FINAL STATEMENT OF REASONS AND PUBLIC REPORT
DEPARTMENT OF PESTICIDE REGULATION

Title 3. California Code of Regulations
Amend Section 6000
Pertaining to Ground Water Protection Areas

UPDATE OF THE INITIAL STATEMENT OF REASONS

The proposed regulatory action was noticed in the *California Regulatory Notice Register* on May 25, 2018. Requests were made to extend the close of the public comment period and to hold a hearing. A Notice of Public Hearing and Extension of Comment Period was issued, scheduling a hearing in Sacramento and extending the close of the public comment period an additional 29 days.

During the "45-day" public comment period, the Department of Pesticide Regulation (DPR) received comments on the proposed text. The comments are discussed under the heading "Summary and Response to Comments Received During the 45-Day Comment Period" of this Final Statement of Reasons. For the reasons stated below, DPR modified the originally proposed text. Furthermore, an additional document was relied upon and added to the rulemaking file. The document relied upon includes maps of the fifteen affected counties. These maps were added as a visual aid to show the location of the proposed ground water protection areas (GWPAs) identified in the text of the proposed regulation in relation to the location of the current GWPAs, and to show data points for wells with pesticide residues in the proposed GWPAs.

DPR received comments addressing the modified text and additional document relied upon during the 15-day public comment period. These comments are discussed under the subheading "Comments Received During the 15-Day Public Comment Period."

This regulation will go into effect on January 1, 2020.

Changes to the Text of Proposed Regulations

- Amend proposed section 6000 to revise the title and revision date of the document incorporated by reference within the definitions of "ground water protection area," "leaching ground water protection areas," and "runoff ground water protection areas." The title and revision date of the document incorporated by reference has been revised to "Ground Water Protection Areas 2018 (Rev. 10/18)."
- Amend the originally proposed document incorporated by reference, "Ground Water Protection Areas 2017 (Rev. 8/17)" as follows:
  - Rename the document to "Ground Water Protection Areas 2018 (Rev. 10/18)" to reflect that the document has been updated.
  - Revise the "Update" section by removing a sentence about GWPAs based on the California Vulnerability Modeling (CALVUL) approach. This sentence is not applicable to the proposed updates. The intent of this section is to provide a brief summary of the recent updates made to the existing document. The new proposed GWPAs added in this

update are only based on pesticide detections, so this sentence is being removed to ensure the “Update” section accurately reflects that the new proposed sections are only based on detections and not based on CALVUL modeling.

- Remove one originally proposed ground water protection area from Solano County (48M07N01E09). Based on reevaluation of the detection data, this section was determined to be contaminated from point-source pollution. Point-source contamination is not a qualifying factor for creating a GWPA, so this section should be removed from the originally proposed list to create additional GWPAs.
- Add two new proposed GWPAs to Madera County (20M12S17E03 and 20M12S17E15). These sections were inadvertently not included in the list of originally proposed GWPAs. Section 20M12S17E03 is a leaching GWPA and section 20M12S17E15 is a runoff GWPA.

DPR has amended Title 3, California Code of Regulations section 6000. In summary, this action amends the document, "EH03-05 (Est. 08/03) Ground Water Protection Areas" that identifies GWPAs in California. DPR proposes to add new GWPAs to this document. These GWPAs have been identified based on pesticide detections. This document is incorporated by reference in the definitions of "ground water protection area," "leaching ground water protection areas," and "runoff ground water protection areas."

PUBLIC HEARING

DPR scheduled and held a public hearing on July 31, 2018 in Sacramento, California. A transcript of the hearing is contained in the rulemaking file.

SUMMARY AND RESPONSE TO COMMENTS RECEIVED DURING 45-DAY COMMENT PERIOD

- *Renee Pinel, Western Plant Health Association on behalf of African-American Farmers of California; California Agricultural Aircraft Association; California Citrus Mutual; California Cotton Ginner and Growers Association; Nisei Farmers League; Western Agricultural Processors Association*

Comment no. 1: Commenter requested a public hearing.

Response: A public hearing was scheduled and held in Sacramento on July 31, 2018.

Comment no. 2: The proposed regulation requires greater discussion and understanding by stakeholders in order to assess potential impacts to those stakeholders. While we appreciate DPR’s providing data spreadsheets to demonstrate why DPR believes these new requirements are needed, we do not believe as presented agricultural stakeholders can utilize the spreadsheets to effectively assess the proposed regulation.

Response: Immediately prior to the start of the public hearing, DPR gave a presentation outlining the proposed regulatory action, including information on how the new GWPAs were

identified and the pesticide use modifications that growers are required to implement if they choose to apply 3 CCR section 6800(a)-listed pesticides in these sections.

