) plan that would outweigh any marginal price difference due to the Mill Tax.

We also agree, as the Study suggests, that the maximum Mill Tax rate, and tax structure, should be set in statute. This ensures there is continual legislative oversight of the tax and how revenues are being spent. That is why we are not supportive of setting a higher maximum rate in statute with the authority of the Director to raise it at any time. The check and balance of legislative oversight is imperative to ensure the Department is wisely using the Mill Tax resources. We also agree with the recommendation that there be periodic legislative review of the program to ensure adjustments are made, up or down, to meet programmatic needs. Any review process should include robust stakeholder involvement as well.

We have concerns about the level of Mill Tax increase recommended in the study and the lack of financial transparency on why that level of increased funding is appropriate. The proposal is more than a 60% increase over the current rate without a justification for why such a large increase is necessary. For example, the study recommends over \$13.8 million for Sustainable Pest Management (SPM) activities without outlining precisely how that value was calculated and what the money will exactly fund. During a Q&A event on May 16 hosted by Crowe LLP on the Study, there were several questions on the SPM funding and during the forum it was communicated that the \$13.8 million was just an estimate. The SPM Roadmap contains a plethora of recommendations, and while some of them might be appropriately

funded with Mill Tax dollars, more detail needs to be provided on exactly what would be funded by the proposed \$13.8 million. As the Study notes, "...there is still a level of uncertainty with the SPM Roadmap outcomes and timing." Therefore, it is inappropriate at this time to collect and spend Mill Tax revenue on yet to be determined SPM activities.

The Study also does not appear to evaluate what the appropriate level of funding for DPR programs is so the Department can fulfil its regulatory function; rather, it simply relies on the Department to determine what programmatic funding levels it needs. A more precise accounting of how and where current Mill Tax revenues are being spent, and specifically what additional funding is needed along with why the funding is needed is crucial to assuring payers of the tax that the dollars are being spent prudently and appropriately.

CLA and RISE remain concerned as the mill tax fees and pesticide registration fees have increased substantially over recent years and remain the highest in the nation. DPR's overall lack of fiscal transparency on how the increase in mill tax revenue will be spent is a concern of CLA and RISE. For any increase in the mill tax, we request more information on the Department's planned deliverables that the funding will provide and metrics to track those deliverables along with enhanced transparency on the Department's expenditures.

Ultimately, we support a rigorous program that is consistently administered for the regulation of pesticides and want DPR to have sufficient funding to fulfill its remit as a state lead agency while appropriately managing revenue from mill tax revenue and pesticides registration fees. We look forward to additional opportunities for stakeholder engagement throughout the duration of the mill tax study and appreciate the opportunity to provide these comments on the Study. Should the Department have any questions, please do not hesitate to contact us.

Sincerely,



Scott J. Dahlman
Director of State Government Affairs, Western Region
CropLife America
sdahlman@croplifeamerica.org



Jon Gaeta
Director, State Affairs
RISE (Responsible Industry for a Sound Environment)
jgaeta@pestfacts.org

Established in 1933, CLA represents the developers, manufacturers, formulators, and distributors of pesticides and plant science solutions for agriculture and pest management in the United States. CLA

represents its members by monitoring legislation, federal agency regulations and actions, and litigation that impact the pesticide and pest control industries and participating in such actions when appropriate, as well as communicating the benefits of pesticides to a variety of audiences. CLA's members produce, sell, and distribute virtually all the pesticide and biotechnology products used by American farmers.

RISE is a national not-for-profit trade association representing more than 220 producers and suppliers of specialty pesticide and fertilizer products to both the professional and consumer markets. RISE member companies manufacture more than 90 percent of domestically produced specialty pesticides used in the United States, including a wide range of products used on lawns, gardens, sport fields, and golf courses and to protect public health.

June 2, 2023

California Department of Pesticide Regulation
Attention: Crowe LLP
400 Capitol Mall Suite 1400
Sacramento, CA 95814
Submitted electronically to ProjectMillStudy@cdpr.ca.gov

Re: Comments on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan

Dear Mr. Abeyta and Crowe LLP Staff:

On behalf of the Household & Commercial Products Association (HCPA), I would like to express our appreciation for the opportunity to provide feedback on the recently released Mill Assessment Study: Preliminary Recommendations and Implementation Plan, which was made available on April 27, 2023. HCPA has been actively involved in this project through stakeholder consultations and written comments, as outlined in the recently released Plan.

Pesticides play an important role in California, and the work you do could significantly influence the cost of business for the manufacturers of antimicrobial pesticide products, which are used to protect against illness and disease, pet care pesticide products, which are used to protect our pets against disease transmission and infestation from fleas and ticks, lawn care pesticide products, which are used to protect against invasive species, and many other consumer, commercial, and institutional pesticide products that are critical to protect public health in California. As an industry, we do not object to reasonable regulatory fees, as we believe it is crucial to establish a robust regulatory infrastructure for pesticide products to ensure protection of the public. However, it is important to ensure that these fees or taxes do not become excessive and that the programs they support benefit all of the industries and operate effectively, and do not create an undue burden upon business, especially smaller businesses.

HCPA appreciates that the study authors continue to discourage the use of mill tiering, as simplicity in compliance benefits both the department and the regulated community. Nevertheless, even a flat-rate approach can only be effective if department expenditures align with the outlined revenue streams, as described below.

HCPA supports the study's recommendation to phase in the mill tax increase. This phased approach allows for a more manageable adjustment to the increased costs. Equally important, it provides companies with sufficient time to plan and accommodate the budgetary impact, considering that budgets are typically prepared many months in advance. Likewise, it affords the Department of Pesticide Regulation (DPR) the opportunity to plan appropriately for its budgetary needs.

While analyzing funding implications, it is essential to strike a balance that considers the impact on both the department and the companies involved. In California, pesticide registration fees are nearly three times higher than the next highest registration fee across the nation for a single year registration, with product renewals set at \$1,525 per product, per year. When factoring in the mill assessment, the cost of introducing a pesticidal product into the California market exceeds the combined costs of all other states. Currently, there are only 2,200 entities reporting mill to DPR, of which, only 1,500 are the registrants paying the registration and renewal fees, ranging from companies with zero sales to those with multimillion-dollar sales. Under the recommendations, this small group would bear the entire burden of the proposed \$149.3 million, plus an additional amount beyond the "implemented rate." This approach is not sustainable, especially when considering the depth, scope, and cost of the Sustainable Pest Management (SPM) Roadmap.

