



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

WALTER E. WHITCOMB
COMMISSIONER

BOARD OF PESTICIDES CONTROL

**November 16, 2018
9:00 AM**

Room 118 Marquardt Building
32 Blossom Lane, Augusta, Maine

AGENDA

1. Introductions of Board and Staff

2. Minutes of the August 15, 2018 Board Meeting

Presentation By: Megan Patterson, Director

Action Needed: Amend and/or Approve

3. Review of Potential Rulemaking Concepts

Amendments to the Federal Certification and Training Requirements necessitate amendments to BPC Chapters 10, 31, 32, and 50. Previous Board discussions have indicated necessary amendments to Chapters 26, 27, 28, and 19, as well as the repeal of Chapter 36. The Board will now discuss the amendments.

Presentation By: Megan Patterson, Director

Action Needed: Refine the Rulemaking Concepts and Schedule a Public Hearing

4. Review of Pesticide Self-Service Sign

BPC Chapter 26 Section 7 required that pesticide self-service sales areas include a “Board approved sign informing the public where to obtain additional information.” The Board reviewed various drafts and discussed improvements at the May 18, 2018 and July 13, 2018

MEGAN PATTERSON, DIRECTOR
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meetings. At the August 15, 2018 meeting the Board authorized the staff to hire a graphic designer to improve the layout. The Board will now review the first drafts provided by the graphic designer.

Presentation By: Amanda Couture,

Action Needed: Provide Input

5. Discussion of Board Priorities Staff Planning Session

In recent years, there has been considerable turnover in Board membership and Board staff. Staff is currently juggling the usual tasks of Board operation, but is also working toward full public implementation of the Maine Pesticide Enforcement, Registration and Licensing System (MEPERLS), conducting water quality testing, updating licensing exams, conducting training for the revised Worker Protection Standard, and preparing for adoption of new federal Certification and Training requirements. In addition, the new Certification and Training requirements make it necessary to revise the State Plan and conduct rulemaking. Staff would like input on which future projects are most important to the Board when discretionary staff time arises. Staff held a planning session and discussed potential projects.

Presentation By: Megan Patterson, Director

Action Needed: Provide guidance to the staff on Board priorities

6. Review of Budget

In early 2017, the Board reviewed the budget with a goal of identifying potential resources that could be allocated to Board priorities. At that time the Board requested ongoing annual updates on the status of the Pesticide Control Fund.

Presentation By: Megan Patterson, Director

Action Needed: None—Informational Only

7. Consideration of Consent Agreement with Wise Acres Farm, Kenduskeag

The Board's Enforcement Protocol authorizes staff to work with the Attorney General and negotiate consent agreements in advance on matters not involving substantial threats to the environment or public health. This procedure was designed for cases where there is no dispute of material facts or law, and the violator admits to the violation and acknowledges a willingness to pay a fine to resolve the matter. This case involves using a pesticide in a manner inconsistent with the label, insufficient records, and lack of required information at central information display.

Presentation By: Raymond Connors, Manager of Compliance

Action Needed: Approve/Disapprove the Consent Agreement Negotiated by Staff

8. Consideration of Consect Agreement with Paul Finden and Emily Rogals, Belfast

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Presentation By: Raymond Connors, Manager of Compliance

Action Needed: Approve/Disapprove the Consent Agreement Negotiated by Staff

9. Correspondence

- a. Email and article from Jody Spear

10. Other Items of Interest

- a. Updated brochure *Licensing Requirements for Pesticide Applicators in the State of Maine*
- b. New BPC magnet
- c. Article *Field Evaluation of Commercially Available Small Unmanned Aircraft Crop Spray Systems*
- d. Press Release: EPA Announces Changes to Dicamba Registration
- e. *A National Road Map For Integrated Pest Management* Revised September 2, 2018, USDA, EPA
- f. Oregon Temporary Rule: Limitations on Pesticides Containing Aminocyclopyrachlor
- g. Chlorpyrifos Court Ruling
 - Ninth Circuit Court Opinion On Petition for Review of an Order of the Environmental Protection Agency—Chlorpyrifos Tolerances
 - Lulac v Wheeler – Petition for Rehearing
 - Summary

11. Schedule of Future Meetings

November 16, 2018 and January 16, 2019 are proposed meeting dates. The January meeting will be at the Agricultural Trades Show and will include a Public Listening Session.

Adjustments and/or Additional Dates?

12. Adjourn

NOTES

- The Board Meeting Agenda and most supporting documents are posted one week before the meeting on the Board website at www.thinkfirstspraylast.org.
- Any person wishing to receive notices and agendas for meetings of the Board, Medical Advisory Committee, or Environmental Risk Advisory Committee must submit a request in writing to the Board's office. Any person with technical expertise who would like to volunteer for service on either committee is invited to submit their resume for future consideration.
- On November 16, 2007, the Board adopted the following policy for submission and distribution of comments and information when conducting routine business (product registration, variances, enforcement actions, etc.):
 - *For regular, non-rulemaking business*, the Board will accept pesticide-related letters, reports, and articles. Reports and articles must be from peer-reviewed journals. E-mail, hard copy, or fax should be sent to the Board's office or pesticides@maine.gov. In order for the Board to receive this information in time for distribution and consideration at its next meeting, all communications must be received by 8:00 AM, three days prior to the Board meeting date (e.g., if the meeting is on a Friday, the deadline would be Tuesday at 8:00 AM). Any information received after the deadline will be held over for the next meeting.
- During rulemaking, when proposing new or amending old regulations, the Board is subject to the requirements of the APA (Administrative Procedures Act), and comments must be taken according to the rules established by the Legislature.



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WALTER E. WHITCOMB
COMMISSIONER

BOARD OF PESTICIDES CONTROL

**August 15, 2018
1:00 PM**

Mather Auditorium, Wells Reserve at Laudholm
342 Laudholm Farm Rd, Wells, Maine

DRAFT MINUTES

Present: Bohlen, Granger, Jemison, Morrill, Waterman

1. Introductions of Board and Staff

- The Board, and Staff introduced themselves
- Staff Present: Bryer, Chamberlain, Connors, Couture, Meserve, Patterson, Pietroski

2. Minutes of the July 13, 2018 Board Meeting

Presentation By: Megan Patterson, Director

Action Needed: Amend and/or Approve

- **Granger/Bohlen: Moved and seconded approval of minutes as amended**
- **In Favor: Unanimous**

3. Consideration of Consent Agreement with Mainely Ticks, Windham

The Board's Enforcement Protocol authorizes staff to work with the Attorney General and negotiate consent agreements in advance on matters not involving substantial threats to the environment or public health. This procedure was designed for cases where there is no dispute of material facts or law, and the violator admits to the violation and acknowledges a willingness to pay a fine to resolve the matter. This case involves an unauthorized application.

Presentation By: Raymond Connors, Manager of Compliance

Action Needed: Approve/Disapprove the Consent Agreement Negotiated by Staff

- Connors stated Mainely Ticks made an application to a property in Sanford. The company had a contract with the previous owner who had sold the house over the winter. Mainely Ticks was unaware the house had been sold. The applicator called the residence and left a message. No reply was received but the applicator came to the residence and made the application the following day anyway. Mainely Ticks did self-report the incident and the new owner called to report it as well. The consent agreement was for \$500 and Mainely Ticks has paid it.
- Bohlen asked if Connors took into consideration that the company self-reported.
- Connors stated it is a requirement of the company to report this type of incident as soon as they are aware, but he did take the self-reporting into consideration.
 - **Jemison/Waterman: Moved and seconded approval of consent agreement**
 - **In Favor: Unanimous**

4. Correspondence

- a. Email and attachments from Riley Titus, Responsible Industry for a Sound Environment (RISE) received July 10, 2018
- b. Email and attachments from Riley Titus, RISE, received August 2, 2018
 - Titus was present and told the Board he felt that integrated pest management (IPM) was lacking in many of the ordinances being passed. He asked the Board what they, the IPM Council, and UMaine Cooperative Extension were doing in regards to education and outreach throughout the state. Titus proposed a resolution to the Board that restates the Board's duty to IPM. He encouraged the Board to adopt this resolution.
 - Randlett told the Board that from a legal perspective he does not recommend the Board adopt the resolution. He added that IPM is a goal of the state, written in statute, not a policy. The state policy is to minimize reliance on pesticides.
 - Titus stated his main concern was the removal of the freedom of choice. He added that any homeowner or business that might service properties are now limited on how they can maintain those properties. Titus stated that he wants individuals to have all tools available to them once the steps of IPM have been conducted.
 - Jemison asked what percentage of those companies use the steps of IPM before they spray a lawn or a property. He added that it seems IPM is almost never used, applications are generally made on a calendar basis, and the whole concept of contract lawncare and IPM does not add up.
 - Granger stated he thought the issue was larger than contract lawncare. There are certain standards some property owners want their property kept to and they should have the ability to control and maintain their landscape how they wish.

- Morrill added that the issue also extends to hobby gardeners and florists and the ordinances are limiting what businesses can do.
 - Bohlen stated that the Board is not a legislative body and he is troubled at the thought that locally elected officials could have their decisions overturned by a Board like us. He added that he disagrees with Titus and does not feel the ordinances are undercutting IPM.
 - Randlett summarized a case in which Central Maine Power had challenged the town of Lebanon for creating an ordinance that put restrictions on the use of pesticides in their town. The Maine Supreme court sided with the town. Randlett submitted the case file as part of the Board packet for today's meeting. He added that the options for a person who wanted to challenge a town ordinance would be to do so in court or go to the legislature.
- c. Email and attachments from Karen Snyder, Portland

Break for public listening session (2:00pm) (see notes below)

5. Other Items of Interest

- a. Central Maine Power Co. v. Town of Lebanon, 1990 (submitted by Mark Randlett, Assistant Attorney General)
- b. Staff memo re pesticide self-service sign
 - **Morrill/Jemison: Moved and seconded to authorize staff to spend \$500 for graphic design work**
 - **In Favor: Unanimous**
- c. Worker Protection Standard updated brochures
 - Patterson presented three Worker Protection Standard, WPS, brochures that were created by staff for education and outreach. The brochures will be going to print within the next month.
- d. Variance permit issued to Mark Eaton for control of invasive phragmites in York
- e. Variance permit issued to Piscataqua Landscaping and Tree Service for control of invasive buckthorn, honeysuckle, and bittersweet in Shepard's Cove, Kittery

6. Schedule of Future Meetings

October 5, 2018, November 16, 2018 and January 16, 2019 are proposed meeting dates. The January meeting will be at the Agricultural Trades Show and will include a Public Listening Session.

- Chamberlain asked the Board about conducting an information gathering session to obtain public input regarding drones and staff outreach. She asked if they would like to do this at a fall meeting.

- Bohlen stated that there are currently rules in place that could function for drone applications. Patterson commented that the rules allowing applicators to do aerial applications are limited to commercial applicators only.
- Jemison added that this technology is quickly evolving.
- Bohlen stated it is not clear whether there is enough predictability to have a public information gathering session at this time.
- Morrill suggested holding an information gathering session at the Annual Agricultural Trade Show in January 2019.

7. Adjourn

- **Granger/Bohlen: Moved and seconded to adjourn at 3:11pm**
- **In Favor: Unanimous**

Notes from Public Listening Session

- Jody Spear told the Board she has followed the Portland ordinance through several stages and is impressed with the progress they have made. The committee recognized that IPM had come to be simply spraying without going through the first steps, so they voted to employ organic plant management. Spear added that pesticides have deleterious effects on humans and ecosystems, and this ordinance is a way of showing there is a preferred method for taking care of pest problems.
- Heather Spalding stated she was encouraged by the discussion today and that there are wonderful possibilities before us that are better for animal and human health. She added that she does not feel IPM and ordinances are mutually exclusive. Spalding told the Board that moving forward she would like the lines of communication to remain open and wants people to talk with each other.
- Spalding asked the Board three questions:
 1. How do submissions make it to the Board packet and how they are then taken up for business? She stated that it appeared as though a couple submissions received special attention.
 2. How is it determined which agricultural operations will receive unannounced visits from an inspector?
 3. Referencing Gary Fish's graphic about the increase in the use of pesticides, what are the Board's thoughts on gathering information on the volume of pesticides purchased and used in the state?
- Spalding closed by telling the Board that Maine Organic Farmers and Gardeners Association (MOFGA) wants to continue to be at the table and to be of assistance.

- Bohlen asked Randlett if it was appropriate to respond to the questions and was answered in the affirmative.
- On the issue of how correspondence is added to the packet, Chamberlain stated that all correspondence received before the deadline used to go into the agenda under “Other Old or New Business”, but now it is being added under “Correspondence” to keep it together and separate from other agenda items. The deadline to be added to the agenda is 8:00am three days before the meeting. Chamberlain explained that if anyone responds to the agenda once it is released then that goes out late so it is sent to the Board but not placed on the agenda. She added that staff do not make the decision when someone writes and asks to be on the agenda; staff forward it to the Board and they make that decision.
- Spalding replied that one specific incidence was regarding a few letters complaining about the ordinances. The authors of the letters did not come to the meeting but the letters were pulled out for fodder for discussion. Spalding asked the Board the process for that versus other submissions that are not discussed.
- Bohlen responded that it can be informal how they run their meetings and what they might be interested in and discuss. He added that the Board will try to be more mindful of that in the future.
- Connors explained the considerations for how non-complaint initiated inspections are conducted. He stated that each year Board staff must fill out a projection form detailing how many of each type of inspection will be done in the upcoming year. Connors stated the inspectors are afforded quite a bit of autonomy in where they conduct routine inspections. However, they do try to factor in inspections where environmental consequences may be greater.
- Jesse O’Brien is a member of the Pest Management Advisory Committee (PMAC) that assisted in drafting South Portland’s pesticide use ordinance. He told the Board that South Portland is having a kick-off party for the ordinance on September 29, 2018 at 9:00am. O’Brien asked if members of the Board or the IPM Council could have a table for outreach there.
- Morrill asked staff to attend.
- Patterson responded to Spalding’s question regarding tracking sales and use of pesticides in Maine. Patterson explained that there were inherent problems with the data that was used in the past and Fish gave a presentation on that topic at a past Board meeting. She suggested that anyone interested in the graphic read the minutes from the meeting with Fish’s explanation of the data collection process. Patterson added that staff is receiving annual use and sales reports, but is not currently compiling data as most annual reports received are hand printed and data correction/verificaiton is often required and difficult. Another challenge is that the approximately 12,000 Maine registered pesticides are not static, with approximately 1,000 products lost and gained annually. Any database designed to handle the data would need to be updated annually.

- There was discussion about a possible requirement stating applicators must submit their data digitally in a usable format.
- Morrill thanked all members of the audience who spoke during the public forum.

**DEPARTMENT OF ATTORNEY GENERAL
CONTINUING LEGAL EDUCATION COMMITTEE**

***THE ADMINISTRATIVE PROCEDURE ACT:
AGENCY RULEMAKING***

**January 26, 2001
University of Maine at Augusta
Augusta, Maine**

Presenters:

Janet M. McClintock,
*Assistant Attorney General
Natural Resources Division*

Jeff Pidot,
*Assistant Attorney General
Chief, Natural Resources Division*

I. DEVELOPMENT OF DRAFT RULE BY THE AGENCY

A. "Rule" v. "Policy" or "Guideline" §§ 8002(9), 8057(1)

general applicability
intended to be judicially enforceable (same legal force as a statute), and
implements or interprets a law or describes the agency's procedures or
practices

An agency is not required to use the formal rulemaking procedures every time it makes a decision interpreting an existing rule. Fryeburg Health Care Center v. DHS, 734 A.2d 1141, 1144 (Me. 1999); Mitchell v. Maine Harness Racing Comm'n, 662 A.2d 924, 927 (Me. 1995).

Courts have found agency policies or methodologies to be invalid because they constituted rules that were not adopted pursuant to the MAPA. Fulkerson v. Comm'r, Dept. of Human Services, 628 A.2d 661 (Me. 1993) (DHS copayment provisions constitute "rules" subject to MAPA); New England Whitewater Center, Inc. v. Department of Inland Fisheries and Wildlife, 550 A.2d 56 (Me. 1988) (changes in process for allocating minimum daily number of passengers to whitewater rafting outfitters constituted rulemaking, thus allocations were invalid for failure of IFW to comply with MAPA).

B. Consensus-based Rule Development Process §§ 8002(3-C), 8051-B, 8060(1)(A)

This is a collaborative process where the draft rule is developed by the agency and a representative group of participants with an interest in the subject of the rulemaking. § 8002(3-C) Under this process, a draft rule is developed jointly by the agency and a group of interested persons. The agency retains sole discretion:

- over whether to submit the rule as a proposed rule, and
- as to the final language of the proposed rule. § 8051-B

The procedures for establishing the representative group of participants and keeping records of their meetings and decisions are found at §§ 8051-B(2) & (3).

An agency action to engage in or terminate a consensus-based rule development process is not subject to judicial review. § 8051-B(4)

C. Factors to Consider During Rule Development

1. Statutory Authority

Statutory Authority to Adopt Rule: Identify the state law that gives the agency specific rulemaking authority. § 8057-A(1)

The MAPA provisions do not relieve any agency of the responsibility to comply with any statute requiring that its rules be filed with or approved by any designated persons before they become effective. § 8057(3)

Consistency With Underlying State or Federal Law or Regulations § 8052(8)

If there is an inconsistency between a rule and the enabling law under which it was adopted, the law controls. *Therault v. Brennan*, 488 F. Supp. 286 (D.Me. 1980)

Most rules function to implement and interpret the statute administered by the agency. If a dispute were to arise in court over the agency's interpretation of the statute it administers or its regulations, the agency's interpretation will be given great deference. *National Industrial Constructors, Inc. v. Superintendent of Insurance*, 655A.2d 342, 345 (Me. 1995); *Abbott v. Comm'r in Inland Fisheries and Wildlife*, 623 A.2d 1273, 1275 (Me. 1993). However, the plain meaning of the statute always controls over an inconsistent administrative interpretation. *National Industrial Constructors, Inc.* at 345.

Delegation Doctrine Me. Const. Art. III, § 2 & Art. I § 6-A

A Legislative delegation of rulemaking authority must be accompanied by adequate standards and safeguards to assure that the delegation is not abused.