DPR also delivered the following presentations that included the proposed GWPAs:

- October 5, 2017, San Joaquin Valley PUR Deputy meeting in Modesto
- January 26, 2018, California Weed Science Society conference in Santa Barbara
- June 13, 2018, Agricultural Pest Control Advisory Committee meeting in Sacramento
- January 25, 2019, California Weed Science Society meeting in Sacramento

DPR's October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," included maps of each of the counties with proposed GWPAs to give a visual representation of the data. These maps included the locations of the proposed GWPAs, the general location of the wells with pesticide detections, and the locations of current GWPAs.

It is inappropriate for DPR to meet with stakeholders during the open comment period.

Comment no. 3: DPR should explain what the data means, as well as what and where changes in data have taken place in comparison to the current "Protection Plans" that justify the expanded program.

Response: DPR identified 122 GWPAs based on verified detections by DPR of 3 CCR section 6800(a)-listed pesticides or degradates in those sections. The October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," lists all of the proposed GWPAs and the ground water studies conducted by DPR that resulted in verified detections of 3 CCR section 6800(a)-listed pesticides or degradates. The individual studies are listed in Appendix 1 and the References.

It is unclear what is meant by "current 'Protection Plans.'" As stated in the Initial Statement of Reasons and Notice of Modifications to Text, all of the proposed GWPAs were identified according to the guidelines outlined in the August 27, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas." The proposed 122 GWPAs were determined to be vulnerable to contamination by 3 CCR section 6800(a)-listed pesticides because DPR detected these pesticides or their degradates in either one well that was adjacent to a GWPA, or in two or more wells in a four section area that was not adjacent to an existing GWPA.

Comment no. 4: As part of the hearing we ask DPR include mapping which would show the new "Protection Areas" in comparison to the prior areas, identify where the data points are located within those areas, and explain the rational for expanded zones based on that data.

Response: Immediately prior to the start of the public hearing, DPR presented a map of Fresno County and a map of the Southern San Joaquin Valley showing sections proposed as new GWPAs in relation to current GWPAs. These maps were a visual representation of some of the data presented in Appendix 1 of the April 24, 2017 memorandum, "Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," and the studies referenced in the memorandum.

DPR's August 27, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas," outlines DPR's procedure. The guidelines used for the proposed GWPAs in the current regulatory action are:
"Detections of active ingredients (AIs) listed in the Title 3, Code of Regulations (3 CCR) section 6800(a) or their degradation products in:

(a) One well in a section that is adjacent to a GWPA; or
(b) Two or more wells within a four section area that is not adjacent to an existing GWPA."

DPR's October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," included maps of each of the counties with proposed GWPAs to give a visual representation of the data. These maps included the locations of the proposed GWPAs, the general location of the wells with pesticide detections, and the locations of current GWPAs.

Comment no. 5: DPR should allow for an extended 30 days for comments beyond the hearing date.

Response: DPR extended the close of the public comment period from July 9, 2018 to August 7, 2018 – seven days beyond the hearing date and 29 days beyond the initial close of the public comment period.

- *Perry Klassen, East San Joaquin Water Quality Coalition on behalf of Central Valley Agricultural Water Quality Coalitions*

Comment no. 6: The new DPR GWPAs may have an impact on the designation of high vulnerable areas and additional regulatory requirements placed on growers; ultimately, inclusion of new GWPAs could have significant financial impacts on growers in the Central Valley.

Response: GWPAs are the regulatory tool that DPR uses to regulate the use of 3 CCR section 6800(a)-listed pesticides in areas vulnerable to ground water contamination from these pesticides, including sections where these pesticides or their degradates have been detected in ground water from agricultural use. These pesticides have been detected in ground water due to legal agricultural use, have been formally reviewed as specified in law, and were determined to require mitigation to allow continued use. The use of 3 CCR section 6800(a)-listed pesticides are restricted in GWPAs to prevent pollution. If growers in GWPAs choose to use 3 CCR section 6800(a)-listed pesticides then they must obtain a permit from the county agricultural commissioner and are required to implement management practices that protect the ground water from further contamination from these pesticides. Also, there are many alternative pesticides that growers can use in GWPAs without having to obtain a permit. DPR cannot control how other agencies may use GWPAs in the future.

Comment no. 7: It is requested that a public hearing take place no sooner than July 30, 2018.

Response: See response to comment no. 1.

Comment no. 8: During the public hearing, DPR staff should discuss in more detail the following items:

1. "How compliance costs were determined"

Response: See the March 19, 2018 memorandum, "Assessment of Economic and Fiscal Impacts of Proposed Regulation Creating Additional Ground Water Protection Areas (DPR 17-003)." The impacts to the regulated community were separated into two primary types:

1) Time requirements for the permitting process and submission of Notices of Intent (NOIs), and
2) Costs of adopting mitigation measures specified in the regulation or of using alternative pesticides or farming practices in the leaching and runoff GWPAs.