Although SPM program prioritization is underway, mill revenues cannot be solely responsible for funding every component of the SPM program. The aggregate cost of implementing all provisions in the Roadmap would reach billions of dollars and demand decades of financing. Consequently, the general fund should not be overlooked as a potential funding source simply because it is subject to fluctuations based on economic activity and a concomitant benefit to the people of California. Numerous essential programs, both large and small, depend on the general fund and face similar volatility. The California Legislature has long recognized this and has established safeguards, such as a substantial rainy-day fund, to mitigate the impact of these inevitable budgetary fluctuations. The state budget should reflect the Legislature's priorities, and the SPM program, regardless of its merit, should be part of that deliberative process.

HCPA finds the nearly 60 percent proposed increase to be excessive. While the study understandably examines the elasticity of pesticide products, it fails to adequately consider the impact on registrants. For instance, if a mill tax bill currently amounts to \$1 million, this proposal would result in a new payment of \$1.58 million after the phase-in period. The addition of \$580,000 (or more) for any company cannot be easily dismissed through elasticity models. Although the demand for products that maintain clean, healthy, and pest-free homes, schools, hospitals, and businesses might be durable, we must carefully evaluate the associated costs. It is critical to note that for consumer products, the proposed increase compounds with other costs including registration and renewal fees in all fifty states, U.S. EPA registration and maintenance fees, CARB VOC fees, and sales taxes borne by consumers.

Furthermore, HCPA remains concerned that the study overlooks the current allocation of programmatic funds relative to their sources. According to DPR, non-agricultural sales account for as much as 55 percent of pesticide sales in California on a per-pound basis. However, the study does not detail the actual revenue generated from non-agricultural sources. Given the nature of consumer products—small, fast-moving items with high sales frequency—it is reasonable to expect non-agricultural products to yield a higher mill revenue per pound. Despite this, most mill-related expenditures are focused on agricultural activities. Before recommending funds for new programs or expanding existing ones, the study authors should carefully examine the nexus between funding sources and departmental expenditures. It makes little sense to levy the mill assessment on products like a hard-surface disinfectant, a crawling insecticide, or household fly abatement if there is no connection between the products and the program expenditures.

HCPA's comments to Crowe LLP in January of this year emphasized the importance of accountability in conjunction with increased funding, and we reiterate this concern here. The Legislature should be embraced as a form of accountability rather than an impediment to more stable funding. A more modest increase followed by legislative oversight to review program performance would be more prudent than a one-time authorization increase of 60 percent.

Companies are being asked to contribute additional funds to both existing and new programs. To ensure transparency and efficacy, the department must develop a plan with measurable goals to address workload issues before finalizing any increase. Registrants have continued to experience significant delays and backlogs in the registration process. How does the department intend to reduce average registration timeframes, and by what extent? As we previously expressed to Crowe LLP and the department, establishing a timely and predictable registration framework would enhance accountability for new funding streams. A healthy

registration system benefits not only California public health, but also the department, given that a significant portion of its funding relies on pesticide sales in the market. It also fosters new product innovation as the increasing cost and delays may incentivize some registrants to register only certain products.

Once again, we appreciate the opportunity to provide input on this important matter. HCPA remains committed to working collaboratively to ensure a sustainable and effective regulatory framework that protects public health and the environment while supporting industry innovation.

Thank you for your attention to these concerns. We look forward to further engagement on this topic.

Sincerely,

A handwritten signature in blue ink, appearing to read 'C. Finarelli', with a stylized flourish at the end.

Christopher Finarelli

Director, State Government Relations & Public Policy - Western Region



California Stormwater Quality Association®

Dedicated to the Advancement of Stormwater Quality Management, Science and Regulation

June 2, 2023

Julie Henderson
Director
California Department of Pesticide Regulation
1001 I Street, Sacramento, CA 95814
Via Email: ProjectMillStudy@cdpr.ca.gov

Subject: Mill Assessment Study: Preliminary Recommendations and Implementation Plan

Dear Ms. Henderson:

On behalf of the California Stormwater Quality Association (CASQA),¹ we thank you for this opportunity to comment on the Preliminary Recommendations and Implementation Plan prepared by Crowe LLP.

For decades, the uses of certain pesticides in urban areas – even when applied in compliance with pesticide regulations – have adversely impacted urban water bodies. Currently, several pesticides are present in California urban water bodies at concentrations above aquatic toxicity thresholds.² Our member agencies face substantial costs to comply with pesticides-related Total Maximum Daily Loads (TMDLs), California State Water Board Toxicity Provisions, and additional permit requirements. Meanwhile, local agencies do not have the authority to further restrict or regulate when or how pesticides are used to proactively prevent and avoid these impacts and liabilities.³

Consistent with CASQA's Vision for Sustainable Stormwater Management (Vision),⁴ we strongly support efforts to reduce pesticide pollution, at the source. Minimizing pesticide pollution, as opposed to attempting to remove pesticides from the environment, is essential to sustainable stormwater management. True source control (the elimination of a pollutant at its source) and the use of alternative products offers the most effective and economical approach to eliminating pesticides that impair the beneficial uses of California's waterways. True source control also more appropriately aligns the costs of addressing pollution with its generation, rather than shifting the cost and environmental impacts to local communities. Minimizing pollution at the source is therefore more effective and the most sustainable approach, particularly for pesticides.

¹ CASQA is a nonprofit corporation that advances sustainable stormwater management protective of California water resources. With approximately 2,000 members, our membership is comprised of a diverse range of stormwater quality management organizations and individuals, including over 180 cities, 23 counties, special districts, federal agencies, state agencies, ports, universities and school districts, wastewater agencies, water suppliers, industries, and consulting firms throughout the state. Collectively, CASQA represents over 26 million people in California.

² California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)

https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html

³ Local agencies in California have authority over their own use of pesticides but are pre-empted by state law from regulating pesticide use by consumers and businesses.

⁴ CASQA's Vision for Sustainable Stormwater Management, October 2020. Available at:

https://www.casqa.org/wp-content/uploads/2022/10/final_-_vision_for_sustainable_stormwater_management_-_10-07-2020.pdf

CASQA Comments on the Mill Assessment Study: Preliminary Recommendations and Implementation Plan

Consequently, pesticide registration costs must be recognized as including environmental monitoring, data analysis, pesticide regulation, user education, and outreach. These costs should be borne by pesticide manufacturers, distributors, retailers, and users, rather than stormwater agencies. Stormwater systems are passive downstream receivers of pesticides, yet the costs of monitoring and responding to their impacts are borne by local communities. California Department of Pesticide Regulation's (DPR) work on reviewing pesticide registrations and implementing programs to ensure safe and effective pesticide use is crucial to offset these costs.

It is from that vantage point that CASQA commends DPR's effort to stabilize its funding mechanism by reviewing, updating and increasing the current Mill Assessment Fee. CASQA strongly agrees that DPR must increase their funding to meet the mission to "protect human health and the environment by regulating pesticide sales and use, and by fostering reduced-risk pest management." By increasing the Mill Assessment Fee, DPR will be able to continue its current mission and move forward with new programmatic initiatives that aim to protect water quality such as the Sustainable Pest Management Roadmap.