Adequate standards exist where "the legislation clearly reveals the purpose to be served by the regulations, explicitly defines what can be regulated for that purpose, and suggests the appropriate degree of regulation." *Lewis v. State Department of Human Services*, 433 A.2d 743, 748 (Me. 1981)

2. Agency Regulatory Agenda §§ 8053-A(2) & (3), 8060, 8064

Except for emergency rules, an agency may not adopt any rule unless the agency has listed the rule on its regulatory agenda. §§ 8060(6), 8064

When an agency proposed a rule not in its current regulatory agenda, the agency must file an amendment to its agenda with the Legislature and Secretary of State under section 8053-A at the time of rule proposal.
§ 8064

Contents: rules agency expects to propose prior to the next regulatory agenda due date (including amended, repealed, suspended rules - 8002(9)), whether the agency anticipates engaging in any consensus-based rule development process, and list of all emergency rules adopted since the previous regulatory agenda due date. § 8060(1)

3. Specific MAPA Rulemaking Requirements Regarding Fiscal Impact, Etc.

Goals and Objectives of the Rule §§ 8057-A(1)

All Relevant Information Regarding Economic, Environmental, Fiscal and Social Impact of the Rule §§ 8052(4), 8057-A

Economic Burden on Small Businesses §§ 8052(5-A), 8057-A(1)(D)

The agency must seek to reduce any economic burdens through flexible or simplified reporting requirements.

Fiscal Impact on Municipalities and Counties § 8063

The agency must estimate the cost to municipalities and counties for implementing or complying with the proposed rule, if any. A fiscal note describing this fiscal impact must be attached to the proposed rule before formal rulemaking is initiated.

Fiscal note requirement not applicable to emergency rules.
Unfunded mandate?

Plain English § 8061

Performance Standards § 8062

4. Incorporation of Other Standards by Reference § 8056(1)(B)

The reference in the rules must fully identify the incorporated rules by exact title, edition or version and the date of publication. § 8056(B)(2)

Cannot incorporate standards as they may be updated by the outside agency or organization in the future. An agency may only adopt the outside material as it exists at the time of adoption. If the agency wants to be able to enforce the incorporated standard when IT is updated, then it must initiate rulemaking at that time to amend its own rule to refer to updated standard.

If an agency refers to or requires compliance with another of its own rules in the proposed rule, the agency need not incorporate that other agency rule by reference

A rule may incorporate by reference a fact or event that has independent significance, such as: (these 2 cases deal with statutory provisions)

Commission of Pharmacy's requirement that pharmacists have a degree from a pharmacy school accredited by the American Council on Pharmaceutical Education even though list of accredited schools subject to change. Lucas v. Maine Commission of Pharmacy, 472 A.2d 904, 909 (Me. 1984)

Use by State Tax Assessor of the national Consumer Price Index published by the U.S. Department of Labor in assessing state tax even through CPI to be determined in the future. Opinion of the Justices, 460 A.2d 1341, 1348 (Me. 1982)

5. Effective Date §§ 8002(3-A), 8052(6), 8072(8)

Routine technical rules: Unless the agency otherwise specifies, the effective date is 5 days after the adopted rule is filed with the Secretary of State. Emergency rules are effective on the date the rule is filed with the Secretary of State. §§ 8002(3-A), 8052(6)

Major substantive rules are effective 30 days after the agency has finally adopted the rule, after the Legislative has reviewed the rule and given its approval for the agency to proceed with final adoption. § 8072(8)

"Sunset" Date: Usually rules go into effect and stay in effect until they are repealed in a separate rulemaking process. However, a rule can be adopted with a "sunset" provision, i.e. the rule will be automatically repealed on a specific date.

Both effective and "sunset" dates can be dependent upon the occurrence or nonoccurrence of an event. In the latter case, notice must be provided to the Secretary of State that the triggering event has occurred.

6. Unfunded State Mandates Me. Const. Art.19, §21, 30-A M.R.S.A. § 5658

Article 19, Section 21 of the Maine Constitution prevents the State from imposing any new mandate on municipalities, counties and other local units of government unless the Legislature provides 90% of the funds required on an annual basis or unless the Legislature approves such action by 2/3 vote. The legislation implementing the constitutional amendment is found at 30-A M.R.S.A. § 5658.

That statute defines “mandate” as “any law, rule or executive order of this State enacted, adopted or issued after November 23, 1992 that requires a local unit of government to expand or modify that unit’s activity so as to necessitate additional expenditures from that units local revenues.”
30-A M.R.S.A. § 5658(1)(C)

7. Takings Me. Const. Art. I, § 21, § 8056(6)

The MAPA specifically states that “[t]he Attorney General may not approve a rule if it is reasonably expected to result in an taking of private property under the Constitution of Maine unless such a result is directly by law or sufficient procedures exist in law or in the proposed rule to allow for a variance designed to avoid such a taking.” § 8056(6)

A regulatory taking occurs when property is regulated to such an extent that it deprives the landowner of all economic use of the property, taking into account the reasonable expectations of the property owner and preexisting principles of nuisance and real estate law prior to the onset of the regulations.

Lucas v. South Carolina Coastal Council, 113 S.Ct. 2264 (1993); Hall v. Board of Environmental Protection, 528 A.2d 453 (Me. 1987).

8. Enforceability/Unconstitutionally Vague Provisions

The rule must be written clearly enough that it gives regulated entities and individuals specific advance notice of the criteria they must meet and gives agencies sufficient guidance to assure that essential determinations are not left to personal whim or arbitrary discretion.

For a good discussion of caselaw, see Kosalka v. Town of Georgetown, 752 A.2d 183 (Me. 2000) (shoreland zoning ordinance requirement that all development must “conserve natural beauty” is unconstitutionally vague).

9. Nonregulatory Material in the Rule

Summary statements, “notes” added to rule text, and the basis statement/response to comments not part of the rule and need not be formally adopted. Nor are they enforceable.

10. Proper Format § 8056(1)(B)

The MAPA provides that all adopted rules must be filed with the Secretary of State in a specific format prescribed by the Secretary of State. See the Guide to Rulemaking.

D. Agency Recordkeeping During Rule Development §§ 8052(5)(B), 8057-A

Maintain a file of all information relevant to the rule that is being considered by the agency in developing the rule. § 8052(5)(B)

If consensus-based rule development process was used, keep records of all meetings and information shared in accordance with § 8051-B.

Gather information required to prepare the Fact Sheet to be provided to the Legislature at the time formal rulemaking is initiated (or, for emergency rules, within 10 days following adoption). §§ 8053-A, 8057-A

II. FORMAL RULEMAKING – PROPOSED AGENCY RULE

A. Definition of “Proposed Rule” §§ 8002(8-A), 8053(5), 8056

Means a rule that an agency has formally proposed for adoption by filing it with the Secretary of State. 8002(8-A) Once a draft rule has been filed with the SOS as a proposed rule, it becomes a “proposed agency rule” subject to all of the procedural requirements of the MAPA concerning public input.

B. Strict Adherence to Formal Rulemaking Process § 8052(1)

1. “Ex Parte” Contacts

Agency decisionmakers: While the ex parte provisions of MAPA § 9055 do not strictly apply to rulemaking proceedings, the MAPA process for receiving public input during rulemaking may not be ignored. All comments must be presented to the agency in the manner outlined in the MAPA.

Agency staff: Because agency staff are not decisionmakers, there is no bar on outside discussion of the proposed rule between staff and interested persons. But if the comments relayed to staff are to be considered by the agency decisionmaker(s) with authority to adopt the rule, they must be timely submitted in writing to be included in the rulemaking record.

2. "Meeting" v. "Hearing" § 8052(1)

"A public meeting or other public forum held by an agency for any purpose that includes receiving public comments on a proposed agency rule is a public hearing and is subject to all the provisions of this subchapter regarding public hearings." § 8052(1)

C. Notice of Proposed Rulemaking to Secretary of State, Public and Legislature §§ 8053, 8053-A(1) & (3)

See Secretary of State's Guide to Rulemaking

The Secretary of State's weekly consolidated rulemaking ad published in newspapers around the state each Wednesday § 8053(3)

Providing notice of a proposed rule is the one of three times the MAPA requires the agency to submit a notice for publication in the Secretary of State's consolidated rulemaking ad:

- Notice of proposed rule
- Notice of an extension of the written comment period for a proposed rule
- Notice of an adopted rule

Date of publication is important because the written comment period and the date of any hearing held on the proposed rule is based on this date.

At the time of rule proposal, the agency must file with the Legislature a fact sheet and, if the rule is not in the agency's current regulatory agenda, an amendment to the agency's regulatory agenda. §§ 8053-A(1) & (3), 8064

D. Public Proceedings – How Comments Received

1. Rulemaking With Hearing §§ 8052(1) & (2)

The MAPA itself does not require a hearing. A hearing will be held on a proposed rule whenever the agency chooses to schedule a hearing, a statute requires a hearing, or 5 or more people request a hearing after a proposed rule has been filed with a written comment period only. The MAPA requirements for hearings in adjudicatory proceedings do not apply to rulemaking hearings. § 8052(2)

The MAPA does require that, where a board or commission has rulemaking authority, at least 1/3 of the board or commission members be present at the rulemaking hearing. The MAPA also specifies who may conduct the hearing. § 8052(2)

The Guide to Rulemaking also contains specific suggestions for the conduct of rulemaking hearings..

Notice and Written Comment Period §§ 8053(1), (2) & (5)

Continuing or postponing a hearing – more notice required

The MAPA requires that the written comment period following a hearing be a minimum of 10 days. § 8052(3) It may be advisable to make this a longer period, perhaps as much as 30 days, if the agency thinks it may want to reopen the record for further written comments.

2. Rulemaking Without Hearing § 8053(1)

Notice and Written Comment Period §§ 8053(1), 8053(5)(A)

E. Reviewing Public Testimony and Comments

1. Agency Recordkeeping

The MAPA imposes strict recordkeeping requirements on the agency at this juncture -- the rulemaking file must contain all testimony and comments, the names of persons who commented and the organizations they represent. § 8052(5)(B)

2. Response to Comments

The agency must evaluate each comment and decide whether to make changes to the proposed rule based on the specific concerns expressed. § 8052(5) In its Response to Comments, the agency must address the specific comments and concerns expressed about any proposed rule and state its rationale for:

adopting any changes from the proposed rule,
failing to adopt the suggested changes, or
drawing findings and recommendations that differ from those
expressed about the proposed rule.

The MAPA § 8052(5)(B) provides that a rule may not be adopted unless the adopted rule is consistent with the terms of the proposed rule, except to the extent that

the agency determines that it is necessary to address concerns raised in comments about the proposed rule, or specific findings are made supporting changes to the proposed rule.

Deliberations By Multi-member Agencies: Be careful this does not turn into a public hearing.

F. Reopening Record for Further Written Comments if Rule to be Adopted “Substantially Different” from Proposed Rule §§ 8052(5)(B) & (7)

The MAPA requires that the agency reopen the rulemaking record and allow further written comment concerning the changes from the proposed rule if the agency determines that the rule to be adopted is “substantially different” from the proposed rule. § 8052(5)(B)

“Substantially different”: Would the affected public understand the change to be one within the broad scope of the original rulemaking proposal, or would it feel that it had not had an opportunity to comment on a significant change to its detriment?

Notice that written comment period extended (or reopened) for a period of 30 days § 8052(5)(B)

The notice must be published within 14 days after the most recently published written comment deadline. § 8052(7) Given the 8 day lead time required by the Secretary of State for the consolidated rulemaking ad, which occurs only on Wednesdays, this does not give the agency much time to review all the testimony and comments, conclude that substantial changes are needed, and reopen the record. Therefore, in a matter where the agency wants to reserve as much flexibility as possible, it is advisable to have a written comment period lasting more than the 10 day statutory minimum following a hearing. With a longer comment period following a hearing, say 30 days, the agency has more time to review the comments as they come in and to make a determination regarding the changes to the proposed rule that may be needed.

G. Preparation of Basis Statement and Response to Comments

1. Basis Statement § 8052(5)

Explain the factual and policy basis for the rule. § 8052(5)

Identify the underlying federal or state law or regulation which serves as the basis of the rule. § 8052(8)

Describe the information developed by the agency during the comment period concerning the purpose and operation of the rule, its fiscal impact, etc. §§ 8057-A(3) & (4)

2. Response to Comments § 8052(5)

List names of persons whose comments were received, including through testimony at hearings, the organizations they represent and summaries of their comments.

If the same or similar comments or concerns about a specific issue were expressed by different persons or organizations, the agency may synthesize these comments and concerns to be addressed by the agency, listing the names of the persons who commented and the organizations they represent.

The agency shall address the specific comments and concerns expressed about any proposed rule and state its rationale for adopting any changes from the proposed rule, failing to adopt the suggested changes or drawing findings and recommendations that differ from those expressed about the proposed rule.

III. ADOPTION AND AG APPROVAL OF ROUTINE TECHNICAL RULE

A. Deadlines for Adoption and AG approval §§ 8052(7)(A) & (B)

Adoption within 120 days of the last written comment deadline
AG approval within 150 days of the last written comment deadline

The 120 and 150 day deadlines start again when the agency reopens the rulemaking record for further written comments.

For a major substantive rule, the 120 day and 150 day deadlines apply to the provisional adoption of the rule, not final adoption. § 8072

B. Adoption by Agency Decisionmakers §§ 8002(1-A) & (3-B)

Final adoption of a routine technical rule occurs when the rule is signed by an agency head or voted on by a board or commission at a public meeting. 8002(1-A) & (3-B)

Record of vote: The agency must keep and make available for inspection a record of the vote of each member of the agency taken in the rulemaking proceedings. 8056(5)

C. Approval by AAG as to Form and Legality 8052(7)(B), 8056(1)(A), 8056(6)

AG review and approval of an adopted rule may not be performed by any person involved in the formulation or drafting of the proposed rule. 8056(6) Ask a colleague to review the rule.

D. Notice of Adopted Rule to Secretary of State, Public and Legislature

The agency submits to the Secretary of State a package consisting of the adopted rule, basis statement, response to comments, checklist, a copy of the fact sheet and a copy of any matter incorporated by reference 8053(5), 8053-A(4), 8056(1)(B), 8056-A, 8057-A(4)

This is the package that is sent to the AAG for review as to form and legality. If this is the first time the AAG has seen the rule, it is important for the AAG to consider each of the factors discussed earlier and all of the procedural requirements of the MAPA.

Minor errors may be corrected at this point if the 120 day deadline for adoption has not yet passed. The agency can re-adopt the rule as corrected and the AG can approve.

E. Post-adoption

Secretary of State correction of minor errors (nonsubstantive typographical, errors in numbering) 8056(10)

Electronic filing with Secretary of State 8056(7) & (8); 29 CMR 800

Publication of rules: Adopted rules must be published and made available to the public by the agency and the Secretary of State. 8056(1)(C), (2), (3), (7) & (9)

Note: agency must also publish forms, instructions and guidelines 8056(4)

IV. EMERGENCY RULEMAKING FOR ROUTINE TECHNICAL RULES
§§ 8002(3-A), 8053-A, 8054, 8060(1)(F) & (6), 8064

This is a fast track procedure for rulemaking that is limited to situations where the agency determines that adherence to the time-consuming notice and comment requirements might result in dangerous delay, preventing rules from having the necessary effect. § 8054

Agency may vary from the normal rulemaking procedures to the minimum extent necessary. § 8054

Effective date: date the adopted emergency rule is filed with the Secretary of State. § 8002(3-A)

Fact Sheet to be provided to the Legislature within 10 days following adoption of emergency rules. § 8053-A

Need not list in regulatory agenda §§ 8060(6), 8064; but regulatory agenda must list all emergency rules adopted since the previous regulatory agenda due date. § 8060(1)(F)

Limited period of effectiveness: An emergency rule is in effect only for 90 days, after which the rule must be adopted through the regular rulemaking process. § 8054(3)

Existence of an emergency: The emergency rule shall include, with specificity, agency findings with respect to:

the existence of an emergency (immediate threat to public health, safety or general welfare)

no emergency when the primary cause of the emergency is delay caused by the agency involved

the extent to which the MAPA provisions governing notice and the acceptance of public comment must be modified in order to mitigate or alleviate the threat found

The agency's findings are subject to judicial review. § 8054(2)

V. RULEMAKING INITIATED BY CITIZEN PETITION § 8055

Any person may petition an agency for the adoption or modification of any rule, on a form designated by the agency for this purpose. §§ 8055(1) & (2)

The Secretary of State has a form agencies can use.

Within 60 days of receiving a citizen rulemaking petition, the agency must either deny the petition in writing, stating the reasons for the denial, or initiate rulemaking proceedings. § 8056(3)

The agency is required to initiate rulemaking proceedings within 60 days if:

Petition is submitted by 150 or more registered voters of the state; petition must be verified and certified by the Secretary of State prior to its presentation to the agency. § 8056(3)

A citizen rulemaking petition is defective unless it is accompanied by an actual rule text. The Secretary of State's form for citizen rulemaking petitions requires that the rule text be attached. This requirement is necessary in order to prevent citizens from asking agencies to initiate rulemaking on some broad subject which would then require the agency to begin the sometimes lengthy process of drafting a rule.

VI. REQUIREMENT THAT AGENCIES ADOPT RULES OF PRACTICE
§ 8051

The MAPA requires each agency to adopt rules of practice governing:

Conduct of adjudicatory proceedings
Licensing proceedings
Rendering of advisory rulings – see § 9001 for required elements of rules regarding advisory rulings

... unless these types of rules are already provided by law. § 8051

If a rule of practice imposes a time limit or deadline for the filing of any papers on the agency or a party, the MAPA sets out standard provisions governing when the filing is complete. § 8051(1) & (2)

ADR: The first time after October 1, 1995 that an agency proposes to adopt or amend existing rules of practice, it shall also propose any rules reasonably necessary to promote the use of alternative dispute resolution techniques. § 8051

If the agency determines that it is unnecessary or inappropriate to propose ADR techniques into its rules of practice, it must state so in the notice of proposed rulemaking provided to the public and the Secretary of State, and again in the basis statement filed with the adopted rule. § 8051

VII. JUDICIAL REVIEW OF RULES

A. Collateral Attack in 80C appeals § 11007

Most court challenges to rules occur in the context of an 80C appeal of final agency action, in which an aggrieved party argues that the agency rule applied to him/her in an adjudicatory action is void or inapplicable.