Additional information on the analysis procedure is specified in the memorandum.

2. "Date ranges and detection limits of data used to determine new GWPAs"

Response: As specified in Appendix 1 of the October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," the sample dates for the detection data range from December 15, 1988 to July 23, 2014. Although dates of individual sampling events vary, all of the data were carefully analyzed for accuracy. Some of the older, isolated pesticide detections previously did not meet the guidelines outlined in the August 29, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas," for reasons such as the inability to obtain sample wells in adjacent sections. These sections now meet those guidelines because of additional sampling by DPR that resulted in pesticide detections around the original detections. Regardless of when the ground water detections occurred, verified detections of 3 CCR section 6800(a)-listed pesticides in ground water indicate that the area is vulnerable to the movement of these pesticides to ground water. The characteristics that make a section vulnerable to ground water contamination do not change significantly over time.

Although the method detection limits may vary, the majority of the analytical methods used in the DPR studies that support the proposed GWPAs have remained steady with reporting limits of 0.05 ppb. As required by the Pesticide Contamination Prevention Act (PCPA) [Food and Agricultural Code section 13149(d)], all samples were either analyzed by a method that was determined by DPR to be unequivocal or were analyzed by a second laboratory. An unequivocal detection method provides a fingerprint of the molecule and distinguishes the target compound from potential interfering compounds with an extremely high level of confidence. Only one DPR study that resulted in proposed GWPAs used an analytical method that had a reporting limit below 0.05 ppb. The analytical method for this study had a reporting limit of 0.025 ppb and resulted in two proposed GWPAs with detections below 0.05 ppb. This analytical method was evaluated by DPR and was determined to provide unequivocal identification of the pesticides. Occasionally, a specific pesticide or degradate in an analytical method had a reporting limit of 0.1 ppb to achieve unequivocal identification of that pesticide. Regardless of the reporting limit,

verified detections of 3 CCR section 6800(a)-listed pesticides in ground water indicate that the area is vulnerable to the movement of these pesticides to ground water.

Also, since 1999, DPR has sampled a network of approximately 70 domestic wells annually in the San Joaquin valley for 3 CCR section 6800(a)-listed pesticides and their degradates. All of these wells initially had detections of one or more of these pesticides or degradates when they were initially sampled in 1999. The data collected from this network has allowed DPR to assess changes in historical concentrations and the effectiveness of GWPAs. The wells in this network have been sampled using the same analytical methods as wells sampled for the proposed GWPAs, and gives DPR additional confidence in the data used for this proposed regulation, regardless of age.

3. "Overview of quality control evaluations associated with the data utilized, including an assessment of how the groundwater data were collected"

Response: All samples were collected by DPR staff according to the Standard Operating Procedures and protocols referenced in the studies and are publicly available upon request. Field blanks were collected for all samples and were analyzed for all corresponding positive detections. A field blank is a quality control sample that checks for contamination at the point of filling a sample bottle and during transport and storage. All studies also include blind spikes and matrix spikes to evaluate the quality of the laboratory results. A blind spike is a blank-matrix sample that has been spiked with a known amount of analyte and submitted to the lab disguised as a field sample. A matrix spike is a blank-matrix sample that has been spiked in the laboratory and analyzed along with the samples.

The Pesticide Use Report data for all sections were analyzed to determine if the pesticide detections were the result of agricultural use. Approximately half of the studies were initiated based on either pesticide detections reported to DPR by other agencies or follow-up sampling by DPR around isolated detections, and the remaining studies were initiated by DPR to monitor for specific pesticides in high use, vulnerable areas (Appendix 1 of the October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections"). As required by the PCPA, all samples were either analyzed by a method that was determined by DPR to be unequivocal or were analyzed by a second laboratory.

4. "Rational for using a single detection be the basis for including an entire Township, Range, Section as a GWPA"

Response: None of the proposed GWPAs are based solely on a single detection. Only sections with verified detections of 3 CCR section 6800(a)-listed pesticides or degradates are proposed to become GWPAs. Sections do not become GWPAs based on detections of other pesticides or degradates.

See August 29, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas," for the guidelines used. Although some sections are proposed to become a GWPA based on one detection of a 3 CCR section 6800(a)-listed pesticide or degradate in the section, any such

section is either adjacent to an existing GWPA or there are two or more wells within the four section area with detections of 3 CCR section 6800(a)-listed pesticides or degradates.

5. "Discussion regarding new "management practices" that would need to be adopted by growers"

Response: Management practices for Leaching GWPAs are specified in 3 CCR section 6487.5 and for Runoff GWPAs in 3 CCR section 6487.4. If a grower in a GWPA chooses to use a 3 CCR section 6800(a)-listed pesticide, there are multiple management practices listed in the regulations that they can choose from. The management plan they choose to implement must be designated on the permit.