CASQA fully supports of increasing the Mill Assessment Fee as outlined in the Preliminary Recommendations and Implementation Plan, as it ensures DPR will be able to complete its mission that aligns closely with our Vision to prioritize solutions for pesticides through true source control.

Thank you for your consideration of our comments. If you have any questions, please contact Victoria Kalkirtz, CASQA's pesticides project lead, at (858) 541-4326 or vkalkirtz@sandiego.gov; or contact me at (424) 241-2249 or karen.cowan@casqa.org.

Sincerely,



Karen Cowan, Executive Director
California Stormwater Quality Association

cc: Karen Morrison, Chief Deputy Director, DPR
Aimee Norman, Chief, Integrated Pest Management Branch, DPR
Karen Mogus, Deputy Director, California State Water Resources Control Board
Philip Crader, Assistant Deputy Director, California State Water Resources Control Board
Tom Mumley, California Regional Water Quality Control Board, San Francisco Bay Region
Rebecca Nordenholt, California Regional Water Quality Control Board, San Francisco Bay Region
Amanda Magee, California State Water Resources Control Board
Claire Waggoner, California State Water Resources Control Board
Jessica Radar, California Regional Water Quality Control Board, Central Valley Region
Peter Meertens, California Regional Water Quality Control Board, Central Coast Region
Jenny Newman, California Regional Water Quality Control Board, Los Angeles Region
CASQA Board of Directors, Executive Program Committee, and True Source Control Subcommittee



June 2, 2023

Julie Henderson
Director
California Dept. of Pesticide Regulation
1001 I Street, Sacramento, CA 95814

Karen Morrison
Chief Deputy Director
California Dept. of Pesticide Regulation
1001 I Street, Sacramento, CA 95814

Via Email: ProjectMillStudy@cdpr.ca.gov

Subject: BACWA Support for Mill Assessment Study Preliminary Recommendations and Implementation

Dear Julie Henderson and Karen Morrison:

On behalf of the Bay Area Clean Water Agencies (BACWA), we thank you for the opportunity to provide comments on the Department of Pesticide Regulation's (DPR's) [Mill Assessment Study: Preliminary Recommendations and Implementation Plan](#) prepared by Crowe LLP. BACWA's members include 55 publicly-owned wastewater treatment facilities and collection system agencies serving 7.1 million San Francisco Bay Area residents. Every day, BACWA members' Publicly-Owned Treatment Works (POTWs) treat millions of gallons of pesticide-containing wastewater that is then discharged to fresh or saltwater bodies, including local creeks and rivers, bays, and the Pacific Ocean. We take our responsibilities for safeguarding receiving waters seriously.

BACWA Supports Implementation of the Sustainable Pest Management Roadmap

Pesticide discharges to the sewer system can prove costly for POTWs, due to the potential for pesticides to cause or contribute to wastewater treatment process interference, NPDES Permit compliance issues, impacts to receiving waters, recycled water quality and/or biosolids reuse, in addition to exposing POTWs to the potential for third party lawsuits under the Clean Water Act. The Clean Water Act holds local governments responsible for pesticide toxicity in surface water, including the cost of monitoring and mitigation. As long as pesticides are approved for uses that result in water quality impacts, wastewater agencies will continue to incur pesticides-related costs for pollution prevention activities, water quality monitoring, and mitigation of pesticide impacts.

Due to the potential for pesticides-related impacts to our member agencies, BACWA supports DPR's multi-year effort to develop the Sustainable Pest Management (SPM) Roadmap and strongly supports its implementation. We commend the state for recognizing the need for expanded activity around urban pest management.

BACWA supports increases in the Mill Fee to sustainably and equitably increase funding to DPR and other agencies bearing costs associated with pesticides use. Pesticide registration costs must be recognized as including all elements of SPM, including environmental monitoring, data analysis, pesticide regulation, and user education and outreach. These costs should be borne by pesticide manufacturers, distributors, retailers, and users, rather than being externalized to wastewater agencies and thereby the public. POTWs are passive downstream receivers of pesticides, and the costs of monitoring and responding to pesticides are borne by all of our ratepayers -- regardless of whether they choose to use high-risk products and threaten water quality, or whether they responsibly embrace SPM approaches. The current, inequitable approach would be partially mitigated by increasing the Mill Fee to support implementation of the SPM Roadmap.

BACWA supports key aspects of the Mill Fee implementation plan, such as:

- **BACWA supports Option F to provide funding for SPM programmatic needs and positive incentives that align with the SPM Roadmap.** By funding implementation of the SPM Roadmap, Option F could support research, grants, environmental and human health monitoring, registration of new alternative products, and other incentives. These actions would assist POTWs with preventing or managing pesticides that are conveyed to wastewater treatment plants via down-the-drain pathways. Ideally, Option F funding could also be used to educate target audiences such as veterinarians, doctors, and the general public about problematic pesticides that are conveyed via wastewater. This could result in direct behavior change and public support for future legislation that targets pesticides entering wastewater and the environment.
- **BACWA supports a higher Mill Fee for Priority Pesticides.** In comments to DPR related to implementation of the SPM Roadmap¹, BACWA expressed support for establishing a state-level prioritization process and advisory body for Priority Pesticides. We further suggested that pet flea control products, which are not removed by standard wastewater treatment processes, be considered for piloting an action plan for Priority Pesticides. Related to this, we support a future tiered rate structure where identified Priority Pesticides are charged a higher Mill Fee. Products such as flea and tick control pesticides exhibit ecosystem and water resources impacts. The greater the risk posed by continued use of these products, the greater the producer responsibility should be to assist with management and mitigation of these products at their end of life. If these costs are passed onto consumers, this would also be likely to result in desired behavior changes, reducing the frequency of use of these products.
- **BACWA supports the Extended Producer Responsibility model.** As a collective of publicly-owned utilities, BACWA understands and agrees with the use of Mill Fees to support the work of DPR. General funds are not a sustainable source of revenue and are not

¹ “Recommendations for Implementation of DPR’s Sustainable Pest Management Roadmap.” Letter from BACWA Executive Director Lorien Fono to DPR Director Julie Henderson, March 13, 2023. Available online at <https://bacwa.org/wp-content/uploads/2023/03/BACWA-DPR-SPM-letter-2023-03-13.pdf>

appropriate to support the work of DPR. We concur that much of DPRs work aligns with the Extended Producer Responsibility model, and that funding from Mill Fees should be utilized for this work.