“Rules” are generally open to collateral attack in an 80C appeal of final agency action. Gross v. Secretary of State, 562 A.2d 667 (Me. 1989); Fisher v. Dame, 433A.2d 366, 372 & n.8 (Me. 1981)

B. Direct Challenge to Rule § 8058

Under section 8058 a plaintiff may bring a declaratory judgment action to seek review of an agency rule per se, absent a specific adjudicatory action. This is a direct challenge to the validity of the rule.

Under section 8058(1), an adopted rule may be declared invalid when:

1. The rule exceeds rulemaking authority of agency.
2. Agency has failed to comply with certain procedural requirements involving public participation (notice, hearing, comment requirements) § 8057(1) or (2)

Failure to adhere to the provisions of sections 8052(1),(2),(3),(4) & (7), 8053 and 8054 renders the rule void, except that insubstantial deviations from the requirements of section 8053 (involving notice) shall not invalidate the rule. § 8057(1)

Rules not approved by the AG and filed with the Secretary of State as required by sections 8056(1)(A) & (B) are void. § 8057(2)

3. Agency has failed to comply with any other procedural error if the error rises to the level that, if the error had not occurred, the rule would have likely been significantly different.
4. The rule is arbitrary, capricious, an abuse of discretion or otherwise not in accordance with law.

Remember the court’s deference to agency interpretation of both law it administers and own rules.

Under section 8058, a person may also bring a declaratory judgment action to seek review of the agency's refusal or failure to adopt a rule where the adoption of a rule is required by law. If the court finds that an agency has failed to adopt a rule as required by law, the court may issue such orders as are necessary and appropriate to remedy such failure. § 8058(1)

No exhaustion of administrative remedies required: Need not bring an action under 8058 in order to bring an 80C appeal of final agency action under section 11007. The failure to seek judicial review under section 8058 does not preclude judicial review of rules in any other civil or criminal proceedings. § 8058(2)

VIII. MAJOR SUBSTANTIVE RULEMAKING §§ 8052(5)(C), 8071-8074

Maine Revised Statutes
Title 7: AGRICULTURE AND ANIMALS
Chapter 103: PRODUCTS CONTROLLED

**§610. DETERMINATIONS; RULES; RESTRICTED USE PESTICIDES;
UNIFORMITY**

1. Determinations. The board may by rule:

A. Declare as a pest any form of plant or animal life, except viruses, bacteria or other microorganisms on or in living human beings or other living animals, that is injurious to health or the environment; [2005, c. 2, §8 (COR).]

B. Determine whether pesticides registered under the authority of FIFRA, Section 24(c) are highly toxic to human beings. [2005, c. 620, §10 (AMD).]

C. Determine whether pesticides or quantities of substances contained in pesticides are injurious to the environment. The board must be guided by EPA regulations in this determination; and [2005, c. 620, §10 (AMD).]

D. Require any pesticide to be colored or discolored if it determines that such a requirement is feasible and is necessary for the protection of health and the environment. [2005, c. 620, §10 (AMD).]

[2005, c. 2, §8 (COR).]

2. Rule-making powers. The board may adopt other rules that it determines necessary to carry out the provisions of this subchapter. The board's rule-making authority includes, but is not limited to, rules:

A. Providing for the collection, examination and reporting of samples of pesticides or devices; [2005, c. 620, §10 (AMD).]

B. Providing for the safe handling, transportation, storage, display, distribution and disposal of pesticides and their containers; [2005, c. 620, §10 (AMD).]

C. Establishing requirements of all pesticides required to be registered under provisions of this subchapter, provided that such rules do not impose any requirements for federally registered labels in addition to or different from those required pursuant to FIFRA; [2005, c. 620, §10 (AMD).]

D. Specifying classes of devices that are subject to the provisions of section 605, subsection 1; [2005, c. 620, §10 (AMD).]

E. Governing pesticide application, including, but not limited to, rules:

(1) Designed to minimize pesticide drift to the maximum extent practicable under currently available technology;

(2) Prescribing procedures to be used for the application of pesticides, including the time, place, manner and method of that application;

(3) Restricting or prohibiting the use of pesticides in designated areas or during specified periods of time; and

(4) Prescribing tolerance levels for pesticide residues in off-target areas; [2005, c. 620, §10 (NEW).]

F. Prescribing the submission of information necessary for the board to undertake its responsibilities under this subchapter; [2005, c. 620, §10 (NEW).]

G. Prescribing requirements as necessary to carry out the provisions of section 607; [2005, c. 620, §10 (NEW) .]

H. Governing the registration and the cancellation and suspension of registration of pesticides pursuant to section 609; and [2005, c. 620, §10 (NEW) .]

I. For the purpose of achieving uniformity of requirements between the states and the Federal Government, provided the rules are in conformity with the primary pesticide standards, particularly as to labeling, registration requirements and criteria for classifying pesticides for restricted use, as established by EPA or other federal or state agencies. [2005, c. 620, §10 (NEW) .]

[2005, c. 620, §10 (AMD) .]

3. Uniformity of requirements; restricted uses.

[2005, c. 620, §10 (RP) .]

4. Designation of rules. Rules adopted under this subchapter are routine technical rules as defined in Title 5, chapter 375, subchapter 2-A unless otherwise specified or designated in accordance with subsection 5.

[2005, c. 620, §10 (NEW) .]

5. Review of regulatory agenda; designation as major substantive rules. Notwithstanding Title 5, section 8060, subsection 2, the due date for the submission of a regulatory agenda by the board under section 8060 is January 15th. The board shall annually submit a regulatory agenda complying with Title 5, section 8060, subsection 1 to the joint standing committee of the Legislature having jurisdiction over pesticides regulation. The legislative committee of jurisdiction shall complete its review of the board's regulatory agenda no later than February 15th of each year. The committee may report out legislation no later than February 20th to designate any rule on the board's regulatory agenda as a major substantive rule subject to legislative review under Title 5, chapter 375, subchapter 2-A.

[2005, c. 620, §10 (NEW) .]

6. Major substantive rules. Rules proposed for adoption by the board after July 1, 2007 that pertain to topics specified in paragraphs A to E are major substantive rules as defined in Title 5, chapter 375, subchapter 2-A. Rules in effect on July 1, 2007 that pertain to topics specified in paragraphs A to E continue in effect, except that proposed amendments to those rules are major substantive rules and must be reviewed and approved prior to final adoption in accordance with Title 5, section 8072. Rules proposed for adoption by the board after March 1, 2008 that pertain to topics specified in paragraphs F and G are major substantive rules as defined in Title 5, chapter 375, subchapter 2-A. Rules in effect on March 1, 2008 that pertain to topics specified in paragraph G continue in effect, except that proposed amendments to those rules are major substantive rules and must be reviewed and approved prior to final adoption in accordance with Title 5, section 8072. Topics governed by this subsection are:

A. Drift from outside spraying; [2007, c. 145, §1 (NEW) .]

B. Notification requirements for outside spraying; [2007, c. 145, §1 (NEW) .]

C. Pesticides applications in occupied buildings; [2007, c. 145, §1 (NEW) .]

D. A notification registry for indoor applications of pesticides; [2007, c. 484, §2 (AMD) .]

E. Buffers from shorelines for broadcast applications of pesticides; [2007, c. 484, §2 (AMD) .]

F. Use of organophosphate pesticides adjacent to occupied areas; and [2007, c. 484, §2 (NEW) .]

G. Distribution and use of plant-incorporated protectants. [2007, c. 484, §2 (NEW).]

[2007, c. 484, §2 (AMD) .]

SECTION HISTORY

1975, c. 382, §3 (NEW). 1977, c. 694, §§62,63 (AMD). 1989, c. 878, §E9 (AMD). RR 2005, c. 2, §8 (COR). 2005, c. 620, §10 (AMD). 2007, c. 145, §1 (AMD). 2007, c. 484, §2 (AMD).

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STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333

PAUL R. LEPAGE
GOVERNOR

WALTER E. WHITCOMB
COMMISSIONER

To: Board Members
From: Staff
Re: Rulemaking
Date: November 7, 2018

Some of the Federal Certification and Training Changes will require amendments to BPC rules. These changes are outlined below, along with other amendments which have been discussed at past meetings. The potential rulemaking are categorized by the following criteria:

Required C&T	Required by federal rule change
Optional C&T	Suggested by federal rule change
Housekeeping	Fairly minor and should require very little discussion.
Incorporate Policy	Will require some discussion on whether and how to incorporate the policy in rule but the objective is already written in policy.
Requires Discussion	Questions have been raised and a decision needs to be made on whether the rule needs to be amended. These will probably take the most time.

The fourth column designates type of rulemaking (see Title 7 Section 610(6)):

RT	Routine Technical
MS	Major Substantive

The chapters that must be amended are 10, 31, 32, and 50, so they are listed first. Complete list of chapters: 10, 31, 32, 50, 26, 27, 28, 36

The first column correspond to the attached reference documents.



1	Chapter 10	Amend definition of “Aerial Applicator” so that it does not automatically require commercial certification	Required C&T Requires Discussion	RT
2	Chapter 10 Section 2(P)(2)b	Incorporate policy regarding application of pesticides to unoccupied hotel rooms and apartments. Currently the rule specifies “occupied apartments” but is silent on “unoccupied apartments.” May want to consider the 7 day exception (section 2(P)(2)(d)ii) because indoors 7 days may not be enough	Incorporate Policy	MS
3	Chapter 10 Section 2(P)(2)(d)ii	Incorporate Policy Concerning Denying Access to the Public for Seven Days to Areas “Open to Use by the Public”	Incorporate Policy	RT
4	Chapter 31 Section 2(A)(II) and (VII); Section 3(B)(II) and (VII)c	Change Forest Pest Control to Forest Pest Management Change Disinfectant and Biocide Treatments to <ul style="list-style-type: none"> • 1 Disinfectant and Biocide Treatments • 2 Swimming Pool & Spa • 3 Mold Remediation & Water Damage Restoration To align with exams	Housekeeping	RT
5	Chapter 31 Section 5(A)(I)(a)	Remove requirement to collect SSN	Housekeeping	RT
6	Chapter 31 Section 5(A)(I)(d)	Amend to charge \$10 for Master Regulations Exam and \$40 for Master Oral exam	Housekeeping	RT
7	Chapter 31 5(A)(III) (a) (b) (c)	Remove exemptions for Post Harvest Treatment from having to take core exam.	Requires Discussion	RT
8	Chapter 31 Section 5(B)(I)	Remove specific categories of credits as we have never enforced this and don’t categorize recertification courses this way	Requires Discussion	RT
9	Chapter 31 Section 6(D)(II)	Remove section as we no longer charge for replacement or upgrade licenses (since it’s mostly digital)	Housekeeping	RT
10	Chapter 32 Section 7	Remove section on Transitioning to new license period	Housekeeping	RT

11	Chapter 32 Section 1	Amend list to include Label comprehension; Pests (but not the ability to identify specific pests); Responsibilities for supervisors of noncertified applicators; Stewardship; Ability to read and understand pesticide labeling	Required C&T	RT
12	Chapter 32 Section 2(A)(5)	Eliminate sections as EPA now requires ability to read labels	Required C&T	RT
13	Chapter 32	New Section—Create supplemental private categories which can be obtained in addition to certification for private licensure: Aerial application Soil fumigation Non-soil fumigation	Required C&T	RT
14	Chapter 32	<i>Applicators in categories likely to affect pollinators <u>should</u> receive information on protecting pollinators in competency standards under “avoiding harm to non-target organisms” and under reading and understanding the labeling requirements</i>	Optional C&T	RT
15	Chapter 31 Section 5(B) and Chapter 32 Section 2(B)	<i>Question: is this already covered in the existing rule?</i> Add criteria for determining: Content covered by the program and how BPC ensures the required content is covered; Process used to approve courses; How the applicator’s successful completion is verified How BPC ensures on-going quality of the continuing education program	Required C&T	RT
16	Chapter 31 Section 5(B) and Chapter 32 Section 2(B)	Require BPC to verify successful completion of each recertification course/event, including the identity of candidates for recertification	Required C&T	RT
17	Chapter 31 and Chapter 32	New Section—require a government-issued photo id for all exams	Required C&T	RT

18	Chapter 31 and Chapter 32	<p>Establish annual training requirement for noncertified applicators of RUPs which can be accomplished:</p> <ul style="list-style-type: none"> • Completing training outlined in the rule, or • Completing training as a handler under the WPS, or • Holding a valid applicator certification in an unrelated category from another jurisdiction • Satisfying the requirements for noncertified applicators established by the certifying authority that meet or exceed federal standards <p>Training must be provided by:</p> <ul style="list-style-type: none"> • A currently certified applicator, or • A certifying authority-designated trainer of certified applicators or handlers, or • A person who has completed an EPA-approved train-the-trainer course under the WPS <p>Supervising applicators must:</p> <ul style="list-style-type: none"> • Ensure noncertified applicators under their supervision are qualified under 171.2001(b)(2) and (c), including the minimum age requirement • Ensure the noncertified applicator has access to applicable labeling during use and provide specific instructions related to the application • Ensure a means for immediate communication between the supervisor and supervisee is available <p>Require records documenting noncertified applicator qualification—must have access to records for 2 years from date of RUP use</p>	Required C&T	RT
19	Chapter 31 and Chapter 32	<p>Establish minimum age for individuals certified as commercial or private applicators with the following exception:</p> <ul style="list-style-type: none"> • Persons using RUPs under the supervision of a private applicator who is an immediate family member must be at least 16 years old. The exception does not apply if the RUP is a fumigant or an RUP to be applied aurally. 	Required C&T	RT
20	Chapter 31 and Chapter 32	<p>Describe the credentials issued to each applicator verifying certification, which might include:</p> <p>Full name of applicator License number Type of certification (private/commercial) Categories/Commodities Expiration date A statement that the certification is issued by Maine</p>	Required C&T	RT
21	Chapter 50 Section 1(A) (II)	Add customer address	Required C&T	RT

22	Chapter 50 Section 1(A)(II)(b)	Add “name(s) of any noncertified applicator that made the application under the direct supervision of the certified applicator”	Required C&T	RT
23	Chapter 50 Section 1(A)(II)(c)	<i>Consider changing “distinct site” to “distinct location” or alternatively adding “location” to the list of requirements</i>	Optional C&T	RT
24	Chapter 50 Section 1(A)(II)(e)	Change TBT to something like “TBT and copper”. There are currently 4 federally registered TBT products—3 of which are only registered in Florida and the other is not currently registered in any other state. That said, TBT may come back to Maine, but people are also using copper compounds which pose a similar, but different risk to that applicator and marine life.	Housekeeping	RT
25	Chapter 50 Section 1(B)(I)	Clarify language with something like “Dealer records must include the name and address of each person to whom the RUP was distributed or sold”. It is not currently clear that the address is required.	Required C&T	RT
26	Chapter 50 Section 1(B)(I)	Clarify that in addition to recording the applicator’s certification number the dealer must also record the “issuing authority, certification expiration date, and categories of certification”.	Required C&T	RT
27	Chapter 50 Section 1(B)(II)	Change “chemical purchased” to “product name” and add “State special local need registration number (if applicable)”	Required C&T	RT
28	Chapter 50 Section 1(C)	Definition of “spray period” was repealed in Title 22 so Spray Period Records should not be required.	Housekeeping	RT
29	Chapter 50 Section 2	Consider changing the requirements to better suit reporting needs—liquid/solid, site based on application category, etc.	Housekeeping	RT
30	Chapter 50	During discussion of removing the requirements for monitors and spotters, the Legislature suggested that the spray application maps should be provided to the BPC after application.	Requires Discussion	RT
31	Chapter 26	Incorporate Interim Interpretative Policy on the Applicability of CMR 01-026 Chapter 26 (Clarify the definition of “occupied buildings” to mean fully enclosed indoor spaces inside building and that open air structures are not buildings for the purpose of the rule)	Incorporate Policy	MS
32	Chapter 27 Section 2(B)(4)ii	Change wording “a list of pesticide applications conducted on school grounds” to include “to school buildings” to clarify that all pesticide applications must be included in log	Housekeeping	RT

33	Chapter 27 Section 2(B)(5)	Change wording from “made in school buildings and on school grounds” to “made <u>to</u> school buildings and on school grounds” to clarify that it includes the exterior of buildings	Housekeeping	RT
34	27 Section 3(A)	Add insect repellents to the list of exemptions	Housekeeping	RT
35	Chapter 28 Section 3(B)(2)(d)v	Clarify that the telephone number on the sign must be a working number	Incorporate Policy	RT
36	Chapter 36	Repeal entire chapter—Certification and Licensing Provisions/Monitors and Spotters for Forest Insect Aerial Spray Program. Requirements were repealed in statute because they are no longer necessary with the current technology used in aircraft.	Housekeeping	RT

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**026 BOARD OF PESTICIDES CONTROL****Chapter 10: DEFINITIONS AND TERMS**

SUMMARY: These definitions and terms are defined as they specifically relate to the use of pesticides, the certification and licensing of pesticide applicators and dealers, and other areas as regulated by the Board in succeeding chapters.

Section 1. Consistent with Statute

All terms used in these Chapters shall be defined as indicated in Title 22 M.R.S.A., Chapter 258-A unless specifically provided herein.

Section 2. Definitions

- 1
- A. "Aerial applicator" means all persons who dispense pesticides by means of any machine or device used or designed for navigation of or flight in the air. All aerial applicators shall be considered commercial applicators and shall be individually certified.
 - B. "Agricultural pesticide application" means any application of a pesticide upon an agricultural commodity which is performed by or for a commercial agricultural producer.
 - C. "Air-carrier application equipment" means any application equipment that utilizes a mechanically generated airstream to propel the spray droplets.
 - D. "Applicant" means a person or persons who apply for a certification, license or permit authorized in 22 M.R.S.A. §1471-D or §1471-N.
 - E. "Branch office" means:
 - 1. any home, store or other business location where an employee of a spray contracting firm directly accepts requests for pest control services from clients through mail, telephone or walk-in inquiries, and
 - 2. any government or university office where employees receive regular direction to apply pesticides in connection with their duties.
 - 3. It does not include the home of an employee who receives work assignments and directions from a branch office with a master applicator.
 - F. "Calibration of equipment" means measurement of dispersal or output of application equipment and adjustment of such equipment to control the rate of dispersal, and droplet or particle size of a pesticide dispersed by the equipment.