Comment no. 9: Explain the process for reviewing, verifying, and utilizing existing monitoring data for this process; in addition, it is unclear how those detections are then extrapolated to new GWPAs regardless of analytical detection limits or number of years since the last detection. For example, data utilized for the new GWPA determinations are as old as 1991. The consideration of 27-year old data does not confirm that the historical source of the detections represents a potential source today.

Response: See responses to comment nos. 8.2 for detection limits and age of data, 8.3 for data evaluation and quality control, and 8.4 for how GWPAs are determined.

Comment no. 10: The written comment period should be extended to 30 days after the public hearing.

Response: See response to comment no. 5.

- *African-American Farmers of California; American Pistachio Growers; Buena Vista Coalition; California Agricultural Aircraft Association; California Association of Pest Control Advisers; California Citrus Mutual; California Cotton Ginners and Growers Association; California Farm Bureau Federation; California Fresh Fruit Association; California Tomato Growers Association; Cawelo Water District Coalition; Far West Equipment Dealers Association; Kern River Watershed Coalition Authority; Nisei Farmers League; San Joaquin County & Delta Water Quality Coalition; Tule Basin Water Quality Coalition; Western Agricultural Processors Association; Western Plant Health Association; Westside Water Quality Coalition*

Comment no. 11: We do not believe all stakeholder groups have been provided necessary information to assess the utility and/or potential effects of the proposed regulation. Prior to DPR finalizing the proposed regulation, DPR should meet directly with agricultural stakeholders to provide a better understanding of the regulation intent. The undersigned stakeholders would also appreciate the opportunity to work with DPR to further explain how the proposed regulation may impact stakeholders and other regulatory agencies and programs.

Response: The intent of the proposed regulatory action is to regulate the use of 3 CCR section 6800(a)-listed pesticides in sections where these pesticides or their degradates have been detected by DPR in ground water.

Also, see responses to comment nos. 2 and 6.

Comment no. 12: The PCPA did not prescribe a level of detection as a trigger for GWPAs. The identification of GWPAs are therefore not always based on the same level of detection depending on the year and changes in methods. In many cases, a detection is magnitudes lower than the concentration that would affect beneficial uses. The process for identifying GWPAs should take into account these factors and ensure that they are addressed properly when determining GWPAs.

Response: Although the method detection limits may vary, the majority of the analytical methods used in the DPR studies that support the proposed GWPAs have remained steady with reporting limits of 0.05 ppb. As required by the Pesticide Contamination Prevention Act (PCPA) [Food and Agricultural Code section 13149(d)], all samples were either analyzed by a method that was determined by DPR to be unequivocal or were analyzed by a second laboratory. An unequivocal detection method provides a fingerprint of the molecule and distinguishes the target compound from potential interfering compounds with an extremely high level of confidence. Only one DPR study that resulted in proposed GWPAs used an analytical method that had a reporting limit below 0.05 ppb. The analytical method for this study had a reporting limit of 0.025 ppb and resulted in two proposed GWPAs with detections below 0.05 ppb. This analytical method was evaluated by DPR and was determined to provide unequivocal identification of the pesticides. Occasionally, a specific pesticide or degradate in an analytical method had a reporting limit of 0.1 ppb to achieve unequivocal identification of that pesticide. Regardless of the reporting limit, verified detections of 3 CCR section 6800(a)-listed pesticides in ground water indicate that the area is vulnerable to the movement of these pesticides to ground water.

See responses to comment nos. 6 and 8.2.

Comment no. 13: Based on the data spreadsheets provided by DPR, where the detections in 24 sections with two sampling events include results from 30 years ago to 2012 and detections in these sections are mostly less than 0.5 ug/L, these data do not suggest contamination that will cause impairments to beneficial uses of the groundwater aquifer.

Response: The data from these studies indicate that agricultural use of 3 CCR section 6800(a)-listed pesticides have contaminated ground water in these sections and satisfy DPR's guidelines for establishing GWPAs as outlined in DPR's August 27, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas."

As specified in Appendix 1 of the October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," the sample dates for the detection data range from December 15, 1988 to July 23, 2014. Although dates of individual sampling events vary, all of the data were carefully analyzed for accuracy. Some of the older, isolated pesticide detections previously did not meet the guidelines outlined in the

August 29, 2011 memorandum, "Criteria for Establishing Ground Water Protection Areas," for reasons such as the inability to obtain sample wells in adjacent sections. These sections now meet those guidelines because of additional sampling by DPR that resulted in pesticide detections around the original detections. Regardless of when the ground water detections occurred, verified detections 3 CCR section 6800(a)-listed pesticides in ground water indicate that the area is vulnerable to the movement of these pesticides to ground water. The characteristics that make a section vulnerable to ground water contamination do not change significantly over time.