Thank you for your consideration of our comments. If you have any questions, please contact BACWA's Project Managers:

Autumn Ross
San Francisco Public Utilities Commission
(415) 695-7336
aross@sfgwater.org

Robert Wilson
City of Santa Rosa
(707) 543-4369
rwilson@srcity.org

Respectfully Submitted,



Lorien Fono, Ph.D., P.E.
Executive Director
Bay Area Clean Water Agencies

cc: Aimee Norman, Chief, Integrated Pest Management Branch, DPR
Nan Singhasemanon, Assistant Director, Pesticides Program Division, DPR
Karen Mogus, Deputy Director, CA State Water Resources Control Board
Philip Crader, Assistant Deputy Director, CA State Water Resources Control Board
Tom Mumley, California RWQCB, SF Bay Region
Alessandra Moyer, California RWQCB, SF Bay Region
Rebecca Nordenholt, California RWQCB, SF Bay Region
James Parrish, California RWQCB, SF Bay Region
BACWA Executive Board
BACWA Pesticides Workgroup

**Public Comment on
“Sustainable Pest Management Roadmap”
(AKA “Pathway to poisoning the environment for another 25 years”)**

My public comment is focused on pesticide use in urban areas because of my personal experience and knowledge of pesticide use where I live. These are the broad topics I will cover in detail with specific examples later in my comment:

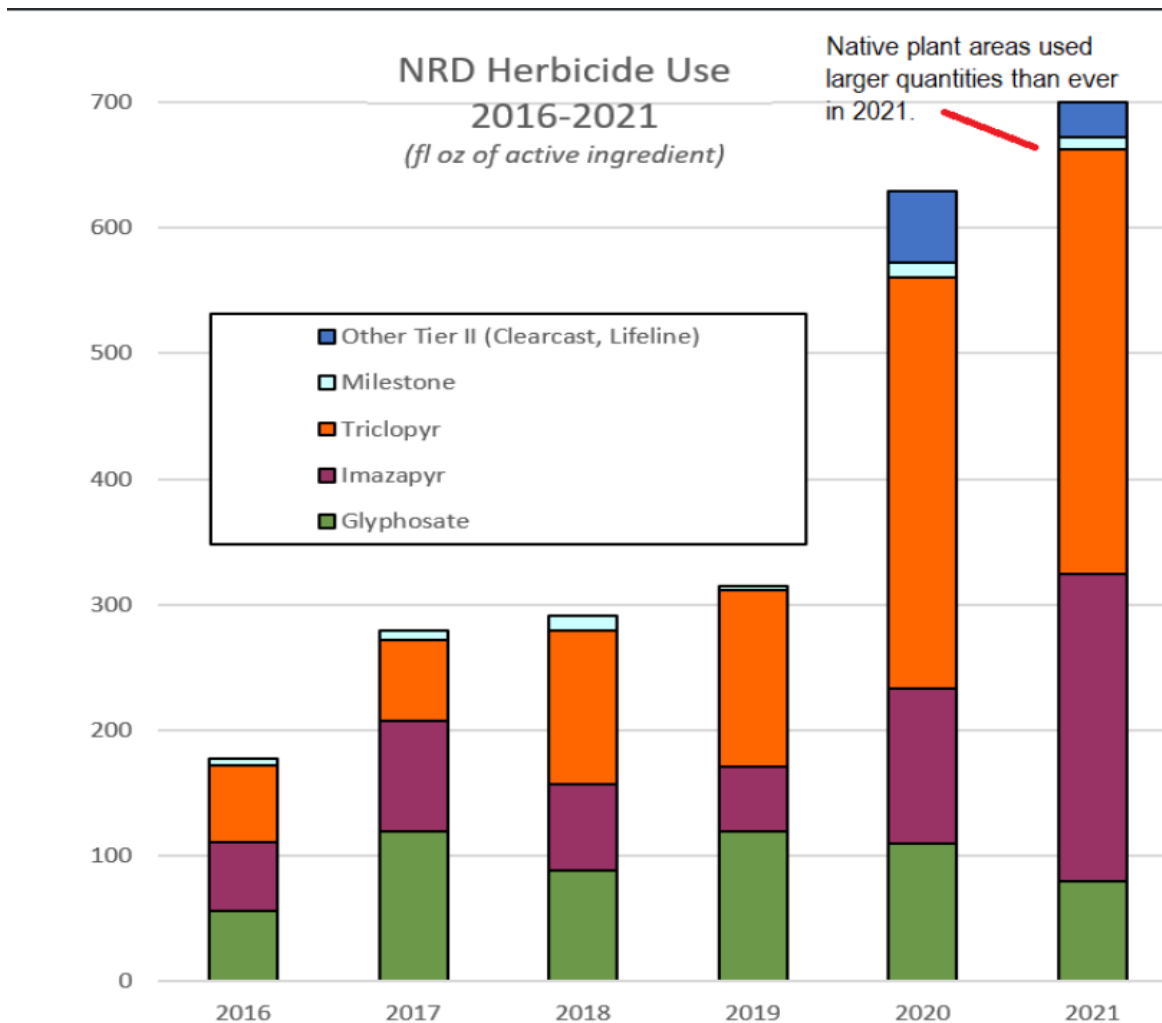
- Since glyphosate was classified as a probable carcinogen by the World Health Organization in 2015 and the manufacturer of glyphosate settled 100,000 product liability lawsuits by awarding \$11 billion to those who were harmed by glyphosate, public land managers have been engaged in the process of substituting other, usually equally or more dangerous herbicides for glyphosate to deflect the public’s concerns. The **Sustainable Pest Management Roadmap (SPM) formalizes this process of substitution without addressing the fundamental problems caused by pesticides.**
- SPM endorses the status quo that exists now. Affixing the word “Accelerating” to SPM is an extreme case of double-speak that deliberately obscures, disguises, distorts, or reverses the meaning of words. **SPM ensures that toxic pesticides will be used in California for more than 25 years, to 2050, and likely beyond.** SPM therefore **accelerates the damage** to the environment that is occurring now. Given that climate change will enable the movement of more pests into areas where they are now suppressed by weather, greater use of pesticides should be anticipated so long as the underlying issue is not addressed.
- The underlying issue is that pests have been identified for eradication that in some cases cannot be eradicated and in other cases should not have been identified as pests either because they are innocuous or because of the valuable ecological functions they perform. **The key question that SPM does not address is whether pesticide use is truly necessary in the first place.** Unless we focus on whether a pesticide is actually necessary, all other issues are merely window dressing for perpetual pesticide use.
- **SPM proposes to identify “Priority Pesticides” for possible substitution without any clear definition of “Priority Pesticides,” a process that is ripe for manipulation.** Given the substitutions that are occurring now, we cannot assume that further substitutions would be less toxic. SPM puts the classification of “Priority Pesticides” into the hands of “stakeholders” without clearly identifying who stakeholders are. SPM says “stakeholders” were involved in the development of the proposed policy. Those stakeholders included only users and promoters of pesticide use. There was no representation on the Urban Sub-Group of organizations such as Californians for Pesticide Reform, California Environmental Health Initiative, Beyond Pesticides, Center for Environmental Health, Environmental Working Group, etc. Nor was there any visible expertise in the fields of science that are capable of analyzing and evaluating the impact of pesticides, such as soil science, endocrinology, toxicology, entomology, botany, biology, or horticulture. SPM ensures that this exclusion will continue during the implementation phase by suggesting that “experiential and observational” knowledge should be represented on an equal footing with undefined “science.” The word “science” is being used and abused by advocates for pesticide use who dangle it as a magic talisman, conferring fraudulent credibility.