-
- G. "Certification" means the recognition by the Board that an applicant has successfully fulfilled all the appropriate competency criteria as set forth in these Chapters.
- H. "Commercial agricultural producer" means, for the purposes of Chapter 50, any person who produces an agricultural commodity for commercial purposes.
- I. "Commercial applicator" means any person, unless exempted in I(4) hereunder, whether or not the person is a private applicator with respect to some uses, who:
1. Uses or supervises the use of any limited or restricted use pesticide other than as a private applicator; or
 2. Makes or supervises a custom application of a general use pesticide; or
 3. Applies a pesticide in connection with their duties as an official or an employee of federal, state, county, university or local government.
 4. The following classes of applicators are exempt from commercial certification/licensing requirements. Applications not listed below must be performed under the direct on-site supervision of a licensed commercial applicator Master and/or Operator.
 - a. Persons applying ready-to-use general use pesticides by hand or with non-powered equipment:
 - i. to control stinging insects when there is an urgent need to mitigate or eliminate a pest that is a threat to health or safety; or
 - ii. to repel biting insects on patients and other persons under their care or supervision who are unable to apply the material to themselves; or
 - iii. to repel biting insects on minors, such as students and campers, provided that a parent or legal guardian has authorized the application of insect repellents.
 - b. Persons applying general use antimicrobial products by hand or with non-powered equipment to interior or exterior surfaces and furnishings of buildings during the course of routine cleaning procedures.
 - c. Persons applying general use paints, stains or wood preservatives, except for the treatment of standing utility poles.
 - d. Persons installing hardware such as doorknobs and pushplates.
- J. "Commercial applicator/Master" means a commercial applicator who, unless exempted in Chapter 31, Section 1(Company/Agency Licensing Requirements), is responsible for the major pest control decisions including, but not limited to, identifying unusual pests and choosing the appropriate pest control strategies and techniques. This person is also

responsible for establishing policies relating to the operating practices of others applying pesticides within the company or agency. Such practices may include equipment maintenance and calibration, employee training, safety and hygiene, pesticide and container disposal, accident mitigation and ensuring that applications are conducted in compliance with all state and federal laws and regulations.

- K. "Commercial applicator/Operator" means a commercial applicator who:
1. applies or directs the application of a pesticide according to the instructions of the master when a master is required according to Chapter 31, Section 1 (Company /Agency Licensing Requirements); or
 2. applies or directs the application of a pesticide and performs the function of the master applicator when a separate master is not required according to Chapter 31, Section 1(Company/Agency Licensing Requirements).
- L. "Compact urban line" means that delineation made by the Maine Department of Transportation which denotes a section of the highway where structures are nearer than 200 feet apart for a distance of one-quarter of a mile.
- M. "Compatibility" means that property of a pesticide that permits its use with other chemicals without undesirable results being caused by the combination.
- N. "Competent" means properly qualified to perform functions associated with pesticide application, the degree of capability required being directly related to the nature of the activity and the associated responsibility.
- O. "Common exposure route" means a likely way (oral, dermal, respiratory) by which a pesticide may reach and/or enter an organism.
- P. "Custom application" means an application of a pesticide:
1. Under contract or for which compensation is received;
 - a. For the purposes of this definition, "under contract" includes: verbal or written agreements to provide services which include the use of any pesticide; i.e., private or commercial rental agreements, pest control service agreements, landscape maintenance agreements, etc.
 - b. For purposes of this definition, compensation is deemed to have been received for a pesticide application where any form of remuneration has been or will be exchanged, including payment of cash, rent, or other financial consideration, or by the exchange of goods and/or services. This also includes any agreements where crops grown on rented land will be sold to the landowner or are otherwise grown for the benefit of the land owner.

2. To a property open to use by the public;
 - a. For purposes of this definition, property is deemed to be open to use by the public where its owner, lessee or other lawful occupant operates, maintains or holds the property open or allows access for routine use by members of the public. Persons are considered to be members of the public even though they may pay a fee or other compensation in order to make use of the property or may visit the property for a commercial purpose.
 - 2 b. Property open to use by the public includes but is not limited to: shopping centers, office and store space routinely open to the public (i.e. rest rooms, self-service areas and display aisles), common areas of apartment buildings, occupied apartments, public pools and water parks, schools and other institutional buildings, public roads, organized recreational facilities, golf courses, campgrounds, parks, parking lots, ornamental and turf areas around condominiums, apartment buildings, stores malls and retail areas of greenhouses and nurseries if the public is allowed access before the pesticide restricted-entry or re-entry interval elapses.
 - c. Examples of property not open to use by the public include without limitation: farms, forest lands, and private residential or commercial property which is not routinely operated or maintained for use by the public or otherwise held open to public use.
 - 3 d. Notwithstanding this definition, property shall not be deemed to be open for use by the public in the following cases:
 - i. where the property is devoted primarily to agricultural, forest, ornamental tree or plant production, but this exception shall not apply to campgrounds, leased inholdings or roads within such property which are open for use by the public;
 - ii. where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application;
 - iii. forestry rights of way where the property has been closed during the time of spraying or during the label restricted entry interval or re-entry period, whichever is greater.
3. In a food establishment licensed under M.R.S. 22, Chapter 551, or an eating establishment licensed under M.R.S. 22, Chapter 562, except that “custom application” does not include a pesticide application at a licensed food or eating establishment when:
 - a. The establishment is ancillary to the production of an agricultural commodity;
 - b. The owner or an employee of that establishment is certified as a private applicator under section 1471-C, subsection 2; and

- c. The property is not open to the public.
4. A pesticide application shall not be deemed a custom application where it is undertaken by a licensed private applicator on property owned or rented by him or his employer or in trade for personal agricultural services between producers of agricultural commodities.
- Q. "Distribute" means to offer for sale, hold for sale, sell, barter, ship, deliver for shipment or receive and, having so received, deliver or offer to deliver pesticides in this state. This also means giving free samples of unregistered products to any person. Sales of hardware, such as doorknobs and pushplates, shall not be considered distribution for the purposes of this definition.
- R. "Environment" means water, air, land, and all plants and man and other animals living therein, and the interrelationships that exist among them.
- S. "Forest" means a concentration of trees and related vegetation managed primarily for the production of forest agricultural commodities such as timber, fiber or other wood products, including other similar areas managed for recreation or resource conservation.
- T. For the purposes of 22 M.R.S. §1471-D (9), "Government Employee" means a person who is employed full- or part-time as a regular employee of any governmental or quasi-governmental organization including federal, state, county and municipal governments and public universities.
- U. "Hazard" means a probability that a given pesticide will have an adverse effect on man or the environment in a given situation, the relative likelihood of danger or ill effect being dependent on a number of interrelated factors present at any given time.
- V. "Host" means any plant or animal on or in which another lives for nourishment, development, or protection.
- W. "Integrated Pest Management" (IPM) means the selection, integration and implementation of pest damage prevention and control based on predicted socioeconomic and ecological consequences, including: (1) understanding the system in which the pest exists, (2) establishing dynamic economic or aesthetic injury thresholds and determining whether the organism or organism complex warrants control, (3) monitoring pests and natural enemies, (4) when needed, selecting the appropriate system of cultural, mechanical, genetic, including resistant cultivars, biological or chemical prevention techniques or controls for desired suppression, and (5) systematically evaluating the pest management approaches utilized.
- X. "Integrated Pest Management Coordinator" means the lead person in a school system or school who is knowledgeable about integrated pest management and is designated by each school to implement the school pest management policy.

- Y. "License" means a commercial applicator license, a private applicator certification, a dealer license, a permit to chemically control vertebrate animals, or a permit to apply limited use pesticides.
- Z. "Licensing" means the issuance by the Board of a document signifying that the applicant has been certified and has met all applicable employee, fee, insurance and reporting requirements.
- AA. "Major application project" means any pesticide application contract that requires the applicator to apply pesticides to more than 1000 acres in the aggregate within a given year. This does not include repeat applications to the same site.
- BB. "Major pesticide storage facility" means any fixed-site, totally enclosed building or portion of such building owned and/or operated by a pesticide distributor where pesticides are held in storage and which meets one of the following criteria:
1. contains at any one time an amount greater than or equal to 6,000 pounds of dry pesticide product, other than dry formulations of products listed in Chapter 24, Section 2, "Exempted Products," or
 2. contains at any one time an amount greater than or equal to 600 gallons of liquid pesticide product, other than liquid formulations of products listed in Chapter 24, Section 2, "Exempted Products," or
 3. contains liquid pesticides in containers that are thirty (30) gallons or greater in size, other than liquid formulations of products listed in Chapter 24, Section 2, "Exempted Products."
- CC. "Minor pesticide storage facility" means any fixed-site, totally enclosed building or portion of such building owned and/or operated by a pesticide distributor where pesticides are held in storage and which meets one of the following criteria:
1. contains at any one time an amount greater than 100 pounds but less than 6,000 pounds of dry pesticide product, other than dry formulations of products listed in Chapter 24, Section 2, "Exempted Products," or
 2. contains at any one time an amount greater than 50 gallons but less than 600 gallons of liquid pesticide, other than liquid formulations of products listed in Chapter 24, Section 2, "Exempted Products," or
 3. contains liquid pesticides in containers greater than three (3) gallons but less than thirty (30) gallons in size, other than liquid formulations of products listed in Chapter 24, Section 2, "Exempted Products."
- DD. "Non-agricultural pesticide application" means any application of a pesticide that is not an agricultural pesticide application.
- EE. "Non-powered equipment" means pesticide spray equipment which pumps and disperses pesticides without utilization of an electric, gasoline, wind-driven or other motorized power source. By way of example, non-powered equipment includes manual pump spray

equipment and self-contained aerosol spray cans or bottles but does not include equipment which employs a motor, except one powered only by hand.

- FF. “Non-target organism” means a plant or animal other than the one against which the pesticide is applied.
- GG. "Off-target direct discharge of pesticides" means the direct application of pesticides onto property beyond the boundaries of the target area intended to be treated. Presence of off-target direct discharge of pesticides may be determined by any evidence, through observation, residue samples or other techniques, that an off-target area has received substantially the same dose of pesticide as a target area.
- HH. "Off-target drift of pesticides" means the drifting of pesticides by air currents or diffusion with resulting deposition of pesticides onto property beyond the boundaries of the target area intended to be treated. The detection of pesticides beyond the boundaries of the target area intended to be treated shall be presumed to be as a result of off-target drift unless there is evidence of off-target direct discharge of pesticides.
- II. "Ornamental plant" means shrubs, trees and related vegetation in and around habitation generally, but not necessarily, located in urban and suburban areas, including residences, parks, streets, retail outlets, and industrial and institutional buildings.
- JJ. "Other forest pests" means forest pests, other than insects and include, but are not limited to, weeds, mites, nematodes, fungi, bacteria, and viruses.
- KK. "Owner" means sole proprietor, partner or stockholder.
- LL. "Person" means any individual, partnership, fiduciary, corporation, governmental entity, association or public or private organization of any character, other than the Board.
- MM. "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling or mitigating any pest; any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant; and any nitrogen stabilizer. It does not include multicellular biological controls such as mites, nematodes, parasitic wasps, snails or other biological agents not regulated as pesticides by the U.S. Environmental Protection Agency.
- NN. "Pesticide dealer" means any person who distributes limited or restricted-use pesticides, including but not limited to sales personnel in an outlet, field salesmen, and manufacturers' representatives selling pesticides directly to the consumer or who accept orders for pesticides.
- OO. "Pesticide distributor" means any person required to be licensed to distribute general, restricted or limited use pesticides.
- PP. "Pesticide storage facility" means any fixed-site, totally enclosed building or portion of such building where pesticides are held for storage.
- QQ. “Practical knowledge” means the possession of pertinent facts and comprehension together with the ability to use them in dealing with specific problems and situations.

- RR. "Principal place of business" means the principal location, either residence or office, in the State in which an individual, partnership, or corporation applies pesticides.
- SS. "Private Applicator" means any person who uses or supervises the use of any pesticide which is classified for restricted or limited use for purposes of producing any agricultural commodity on property owned or rented by him or his employer or, if applied without compensation other than the trading of personal services between producers of agricultural commodities, on the property of another person. In situations where the applicator is applying pesticides to crops on rented land, there must be a written contract showing that the grower/applicator retains control over the property as well as the disposition or sale of the harvested crop.
- TT. "Private domestic well" means any well used for drinking water other than one which serves a public water system.
- UU. "Project" means, for the purposes of Chapter 51, the aerial application of pesticides to control an individual forest insect pest complex provided by:
1. Any number of applicator businesses for a single person, or
 2. One applicator business on contiguous parcels of land.
- VV. "Public precautions" means those statements which appear on the pesticide label directed towards the non-applicator public. Public precautions may include, but are not limited to, re-entry intervals.
- WW. "Public water system" means any water supply system that provides water to at least 15 service connections or serves water to at least 25 individuals daily for at least 30 days a year.
- XX. "Regulated pest" means a specific organism considered by a State or Federal agency to be a pest requiring regulatory restrictions, regulations, or control procedures in order to protect the host, man and/or his environment.
- YY. "School" means any public or private elementary or secondary school, kindergarten or nursery school that is part of an elementary or secondary school or a tribally funded school.
- ZZ. "School Building" means any structure used or occupied by students or staff of any school.
- AAA. "School Grounds" means:
1. land associated with a school building including playgrounds, athletic fields and agricultural fields used by students or staff of a school, and
 2. any other outdoor area used by students or staff that is under the control of a school.
- BBB. "Self-service sales area" means any area within or immediately outside a retail or wholesale business in which members of the public have direct access to pesticide products. For the purposes of this chapter, self-service sales areas shall be limited to

those pesticide products which require a pesticide dealer to be licensed under 22 M.R.S.A. §1471-W, "General Use Pesticide Dealers."

- CCC. "Sensitive area" means any of the following, except where the area involved is the intended target of the pesticide application:
1. Apiaries, the location of which is registered with the Department of Agriculture, Conservation and Forestry pursuant to 7 M.R.S.A. §2701;
 2. Critical areas designated by the Board pursuant to 22 M.R.S.A. §1471-M(2);
 3. Public wells, drinking water springs used by the public, and public water supply intake points, provided the location of the same is known or should reasonably be known to the pesticide applicator;
 4. Private sources of drinking water, where the owner or legal user thereof has given prior notice of the location of such source to the landowner or lessee of the area which will be subject to a pesticide application;
 5. Water bodies, including streams, brooks, rivers, ponds, lakes, estuaries and marine waters, provided that any such water body contains water at the time of the pesticide application and is known to the spray applicator or is reasonably detectable from visual observation, reasonably available maps or reasonable inquiry. This term shall not include: (a) in the case of forest aerial spray programs, streams and brooks that are neither shown on reasonably available maps nor visible from an aircraft operating at 1000 feet in elevation above ground level; and (b) waters that are confined and retained completely upon the property of the person conducting or contracting for spray services, and that do not drain into or connect with any other water body;
 6. Wetlands of Special Significance.
 7. Cleared areas where livestock are contained or pastured, cultivated land, cropland or gardens.
 8. A "Sensitive Area Likely to Be Occupied" is an area where humans are likely to be present including the following:
 - a. Residential buildings, together with any associated maintained areas likely to be occupied by humans, such as lawns, gardens, recreational areas and livestock management and housing areas;
 - b. School buildings, together with any associated maintained areas that are areas likely to be occupied by humans, such as playgrounds, athletic fields or courts;
 - c. Commercial, institutional, or other structures likely to be occupied by humans, together with any associated maintained areas such as lawns, gardens, parking and recreational areas;

- d. Maintained recreational areas likely to be occupied by humans including campgrounds, picnic areas, marked roadside rest areas, marked hiking trails, park and recreation facilities, athletic fields, and other areas for organized sports or recreation. This definition does not include trails located on privately owned lands which are used by permission of the landowner.
- DDD. "Spray application" means, for the purposes of Chapter 51, the dispensing of pesticides in any manner from an aircraft.
- EEE. "Spray contracting firm" means any person, including a corporation, employed or contracted to conduct a public or private custom application of one or more pesticides. This term does not include:
1. the owner or lessee of land to be sprayed and employees of that landowner or lessee,
 2. the Division of Forestry and the employees of the Division of Forestry,
 3. individuals who are certified as commercial applicators providing that individual does not have in his/her employment one or more others to undertake pesticide applications; or
 4. persons who perform custom applications of pesticides solely on or within a premises which they own or lease.
 5. persons and corporations that subcontract for pesticide applications, but do not maintain any control over the pesticide application including which pesticides are applied, when they are applied or how they are applied.
- FFF. "Spray period report" means a written description of the spray activity certifying the date and time, the area usually sprayed, the pesticide used, and including a description of the weather conditions during spray activity. The report must also include a map showing where spray booms were turned on and off, with notation of any non-target areas that were sprayed.
- GGG. "Standard" means the measure of knowledge and ability that must be demonstrated as a requirement for certification.
- HHH. "Storage" means holding pesticides for distribution in locations other than self-service sales areas.
- III. "Susceptibility" means the degree to which an organism is affected by a pesticide at a particular level of exposure.
- JJJ. "Toxicity" means the property of a pesticide to cause any adverse physiological effects.
- KKK. "Uncertified person" means any person who is not holding a currently valid certification document indicating that he is certified under section 4 of FIFRA in the category of the restricted use pesticide made available for use.

