

FEBRUARY 17, 2021

The 2021-22 Budget: Transition to Safer Pest Management



LEGISLATIVE ANALYST'S OFFICE

Background

Overview of Pesticides

Various Products Are Considered Pesticides. Under state and federal law, a pesticide is any substance intended to control, destroy, repel, or otherwise mitigate a pest, such as insects, bacteria, weeds, and rodents.

- ***Agricultural Pesticides.*** Pesticides include insecticides, herbicides, and other agricultural and garden chemicals.
- ***Non-Agricultural Pesticides.*** Pesticides also include many industrial and home cleaning products like pool cleaners and disinfectants. (A product is not considered a pesticide if it is meant to be used in or on a person.)

Pesticides Provide Benefits. Pesticides play an important role in protecting people and their environment. For instance, the agricultural sector uses pesticides to control pests that can destroy or damage crops.

However, Certain Pesticides Have Some Negative Effects. The use of certain pesticides can have negative effects, such as killing nontarget species, water contamination, and short-term adverse health effects. Additionally, research has grown in recent years linking the use of certain pesticides to long-term adverse health effects. For instance, individuals who occupationally use certain pesticides have been found to have a higher risk of developing Parkinson's disease.



Background

(Continued)

Integrated Pest Management

Integrated Pest Management (IPM) Encourages Use of Other Pest Control Practices. IPM is designed to reduce—though not necessarily eliminate—the use of pesticides through a combination of techniques, such as using beneficial organisms to eliminate pest populations. IPM promotes the judicious use of pesticides when other methods do not work and when monitoring indicates that pest levels have risen to the point where pesticides are needed.

Various State Entities Promote IPM. The state has funded several grants and programs through various state entities to promote IPM research and outreach.

- ***Department of Pesticide Regulation (DPR).*** DPR administers several IPM grants, such as the Pest Management Research Grant Program, which funds research to develop practices that reduce the use of pesticides of high regulatory concern. The department also has several IPM programs, such as the School IPM Program that promotes the adoption of IPM practices at schools and child care centers.
- ***California Department of Food and Agriculture (CDFA).*** CDFA also administers several IPM grants, such as the Biologically Integrated Farming Systems Grant Program, which funds on-farm demonstrations and evaluations of IPM practices.
- ***Academic Institutions.*** The University of California Division of Agriculture and Natural Resources (UC ANR) and the California State University Agricultural Research Institute (CSU ARI) conduct IPM research and outreach, such as conducting field trials, training pest control managers, and working with farmers to implement the use of nonchemical pest control methods.



Background

(Continued)

Pesticide Regulations and State Funding

Federal, State, and Local Roles in Pesticide Regulation. Various government entities play a role in regulating pesticide sales and use.

- ***Federal.*** The U.S. Environmental Protection Agency (U.S. EPA) is responsible for setting minimum pesticide use standards; registering pesticides at the federal level that have been determined to not harm people, nontarget species, or the environment; and sets pesticide labeling requirements that indicate how to handle and safely use products.
- ***State.*** DPR is responsible for (1) evaluating and registering pesticides at the state level, (2) licensing individuals and businesses that apply pesticides, (3) evaluating health impacts of pesticides, (4) monitoring the environmental impacts of pesticides in air and water, (5) monitoring pesticide residues on produce, and (6) enforcing state and federal laws related to pesticides.
- ***Local.*** County Agricultural Commissioners (CAC) are responsible for enforcing pesticide laws and regulations in concert with DPR. The state is responsible for overseeing enforcement efforts by CACs.

Federal Labeling Includes Acute Toxicity Warnings. U.S. EPA requires most registered pesticides to have a “signal word” on its product label. The signal word indicates a product’s relative acute toxicity to humans and ranges from (1) Caution, (2) Warning, (3) Danger, and (4) Danger/Poison. Some pesticides do not have a signal word due to their very low acute toxicity.