Substituting more toxic herbicides for glyphosate

Those who live in cities are often unaware of the pesticides being sprayed in their parks and open spaces. Unless you actually see it happening, it is invisible to you because many land managers do not post pesticide application notices and when they do, they aren’t posted for long. Pesticide application notices are not required by California law if the manufacturer claims that the pesticide will dry within 24 hours. Since most manufacturers make that claim, few public land managers post their applications. Two notable exceptions that routinely post their applications are San Francisco’s public agencies and East Bay Regional Park District.

Since no good deed goes unpunished, both agencies were under a great deal of pressure to reduce or eliminate use of glyphosate after its chronic lethal health effects were made public by the World Health Organization’s decision to classify it as a probable human carcinogen and about 100,000 people who sued the manufacturer settled for \$11 billion for the potentially terminal health conditions caused by glyphosate. These events got the public’s attention and where the spraying of glyphosate was visible to them, they objected.

Some public agencies have reduced their use of pesticides. Others substituted different herbicides for glyphosate. Some did both. The Natural Resources Division (NRD) of San Francisco’s Recreation and Park Department is responsible for about one-third of all park acreage where they are trying to eradicate non-native plants to benefit native plants. NRD has substituted triclopyr and imazapyr for glyphosate, while also increasing the number of applications and volume of herbicide until 2022:

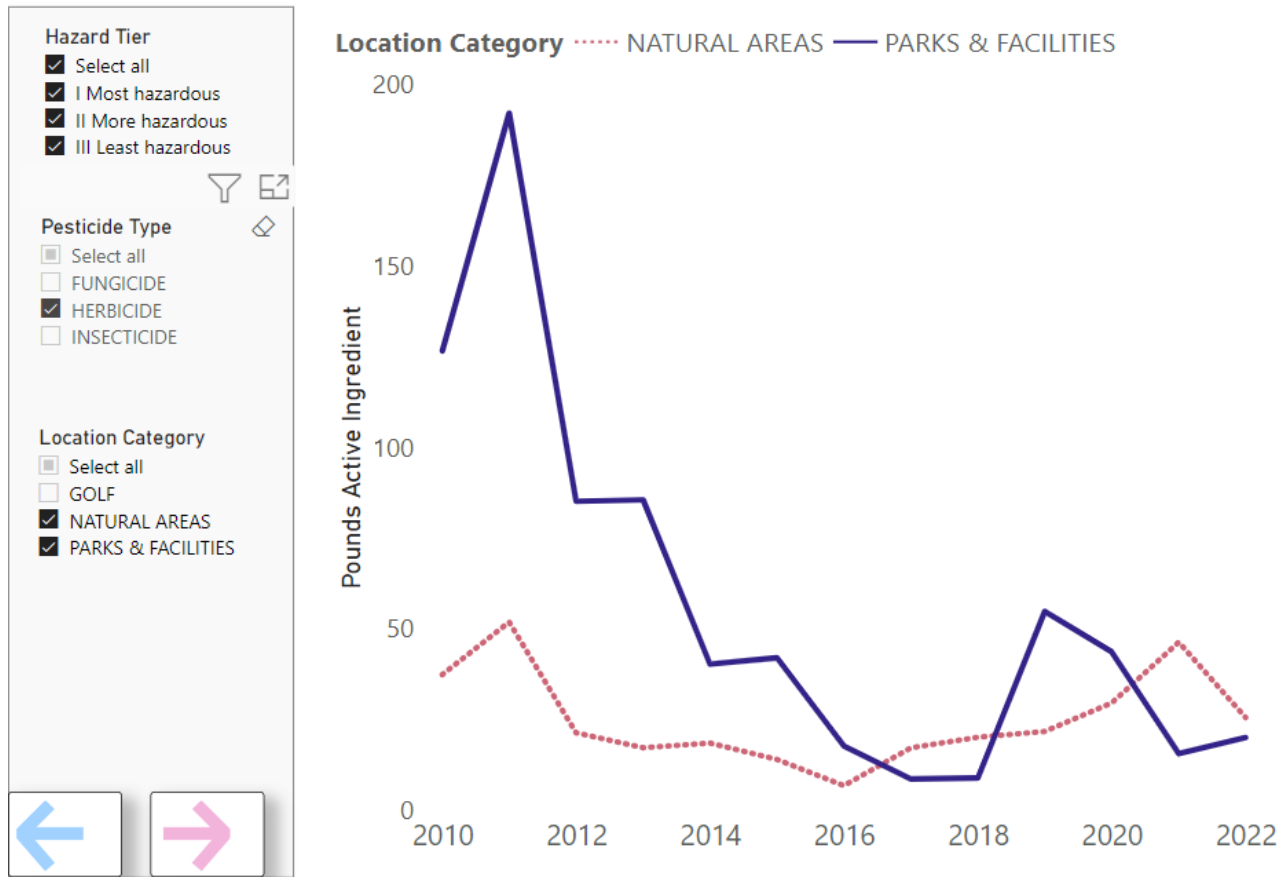


Source: Analysis of Pesticide Use Reports by San Francisco Forest Alliance

Triclopyr and imazapyr are more mobile and persistent in the soil than glyphosate, killing non-target plants. Triclopyr is known to damage mycorrhizal fungi in the soil, damaging non-target plants. Both herbicides are capable of killing the roots of non-target plants and trees. Both have “Warning” risk signal words compared to the less toxic “Caution” risk signal word for glyphosate. There is clearly more health and environmental risk associated with triclopyr and imazapyr than glyphosate. The chronic health effects of these products are less well known than glyphosate because much larger quantities of glyphosate have been used for much longer.

The volume of herbicides in the two-thirds of San Francisco’s park acreage that is not managed for the benefit of native plants has been drastically reduced and is now less than the volume of herbicides used by one-third of park acreage managed by NRD for the benefit of native plants:

Pesticide Usage Trends in Parks



Source: San Francisco’s IPM Program, Department of Environment

East Bay Regional Park District made a similar decision by banning glyphosate in developed areas, such as parking lots and picnic areas, but continuing to use other herbicides in undeveloped areas of the park, including many specific projects that attempt to eradicate non-native species they consider a problem, such as non-native spartina marsh grass. Spraying of triclopyr herbicides by EBRPD increased 56% while spraying of glyphosate decreased significantly in 2021.