- LLL. "Wetlands of Special Significance" means all coastal wetlands and great ponds. In addition, certain freshwater wetlands are considered wetlands of special significance if they have one or more of the following characteristics.
1. **Critically imperiled or imperiled community.** The freshwater wetland contains a natural community that is critically imperiled (S1) or imperiled (S2) as defined by the Natural Areas Program.
 2. **Significant wildlife habitat.** The freshwater wetland contains significant wildlife habitat as defined by 38 M.R.S.A. §480-B(10).
 3. **Location near coastal wetland.** The freshwater wetland area is located within 250 feet of a coastal wetland.
 4. **Location near GPA great pond.** The freshwater wetland area is located within 250 feet of the normal high water line, and within the same watershed, of any lake or pond classified as GPA under 38 M.R.S.A. §465-A.
 5. **Aquatic vegetation, emergent marsh vegetation or open water.** The freshwater wetland contains under normal circumstances at least 20,000 square feet of aquatic vegetation, emergent marsh vegetation or open water, unless the 20,000 or more square foot area is the result of an artificial ponds or impoundment.
 6. **Wetlands subject to flooding.** The freshwater wetland area is inundated with floodwater during a 100-year flood event based on flood insurance maps produced by the Federal Emergency Management Agency or other site-specific information.
 7. **Peatlands.** The freshwater wetland is or contains peatlands, except that the Department of Environmental Protection may determine that a previously mined peatland, or portion thereof, is not a wetland of special significance.
 8. **River, stream or brook.** The freshwater wetland area is located within 25 feet of a river, stream or brook.
-

STATUTORY AUTHORITY: 22 M.R.S.A., Chapter 258-A

EFFECTIVE DATE:

July 6, 1979

AMENDED:

April 27, 1988

May 21, 1996

August 17, 1996

October 2, 1996

EFFECTIVE DATE (ELECTRONIC CONVERSION):

March 1, 1997

AMENDED:

April 14, 1998 - inserted definitions for "Agricultural pesticide application" and "Non-agricultural pesticide application"; renumbered; converted to MS Word.

March 5, 2003

NON-SUBSTANTIVE CORRECTION:

February 17, 2004 - cross reference in Section 2.H

AMENDED:

January 4, 2005 – filing 2004-602

March 4, 2007 – Section 2(I)(4)(c), filing 2007-64

July 16, 2009 – filing 2009-251 (major substantive final adoption)

January 29, 2013 – filing 2013-014

CORRECTIONS:

February, 2014 – agency names, formatting



PAUL R. LEPAGE
GOVERNOR

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
28 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0028

WALTER E. WHITCOMB
COMMISSIONER

HENRY S. JENNINGS
DIRECTOR

MEMORANDUM

Date: April 24, 2015
To: Board Members
From: Gary Fish
Subject: Policy regarding application of pesticides to unoccupied hotel rooms and apartments

Background

At the December 5, 2014 meeting the Board had a discussion regarding pesticide applications to hotel rooms and unoccupied apartments. State statutes define pesticide applications made to property open to use by the public as “custom applications” which may only be conducted by a licensed commercial applicator.

Section 2 (P) (2) of Chapter 10 defines “property open to use by public” and when those areas are NOT considered open to the public. One of those exemptions includes, “where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application.”

The Board recognized that indoor pesticide applications inherently pose greater risks to building occupants than outdoor applications because the confined space of a residential building inhibits both the dissipation and breakdown of airborne and surface pesticide residues. Due to these concerns, the Board came to a consensus that the term “property” means the entire building when it involves residential apartments and lodging places¹.

Board Policy

Based on the considerations described above, the Board adopted the following policy on April 24, 2015:

The Board determined that because indoor applications pose greater risks to building occupants, lodging places and apartment buildings should not be included as exemptions to areas open to the public. Therefore all pesticide applications to lodging places or apartment buildings must be made under the direct supervision of a licensed commercial applicator unless the public is excluded from the entire building for the full seven days.

¹Lodging Places - LODGING PLACES means every building or structure, or any part thereof, used, maintained, advertised or held out to the public as a place where sleeping accommodations are furnished to the public for business purposes. The term includes, but not by way of limitation, hotels, motels, guest homes and cottages. A Lodging License is required for any person or entity which rents out four or more rooms or cottages. CMR 10-144 Chapter 206



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MAINE BOARD OF PESTICIDES CONTROL

**POLICY CONCERNING DENYING ACCESS TO THE PUBLIC
FOR SEVEN DAYS TO AREAS “OPEN TO USE BY THE PUBLIC”**

ADOPTED July 10, 2015

Background

At the December, 2014, and the April and June, 2015 meetings, the Board had discussions regarding pesticide applications to private lands which are held open for public use. State statutes define pesticide applications made to property open to use by the public as “custom applications” which may only be conducted by a licensed commercial applicator.

Section 2 (P) (2) of Chapter 10 defines “property open to use by the public.” Property is deemed to be open to use by the public where its owner, lessee or other lawful occupant operates, maintains or holds the property open or allows access for routine use by members of the public. The rule also defines when those areas are NOT considered open to the public.

One of those exemptions includes areas, “where the public has not been permitted upon the property at any time within seven days of when the property received a pesticide application.”

The Board discussed what the term “property” means in the context of this exemption and whether or not to interpret it in a way that allows land trusts and other land owners to control invasive plants or other vegetation and then close off only the area that was treated instead of the entire property.

Board Policy

The Board determined that because pesticide applications to recreational areas, trails and parks pose minimal risks, the exemption from consideration as a “property open to use by the public” is appropriate when the public is excluded from treated areas for seven days. Therefore pesticide applications under those circumstances will not require supervision by a licensed commercial applicator.

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

026 BOARD OF PESTICIDES CONTROL

Chapter 31: CERTIFICATION AND LICENSING PROVISIONS/COMMERCIAL APPLICATORS

SUMMARY: These regulations describe the requirements for certification and licensing of commercial applicators.

1. Individual Certification and Company/Agency Licensing Requirements

- A. Any commercial applicator must be either:
 - I. licensed as a commercial applicator/master; or
 - II. licensed as a commercial applicator/operator; or
 - III. supervised on-site by either a licensed commercial applicator/master or a commercial applicator/operator who is physically present on the property of the client the entire time it takes to complete an application conducted by an unlicensed applicator. This supervision must include visual and voice contact. Visual contact must be continuous except when topography obstructs visual observation for less than five minutes. Video contact does not constitute visual observation. The voice contact requirement may be satisfied by real time radio or telephone contact. In lawn care and other situations where both the licensed and unlicensed applicator are operating off the same application equipment, the licensed applicator may move to an adjoining property on the same side of the street and start another application so long as he or she is able to maintain continuous visual and voice contact with the unlicensed applicator.
- B. All commercial applicator licenses shall be affiliated with a company/agency and shall terminate when the employee leaves the employment of that company or agency.
- C. Individuals certified as commercial applicators are eligible to license with one or more companies/agencies upon submission of the application and fee as described in Section 6 of this regulation. The individual's certification remains in force for the duration of the certification period as described in Section 5 of this regulation.
- D. Each branch office of any company, agency, organization or self-employed individual ("employing entity") required to have personnel licensed commercially under state pesticide law shall have in its employment at least one master applicator. This Master must be licensed in all categories which the branch office of the company or agency performs applications and any Operators must also be licensed in the categories in which they perform or supervise pesticide applications. This master applicator must actively supervise persons applying pesticides within such employing entity and have the ability

to be on site to assist such persons within six (6) hours driving time. Whenever an out-of-state employing entity is conducting a major application project they must have a master applicator within the state.

E. Exemptions

- I. Employing entities only performing post harvest treatments to agricultural commodities are exempt from master licensing requirements.
- II. Persons applying pesticides to household pets and other non agricultural domestic animals are exempt from commercial applicator licensing.
- III. Swimming pool and spa operators that are certified by the National Swimming Pool Foundation, National Spa and Pool Institute or other organization approved by the Board are exempt from commercial applicator licensing. However, these persons must still comply with all provisions of C.M.R. 10-144, Chapter 202 – Rules Relating to Public Swimming Pools and Spas Administered by the Maine Bureau of Health.
- IV. Certified or licensed Wastewater or Drinking Water Operators applying registered disinfectants to waste or drinking water as part of their employment.
- V. Adults applying repellents to children with the consent of parents/guardians.
- VI. Persons installing antimicrobial metal hardware.

2. Categories of Commercial Applicators

- A. All commercial applicators shall be categorized according to the type of work performed as outlined below:
 - I. **Agricultural Animal and Plant Pest Control**
 - a. **Agricultural Animal** - This subcategory includes commercial applicators using or supervising the use of pesticides on animals and to places on or in which animals are confined. Doctors of Veterinary Medicine engaged in the business of applying pesticides for hire as pesticide applicators are included in this subcategory; however, those persons applying pesticides as drugs or medication during the course of their normal practice are not included.
 - b. **Agricultural Plant** - This subcategory includes commercial applicators using or supervising the use of pesticides in the production of crops including blueberries, orchard fruit, potatoes, vegetables, forage, grain and industrial or non-food crops.

Option I - Limited Commercial Blueberry - This option includes commercial applicators using or supervising the use of pesticides in the production of blueberries only.

Option II - Chemigation - This option includes commercial applicators using or supervising the use of pesticides applied through irrigation equipment in the production of crops.

Option III - Agricultural Fumigation - This option includes commercial applicators using or supervising the use of fumigant pesticides in the production of crops.

Option IV - Post Harvest Treatment - This option includes commercial applicators using or supervising the use of pesticides in the post harvest treatment of food crops.

4 II. **Forest Pest Control**

This category includes commercial applicators using or supervising the use of pesticides in forests, forest nurseries, Christmas trees, and forest seed producing areas.

III. **Ornamental and Turf Pest Control**

- a. **Outdoor Ornamentals** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of outdoor ornamental trees, shrubs and flowers.
- b. **Turf** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of turf, such as at turf farms, golf courses, parks, cemeteries, athletic fields and lawns.
- c. **Indoor Ornamentals** - This subcategory includes commercial applicators using or supervising the use of pesticides to control pests in the maintenance and production of live plants in shopping malls, businesses, residences and institutions.

IV. **Seed Treatment**

This category includes commercial applicators using or supervising the use of pesticides on seeds.

V. **Aquatic Pest Control**

- a. **General Aquatic** - This subcategory includes commercial applicators using or supervising the use of pesticides applied directly to surface water, including but not limited to outdoor application to public drinking

water supplies, golf course ponds, rivers, streams and wetlands. Excluding applicators engaged in public health related activities included in categories VII(e) and VIII below.

- b. **Sewer Root Control** - This subcategory includes commercial applicators using or supervising the use of pesticides applied to sewers to control root growth in sewer pipes.

VI. **Vegetation Management**

- a. **Rights-of-Way Vegetation Management** - This subcategory includes commercial applicators using or supervising the use of pesticides in the management of vegetation on utility, roadside and railroad rights-of-way.
- b. **General Vegetation Management** - This subcategory includes commercial applicators using or supervising the use of pesticides in the management of vegetation (including invasive plants) on sites not included in category VI a including, but not limited to, municipal and other publicly owned properties, industrial or commercial plants and buildings, lumber yards, airports, tank farms, storage areas, parking lots, sidewalks, and trails.

VII. **Industrial, Institutional, Structural and Health Related Pest Control**

- a. **General** - This subcategory includes commercial applicators using or supervising the use of pesticides in, on or around human dwellings, office buildings, institutions such as schools and hospitals, stores, restaurants, industrial establishments (other than in Category 6) including factories, warehouses, food processing plants, food or feed transportation facilities and other structures, vehicles, railroad cars, ships, aircraft and adjacent areas; and for the protection of stored, processed or manufactured products. This subcategory also includes commercial applicators using or supervising the use of pesticides to control rodents on refuse areas and to control other pests, including but not limited to birds and mammals.
- b. **Fumigation** - This subcategory includes commercial applicators using or supervising the use of fumigants or fumigation techniques in any type of structure or transportation device.
- c. **Disinfectant and Biocide Treatments** - This subcategory includes commercial applicators using or supervising the use of pesticides to treat water in manufacturing, swimming pools, spas, industrial cooling towers, public drinking water treatment plants, sewers and air conditioning systems.
- d. **Wood Preserving** - This subcategory includes commercial applicators using or supervising the use of restricted use pesticides to treat lumber, poles, railroad ties and other types of wooden structures including

bridges, shops and homes. It also includes commercial applicators applying general use pesticides for remedial treatment to utility poles.

- e. **Biting Fly & other Arthropod Vectors** - This subcategory includes commercial applicators and non-public health governmental officials using or supervising the use of pesticides in management and control of biting flies & other arthropod vectors of public health and public nuisance importance including, but not limited to, ticks, mosquitoes, black flies, midges, and members of the horsefly family.
- f. **Termite Pests** - This subcategory includes commercial applicators using or supervising the use of pesticides to control termites.

VIII. **Public Health Pest Control**

- a. **Biting Fly Pests** - This subcategory includes governmental officials using pesticides in management and control of potential disease vectors or other pests having medical and public health importance including, but not limited to, mosquitoes, black flies, midges, and members of the horsefly family.
- b. **Other Pests** - This subcategory includes governmental officials using pesticides in programs for controlling other pests of concern to public health including, but not limited to, ticks and birds and mammal vectors of human disease.

IX. **Regulatory Pest Control**

This category includes governmental employees using pesticides in the control of pests regulated by the U.S. Animal and Plant Health Inspection Service or some other governmental agency.

X. **Demonstration and Research Pest Control**

This category includes all individuals who (1) demonstrate to the public the proper use and techniques of application of pesticides or supervise such demonstration, (2) conduct field research with pesticides, and in doing so, use or supervise the use of pesticides. Individuals who conduct only laboratory-type research are not included. Applicants seeking certification in this category must also become certified in whatever category/subcategory they plan to make applications under; e.g., Categories I - IX.

XI. **Aerial Pest Control**

This category includes commercial applicators, including pilots and co-pilots, applying or supervising the application of pesticides by means of any aircraft. Applicants seeking certification in this category must also become certified in whatever category/subcategory they plan to make applications under; e.g., Categories I - IX.

3. **Competency Standards for Certification of Commercial Applicators**

- A. Applicants seeking commercial certification must establish competency in the general principles of safe pest control by demonstrating knowledge of basic subjects including, but not limited to, pesticide labeling, safety, environmental concerns, pest organisms, pesticides, equipment, application techniques and applicable laws and regulations. (Core Exam).
- B. Applicants seeking commercial certification must demonstrate competency in each applicable category or subcategory. (Category Exam). Competency in the applicable category or subcategory shall be established as follows:

I. **Agricultural Animal and Plant Pest Control**

- a. **Agricultural Animals.** Applicants seeking certification in the subcategory of Animal Pest Control as described in Section 2(A)(I)(a) must demonstrate knowledge of animals, their associated pests, and methods of pest control. Areas of practical knowledge shall include specific toxicity, residue potential, relative hazards of different formulations, application techniques, and hazards associated with age of animals, stress, and extent of treatment.
- b. **Agricultural Plant.** Applicants seeking certification in the subcategory of Plant Pest Control as described in Section 2(A)(I)(b) Options I - IV must demonstrate practical knowledge of the crops grown and the specific pests of those crops on which they may be using pesticides. Areas of such practical knowledge shall include soil and water problems, preharvest intervals, reentry intervals, phytotoxicity, potential for environmental contamination, non-target injury, and community problems related to pesticide use in certain areas. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

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II. **Forest Pest Control**

Applicants seeking certification in the category of Forest Pest control as described in Section 2(A)(II) must demonstrate practical knowledge of forest

vegetation management, forest tree biology and associated pests. Such required knowledge shall include population dynamics of pest species, pesticide-organism interactions, integration of pesticide use with other pest control methods, environmental contamination, pesticide effects on non-target organisms, and use of specialized equipment. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

III. **Ornamental and Turf Pest Control**

- a. **Outdoor Ornamentals.** Applicants seeking certification in the Outdoor Ornamental subcategory as defined in Section 2(A)(III)(a) must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of trees, shrubs and floral plantings. Such knowledge shall include potential phytotoxicity, undue pesticide persistence, and application methods, with particular reference to techniques used in proximity to human habitations. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.
- b. **Turf.** Applicants seeking certification in the Turf subcategory as described in Section 2(A)(III)(b) must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of turf. Such knowledge shall include potential phytotoxicity, undue pesticide persistence, and application methods, with particular reference to techniques used in proximity to human habitations. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.
- c. **Indoor Ornamentals.** Applicants seeking certification in the Indoor Ornamental subcategory described in Section 2(A)(III)(c) must demonstrate practical knowledge of pesticide problems associated with the production and maintenance of indoor ornamental plantings. Such knowledge shall include pest recognition, proper pesticide selection, undue pesticide persistence, and application methods with particular reference to techniques used in proximity to human presence.

IV. **Seed Treatment**

Applicants seeking certification in the category of Seed Treatment as described in Section 2(A)(IV) must demonstrate practical knowledge of seed types and problems requiring chemical treatment. Such knowledge shall include seed coloring agents, carriers and binders which may affect germination, hazards associated with handling, sorting, and mixing in the treatment process, hazards of introduction of treated seed into food and feed channels, and proper disposal of unused treated seeds.

V. **Aquatic Pest Control**

- a. **General Aquatic** - Applicants seeking certification in the subcategory of General Aquatic as described in Section 2(A)(V)(a) must demonstrate practical knowledge of proper methods of aquatic pesticide application, application to limited area, and a recognition of the adverse effects which can be caused by improper techniques, dosage rates, and formulations. Such knowledge shall include basic factors contributing to the development of nuisance aquatic plant growth such as algal blooms, understanding of various water use situations and potential downstream effects from pesticide use, and potential effects of various aquatic pesticides on plants, fish, birds, insects and other organisms associated with the aquatic environment. Also required shall be an understanding of the Department of Environmental Protection laws and regulations pertaining to aquatic discharges and aquatic weed control and a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.
- b. **Sewer Root Control** - Applicants seeking certification in the subcategory of Sewer Root Control as described in Section 2(A)(V)(b) must demonstrate practical knowledge of proper methods of sewer root control pesticide application, application to pipes, and a recognition of the adverse effects which can be caused by improper techniques, dosage rates, and formulations. Such knowledge shall include potential effects on water treatment plants, movement of pesticides into off target pipes or buildings and the hazards of sewer gases.