DPR Air Monitoring Stations. In 2011, DPR started the Air Monitoring Network (AMN) to sample ambient air for pesticides year round and to assess chronic exposures. (Prior to starting AMN, this was largely done on a seasonal basis.) DPR currently has three monitoring stations that are funded on an ongoing basis from special funds.

- ***Additional Five Stations Previously Funded.*** Five additional AMN stations were approved with limited-term funding that ended in 2019-20. The Governor’s 2020-21 budget included a proposal that would have funded these five sites on an ongoing basis with special funds, but the proposal was withdrawn due to budget constraints.



Background

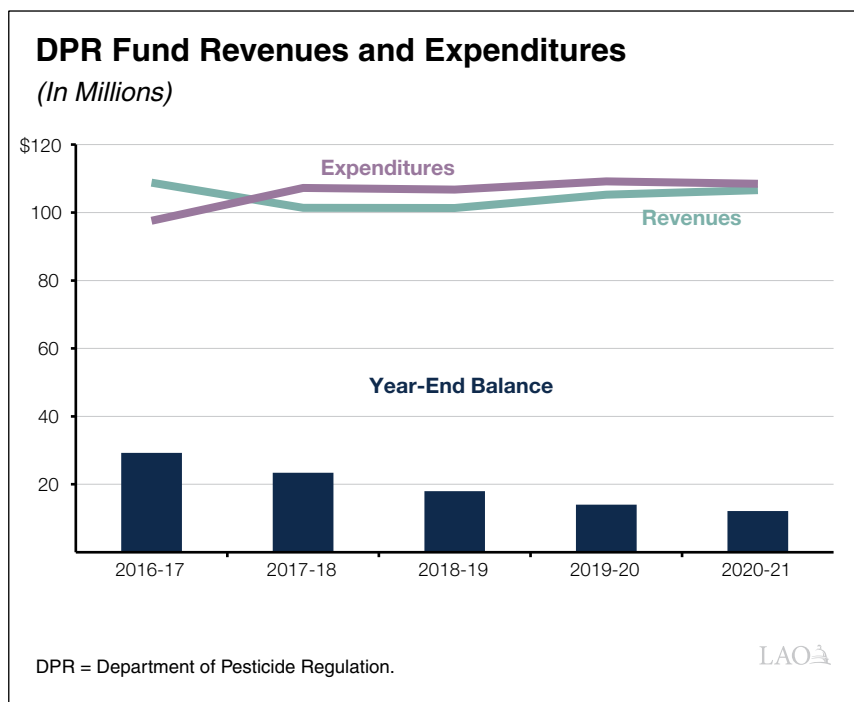
(Continued)

Department of Pesticide Regulation Fund

DPR Is Supported by Its Own Special Fund. The DPR Fund supports roughly 90 percent of the department’s budget. The fund receives 20 percent of its revenues from pesticide-related licensing and registration fees and 80 percent from a mill assessment levied on pesticides.

- **Mill Assessment.** The mill assessment is applied to agricultural and non-agricultural pesticides at the point of first sale into the state. The assessment is currently at 21 mills, or 2.1 cents per dollar, and was last adjusted in 2004. Of the total mill assessment, 7.6 mills are allocated to CACs for their pesticide compliance and enforcement activities.

DPR’s Major Fund Source Has Structural Imbalance. As shown in the figure below, the growth in expenditures from the DPR Fund has outpaced growth in revenues, creating a structural imbalance in the fund. Absent any changes, the administration estimates that the fund will go insolvent in 2022-23.



Governor's Proposal

The Governor's proposal has three components: (1) restructuring and increasing the mill assessment to generate more revenue, (2) increasing spending on regulatory activities and IPM programs, and (3) providing limited-term General Fund augmentations to support the proposed spending increases until the increased mill assessment is fully implemented. The figure below provides an overview of how the additional revenues and General Fund would be spent under this proposal, which we discuss in more detail in the sections below.