Also, see responses to comment nos. 6 and 8.2.

Comment no 14: In regard to a revised procedure currently under development (updating SNVs), we suggest that DPR consider new scientific data and approaches that may provide a more effective means of determining actual risk to water quality. The stakeholders wish to be informed about the revised process for determining pesticide pollution potential, which is under development by DPR and the USGS, and provide input as applicable.

Response: This comment is outside the scope of the current regulation. DPR will update stakeholders about the process when appropriate.

Comment no 15: As some of the previous pesticide formulations have not been available for use in decades, we believe resampling of previously sampled wells is justified to assess changes in historical concentrations and determine whether active ingredients or degradates still exist, especially when the evaluation is reliant on data that is 30 years old. We understand the importance of using verified and validated data to assess the risk of pesticide applications to groundwater quality; however, the process can be improved to consider additional information including current application practices, cropping patterns, groundwater levels and detection limits when evaluating whether a new GWPA is warranted. Regulations and management practices considered protective of water quality have been implemented in response to historical pesticide detections. As a result of these changes in practices historically detected low pesticide concentrations may no longer persist.

Response: Although pesticide formulations may have changed, the 3 CCR section 6800(a)-listed pesticides are active ingredients that have not changed and have been detected in ground water from agricultural use. In the 122 proposed GWPAs, DPR detected these pesticides or their degradates in ground water, which indicates that the areas are vulnerable to contamination from these pesticides.

Also, see responses to comment nos. 8.2 and 8.3.

Comment no. 16: We recognize that while agronomists generally would not expect the soil structure or chemistry to change, there are many other parameters that may have changed significantly that affect present and future sampling detections. Growers who irrigate and produce a commercial crop have been in compliance with the Irrigated Lands Regulatory Program in the Central Valley since 2004. Currently growers are faced with managing their operations to protect both surface and groundwater quality and are implementing a variety of

practices to reduce the amount of water leaving their fields to both surface and ground water and ensuring that well head protection practices are implemented to prevent contamination. We understand historical data may be useful in determining where to sample however, 30-year old data should not be used in isolation as a regulatory tool. Proposed GWPA regulations should be reflective of current conditions and other regulations.

Response: No other agencies are regulating pesticide use.

Also, see responses to comment nos. 6 and 8.2.

Comment no. 17: The regulatory package as described in the hearing also includes changing publication "EH03-05" to be Groundwater Protection areas 2017…The update implies that the GWPAs listed are "based on soil properties and estimates of the depth-to groundwater, which has been denoted as the California Vulnerability Modeling (CALVUL) approach." It is unclear whether approximately 4,000 sites are listed due to model results or by virtue of the actual sampling data. ***The updated document states that "this update was triggered by the identification of additional GWPAs based on pesticide detections in ground water."*** …we do not believe a GWPA should be designated based solely upon minimum detection levels of a degradate, especially if the GPWA is based on only one sample at a well. Rather, resampling wells of concern over a period of years would result in a better understanding of pesticide transformation and dissipation in the subsurface, pesticide transport mechanisms, and the potential for certain pesticides and/or degradates to mobilize.

Response: The "Ground Water Protection Areas 2017" document was updated to clarify this discrepancy as stated in the Notice of Modifications to Text: "Revise the 'Update' section by removing a sentence about GWPAs based on the California Vulnerability Modeling (CALVUL) approach. This sentence is not applicable to the proposed updates. The intent of this section is to provide a brief summary of the recent updates made to the existing document. The new proposed GWPAs added in this update are only based on pesticide detections, so this sentence is being removed to ensure the 'Update' section accurately reflects that the new proposed sections are only based on detections and not based on CALVUL modeling."

Also, see responses to comment nos. 8.2 and 8.4.

Comment no. 18: Cost estimates related to the proposed 121 GWPAs are unclear and ambiguous. Cost analysis should include additional compliance measures required by the Regional Water Quality Control Board for agricultural operations in designated GWPAs. Additionally, the agricultural industry supports the California Department of Food and Agriculture (CDFA) to help analyze regulatory proposals through the Office of Pesticide Consultation and Analysis (OPCA). The OPCA should be consulted during the process of estimating regulatory costs to farmers. Impacted stakeholders are concerned about the lack of transparency in the process used to establish this cost, which may result in higher costs directly or indirectly to farmers.

Response: DPR's initial economic analysis was submitted to John Steggall of CDFA's OPCA for review on September 13, 2017. CDFA's comments were received by DPR on October 6,

2017. CDFA stated that it was not able to do an appropriate economic analysis and asked experts at the Department of Agricultural and Resource Economics at the University of California at Davis to evaluate DPR's economic analysis. The UC Davis experts provided comments on the proposed regulation. DPR addressed their concerns and made changes to the economic assessment as needed.