VI. **Vegetation Management**

Applicants seeking certification in the subcategories under Vegetation Management as described in Section 2(A)(VI) (a-b) must demonstrate practical knowledge of the impact of pesticide use on a wide variety of environments. Such knowledge shall include an ability to recognize target organisms and circumstances specific to the subcategory, awareness of problems of runoff, root pickup and aesthetic considerations associated with excessive foliage destruction and "brown-out", and an understanding of the mode of action of herbicides, and reasons for the choice of particular chemicals for particular problems,

importance of the assessment of potential impact of spraying on adjacent public and private properties and activities, and effects of spraying on fish and wildlife species and their habitat. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

VII. **Industrial, Institutional, Structural and Health Related Pest**

- a. **General.** Applicants seeking certification in the subcategory of General Pest Control as described in Section 2(A)(VII)(a) must demonstrate a practical knowledge of a wide variety of pests and methods for their control. Such knowledge shall include identification of pests and knowledge of life cycles, formulations appropriate for various indoor and outdoor uses, methods to avoid contamination of food and feed, and damage to structures and furnishings, avoidance of risk to humans, domestic animals, and non-target organisms and risks to the environment associated with structural pesticide use.
- b. **Fumigation.** Applicants seeking certification in the subcategory Fumigation as described in Section 2(A)(VII)(b) must demonstrate a practical knowledge of a wide variety of pests and fumigation methods for their control. Such knowledge shall include identification of pests and knowledge of life cycles, fumigant formulations, methods to avoid contamination of food and damage to structures and furnishings, and avoidance of risks to employees and customers.
- 4 c. **Disinfectant and Biocide Treatments.** Applicants seeking certification in the Disinfectant and Biocide Treatments subcategory described in Section 2(A)(VII)(c) must demonstrate practical knowledge of water organisms and their life cycles, drinking water treatment plant, cooling water and pool or spa system designs, labels and hazards of disinfectants and biocides and proper application techniques to assure adequate control while minimizing exposure to humans and the environment.
- d. **Wood Preserving.** Applicants seeking certification in the Wood Preserving Subcategory described in Section 2(A)(VII)(d) must demonstrate practical knowledge in wood destroying organisms and their life cycles, nonchemical control methods, pesticides appropriate for wood preservation, hazards associated with their use, proper handling of the finished product, proper disposal of waste preservatives, and proper application techniques to assure adequate control while minimizing exposure to humans, livestock and the environment.
- e. **Biting Fly and Other Arthropod Vector Pests.** Applicants seeking certification in the subcategory of Biting Fly and Other Arthropod Vector Pest control as described in Section 2(A)(VII)(e) must demonstrate a practical knowledge of the species involved, their potential roles in disease transmission, and the use of pesticides in their

control. Such knowledge shall include identification of and familiarity with life cycles and habitat requirements, special environmental hazards associated with the use of pesticides in control programs, and knowledge of the importance of integrating chemical and non-chemical control methods. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

- f. **Termite Pests.** Applicants seeking certification in this subcategory must demonstrate a practical knowledge of Termite pests and methods for their control. Such knowledge shall include identification of termites and knowledge of life cycles, formulations appropriate for various indoor and outdoor uses, methods to avoid contamination of food and feed, and damage to structures and furnishings, avoidance of risk to humans, domestic animals, and non-target organisms and risks to the environment associated with structural pesticide use.

VIII. **Public Health Pest Control**

- a. **Biting Fly and Other Arthropod Vector Pests.** Applicants seeking certification in the subcategory of Biting Fly and Other Arthropod Vector Pest Control as described in Section 2(A)(VIII)(a) must demonstrate a practical knowledge of the species involved, their potential roles in disease transmission, and the use of pesticides in their control. Such knowledge shall include identification of and familiarity with life cycles and habitat requirements, special environmental hazards associated with the use of pesticides in control programs, and knowledge of the importance of integrating chemical and non-chemical control methods. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.
- b. **Other Pests.** Applicants seeking certification in the subcategory of Other Pest Control as described in Section 2(A)(VIII)(b) must demonstrate a practical knowledge of the species involved, their potential roles in disease transmission, and the use of pesticides in their control. Such knowledge shall include identification of and familiarity with life cycles and habitat requirements, special environmental hazards associated with the use of pesticides in control programs, and knowledge of the importance of integrating chemical and non-chemical control methods. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

IX. Regulatory Pest Control

Applicants seeking certification in the category of Regulatory Pest Control as described in Section 2(A)(IX) must demonstrate practical knowledge of regulated pests and applicable laws relating to quarantine and other regulations of pests. Such knowledge shall also include environmental impact of pesticide use in eradication and suppression programs, and factors influencing introduction, spread, and population dynamics of relevant pests. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

X. Demonstration and Research Pest Control

Applicants seeking certification in the category of Demonstration and Research Pest Control as described in Section 2(A)(X) must demonstrate practical knowledge in the broad spectrum of activities involved in advising other applicators and the public as to the safe and effective use of pesticides. Persons involved specifically in demonstration activities will be required to demonstrate knowledge of pesticide-organism interactions, the importance of integrating chemical and non-chemical control methods, and a grasp of the pests, life cycles and problems appropriate to the particular demonstration situation. Field researchers will be required to demonstrate general knowledge of pesticides and pesticide safety, as well as a familiarity with the specific standards of this Section which apply to their particular areas of experimentation. All individuals certified in this category must also be certified in one or more of the previous categories or subcategories which represent at least 80% of their practice. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

XI. Aerial Pest Control

Applicants seeking certification in the category of Aerial Pest Control as described in Section 2(A)(XI) must demonstrate at least a practical knowledge of problems which are of special significance in aerial application of pesticides, including chemical dispersal equipment, tank, pump and plumbing arrangements; nozzle selection and location; ultra-low volume systems; aircraft calibration; field flight patterns; droplet size considerations; flagging methods; and loading procedures. Applicants must also demonstrate competency in the specific category or subcategory in which applications will be made, as described in paragraphs I, II, VI and VIII herein. Also required shall be a knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans.

4. Competency Standards for Certification of Commercial Applicator/Master

- A. **Regulations Exam.** An applicant seeking certification as a commercial applicator/master must successfully complete a closed book exam on the appropriate chapters of the Board's regulations. The passing grade shall be 80%. An applicant must successfully complete the regulations exam before being allowed to proceed to the master exam. The staff may waive the requirements for the closed book regulation exam if it determines that a pest management emergency exists necessitating the issuance of a nonresident license pursuant to Section 6 B. of this chapter, provided that the staff verbally reviews the pertinent regulations with the applicant prior to issuing a nonresident license.
- B. **Master Exam.** An applicant seeking certification as a commercial applicator/master must also demonstrate practical knowledge in ecological and environmental concerns, pesticide container and rinsate disposal, spill and accident mitigation, pesticide storage and on site security, employee safety and training, potential chronic effects of exposure to pesticides, pesticide registration and special review, the potential for groundwater contamination, principles of pesticide drift and measures to reduce drift, protection of public health, minimizing public exposure and use of non pesticide control methods. In addition, applicant must demonstrate the ability to interact with a concerned public.

5. Certification Procedures for Commercial Applicators

A. Initial Certification

- I. **Application for Exams.** Individuals applying to take exams must submit a completed application and associated fees. All fees are waived for governmental employees.

- 5 a. Information shall include name, Social security number, home address, company address, name and telephone number of supervisor and categories for which certification is desired.
- b. A non-refundable fee of \$10.00 for each core, category or subcategory exam shall accompany the application.
- c. Study materials for other than the regulations exam are available through the University of Maine Cooperative Extension Pest Management Office for a fee.
- 6 d. A non-refundable fee of \$50.00 for the regulations and master exams shall accompany the application for Master exams. Study material for the regulations exam will be sent to the applicant upon receipt of their application and the required fees.

II. Appointment for Exams

- a. Exams will be scheduled by Board staff. It is the responsibility of the applicant to reschedule if necessary.

- b. All exam fees shall be forfeited if an applicant fails to notify the Board that he/she cannot sit for the exams on the scheduled date at least 24 hours in advance of the scheduled exam. Applicants who cancel their exam appointment two times in a row shall also forfeit their exam fees. Re-application shall require an additional \$15.00 fee.
- c. Exams will be available year-round on an appointment basis at the Board's office in Augusta.
- d. Exams may also be offered at other locations designated by the Board staff. Appointments for these exams should be arranged by application with the Board's office in Augusta.

III. Exams

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- a. Applicants in all areas except category I(b)IV, Post Harvest Treatment shall take a closed book core exam plus a closed book category technical exam on each applicable category or subcategory for which they anticipate making pesticide applications.
- b. In addition to the exams described above in sections (a), applicants for commercial applicator/master certification in all areas except category I(b)IV, Post Harvest Treatment must complete a closed book written regulations exam as well as a master exam. Applicants for commercial applicator/master must successfully complete the core and at least one category exam or the combined exam before being eligible to take the master exams. Applicants must also successfully complete the regulations exam before being allowed to commence on the master exam.
- c. Applicants in subcategory I(b)IV Post Harvest Treatment shall take one closed book exam which combines the core exam and the category exam.

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IV. Examination Procedures. All applicants shall comply with these rules or forfeit their opportunity to complete the exams at a specified appointment.

- a. Applicants should be present and ready to take the exams at the appointed time.
- b. Applicants shall not talk during the examination period.
- c. Applicants shall not be allowed to bring any books, papers, cellular telephones, calculators or electronically stored data into the examining room. Pencils and work sheets will be provided and all papers shall be collected at the end of the period.
- d. Applicants shall not make notes of the exams and shall not leave the table during an exam unless authorized by the staff.

- V. **Qualification Requirements.** An applicant must achieve a passing score of 80 percent on each exam.
- a. An applicant who fails the core exam must re-apply and pay all required fees and may not retake that examination prior to 6 days after the date of such failed examination. If an applicant fails again the applicant must reapply and pay all required fees and wait 6 more days before retaking again.
 - b. An applicant who fails a category exam must re-apply and pay all required fees and may not retake that examination prior to 6 days after the date of such failed examination. If an applicant fails again the applicant must reapply and pay all required fees and wait 6 more days before retaking again.
 - c. An applicant who passes the core and one category exam shall be considered eligible for operator level licensing in that particular category so long as that person will be working under the supervision of a Master applicator. If at a later date the applicant wishes to add another category, only the appropriate category exam shall be required.
 - d. An applicant who fails a master exam must re-apply and pay all required fees and may not retake the examination prior to 6 days after the date of such failed examination.
 - e. Any applicant must pass both the core and at least one category exam by December 31 of the third year from the date on which the first exam was passed.
 - f. Any applicant who violates any of the rules pertaining to examinations shall wait a minimum of 60 days before retaking.
- VI. **Expiration.** Certification under this Section will expire on December 31st of the third year after the date of successful completion of required exams and on December 31st of every third year thereafter unless a special restricted certification period is assigned by the Board or Board staff.
- VII. An applicant's original certification period shall not be extended due to the applicant qualifying for another category or upgrading to the master level.

15 B. **Recertification of Applicators**
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- I. Persons with current valid certification may renew that certification by either providing documentation from a substantially equivalent professional certification program approved by the board or by accumulating recertification credits during the certification period described in Section 5(A)VI according to the following schedule:

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- a. **Master level** - 9 credit hours, including at least 2 in a category or subcategory they are licensed for and 1 credit hour in environmental science, ecology or toxicology.
 - b. **Operator level** - 6 credit hours, including at least 2 in a category or subcategory they are licensed for and 1 credit hour in environmental science, ecology or toxicology.
- II. Recertification credits will be available through Board-approved meetings including but not limited to industry and trade organization seminars, workshops where pesticide topics are presented and approved home study courses.
- a. Board staff will review program agendas and monitor programs as time permits.
- III. Credit will be allowed for topics including, but not limited to:
- a. Applicable laws and regulations.
 - b. Environmental hazards.
 - c. Calibration and new application techniques.
 - d. Label review.
 - e. Applicator safety.
 - f. Storage and disposal.
 - g. Pest identification and control.
 - h. Integrated pest management.
- IV. Persons organizing meetings for which they want credits awarded must contact the Board in writing at least 15 days in advance of the meeting with details of the agenda. Board staff will review program agendas and assign credit values.
- a. One credit will be assigned for each 1 hour of presentation on appropriate topics.
 - b. An individual who conducts a meeting for which the Board does assign recertification credits will be eligible for two credits for each 1 hour of presentation on appropriate topics.
 - c. An individual who organizes a meeting shall be required to maintain a sign up sheet and supervise the signing of the sheet by all applicators attending the program. That individual shall submit the sign up sheet to the Board at the same time the verification attendance forms are collected and submitted to the Board.

- V. For in state programs, applicants must submit verification of attendance at approved programs to the Board. For out of state programs, applicators must submit verification of attendance; they may also be asked to provide documentation such as an agenda or descriptions of the presentations attended.
- VI. A person who fails to accumulate the necessary credits during their first three year certification period will have to retake and pass all exam(s) required for initial certification. If a person fails to accumulate the necessary credits again that person must retake and pass all exam(s) required for initial certification and within one year thereafter, obtain the balance of the recertification credits which that person failed to accumulate during the previous certification period. If that person does not obtain the balance of credits needed, the Board will not renew their license until the make- up credits are accrued.
- VII. Applicants must attend the entire approved program(s) for which recertification credit is sought. No other person may complete or sign a verification form on another applicator's behalf. Any form that is completed or signed by a person other than the applicator will be deemed a fraudulent report and will not be approved by the Board for recertification credit(s). Any credit(s) approved by the Board pursuant to an attendance verification form which is subsequently determined by the Board to have been completed or signed by a person other than the applicator shall be void and may not be counted towards the applicator's recertification requirements; and any recertification issued on the basis of such credits shall be void.

6. Licensing

- A. All Commercial Applicators required to be certified under this chapter and state pesticide law shall be licensed before using or supervising the use of pesticides as described in Section 1(A).
- B. **Nonresident licenses.** When the staff determines that a pest management emergency exists which necessitates the use of aerial application and for which there are not sufficient qualified Maine licensees, it may issue a license without examination to nonresidents who are licensed or certified by another state or the Federal Government substantially in accordance with the provisions of this chapter. Nonresident licenses issued pursuant to this section are effective until December 31 of the year in which they are issued.
- C. **Application.** Application for a commercial applicator license shall be on forms provided by the Board.
 - I. The completed application must include the name of the company or agency employing the applicant.

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- II. Unless the applicant is the owner of a company, the completed application must be signed by both the applicant and that person's supervisor to verify the applicant is an employee of the company/agency.
- D. **Fee.** At the time of application, the applicant must tender the appropriate fee as follows:
- I. For a commercial applicator license - \$105.00 per person.
- II. For replacement, upgrade to master or to add categories \$5.00.
- E. Commercial applicators who apply pesticides for hire (custom applicators) and operate a company that is incorporated or which employs more than one applicator (licensed or unlicensed) must comply with Chapter 35, *Certification & Licensing Provisions/Spray Contracting Firms* which requires an additional Spray Contracting Firm License.
- F. **Insurance.** Commercial applicators who spray for hire (custom applicators) shall be required to have liability insurance in force at any time they make a pesticide application.
- I. Applicators shall submit a completed and signed form provided by the Board at the time they apply for their license which attests that they will have the required amounts of insurance coverage in effect when they make pesticide treatments. The information submitted on the form must be true and correct.
- II. Insurance coverage must meet or exceed the following minimum levels of liability:
- a. **Ground applicators**
- | | |
|------------------|--|
| Public liability | \$100,000 each person
\$300,000 each occurrence |
| Property damage | \$100,000 each occurrence |
- b. **Aircraft applicators**
- | | |
|------------------|--|
| Public liability | \$100,000 each person
\$300,000 each occurrence |
| Property damage | \$100,000 each occurrence |
- G. **Reports.** Annual Summary Reports described in Chapter 50, Section 2(A) must be submitted for each calendar year by January 31 of the following year. In the event a required report is not received by the due date, the person's license is temporarily suspended until the proper report is received or until a decision is rendered at a formal hearing as described in 22 MRSA §1471-D (7).

H. Expiration

- I. All licenses will expire at the end of the certification period as determined in Section 5(A)VI or when an individual licensee terminates employment with the company/agency with which the individual's license is affiliated.
- II. The licensee or a company/agency representative shall notify the Board in writing within 10 days after a licensee is terminated from employment.
- III. Also, all licenses within a company/agency are suspended if the licensed Master is terminated from employment or dies.

- I. **Decision.** Within 60 days of receipt of application by the Board, unless the applicant agrees to a longer period of time, the Director shall issue, renew or deny the license. The Director's decision shall be considered final agency action for purposes of 5 M.R.S.A. §11001 *et seq.*

10 7. Transition

For the purposes of converting from two year licenses and six year certification periods to three year licenses with concurrent three year certification periods, and to ensure that license expirations are evenly distributed across any three year period. During the transition period, the Board may initially issue one, two, or three year licenses with corresponding certification periods. Licensees must obtain a proportional number of recertification credits per year during the transition period. License fees will also be prorated in accordance with the length of the license term. The length of the initial license terms will be assigned by the Board when a license is renewed, based on applicant's last name.

STATUTORY AUTHORITY: 22 M.R.S.A., Section 1471-D

EFFECTIVE DATE:

January 1, 1983 (filed with Secretary of State August 13, 1982)

AMENDED:

December 29, 1982

January 1, 1984

January 1, 1984 - Section 7

May 20, 1984 - Section 6

May 13, 1985 - Section 5

Emergency amendment effective April 18, 1986 - Section 6

August 3, 1986 - Section 6

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October 2, 1996

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March 1, 1997

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December 28, 1999 -- also converted to MS Word

March 5, 2003

July 3, 2005 – filing 2005-267

March 4, 2007 – filing 2007-69

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CORRECTIONS:

February, 2014 – agency names, formatting

AMENDED:

December 9, 2014 – filing 2014-280

September 23, 2015 – filing 2015-168

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

026 BOARD OF PESTICIDES CONTROL

Chapter 32: CERTIFICATION & LICENSING PROVISIONS/PRIVATE APPLICATORS

SUMMARY: These regulations describe the requirements for certification and licensing of private applicators.

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1. Competency Standards for Certification - Private Applicator

- A. No person shall be certified as a private applicator unless he has fulfilled requirements demonstrating his knowledge of basic subjects including pesticide labeling, safety, environmental concerns, pest organisms, pesticides, equipment, application techniques, and applicable laws and regulations. Also required shall be knowledge of current methodology and technology for the control of pesticide drift to non-target areas, the proper meteorological conditions for the application of pesticides, and the potential adverse effect of pesticides on plants, animals or humans (core exam).
- B. No person shall be certified as a private applicator unless he has demonstrated knowledge of the general principles of pest control for his major commodity, including specific pests of the crop, their life cycle, and proper timing of control measures to be efficacious (Commodity Exam).