Increased Funding and Expenditures Under the Governor's Proposal <i>(In Millions)</i>				
	2021-22	2022-23	2023-24	2024-25 and Ongoing
Funding				
Additional mill revenues	\$18.0	\$28.0	\$35.0	\$45.0
General Fund	20.0	17.0	10.0	—
Total Funding	\$38.0	\$45.0	\$45.0	\$45.0
Expenditures				
Department of Pesticide Regulation				
IPM grants and programs ^a	\$8.3	\$8.3	\$8.3	\$8.3
Air Monitoring Network	4.0	4.0	4.0	4.0
Enforcement	3.0	3.0	3.0	3.0
Community engagement	1.5	1.5	1.5	1.5
County Agricultural Commissioners				
Funding for CACs	\$9.5	\$9.5	\$9.5	\$9.5
Department of Food and Agriculture				
CSU and UC ^a	\$8.0	\$8.0	\$8.0	\$8.0
IPM grants ^a	3.8	3.8	3.8	3.8
DPR Fund				
Set aside for DPR Fund reserves	—	\$7.0	\$7.0	\$7.0
Total Expenditures	\$38.0	\$45.0	\$45.0	\$45.0

^a Programs partially funded by General Fund until increased mill assessment is fully implemented.

IPM = Integrated Pest Management; CAC = County Agricultural Commissioner; and DPR = Department of Pesticide Regulation.



Governor’s Proposal

(Continued)

Tiered Mill Assessment

Restructures Mill Assessment From Flat Rate to Tiered Rate Based on Acute Toxicity. The Governor’s proposal includes budget trailer legislation to restructure the mill assessment on pesticides sales from a flat rate to a tiered rate. The tiered mill assessment would be based on a product’s signal word. The administration states that the purpose of the tiered rate structure is to send a market signal that would discourage the use of the most toxic pesticides.

Tiered Structure Would Be Phased in Over Four Years. The figure below shows how the tiered mill assessment would be phased in by signal word. The administration estimates that these rate increases would raise \$45 million when fully implemented in 2024-25. This estimate assumes no growth in pesticide sales—the underlying revenue base for the mill assessment—between now and 2024-25. (In recent years, pesticide sales have grown roughly 3 percent per year—slightly faster than inflation.)

Tiered Mill Assessment Phased in Over Four Years					
<i>(In Cents Per Dollar^a)</i>					
Signal Words	Existing	2021-22	2022-23	2023-24	2024-25
No Signal Word and Caution	2.1	2.1	2.5	2.5	2.6
Warning	2.1	3.0	3.0	3.5	4.0
Danger and Danger/Poison	2.1	3.5	3.5	4.0	4.5

^a Each cent per dollar equals ten mills.



Governor's Proposal

(Continued)

Spending Proposals

Increased Spending on Various DPR Programs. The Governor's proposal includes \$16.8 million and 44 positions in 2021-22 (growing to 47 positions in 2022-23 and ongoing) for various DPR programs and grants.

- **IPM Grants and Programs.** The Governor's proposal includes \$8.3 million and 15 positions to augment funding for the department's current IPM grants and programs. Most of this funding would support grants, such as the Pest Management Research Grant Program. By comparison, these grant programs currently have baseline funding totaling about \$1 million annually.
- **AMN.** The Governor's budget includes \$4 million and seven positions to permanently fund the five AMN stations that were previously approved on a limited-term basis.
- **Enforcement.** The Governor's proposal includes \$3 million and 18 positions to augment the department's enforcement activities, such as monitoring and investigating pesticide use complaints and violations and reviewing illegal residue cases. This proposal would increase DPR's enforcement budget by roughly 20 percent.
- **Community Engagement.** The Governor's proposal includes \$1.5 million and seven positions to provide additional outreach and technical assistance to communities.

Increased Support for CACs. Through budget trailer legislation, the Governor proposes increasing the share of the total mill assessment provided to CACs from 7.6 mills to 10 mills. This would result in an additional \$9.5 million for CACs to augment their enforcement activities, including to increase inspections.