Marin County has taken a different route to satisfy two competing public interests. Concern about the health risks of pesticides and a strong preference for native plants are conflicting interests that are both strong in Marin County. Public land managers in Marin County believe they have threaded the narrow eye of that needle by banning all but organic pesticides on public land and watersheds. A [presentation to the California Invasive Plant Council](#) in November 2022 about organic herbicides suggests that organic herbicides do not resolve the conflict between these competing objectives because most organic herbicides on the market are considered more toxic than glyphosate and they are not effective.

Public land managers are responding to the public's concerns about glyphosate by decreasing pesticide spraying in developed areas of parks, but they haven't given up their crusade against non-native plants. And they are using more toxic herbicides to continue their war on introduced plants. These substitutions may be effective for public relations, but they do not make us safer. Reducing pesticide use is the only way to reduce the damage to the environment and human health.

25 more years of escalating pesticide use

SPM makes a commitment to continuing the use of pesticides until 2050, which would compound the damage that pesticides have already done to the environment and to human health. SPM does not propose to reduce the use of pesticides. Rather it proposes to support the development of new pesticides that unqualified "stakeholders" consider less toxic. These are but a few reasons why the "roadmap" is the pathway to destruction:

Climate change is barely mentioned by the SPM proposal, yet it is the primary reason why plants considered "weeds" have gained ground in the past 25 years and will continue to claim more ground in the next 25 years. Higher concentrations of carbon dioxide in the atmosphere have given non-native plants a competitive advantage over native plants. Pests that were suppressed by cold winter temperatures have expanded their ranges into warming regions. These and other changes in the environment have continuously expanded the number of plants targeted for eradication with pesticides. **Destroying harmless plants and trees contributes to climate change**, by releasing more greenhouse gases into the atmosphere and killing plants that would otherwise absorb carbon dioxide.

Some pesticides and other chemicals **bioaccumulate** in the bodies of animals, including humans. The longer we use those pesticides, the greater the pesticide burden we carry. If you were born before DDT was banned in 1972, you still carry the burden of your exposure to that widely used pesticide before it was banned. Since DDT persists in the environment indefinitely, those who were born after 1972 are still being exposed to it decades after it was banned. Yesterday's mistakes are often mistakes forever.

Plants and animals are continuously adapting and evolving in response to the challenges they face in a changing environment. In the case of plants being constantly bombarded with herbicides, they have developed **resistance to herbicides**. The longer we use herbicides, the more resistant they will become, forcing those who remain on the pesticide treadmill to use yet more herbicide. We are breeding stronger weeds by spraying them continuously with herbicides. SPM mentions resistance in passing, dismissing it as a trivial matter. It isn't.

Every new pesticide opens a new can of worms. Granted, testing is inadequate, but more testing is only as effective as current science allows it to be. For example, the manufacturers of glyphosate claimed for decades that glyphosate could not harm humans because the biological pathway it uses to kill plants doesn't exist in animals. They were wrong. We learned only recently that the [pathway used by glyphosate exists in bacteria and those bacteria exist in our bodies, particularly in our guts](#), where most of our immune functions reside. How many more biological mysteries will be revealed by science in the next 25 years? Meanwhile, **pesticides now considered harmless are doing damage of which we are unaware**. The authors of SPM cannot predict the scientific discoveries that await us in the next 25 years. Therefore, they cannot responsibly make a commitment to continue using pesticides for the next 25 years.

Is eradication of non-native plants necessary?

As I have said, many public land managers have reduced their use of pesticides in developed areas, while increasing pesticide use in undeveloped areas based on the unsubstantiated belief that the mere existence of non-native plants threatens the existence of native plants. Using a few conspicuous examples of attempts to eradicate specific non-native plant species, I will make the case that these attempts are either futile, unnecessary, or do more harm than good.

The 25-year attempt to eradicate *Oxalis pes-caprae* in the so-called “natural areas” of San Francisco’s parks are an example of the futility of such attempts. Over 20% of all herbicide spraying by the Natural Resources Division (NRD) of the Recreation and Park Department was applied to kill oxalis in “natural areas” in 2022. NRD sprayed oxalis 35 times in 2021 and 38 times in 2022. From January to March, virtually all the herbicides sprayed by NRD in the so-called “natural areas” were sprayed on oxalis. If it were possible to eradicate oxalis with herbicide, why is there more oxalis now than there was 25 years ago, when NRD (then known as the Natural Areas Program) started spraying herbicides in the “natural areas?”

The [University of California Integrated Pest Management Program explains](#) why it’s not possible to eradicate *Oxalis pes-caprae* with herbicides: “Several postemergent herbicides including triclopyr and fluroxypyr (selective for broadleaf plants) and glyphosate and glufosinate (nonselective) effectively kill the top growth of this weed but are harmful to most ornamentals, so be careful these herbicides don’t drift onto desirable plants. These herbicides don’t kill the bulbs, and regrowth from bulbs should be expected.” In other words, **you can kill the above-ground top growth and other non-target plants in the vicinity, but you won’t kill the oxalis. And if you try, you will kill the plants you prefer.**

Native plant advocates who demand that this pointless crusade against oxalis continue mistakenly believe that oxalis is killing the native plants they prefer. They are wrong. Herbicides are killing the plants they prefer. [Research has been done by scientists at University of Montana to address the question of how competitive oxalis is in plant communities that include native plants:](#) “***Oxalis is a poor competitor. This is consistent with the preferential distribution of Oxalis in disturbed areas such as ruderal habitats, and might explain its low influence on the cover of native species in invaded sites.***” The study also explains why oxalis does not suppress the growth of other plants, including natives. **Oxalis makes more phosphorous available in the soil, which essentially acts as a fertilizer for other plants:** “These results are consistent with our field data and suggest that *Oxalis* may improve P availability in the field.” In other words, *Oxalis pes-caprae* does not suppress the growth of other plants and, in fact, increases nutrients in the soil.