Comment no. 19: The proposed GWPA regulation affects approximately 2.5 million acres of California cropland. DPR's monitoring program, database, and existing and proposed regulations should be evaluated to assure relevance to current and future groundwater conditions.

Response: The proposed regulations would affect approximately 78,080 acres. There are currently approximately 2.38 million acres in California that are GWPAs (3,718 GWPAs). The proposed 122 GWPAs would increase that number to an approximate grand total of 2.46 million acres.

DPR does and will continue to evaluate its programs and regulations to assure relevance. Adding the proposed GWPAs to regulate the use of 3 CCR section 6800(a)-listed pesticides in sections where those pesticides or their degradates have been detected is a part of that evaluation.

Comment no. 20: We ask that DPR undertake more outreach with agricultural stakeholders prior to finalizing any further actions related to the proposed regulation. While DPR may consider this an update to an established program other regulatory agencies and programs rely on established GWPAs which impact reporting, monitoring and compliance for other permitted agricultural operations. There is potential for significant financial and land use impacts from the expansion of GWPAs. It is important that all parties understand how revised or new GWPAs could influence decisions made by other agencies and regulatory programs. Additionally, GWPAs should be determined based on metrics that are protective of groundwater quality and are reflective of true risk.

Response: See responses to comment nos. 2 and 6.

Comment no. 21: The stakeholders wish to be informed about the revised process for determining pesticide pollution potential that is currently under development by DPR and the USGS in response to SB 1117.

Response: See response to comment no. 14.

- *Dave Lawson, Western Plant Health Association*

Comment no. 22: We do not believe, as presented, WPHA and other agricultural stakeholders can utilize these spreadsheets and data effectively within the given time. So we ask that prior to DPR finalizing regulation, that DPR meet directly with agricultural stakeholders to help stakeholders understand what these regulations will do and to assure that DPR fully understands the concerns of the stakeholders and how these may – how these regulations may impact other regulatory agencies and programs that we deal with.

Response: See responses to comment nos. 2 and 6.

Comment no. 23: We do not believe that several of the proposed ground water protection areas should be included, because the spreadsheet information reflecting the sample data is considerably old, over 15 to 20 years old, and several of the samples impacting the ground water protection areas and their decisions include metabolites and not parent material. We are concerned about the inclusion of metabolites of listed products by DPR staff. While we find no rulemaking that allows such inclusion, other than DPR referencing to include the metabolites within this new rule.

Response: The 3 CCR section 6000 definition of "ground water protection area" states that the determination of a ground water protection area is based on factors characteristic of areas where legally applied pesticides or their breakdown products have been detected and verified in ground water. Breakdown products, also known as degradates, include metabolites. Verified detections of the degradates of 3 CCR section 6800(a)-listed pesticides in ground water are included because they are the result of use of the active ingredient. The detections also indicate that the area is vulnerable to the movement of 3 CCR section 6800(a)-listed pesticides to ground water.

Also, see response to comment no. 8.2.

Comment no. 24: We'd also like to know what there might be in the way of a de-listing process for the ground water protection areas. We find that through this process, DPR is basing new ground water protection areas and their listing based on proximity to old ground water protection areas. And we have no idea how old the data is for these adjacent ground water protection areas.

Response: DPR is unlikely to de-list GWPAs that were based on verified detections of 3 CCR section 6800(a)-listed pesticides or degradates. DPR did de-list some modeled GWPAs in isolated areas in 2004. Modeled GWPAs are based on soil type and depth to ground water. None of the proposed GWPAs in this proposed regulation are based on modeled GWPAs; all are based on verified detections of 3 CCR section 6800(a)-listed pesticides or degradates.

Comment no. 25: We feel that while the historic data may be useful in determining where to sample next to get more current information, this data should not be used as a regulatory tool at this late date. If the data was going to be useful, it should be part of the program already, and actions based upon presented old data does nothing to protect California citizens or ground water quality.

Response: See responses to comment nos. 6 and 8.2.

Comment no. 26: We ask that DPR undertake more outreach prior to finalizing any further action. As evidenced by the request for this hearing, many people are concerned about what this program means. While DPR may consider this an update to an established program, there are more agencies involved or becoming more involved in water quality issues and mandating requirements on growers. It's important that all growers, parties, DPR understand how programs can influence actions by other agencies and groups.

Response: See responses to comment nos. 2 and 6.

- *Sarah Rutherford, Kaweah Basin Water Quality Association*

Comment no. 27: We appreciate some of the data that has been shared as well, but have some lingering questions about how it was evaluated.

Response: See response to comment no. 8.3.