Governor's Proposal

(Continued)

Increased Spending for Various CDFA Programs. The Governor's proposal includes \$11.8 million ongoing for various CDFA programs related to IPM.

- **CSU ARI and UC ANR.** The Governor's proposal includes \$8 million to fund a cooperative agreement between CDFA and CSU ARI and UC ANR to expand IPM research and outreach to the agricultural community.
- **IPM Grants.** The Governor proposes \$3.8 million to augment funding for the department's current IPM grants, and just over half of this amount would be for the Biologically Integrated Farming System Grant Program. Up to 5 percent of this funding can be used for administrative expenses.

Support for DPR Fund Reserves. Based on the administration's revenue and spending estimates, the proposal would begin providing \$7 million annually towards the DPR Fund reserves starting in 2022-23.

General Fund Support

General Fund Used to Support Some of the New Spending. The tiered mill assessment will be phased in over a four-year period, which would generate increasing amounts of revenues each year until 2024-25. However, the administration is proposing to use General Fund for three years to support certain programs until the new mill revenues are able to fully support these programs on an ongoing basis.



Assessment

Tiered Mill Assessment

Reasonable to Set Rates Based on Signal Words. Acutely toxic pesticides can harm not only the people directly involved in selecting the pesticides, but also other people, such as farmworkers. In principle, an assessment structure with different rates tied to signal words—as the Governor has proposed—could address this problem. Additionally, the proposed structure is relatively simple and uses information that is readily available to the businesses who pay the mill assessment, so it does not raise major implementation concerns.

- ***Rate Structure Does Not Address Other Effects of Pesticides.*** As we understand it, there is not a close link between a pesticide’s acute toxicity to human health and its other adverse effects (such as chronic toxicity or environmental effects). Consequently, the extent to which the proposed rates would address these other problems is unclear.

Proposed Rates Not Large Enough to Send Strong Market Signal. Upon full implementation, the proposal likely would widen price differences between the most toxic and least toxic pesticides by roughly 2 percent. We have not found evidence that would support precise estimates of the market response to this price change. That said, the price difference is so small that even a proportionally strong market response would not have large effects on the mix of pesticides used in the state. Discouraging the use of the most toxic types of pesticides likely would require much larger rate differences between tiers.

Four-Year Phase-In Unusually Long. The proposed mill increase is smaller than recent state excise tax increases on tobacco, cannabis, and transportation fuel. These taxes increased in one or two steps, but the Governor’s proposal would phase in the mill increase in four steps. Although a slow phase-in would reduce short-term costs for buyers and sellers of pesticides, it would have some notable drawbacks.

- ***General Fund Support.*** Relative to a faster phase-in, this aspect of the proposal would increase the General Fund cost in order to fully fund the increased spending proposals.
- ***Potentially Weaker Market Signal.*** In addition, phasing in the mill over this longer period could further weaken the market signal sent by the rate increase.



Assessment

(Continued)

Spending Proposals

Additional Spending Proposals Are Reasonable. We find that the Governor's proposals for increased spending merit legislative consideration based on estimated workload, potential to increase the use of IPM, and public health benefits.

- ***IPM Grants and Programs.*** Providing state funding towards grants and programs that further IPM research, implementation, and outreach has merit in the long run. While these programs will not provide immediate reductions, they can be an important part of the state's long-term goal of reducing pesticide usage.
- ***AMN.*** The proposal aligns with past legislative priorities by providing an ongoing source of funding for previously approved AMN stations. AMN provides the state with year-round data on pesticide levels in ambient air in various agricultural communities. Thus, expanding this network has the potential of increasing protections and public health in more communities throughout the state.
- ***Enforcement.*** Additional funding for enforcement activities is reasonable since it would allow DPR and CACs to conduct more activities related to upholding state and federal pesticide laws and regulations. A workload analysis from the department indicates that the additional funding largely would support monitoring and investigating pesticide use violations and reviewing illegal residue cases.
- ***Community Engagement.*** The department has indicated that there has been increased workload associated with community outreach. For instance, the department states that an increasing number of communities have inquired about pesticide emissions and have asked for technical assistance from DPR. Based on workload analysis from the department, we find that increasing funding for this effort is reasonable.