Coyote hunting (probably gophers) in oxalis in Glen Canyon Park in San Francisco. Copyright Janet Kessler

Garlic Mustard is an example of a non-native species that native plant advocates have tried to eradicate in the Northeast because they believe it is out-competing native plants. [A recent study](#) conducted over a period of ten years has found that growth rates of garlic mustard initially increased, but decreased over time and eventually the population started to decline: *“A phenomenon that has received increased attention is whether introduced species go through boom and bust cycles, ultimately becoming non-threatening members of local communities.”* The decline of garlic mustard abundance over time is attributed to negative soil feedback that builds over time as the soil microbial community responds to the new plant. Removing garlic mustard episodically prolongs the process of building that negative soil feedback. When groups of well-meaning young people are sent into the forest to pull garlic mustard, they trample the very native plants they are trying to save. Furthermore, the study found that the suppression of native plants was caused by an over-abundance of deer, who prefer native plants. The author of this study advises eradication projects to be **wary of doing more harm than good**: *“Herbicide, disking, and mowing can all have negative impacts on species you are trying protect.”*

Tropical milkweed (*Asclepias curassavica*) is an example of a non-native plant that has been inappropriately classified as a “noxious weed” in California in response to the demands of native plant advocates, but they weren’t satisfied with that classification. They have also succeeded in getting the sale of tropical milkweed banned in four counties in California. Tropical milkweed is not only beneficial to monarchs, it is also ensuring the survival of the species in California by enabling monarchs to adapt to climate change. It is popular with home gardeners because it is a strikingly beautiful plant and it is evergreen, unlike our native milkweed, which is deciduous, therefore not available in winter months.

Monarch butterflies are dependent upon milkweed as its host plant. They lay their eggs on milkweed and their caterpillars eat milkweed. In the past, monarchs in California spent the winter roosting in trees along the coast of California. They did not breed during the winter. They moved inland during summer months where they bred.

Because of global warming, monarchs have begun to breed during the winter months in California and the existence of tropical milkweed in gardens in coastal California has made that possible: *“the [monarch] population boom in the Bay Area had not been seen before. It was unusually warm that fall, which may have accounted for the numbers. And tropical milkweed, which unlike native milkweed flowers through the winter and creates a suitable habitat for breeding, was abundant in gardens.”* ([“The Story of the Butterflies,” Endria Richardson, Bay Nature, Summer 2022](#))

Scientists with a commitment to the survival of monarchs have welcomed this development: *“But the growth of local, breeding monarchs is seen, at least by some, as a sign of the resilience of the monarchs, their ability to find new ways to persist in the face of an increasingly threatened migration. Might we be seeing the growth of a resident population of monarchs in the Bay Area?”* ([“The Story of the Butterflies,” Endria Richardson, Bay Nature, Summer 2022](#))

When the nature police succeeded in getting the sale of tropical milkweed banned in San Mateo, Ventura, Marin and Contra Costa counties academic entomologists pushed back against this harmful ban in an [article published by The Monterey Herald](#), San Jose Mercury, Marin Independent Journal, and East Bay Times:

- *“Hugh Dingle, a retired University of California at Davis entomology professor who has studied monarch butterfly migration for more than two decades, said the bans are “basically a wasted effort” and that the focus should be on larger threats such as pesticide and herbicide use. All species of milkweed carry parasites that can affect monarch populations, Dingle said.”*
- *“Arthur Shapiro, a UC Davis professor who has studied monarch butterflies for the past six decades, described the rationale behind the bans as “hogwash.” Shapiro, Dingle and other researchers said winter breeding among monarch butterflies is a relatively new behavior and one influenced by warmer winter temperatures caused by climate change.”*
- *“David James, an associate entomology professor at Washington State University who has studied monarch butterfly breeding and migration in the Bay Area, said there is a case to be made about the tropical milkweed as being a vital resource for the monarchs in a changing climate.”*
- *“Leslie McGinnis, a UC Berkeley doctoral candidate studying monarch populations and working with gardeners in the East Bay, said the bans take a “simplistic view” of the threats that monarchs face, including the fact that many native milkweed plants supplied to nurseries can also be sprayed with pesticides. The bans, she said, can work to disenfranchise or demonize people that have tropical milkweed who instead could be partners in working to help restore monarch populations.”*

Native plant advocates are wedded to a past that is long gone. The climate has changed and it will continue to change. Monarchs and other animals are trying to adapt to changed conditions. Their survival depends on their ability to adapt. The native plant movement has become a form of climate change denial. Their irrational hatred of introduced plants is damaging the environment with herbicides and harming wildlife. [There is no evidence that tropical milkweed is harmful to monarchs.](#)

There are many other plants that are being sprayed with herbicides in California, solely because they are not native. Many berry-producing plants are not actually invasive, but are being eradicated because birds eat them and spread the

plant into new territory. Spraying Himalayan blackberries, holly, cotoneaster, pyracantha, etc. with herbicides is harmful to birds and also deprives them of food. Native plant advocates claim their eradication projects benefit birds. They don't.

San Franciscans have asked the Natural Resource Division not to spray herbicide on blackberries while they are fruiting because children eat the berries. NRD continues to ignore that request. Nandina is an introduced berry-producing plant that was briefly classified as "invasive" by the California Invasive Plant Council until a knowledgeable person pointed out that the berries of nandina are poisonous to birds and birds do not eat them, saving nandina from being pointlessly eradicated with herbicide.

The attempt to eradicate a hybrid of native and non-native species of spartina marsh grass with 20 years of continuous spraying of imazapyr is an example of several species of non-native plants that are targeted solely because they breed with native plants. Hybrid spartina is being hunted because it outcompetes native spartina. Nativists fear the loss of native spartina as a distinct species. Rather than seeing the potential for a new, improved species of spartina, they see it as a loss of biodiversity, rather than an increase in biodiversity.

Hybridization is an important evolutionary tool that frequently increases biodiversity by creating new species on the margins of ranges where closely related species encounter one another. For example, [hybridization is credited with creating over 500 species of oaks](#) all over the world that are well-adapted to their respective microclimates. The rapidly changing climate and the globalization of trade have created more opportunities for hybridization and resulting speciation.

[Advances in molecular analysis has informed us](#) of the frequency of hybridization and its benefits to biodiversity: *"With the growing availability of genomic tools and advancements in genomic analyses, it is becoming increasingly clear that **gene flow between divergent taxa can generate new phenotypic diversity, allow for adaptation to novel environments, and contribute to speciation.** Hybridization can have immediate phenotypic consequences through the expression of hybrid vigor. On longer evolutionary time scales, **hybridization can lead to local adaption** through the introgression of novel alleles and transgressive segregation and, in some cases, result in the formation of new hybrid species."*

Restoration and expansion of wetlands is extremely important as we prepare for anticipated rising sea levels. If hardier, denser, stronger hybrid species of marsh grass are available why would we reject that opportunity? Nativist ideology should not deprive us of this opportunity. Endangered Ridgway rails are also deprived of the dense nesting habitat they need to survive predation.

In April 2021, the National Park Service published policy guidance for park managers based on the principles of "Resist-Accept-Direct." The [New York Times interviewed the lead author of the policy guidance](#), who described the new conservation strategy of the National Park Service: *"**The concept of things going back to some historical fixed condition is really just no longer tenable.**"*

An ecologist and the science coordinator of Acadia National Park in Maine told *NY Times* what this new strategy meant to him and his colleagues. He said that as recently as 2007 protected areas like the national parks were still being thought about as static places that could be preserved forever with the right techniques. *"We weren't being trained on*

how to manage for change,” he said. “We were being trained on how to keep things like they were in the past.” That means nearly everyone in his line of work was caught unprepared for the current reality. “You have a whole profession of people having to shift how we think. We were probably always wrong to think about protected places as static.”