- *Jodi Raley, California Cotton Ginners and Growers Association and Western Ag Processors Association*

Comment no. 28: I really would encourage increased engagement with stakeholders and agricultural stakeholders to be able to better understand the impacts and implication of these new listing sites and how they came about to be listing sites, how they were evaluated and just so that they can have a broader discussion and better understanding of these regulations.

Response: See responses to comment nos. 2, 8.3, and 8.4.

COMMENTS RECEIVED DURING THE 15-DAY COMMENT PERIOD

- *Dave Lawson, Western Plant Health Association*

Comment no. 1: We find a lack of consistency in the determinations proposing 122 additions to the GWPA list. The identification of GWPAs are not always based on the same level of detection depending on the year and changes in methods. In many cases, it appears a detection is magnitudes lower than the concentration that would affect beneficial uses of the water or well in question.

Response: See responses to comment nos. 8.2 and 8.3 from "Summary and Response to Comments Received During the 45-Day Public Comment Period."

Comment no. 2: We are also concerned that the data provided for justification of the GWPAs may no longer reliable for basing the determinations. Most of the span for sampling years is from 1989 – 2014 with the majority or average being from before 2007. Only 13 samples are 2010 or newer. WHPA disagrees with the use of the pre-2010 data. Previously, DPR did not find the sampling prior to 2014 to be of adequate concern to justify action. We strongly believe that to now add antiquated sampling data that has not been re-tested is inappropriate. WPHA recommends that any new GWPAs that DPR identifies should be limited to the new sampling areas conducted after 2010.

Response: This comment is not relevant to the modified text.

Comment no. 3: The data spreadsheets provided earlier by DPR identified approximately 4,000 sites that have been listed over a large span of time from 1989 through 2017. The sampling detects represent findings a low as 0.05 parts per billion/L (20 years ago). We believe most of the data presented is far too old, out of date, and do not suggest contamination that will cause impairments to beneficial uses of the groundwater aquifer. Most of the data is simply no longer

relevant. WPHA believes the metabolites (all of which were found at extremely low levels) have no regulatory flag attached to them and should not be used as a determination for contamination.

Response: This comment is not relevant to the modified text.

Comment no. 4: We are also concerned about DPR's failure to engage stakeholders in this process. At the DPR GWPA hearing, WPHA asked that DPR meet directly with agricultural stakeholders to provide a better understanding of the regulatory intent. The grower stakeholder groups asked for the opportunity to further explain to DPR how the proposed regulation may impact stakeholders and other regulatory agencies and programs. Instead of meeting with these stakeholders, DPR staff apparently chose to create an internal memorandum to support their position for the regulations and increased the list of GWPAs.

Response: It is inappropriate for DPR to meet with stakeholders during the open comment period. If the commenter is referring to the October 22, 2018 memorandum, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections," as the "internal memorandum," this memorandum is a public document and is included in the regulation package. Based on the comments received during the first public comment period, DPR staff reevaluated all of the data used in the proposed regulatory action to ensure its quality. As outlined in the memorandum, during this process DPR found that one of the proposed GWPAs should not have been included and two additional sections should have been included.

Comment no. 5: In the added memorandum from Vaneet Aggarwal, "Revisions to the Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections" (October 2018), Aggarwal deletes 1 GWPA and adds 2 others on to the list. The two new GWPAs reflect sampling dates of 2007 and report dates 2008 and reflect extremely low detection levels of metabolites. If these detections are a concern to the DPR and needed to be added, then why were the GWPAs not added 10 years ago? WPHA again requests that additional GWPAs be limited to sampling that reflects recent data, no earlier than 2010, where there would be a greater certainty that the information from which DPR is making regulatory decisions is accurate.

Response: DPR staff reevaluated all of the data used in the proposed regulatory action to ensure its quality. As outlined in the memorandum, during this process DPR found that one of the proposed GWPAs should not have been included and two additional sections should have been included. The guidelines for establishing GWPAs did not change during this reevaluation.

Comment no. 6: The added Aggarwal memorandum (October 2018) includes a list of 35 references. Many appear to have no bearing on the 6800(a) list and ground water monitoring for listing products. To stakeholders it appears that DPR staff is simply adding paper mass to appear scientifically credible and justify its listings. Of the 35 references listed, 23 belong to one person which covers the years 1989 – 2003. Only 10 reports/references are included that were created in the past 15 years.

Response: The 35 references are the same references cited in the April 24, 2017 memorandum, "Proposal to Create Additional Ground Water Protection Areas Based on Pesticide Detections." These are references to all of the studies that DPR conducted that include the 3 CCR section 6800(a)-listed pesticide or degradate detections for the proposed GWPAs.