Assessment

(Continued)

Administration’s Spending Proposals Leave DPR Fund With Diminished Reserves in 2021-22. Despite additional revenues from the tiered mill assessment, the DPR Fund is estimated to end the budget year with \$842,000 in reserves—less than 1 percent of estimated revenues. While the proposal would begin building reserves starting in 2022-23, it leaves little flexibility in the budget year if revenues come in lower than expected or if there are unanticipated expenditure increases.

General Fund Support

Proposed Spending Requires Relatively Large General Fund Support Early On. In contrast to the plan to phase in the tiered mill assessment, the administration proposes to fully implement all of its new spending proposals in the budget year. This results in a relatively large imbalance between spending and revenues over the next three years. This is especially true in the budget year, which results in the proposed General Fund augmentation of \$20 million.



Recommendations

Phase in Revenues More Quickly

Phase in Tiered Mill Assessment Over One or Two Years. As noted above, phasing in the rate increases over four years—combined with the administration’s increased spending proposals—would result in substantial General Fund costs for each of the next three years. We recommend the Legislature phase in any rate increase in one or two years instead.

- Potential Alternatives to Governor’s Proposal.** The figure below illustrates two alternatives in which the state ultimately would levy the same rates as the administration proposes, but phased in faster. (As discussed below, the Legislature may explore a range of possible rate structures.) Under these alternatives, a one-year phase-in would implement the proposed rates immediately in 2021-22, while a two-year phase-in would increase the rates in roughly equal parts in 2021-22 and 2022-23.

Fiscal Effects of Alternatives			
<i>(In Millions)^a</i>			
Fiscal Year	New Mill Revenues	New Spending	General Fund Cost
Governor’s Proposal			
2021-22	\$18	\$38	\$20
2022-23	28	38	17
2023-24	35	38	10
2024-25	45	38	—
Alternative 1: One-Year Phase-In			
2021-22	\$45	\$38	—
2022-23	45	38	—
2023-24	45	38	—
2024-25	45	38	—
Alternative 2: Two-Year Phase-In			
2021-22	\$23	\$18 ^b	—
2022-23	45	38	—
2023-24	45	38	—
2024-25	45	38	—

^a All estimates assume no growth in pesticide sales from 2019-20 to 2024-25.
^b Reflects spending on programs that the Governor proposes to fund with the Department of Pesticide Regulation Fund in 2021-22.



Recommendations

(Continued)

Consider Key Questions in Design of Tiered Structure. As the Legislature considers a tiered mill assessment, we recommend that it consider these questions:

- **Is Signal Word the Best Basis for a Tiered Tax?** Levying rates based on signal words is a reasonable way to address the acute toxicity of pesticides. The Legislature may wish to explore the feasibility of alternatives that could address a broader range of pesticide-related concerns, such as environmental harms and chronic toxicity.
- **Should Rates Reflect Revenue Target or Market Signal?** The Governor's proposed rate increases would raise enough revenues to fund the proposed spending and to address the structural deficit in the DPR Fund. If, however, the Legislature shares the Governor's interest in using the mill assessment to send a market signal discouraging use of the most toxic pesticides, then it could consider much larger rate differences between tiers. (The rates could be set to raise the same amount of revenue as the Governor's proposal, or a higher or lower amount.)

Phase in Spending to Match Projected Revenues From Increased Mill

Phase in Proposed Spending as Revenues Increase. We find that the Governor's spending under this proposal is reasonable given that it assists the state in reducing pesticide usage and expands the state's efforts in upholding pesticide laws and regulations. However, we recommend the Legislature align any new spending with the rate at which revenues are generated. This would (1) allow mill revenues to fully fund proposed spending, (2) eliminate the General Fund costs, and (3) potentially provide more immediate relief to the DPR Fund.