The National Park Service is a huge bureaucratic organization and each park in the system has a great deal of autonomy. Therefore, we have seen little evidence that national parks in the greater Bay Area are heeding this sensible advice, but they should and eventually they probably will, certainly within the next 25 years. California should follow the National Park Service’s lead.

The irrational preference for native species has put us on the pesticide treadmill. Every plant species now targeted for eradication with herbicides should be re-evaluated, taking into consideration the following criteria:

- Is it futile to attempt to eradicate a plant species that is deeply entrenched in plant communities?
- Will the attempt to eradicate the plant species do more harm than good?
- Is the plant species better adapted to current environmental and climate conditions?
- Is the targeted non-native plant making valuable contributions to the ecosystem and its animal inhabitants?

If these questions cannot be satisfactorily answered, the bulls-eye on the targeted plant should be erased. **Limiting the number of plants now being sprayed with herbicide is the only way to reduce pesticide use. If the plant isn’t a problem, there is no legitimate reason to spray it with herbicide.**

“Priority Pesticides” are a shell game

SPM will perpetuate and increase the use of pesticides in California until 2050 and beyond. SPM attempts to mollify the public’s concerns about pesticides by proposing to substitute one dangerous pesticide for another equally dangerous pesticide. SPM tries to obscure that agenda by claiming that increased testing and “bringing alternative products to market” will ensure safer pesticides in the future. It proposes to reduce risk without reducing pesticide use. It is an empty promise with no track record of testing or new product development having achieved that goal in the 60 years that pesticides have been heavily used in California.

The newest products are the most likely to be more dangerous than those that have been on the market long enough to observe the problems they cause. Testing did not identify the health problems caused by glyphosate. Health problems became evident only after glyphosate was heavily used for nearly 50 years.

The problems that have been recently identified with products such as chlorpyrifos were not identified by testing. The problems were identified by observing the effect chlorpyrifos was having on children who were exposed to chlorpyrifos.

Neonicotinoids have been banned by many other nations because they are killing insects, but those problems weren’t identified by testing. They were identified by observing the disoriented behavior of insects exposed to neonicotinoids. Disoriented bees had to wander away from their hives into oblivion, causing widespread colony collapse before anyone took the toxicity of neonicotinoids seriously.

Testing required to bring newly developed pesticides to market is paid for by the manufacturer of the product. The problems that the product is causing in the environment and in human health are not identified by studies that are paid

for by manufacturers who have no interest in knowing about those problems and every interest in concealing them. Therefore, funding for such studies of products on the market is very limited. There is no doubt that more such studies would identify more problems about which we know little. The only way the problems come to light is when people suffer the health consequences of massive exposure events, such as trainloads of polyvinylchloride burning in a fireball in the middle of a town in Ohio.

Theoretically, testing is required at the federal level that does not occur because of inadequate resources. The EPA is required to conduct biological evaluations of the effect of pesticides on endangered species. Glyphosate has been on the market since 1974, yet the biological evaluation was not done until 2021. The biological evaluation found that glyphosate is “likely to adversely affect” 93% of legally protected endangered and threatened plants and animals:

Table 1. Summary of Species Effects Determinations for Glyphosate (Counts by Taxon).

Taxon	Step 1 Effects Determinations		Step 2 Effects Determinations		Totals
	No Effect	May Affect	Not Likely to Adversely Affect	Likely to Adversely Affect	
Mammals	0	99	24	75	99
Birds	0	108	20	88	108
Amphibians	0	36	0	36	36
Reptiles	0	47	14	33	47
Fish	0	190	11	179	190
Plants	0	948	8	940	948
Aquatic Invertebrates	0	207	22	185	207
Terrestrial Invertebrates	0	160	20	140	160
Total	0	1795	119	1676	1795
Percent of total	0%	100%	7%	93%	

Source: EPA Biological Evaluation of glyphosate

Biological evaluations of most pesticide products have not been done. In the case of the glyphosate evaluation, damage to endangered species were observed decades before the evaluation was done.

“In 1996, Congress ordered the U.S. Environmental Protection Agency (EPA) to test all pesticides used on food for endocrine disruption by 1999. The EPA still doesn’t do this today.” (<https://www.ehn.org/are-pesticides-endocrine-disruptors-2659413208.html>) Twenty-five years later, the EPA has not implemented the program, nor has it begun testing on 96% of registered pesticides. Endocrine-disrupting chemicals are “compounds that can block, mimic or interfere with the proper functioning of hormones [that] have been linked to a variety of health problems including obesity, diabetes, respiratory issues, some cancers and negative impacts on the nervous, reproductive and immune systems.” Creating new testing requirements, doesn’t make them happen. SPM’s claim that more testing will be done is an empty promise that creates a false sense of security.

Glancing at the lengthy list of EPA test guidelines might reassure the public, but it shouldn't because it doesn't mean the tests are being done. There are 49 test guidelines *"intended to meet testing requirements for human health impacts of chemical substances."* SPM should not waste taxpayers' money creating more testing guidelines until the tests are actually done.

Rubber-stamp advisory committees

SPM proposes a process of identifying "Priority Pesticides" for potential substitution or "eventual elimination" in Appendix 9. The process is similar to the process that produced SPM and it predicts the same outcome: a list that will enable the use of pesticides on the same scale and for the same purposes, including eradicating harmless introduced plants that are performing useful functions.

The process begins with staff recommendations that are reviewed by an advisory committee of "stakeholders." The committee of stakeholders that produced SPM for urban settings were committed to the status quo, even including representation of a manufacturer of pesticides. The Urban Sub-Group chairman was the former IPM director of San Francisco's IPM program that reduced pesticide use by public agencies in San Francisco, while increasing pesticide use in the so-called "natural areas" intended to protect native plants. The composition of the Urban Sub-Group predicted that SPM for urban settings was doomed to legitimize and perpetuate the status quo.

SPM ensures a similar composition of the advisory committee that will recommend "Priority Pesticides" by valuing "experiential and observational knowledge" on the same footing as scientific knowledge. The SPM process protects the status quo and ensures the continued and increasing use of pesticides in California. The advisory committee should be composed of people with expertise in the fields of knowledge that are capable of analyzing pesticides and the impact they have on the environment and on human health, such as soil science, endocrinology, toxicology, epidemiology, biology, botany, horticulture, etc.

In conclusion, there is no cosmetic fix of SPM as it is presently drafted. A new effort would be led by people who are prepared to make a commitment to reducing pesticide use in California with that goal as the guiding principle. If the State of California is not prepared to make that commitment there is no point in performing another shadow dance with the public.

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