2. Certification Procedures for Private Applicators

A. Initial Certification

- 1. Any person seeking to be certified as a private applicator must pass a written core exam and a written exam in the area of his primary commodity. Both exams shall be closed book.
- 2. Exams may be taken at cooperating County University of Maine Cooperative Extension offices. Exams may also be offered at other locations designated by the Board staff or available on an appointment basis at the office of the Board,
- 3. **Examination Procedures.** All applicants shall comply with these rules or forfeit their opportunity to complete the exams at a specified appointment.
 - a. Applicants should be present and ready to take the exams at the appointed time.
 - b. Applicants shall not talk during the examination period.
 - c. Applicants shall not be allowed to bring any books, papers, calculators or electronically stored data into the examining room. Pencils and work

sheets will be provided and all papers shall be collected at the end of the period.

- d. Applicants shall not make notes of the exams and shall not leave the table during an exam unless authorized by the staff.

4. **Qualification Requirements.** An applicant must achieve a passing score of 80 percent on each exam.

- a. An applicant who fails the core exam may not retake that examination prior to 6 days after the date of such failed examination. If an applicant fails again the applicant must wait 6 more days before retaking the exam again.
- b. An applicant who fails the exam in the area of his primary commodity may not retake the that examination prior to 6 days after the date of such failed examination. If an applicant fails again the applicant must wait 6 more days before retaking the exam again.
- c. Any applicant must pass both the core and at least one commodity exam within 12 months before qualifying for certification.
- d. Any applicant who violates any of the rules pertaining to examinations shall wait a minimum of 60 days before retesting.

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- 5. At its discretion, the Board may, in special circumstances, offer the option of an oral core and commodity exam to a person with recognized difficulty in reading.
 - a. The person requesting this option must identify another qualified individual from whom he can seek advice and guidance necessary for the safe and proper use of pesticides related to his certification.
 - b. The person identified as reader and advisor to applicant must be present at time of oral exam and acknowledge his willingness to assist the private applicator.
- 6. Certification under this section will expire on October 31st of the third year after the date of successful completion of the exams and on October 31st of every third year thereafter unless a special restricted certification period is assigned by the Board or Board staff.

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B. **Recertification**

- 1. Any person with current valid certification may renew that certification by accumulating 6 recertification credits during the certification period described in Section 2(A)6.

2. Recertification credits will be available through Board-approved meetings including but not limited to industry and trade organization seminars, workshops where pesticide topics are presented and approved home study courses.
3. Credit will be allowed for topics including, but not limited to:
 - a. Applicable laws and regulations.
 - b. Environmental hazards.
 - c. Calibration and new application techniques.
 - d. Label review.
 - e. Applicator safety.
 - f. Storage and disposal.
 - g. Pest identification and control.
 - h. Integrated pest management.
4. Persons organizing meetings for which they want credits awarded must contact the Board in writing at least 15 days in advance of the meeting and submit details of the pesticide topics, including titles and length of time devoted to them. Board staff will review program agendas and assign credit values. Board staff will monitor programs as time permits.
 - a. A minimum credit of one hour shall be assigned for each one hour of presentation on appropriate topics.
 - b. An individual conducts a meeting for which the Board does assign recertification credits will be eligible for two credits for each 1 hour of presentation on appropriate topics.
5. For in state programs, each participant will complete a form to verify attendance at each program for which credit is allowed at the site. For out of state programs, applicators must notify the Board about attendance and send a registration receipt or other proof of attendance and a copy of the agenda or other description of the presentations attended. The agenda must show the length of each presentation and describe what was covered.
6. A person who fails to accumulate the necessary credits will have to re-apply to take the exams required for initial certification.

3. Licensing

- A. **Application.** Application for a private applicator license, shall be on forms provided by the Board. Information shall include name; Social Security number; mailing address; farm name, location and telephone number; and major crop(s).
- B. **Fee.** At the time of application, the applicant must tender the appropriate fee as follows:
1. For a private applicator license - \$15.00 per person.
 2. For replacement or alteration - \$5.00.
- C. **Expiration.** Private applicator licenses are issued on a three-year period and will expire on October 31st of the third year. Any person who has accumulated the required number of recertification credits must apply for license renewal within one year of the expiration date of the license or the recertification credits are forfeited and that person must retake and pass both the core and commodity exams to again be eligible for licensing.
- D. **Decision.** Within 60 days of receipt of application by the Board, unless the applicant agrees to a longer period of time, the Director shall issue, renew or deny the license. The Director's decision shall be considered final agency action for purposes of 5 M.R.S.A. §11001 *et seq.*
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STATUTORY AUTHORITY: 22 M.R.S.A. § 1471-D

EFFECTIVE DATE:

January 1, 1983

AMENDMENT EFFECTIVE:

December 6, 1987

August 17, 1996

EFFECTIVE DATE (ELECTRONIC CONVERSION):

March 1, 1997

AMENDED:

August 25, 1997 – fees

January 4, 2005 – filing 2004-605, Section 3.C.

CORRECTIONS:

February, 2014 – agency names, formatting

AMENDED:

December 9, 2014 – Section 2(A)(4)(a, b), filing 2014-281

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**026 BOARD OF PESTICIDES CONTROL****Chapter 50: RECORD KEEPING & REPORTING REQUIREMENTS**

SUMMARY: These regulations describe the types of records and reports which commercial applicators, commercial agricultural producers, limited/restricted use pesticide dealers, spray contracting firms and monitors must maintain and submit to the Board.

Section 1. Records**A. Pesticide Application Records**

I. Commercial agricultural producers and commercial applicators shall maintain pesticide application records consistent with paragraph II. below for a period of two years from the date of application. Such records shall be kept current by recording all the required information on the same day the application is performed. These records shall be maintained at the primary place of business and available for inspection by representatives of the Board at reasonable times, upon request.

II. Pesticide application records shall include, at a minimum:

- a. Site information including town and location, crop or site treated, target organism, customer (where applicable); and
- i. for broadcast applications, size of treated area (when completed);
 - ii. for volumetric applications as described on the label, the volume treated;
 - iii. for non-broadcast applications (such as spot treatments, crack and crevice or stump treatments) a practical description of the scope or extent of the application (such as number of trees, stumps or rooms treated).

- b. **Application information.** For each distinct site, records must include date and time of application(s), brand name of pesticide(s) applied, EPA registration number(s), active ingredient(s), restricted entry interval(s) and/or ventilation period(s) (where applicable), method of application (type of equipment), dilution agent(s) (other than water), the applicator's name and certification number (where applicable) and spray contracting firm (where applicable).

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- 23 c. **Rate information.** For each distinct site, application rate information must be maintained as follows:
- i. **Restricted Use Pesticides.** For restricted use pesticides, applicators shall record the total amount of pesticide applied (undiluted).
 - ii. **General Use Pesticides.** For general use pesticides, applicators shall record:
 - (1) rate information as described in (i.) above; or
 - (2) the mix ratio and the total mix applied; or
 - (3) the mix ratio and the mix per unit area applied.
- d. For outdoor applications, except those listed below, weather conditions including wind speed and direction, air temperature and sky conditions recorded such as sunny, partly cloudy, overcast, foggy or rainy. No weather condition records need be kept for outdoor applications involving:
- i. pesticides placed in bait stations;
 - ii. pesticide-impregnated devices placed on animals, such as ear tags; or
 - iii. pesticides injected into trees or utility poles.
- 24 e. For TBT applications to marine vessels, applicators must also record the vessel identification and size, and the disposition of TBT wastes including chips/dust removed prior to application and empty containers.

B. **Limited Use/Restricted Use Pesticide Sales Records**

- 25 I. Licensed pesticide dealers shall maintain records of each sale of a
26 restricted/limited use pesticide on their sales slips and the customer's certification number should be recorded on every invoice or electronic record involving that individual. Licensed pesticide dealers must also maintain records to verify that sales of restricted/limited use pesticides to unlicensed purchasers are only made where a licensed applicator is employed to supervise the use of the restricted/limited use products. These records are to be available for inspection by representatives of the Board at reasonable times, upon request, and are to be maintained for two calendar years from the date of sale.
- 27 II. Pesticide dealer records shall also include the signature of purchaser or his/her agent, the chemical purchased, the EPA registration number, the quantity and size of containers purchased and the date of purchase.

- III. Any pesticide dealer who discontinues the sales of restricted/limited use pesticides shall notify the Board in writing and shall provide the Board, upon request, with all required records including a final sales report up to the date of discontinuance.

28 C. Spray Period Records for Major Forest Insect Aerial Spray Programs

- I. Each monitor employed on a major public or private forest insect aerial spray application program shall prepare written spray period records describing each spray period.
- II. The spray period records shall include the following information: Date and time of the spray period; Area actually sprayed; Pesticide used; Weather conditions before, during and immediately after spraying; Spray behavior, including visible drift to nontarget areas; and Notation of any reason why a spray period was terminated prior to completion of area. The records shall also include a map showing any nontarget areas that were sprayed.
- III. The spray period records shall be made available for inspection by representatives of the Board as soon as practicable following the close of each spray period and, in any event, before the next spray period and before the end of the day. The spray records shall be maintained on file and available for inspection by representatives of the Board for a period of at least two years.

29 Section 2. Reports

- A. **Annual Summary Reports by Commercial Applicators.** Annual summary reports must be submitted for each calendar year by January 31 of the following year. In the event a required report is not received by the due date, the person's license may be temporarily suspended until the proper report is received or until a decision is tendered at a formal hearing as described in 22 M.R.S.A. §1471-D(7). The report filed with the Board by or on behalf of commercial applicators shall contain the following information for each site or crop treated: quantity of each pesticide used, EPA registration number and total area treated (where applicable) for each pesticide.
- B. **Annual Pesticide Sales Reports.** Pesticide dealers licensed to sell limited and restricted use pesticides must provide the Board with a calendar year-end report of total sales of all limited, restricted and general use pesticides before their pesticide dealer license can be renewed. The Board will furnish report forms.
- C. **Spray Incident Reports**
 - I. Commercial agricultural producers, commercial applicators, spray contracting firms and licensed pesticide dealers shall be responsible for telephoning a spray incident report to the Board as soon as practicable after emergency health care has been obtained for injured parties and efforts have been initiated to contain any spills.

- II. A reportable spray incident is any significant misapplication or accidental discharge of a pesticide. Such incidents shall include: fires involving pesticides; vehicle and aircraft accidents resulting in a spill or human contamination; failure to turn off spray booms or other spray equipment resulting in application to sensitive areas (such as water bodies, accidentally applying pesticides to the wrong site or places of human habitation) when such application is a violation of label instructions or other law; overfilling of spray equipment resulting in risk of contamination of water; and any other equipment breakage or malfunction or pesticide handling activity which causes a pesticide release which may result in a threat to human health or the environment.
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STATUTORY AUTHORITY: Title 22 M.R.S.A., Chapter 258-A §1471-G, M and R

EFFECTIVE DATE:

July 6, 1979 - as "Reporting Requirements," filing 79-338

AMENDED:

August 12, 1985 - filing 85-275

REPEALED AND REPLACED:

April 5, 1995 - as "Record Keeping and Reporting Requirements," filing 95-149

AMENDED:

October 2, 1996

EFFECTIVE DATE (ELECTRONIC CONVERSION):

March 1, 1997

AMENDED:

November 11, 2001 - filing 2001-483

March 5, 2003 - filing 2003-61

January 4, 2005 – filing 2004-606 affecting Section 1.A.I.

December 23, 2012 – filing 2012-348 affecting Section 1.B.II.

CORRECTIONS:

February, 2014 – agency names, formatting

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

026 BOARD OF PESTICIDES CONTROL

Chapter 26: STANDARDS FOR INDOOR PESTICIDE APPLICATIONS AND NOTIFICATION FOR ALL OCCUPIED BUILDINGS EXCEPT K - 12 SCHOOLS

SUMMARY: These regulations establish procedures and standards for applicators applying pesticides inside occupied private and public buildings other than K - 12 schools that are covered by Chapter 27. This chapter also sets forth the requirements for notification about pending pesticide applications to residents of rented space, employees of agencies, businesses and institutions, and parents or guardians of children in licensed child care facilities and nursery schools.

Section 1. Definitions

- A. **Applicator.** For the purposes of this regulation, Applicator means a commercial applicator or other persons who apply pesticides to occupied buildings.
- B. **Client.** For the purposes of this regulation, Client is the person who either owns or manages the Occupied Building and who contracts with a commercial applicator to monitor and/or control pests.
- C. **Crack and Crevice Treatment.** For the purposes of this regulation, Crack and Crevice Treatment means using an injector tip and placing the tip inside an opening to apply small amounts of pesticides into cracks and crevices in which pests hide or through which they may enter a building. Such openings commonly occur at expansion joints, between elements of construction, and between equipment and floors. These openings may lead to voids such as hollow walls, equipment legs and bases, conduits, motor housings, and junction or switch boxes. This does not include spraying a band covering the baseboards or mopboards or spraying above the baseboards or mopboards.
- D. **Integrated Pest Management.** For the purposes of this regulation, Integrated Pest Management (IPM) is a process that utilizes regular monitoring to determine if and when a treatment is needed. It employs physical, mechanical, cultural, chemical, biological and educational programs to keep pest populations low enough to prevent intolerable damage or annoyance. Pesticides should be only one of many options considered for solving a pest problem, and when required, target-specific, low impact pesticides and application techniques should be employed. Furthermore, pesticide applications are not made according to a pre-determined schedule but are only made when and where monitoring, or a previous history of pest incidence has indicated that the pest will cause unacceptable economic, medical or aesthetic damage. The IPM program must as a result be environmentally, socially, and economically compatible to meet current public expectations.
- E. **Occupied Building.** For the purposes of this regulation, Occupied Building means any public, private, commercial or institutional structure used or occupied by persons on a regular, long-term basis as a residence or for occupations. These include but are not

limited to rented residential buildings, condominiums, licensed childcare facilities and nursery schools, and governmental, commercial and institutional buildings.

Section 2. Exemptions

- A. The following pesticide uses are exempt from the requirements of this Chapter:
1. application of ready-to-use general use pesticides by hand or with non-powered equipment to control or repel stinging or biting insects when there is an urgent need to mitigate or eliminate a pest that threatens the health or safety of any person;
 2. application of general use antimicrobial products by hand or with non-powered equipment to interior or exterior surfaces and furnishings during the course of routine cleaning procedures;
 3. application of paints, stains or wood preservatives that are classified as general use pesticides;
 4. application of pesticides by a resident to his or her own residential unit;
 5. commercial application of pesticides where the resident has contracted for application to his or her own personal residential unit; and
 6. indoor applications of pesticides injected into closed systems for control of nuisance microbial organisms.
- B. The use of baits, gels, pastes, dusts and granular materials placed in areas not readily accessible to residents, employees or children is exempt from the requirements of Sections 3(A), 3(B) and 3(C) of this Chapter.
- C. The use of crack and crevice treatments placed in areas not readily accessible to residents, employees or children and done in a manner that minimizes exposure to vapors and/or aerosolized materials is exempt from the requirements in Sections 3(A), 3(B) and 3(C) of this Chapter.

Section 3. Notification

A. Notice to Residents

1. At least 24 hours and no more than seven days in advance of a pesticide application not exempted by Section 2, the applicator must provide or cause to be provided a Board approved written notice (see Appendix A) to the resident or residents of an apartment unit, condominium unit or other rented residential unit to be treated, where the residents of that unit did not request the impending pesticide application. The notice may be mailed or provided directly to the residents and shall explain that pesticides may be used in their residential unit and that they have the right to ask for and receive more specific information described

in Section 3(D) of this regulation. If the resident asks for further information specified in Section 3(D), the applicator must provide it.

2. If an application not exempted by Section 2 will be made to common areas of these rental residential buildings, the applicator must post or cause to be posted a Board approved written notice (see Appendix A) at least 24 hours in advance and no more than seven days in advance of the planned application informing the residents of that building that pesticides will be used in the common areas and that they have the right to ask for and receive more specific information as described in Section 3(D). The Board approved written notice must remain posted for at least 48 hours following the application.
3. The applicator may fulfill the requirements of subsections 3(A)(1) and 3(A)(2) by providing the Board approved notice and instructing the landlord or building manager to distribute the notice to the residents as described in subsection 3(A)(1) or to post the notice as described in subsection 3(A)(2) as appropriate. The applicator must confirm with the landlord or building manager that the requirements of subsections 3(A)(1) and 3(A)(2) have been met before making any application not exempt under Section 2 of this Chapter. The person who carries out the notification and confirms that the requirements have been fulfilled is responsible for that notification.

B. Notice to Employees of Agencies, Businesses and Institutions

At least 24 hours and no more than seven days in advance of a pesticide application in a building housing an agency, business or institution that is not exempted under Section 2, the applicator must post or cause to be posted a Board approved written notice (see Appendix A) in a conspicuous place or places where notices to employees are customarily posted. The notice must inform employees of the planned application and about their right to ask for and receive more specific information, as described in Section 3(D). The Board approved written notice must remain posted for at least 48 hours following the application. If an employee asks for further information specified in Section 3(D), the applicator must provide it. The applicator may fulfill the requirements of subsection 3(B) by providing the Board approved notice and instructing the building manager, the person requesting the application or another responsible individual to post the notice as described in this subsection. The applicator must confirm with the building manager, the person requesting the application or another responsible individual that the requirements of this section have been met before making any application not exempt under Section 2 of this Chapter. The person who carries out the notification and confirms that the requirements have been fulfilled is responsible for that notification.

C. Notice to Parents and Guardians of Children in Licensed Childcare Facilities or Nursery Schools

At least 24 hours and no more than seven days in advance of a pesticide application in a licensed child care facility or nursery school that is not exempted by Section 2, the applicator must provide or cause to be provided a Board approved written notice of the planned application (see Appendix A) to parents or guardians of currently enrolled children. The notice must inform parents or guardians that pesticides will be used in the building and that they have the right to ask for and receive more specific information, as

described in Section 3D. If a parent or guardian asks for information specified in Section 3(D), the applicator must provide it. The applicator may fulfill the requirements of subsection 3(C) by providing the Board approved notice and instructing the manager of the daycare or nursery or another responsible individual to distribute the notice to parents or guardians as described in this subsection. The applicator must confirm with the manager or responsible individual of the daycare or nursery that the requirements of this subsection have been met before making any application not exempt under Section 2 of this Chapter. The person who carries out the notification and confirms that the requirements have been fulfilled is responsible for that notification.