Comment no. 7: In the recently forwarded document "Groundwater Protection Areas 2018" (file name pDPR 18-001 OAL Modified Text GWPAs 2018 doc.pdf) it appears that DPR choses to delete a significant memo "Recommendations for Exclusion of Counties with Sparse and Non-Contiguous Groundwater Protection Areas from the Proposed Groundwater Regulations" from DPR scientist John Troiano to Dr. Sanders, DPR Chief of Environmental Monitoring Branch. We are concerned that these relevant thoughts and earlier decisions will be lost and without traceability for future discussion. WPHA requests that this memo not be deleted from the historical background of this issue. To do so, would appear to most that DPR is trying to rewrite the technical history of the GWPA regulations.

Response: This comment is not relevant to the modified text. The modified text edited the "Update" section for clarity, added two new proposed GWPAs, and deleted one originally proposed GWPA. This comment addresses the text originally proposed.

Comment no. 8: The DPR cost estimates related to the proposed 122 GWPAs are unclear and appear ambiguous. There is a potential for significant financial and land use impacts from the expansion of GWPAs. The agricultural industry has long supported the Office of Pesticide Consultation and Analysis (OPCA) in the California Department of Food and Agriculture (CDFA) to help analyze pesticide-related regulatory proposals. We believe OPCA should have been consulted during the process of estimating regulatory costs to farming production and to the apparent impact to agricultural land values. Regulated lands most certainly carry a devalue factor. Impacted stakeholders are concerned about the lack of transparency in the economic impact analysis process and believe there are additional higher costs directly and indirectly to farmers that have been ignored or left unanalyzed by the failure to engage OPCA in this process.

Response: This comment is not relevant to the modified text. DPR's initial economic analysis was submitted to John Steggall of CDFA's OPCA for review on September 13, 2017. CDFA's comments were received by DPR on October 6, 2017.CDFA stated that it was not able to do an appropriate economic analysis and asked experts at the Department of Agricultural and Resource Economics at the University of California at Davis to evaluate DPR's economic analysis. The UC Davis experts provided comments on the proposed regulation. DPR addressed their concerns and made changes to the economic assessment as needed. Additionally, on November 20, 2018, prior to the start of the 15-day notice, DPR submitted copies of the modified text and additional document relied upon to John Steggall of CDFA's OPCA for review. DPR received a response from CDFA on November 28, 2018. CDFA stated that due to the short notice time it was not able to do an economic analysis of the proposed changes. An evaluation of crop acreage by CDFA showed that the changes will increase the total acreage by about 0.8% and that it is likely that the new acreage will be affected similarly to DPR's economic of the original GWPA listing: about $2 additional cost per acre.

Comment no. 9: To improve the GWPA program WPHA strongly recommends that DPR should consider additional information including current application practices, cropping patterns, groundwater levels and detection limits when evaluating whether a new GWPA is warranted.

Response: This comment is not relevant to the modified text.

Comment no. 10: We oppose the proposed GWPA regulatory changes until a full re-evaluation is completed to assure the stakeholders that the GWPA monitoring program, database and existing regulations are relevant to current and future groundwater conditions. We believe that GWPAs should be determined based on metrics that are protective of groundwater quality and are reflective of true risk. We do not believe a GWPA should be designated based solely upon minimum detection levels of a chemical degradate, especially if the GWPA is based on only one historical sample that has not been re-evaluated since 2010.

Response: The comment is not relevant to the modified text.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

DPR has determined that the proposed regulatory action does not impose a mandate on local agencies or school districts requiring reimbursement by the State pursuant to Part 7 (commencing with section 17500) of Division 4 of the Government Code because the regulatory action does not constitute a "new program or higher level of service of an existing program" within the meaning of section 6 of Article XIII B of the California Constitution. DPR has also determined that no nondiscretionary costs or savings to local agencies or school districts will result from this regulatory action.

ALTERNATIVES DETERMINATION

The Director has determined that no alternative considered by DPR would be more effective in carrying out the purpose for which this regulation is proposed, or would be as effective and less burdensome to affected private persons or businesses than the adopted regulations, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of the law. These amendments will protect ground water from contamination resulting from the agricultural use of pesticides thus preventing pesticide pollution of California's ground water aquifers that may be used to supply drinking water.

POSTING REQUIREMENT

Title 3, California Code of Regulations, section 6110, states in part that, "The public report shall be posted on the official bulletin boards of the Department, and of each commissioner's office, and in each District office of the DPR [Division of Pest Management, Environmental Protection and Worker Safety] for 45 days." DPR has posted its Initial Statement of Reasons and Public Report on its official bulletin board, which consists of the Department's Internet Home Page <http://www.cdpr.ca.gov>. In addition, copies were provided to the offices listed above for posting. The document incorporated by reference in this rulemaking was available upon request directly from the Department.