- D. If residents, employees, parents or guardians ask for information about a pesticide application, the applicator shall provide the information requested, including as applicable: (a) the trade name and EPA Registration number of the pesticide(s) intended to be applied; (b) the approximate date and time of the application; (c) the location of the application; (d) the re-entry interval listed on the product label; and (e) the name and phone number of the person to whom further inquiry regarding the application may be made. If requested, the applicator shall also provide a copy of the pesticide product label and Material Safety Data Sheet, and shall make reasonable efforts to fulfill any other requests for pesticide information. However, such requests for additional information will not delay nor prohibit the applicator from performing the pesticide application as scheduled.

Section 4. Integrated Pest Management Techniques

- A. Applicators must undertake pest management activities using appropriate elements of integrated pest management. In all cases, any application shall be conducted in a manner to minimize exposure and human risk to the maximum extent practicable using currently available technology.
- B. Applicators must identify conditions conducive to the development of pest problems. Commercial applicators must provide to the client a written evaluation of pest conducive conditions and must provide specific recommendations for practical non-pesticide control measures.
- C. Prior to any pesticide application, applicators must identify the pest specifically and evaluate the infestation severity and any associated damage except as provided in Section 4(C)(1) and (2) below.
1. Where there is a history of pest infestation and conditions are conducive to pest infestations, baits, gels, pastes or granular materials placed in areas not readily accessible to residents, employees, patients, or children and crack and crevice treatments designed to control commonly occurring pests in these areas may be used without specific evidence that a significant population is currently present.
 2. For specific public health pests designated by Board policy, baits, gels, pastes, granular materials or crack and crevice treatments placed in areas not readily accessible to residents, employees or customers may be used without specific evidence of an infestation.

Section 5. Risk Minimization

- A. Prior to pesticide application, applicators must take into account the toxicity of recommended product(s) and choose low risk product(s) based on efficacy, volatility, the potential for exposure, the signal word on the pesticide label, the material safety data sheet and any label language imposing a ventilation requirement.
- B. Unless prohibited by the label, only baits, gels, pastes or granular materials and crack and crevice treatments may be used when residents, patients, children, customers and unconsenting employees are in the same room.
- C. Prior to making an application, applicators must also consider the following:
 - 1. The principal uses for the room to be treated including if it is primarily occupied by sensitive individuals such as children, older adults or persons with chronic illnesses.
 - 2. The type of treatment being made and the likelihood that people or pets will come into contact with the treated area following the application.
 - 3. The volatility of the product being applied and the practical need to ventilate the treated room(s) prior to re-entry. In all cases, label statements relative to ventilation or re-entry shall be minimum requirements.
 - 4. The type of ventilation system, if present, including whether it serves only the treated room(s) or the entire building, and whether it can and should be shut off while the treatment is performed.

Section 6. Tenant's Consent

Except in cases where a public health or code enforcement official with jurisdiction has determined a need for immediate pest management, application to a tenant's residential unit is prohibited if the tenant is opposed to such treatment. A pesticide application may not be made until such time as alternative control measures have been tried and documented as to their failure to control a pest problem, which poses health risks, threatens significant property damage or threatens to infest other parts of the building.

Section 7. Other Requirements

These regulations do not affect pesticide label instructions, which may be more restrictive in certain cases. Under federal and state law, wherever particular label instructions impose standards that are more restrictive than these regulations, such label instructions must be followed. Similarly, these regulations do not affect more restrictive regulations or guidelines applicable to particular types of pesticide applications.

Section 8. Transition

This regulation will become effective on January 1, 2007.

STATUTORY AUTHORITY: 7 M.R.S.A. §§ 601-625 and 22 M.R.S.A. §§ 1471-A-X.

EFFECTIVE DATE:

January 1, 2007 – filing 2006-204

AMENDED:

May 1, 2008 – filing 2008-153 (Final Adoption, major substantive)

CORRECTIONS:

February, 2014 – agency names, formatting

Notice of Pesticide Application

Pesticides May Be Applied in this Building as Part of an Integrated Pest Management Program on (date) _____

To request information about the use of pesticides in this building contact:

Company: _____

Phone/E-mail: _____

This sign must remain posted for at least 48 hours after the application is completed.

Date Posted or Provided: _____

Person Providing Notice: _____

Date/Time Completed: _____

Remove sign on: _____

For general information on pesticides and regulations contact:

Maine Board of Pesticides Control

287-2731, or visit

www.thinkfirstspraylast.org





JOHN ELIAS BALDACCI
GOVERNOR

STATE OF MAINE
MAINE DEPARTMENT OF AGRICULTURE, FOOD & RURAL RESOURCES
BOARD OF PESTICIDES CONTROL
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SETH H. BRADSTREET
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HENRY S. JENNINGS
DIRECTOR

MAINE BOARD OF PESTICIDES CONTROL INTERIM INTERPRETATIVE POLICY ON THE APPLICABILITY OF CMR 01-026 CHAPTER 26

ADOPTED AUGUST 27, 2009

BACKGROUND

The Board first adopted Chapter 26 of its rules in 2006 and later amended it in 2008. At the time of adoption, the Board intended to regulate the use of pesticides inside occupied buildings because the air tight environment poses unique exposure risks to building occupants. However, when the Board crafted the definition of an “occupied building”, it used the term “structures”, which is a more general term than building. Consequently, Chapter 26 as currently written could be interpreted to regulate the roofed areas of retail stores that are otherwise open to the outdoors. Such areas have ample ventilation and do not pose the same exposure risks as an air tight building space would.

POLICY

The Board determined that its intent in promulgating Chapter 26 was to regulate the use of pesticides in enclosed buildings in which reduced airflow affects dissipation of airborne pesticides. Consequently, the Board adopted an interim interpretation of the term “occupied buildings” to mean fully enclosed indoor spaces inside buildings.

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**026 BOARD OF PESTICIDES CONTROL****Chapter 27: STANDARDS FOR PESTICIDE APPLICATIONS AND PUBLIC NOTIFICATION IN SCHOOLS**

SUMMARY: This rule establishes procedures and standards for applying pesticides in school buildings and on school grounds. This rule also sets forth the requirements for notifying school staff, students, visitors, parents and guardians about pending pesticide applications.

Section 1. Definitions

- A. **Integrated Pest Management.** For the purposes of this rule, Integrated Pest Management (IPM) means the selection, integration and implementation of pest damage prevention and control based on predicted socioeconomic and ecological consequences, including:
- (1) understanding the system in which the pest exists,
 - (2) establishing dynamic economic or aesthetic injury thresholds and determining whether the organism or organism complex warrants control,
 - (3) monitoring pests and natural enemies,
 - (4) when needed, selecting the appropriate system of cultural, mechanical, genetic, including resistant cultivars, biological or chemical prevention techniques or controls for desired suppression, and
 - (5) systematically evaluating the pest management approaches utilized.
- B. **School.** For the purposes of this rule, School means any public, private or tribally funded:
- (1) elementary school,
 - (2) secondary school,
 - (3) kindergarten or
 - (4) nursery school that is part of an elementary or secondary school.
- C. **School Building.** For the purposes of this rule, School Building means any structure used or occupied by students or staff of any school.

- D. **School Grounds.** For the purposes of this rule, School Grounds means:
- (1) land associated with a school building including playgrounds, athletic fields and agricultural fields used by students or staff of a school, and
 - (2) any other outdoor area used by students or staff including property owned by a municipality or a private entity that is regularly utilized for school activities by students and staff. School grounds do not include land utilized primarily for non-school activities, such as golf courses and museums.
- E. **Integrated Pest Management Coordinator.** An employee of the school system or school who is knowledgeable about integrated pest management and is designated by each school to implement the school pest management policy.
- F. **School Session.** For the purposes of this rule, school is considered to be in session during the school year including weekends. School is not considered to be in session during any vacation of at least one week.

Section 2. Requirements for All Schools

- A. All public and private schools in the State of Maine shall adopt and implement a written policy for the application of Integrated Pest Management techniques in school buildings and on school grounds.
- B. Each school shall appoint an IPM Coordinator who shall act as the lead person in implementing the school's Integrated Pest Management policy. The IPM Coordinator shall be responsible for coordinating pest monitoring and pesticide applications, and making sure all notice requirements as set forth in this rule are met. In addition, the IPM Coordinator shall:
- (1) complete Board-approved IPM Coordinator overview training within one month of his/her first appointment as an IPM Coordinator and obtain Board documentation thereof;
 - (2) complete Board-approved IPM Coordinator comprehensive training within one year of his/her first appointment as an IPM Coordinator and obtain Board documentation thereof;
 - (3) obtain at least one hour of Board-approved continuing education annually;
 - (4) maintain and make available to parents, guardians and staff upon request:
 - a. the school's IPM Policy,
 - b. a copy of this rule (CMR 01-026 Chapter 27),
 - c. a "Pest Management Activity Log," which must be kept current. Pest management information must be kept for a minimum of two years from date of entry, and must include:

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- i. the specific name of the pest and the IPM steps taken, as described under Section 5C of this rule; and
 - ii. a list of pesticide applications conducted on school grounds, including the date, time, location, trade name of the product applied, EPA Registration number, company name (if applicable) and the name and license number of the applicator. If the product has no EPA Registration number, then a copy of the label must be included.

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- (5) authorize any pesticide application not exempted under Sections 3A(2), 3A(3), 3B, 3C, or 3D made in school buildings or on school grounds and so indicate by completing and signing an entry on the Pest Management Activity Log prior to, or on the date on which the minimum notification requirements must be implemented; and
 - (6) ensure that any applicable notification provisions required under this rule are implemented as specified.
- C. By September 1, every school shall inform the Board of the identity and the contact information for the IPM Coordinator. This requirement can be fulfilled through a Board approved reporting system.

34 **Section 3. Exemptions**

- A. The following pesticide uses are exempt from the requirements of Sections 4 and 5 of this rule:
- (1) application of ready-to-use general use pesticides by hand or with non-powered equipment to control or repel stinging or biting insects when there is an urgent need to mitigate or eliminate a pest that threatens the health or safety of a student, staff member or visitor,
 - (2) application of general use antimicrobial products by hand or with non-powered equipment to interior or exterior surfaces and furnishings during the course of routine cleaning procedures, and
 - (3) application of paints, stains or wood preservatives that are classified as general use pesticides.
- B. The following pesticide uses are exempt from the requirements of Section 4 of this rule:
- (1) pesticides injected into cracks, crevices or wall voids,
 - (2) bait blocks, gels, pastes, granular and pelletized materials placed in areas inaccessible to students,
 - (3) indoor application of a pesticide with no re-entry or restricted entry interval specified on its label but entry to the treated area is restricted for at least 24 hours.

- C. When the Maine Center for Disease Control has identified arbovirus positive animals (including mosquitoes and ticks) in the area, powered applications for mosquito control are exempt from Section 4B(1) and 5C. Applicators should post the treated area as soon as practical, in a manner consistent with Section 4B(2).
- D. School education facilities utilized for agricultural or horticultural education, and not normally used by the general school population, such as, but not limited to, greenhouses, nursery plots or agricultural fields, are exempt from the application limitations contained in Section 5E and notification provisions contained in Section 4B(1) provided that parents, staff and students are informed about the potential for pesticide applications in such areas. The posting requirements contained in Section 4B(2) must be complied with. In addition, students entering treated areas must be trained as agricultural workers, as defined by the federal Worker Protection Standard.

Section 4. Notification

- A. A notice shall be included in the school's policy manual or handbook describing the school's IPM program including that a school integrated pest management policy exists and where it may be reviewed, that pesticides may periodically be applied in school buildings and on school grounds and that applications will be noticed in accordance with Section 4B hereof. This notice shall describe how to contact the IPM Coordinator and shall also state that the school's IPM Policy, a copy of the *Standards for Pesticide Applications and Public Notification in Schools* rule (CMR 01-026 Chapter 27), and the Pest Management Activity Log, are available for review.
- B. When school is in session, schools shall provide notice of pesticide applications in accordance with Sections 4B(1) and 4B(2). When school is not in session, notice shall be accomplished by posting of signs as described in Section 4B(2) of this rule.
 - (1) The school shall provide notification of each application not exempted by Section 3 performed inside a school building or on school grounds to all school staff and parents or guardians of students. Notices given shall state, at a minimum: (a) the trade name and EPA Registration number of the pesticide to be applied; (b) the approximate date and time of the application; (c) the location of the application; (d) the reasons for the application; and (e) the name and phone number of the person to whom further inquiry regarding the application may be made. These notices must be sent at least five days prior to the planned application.
 - (2) In addition to the notice provisions above, whenever pesticide applications not exempted by Section 3 are performed in a school building or on school grounds, a sign shall be posted at each point of access to the treated area and in a common area of the school at least two working days prior to the application and for at least forty-eight hours following the application. Posting of the notification signs as required by this rule satisfies the posting requirements of Chapter 28 of the Board's rules (CMR 01-026 Chapter 28).

- a. The signs shall:
 - i. be light colored (white, beige, yellow or pink) with dark, bold letters (black, blue, red or green).
 - ii. bear the word CAUTION in 72 point type,
 - iii. bear the words PESTICIDE APPLICATION NOTICE in 30 point type or larger,
 - iv. state any reentry precautions from the pesticide labeling in at least 12 point type,
 - v. state the approximate date and time of the application in at least 12 point type, and
 - vi. state the name of the company or licensed applicator making the pesticide application and a contact telephone number in at least 12 point type,
- b. The signs for indoor applications must:
 - i. be at least 8.5 inches wide by 11 inches tall,
 - ii. state the trade name and EPA Registration number(s) of the pesticide(s) to be applied in at least 12 point type,
 - iii. state the location of the application in at least 12 point type, and
 - iv. state the reason(s) for the application in at least 12 point type.
- c. The signs for outdoor applications must:
 - i. be at least 5 inches wide by 4 inches tall,
 - ii. be made of rigid, weather-resistant material that will last at least ninety-six (96) hours when placed outdoors,
 - iii. bear the Board designated symbol (see appendix A), and
 - iv. state a date and/or time to remove the sign.

Section 5. Integrated Pest Management Techniques

- A. All pest management activities shall be undertaken with the recognition that it is the policy of the State to work to find ways to use the minimum amount of pesticides needed to effectively control targeted pests in all areas of application. In all cases, applications should be conducted in a manner to minimize human risk to the maximum extent practicable using currently available technology.

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- B. All pest management activities should be conducted using appropriate elements of integrated pest management as described in the latest Cooperative Extension or Department of Agriculture training manuals for pest management in and/or on school property. Pest management activities should also be conducted in accordance with the Best Management Practices for Athletic Fields & School Grounds, or other applicable Best Management Practices approved by the Board.
- C. Prior to any pesticide application the following steps must be taken and recorded:
- (1) monitor for pest presence or conditions conducive to a pest outbreak,
 - (2) identify the pest specifically,
 - (3) determine that the pest population exceeds acceptable safety, economic or aesthetic threshold levels, and
 - (4) utilize non-pesticide control measures that have been demonstrated to be practicable, effective and affordable.
- D. When a pesticide application is deemed necessary, the applicator must comply with all the requirements of CMR 01-026 Chapter 31–Certification and Licensing Provisions/Commercial Applicator. The applicator must also take into account the toxicity of recommended products and choose lowest risk products based on efficacy, the potential for exposure, the signal word on the pesticide label, the material safety data sheet, other toxicology data and any other label language indicating special problems such as toxicity to wildlife or likelihood of contaminating surface or ground water.
- E. Indoor pesticide use must be limited to placement of baits and wall void or crack and crevice and pool and spa disinfectant treatments unless the pest threatens the health and safety of persons in the buildings as determined by the school's integrated pest management coordinator.
- F. Pesticide applications must not be conducted when people are in the same room to be treated except that applicators may set out bait blocks, pastes or gels when only informed staff members are present. When space, spot, surface or fumigation applications are conducted the ventilation and air conditioning systems in the area must be shut off or the entire building must be evacuated. Applications should be planned to occur on weekends or vacations to allow maximum time for sprays to dry and vapors to dissipate.
- G. Outdoor applications should be scheduled so as to allow the maximum time for sprays to dry and vapors to dissipate and shall not occur when unprotected persons are in the target area or in such proximity as to likely result in unconsenting exposure to pesticides. Applications must also be conducted in accordance with all other applicable Board rules designed for minimizing pesticide drift and posting of treated sites. Spot treatments should be considered in lieu of broadcast applications.

Section 6. Requirements for Commercial Pesticide Applicators Making Applications in School Buildings or on School Grounds

- A. Prior to conducting a pesticide application not exempted in Section 3 in a school building or on school grounds, commercial pesticide applicators shall obtain written authorization from the IPM Coordinator. Authorization must be specific to each application and given no more than 10 days prior to the planned application.
 - B. Commercial pesticide applicators shall, within one business day of each pesticide application, provide the IPM Coordinator with a written record of the application including the date, time, location, trade name of the product applied, EPA Registration number and the name of the licensed applicator. If the product has no EPA Registration number then the applicator will provide a copy of the label.
 - C. Commercial pesticide applicators shall inform the IPM Coordinator about any pest monitoring activity and results. If it is acceptable to the IPM Coordinator, this may be achieved by recording them in the Pest Management Activity Log.
-

STATUTORY AUTHORITY: 7 M.R.S.A. §§ 601-625 and 22 M.R.S.A. §§ 1471-A-X

EFFECTIVE DATE:

August 30, 2003, filing 2002-408 accepted October 24, 2002.

AMENDED:

July 5, 2005 – filing 2005-266

March 4, 2007 – Section 3(C), filing 2007-67

August 29, 2013 – filing 2013-188 (Final adoption, major substantive)

Appendix A

Board Designated Symbol for Posting Outdoor Pesticide Applications to School Grounds



01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**026 BOARD OF PESTICIDES CONTROL****Chapter 28: NOTIFICATION PROVISIONS FOR OUTDOOR PESTICIDE APPLICATIONS**

SUMMARY: These regulations establish procedures and standards for informing interested members of the public about outdoor pesticide applications in their vicinity. This chapter sets forth the requirements for requesting notification about pesticide applications, for posting property on which certain commercial pesticide applications have occurred and also establishes the *Maine Pesticide Notification Registry* structure and fees.

Section 1. Requesting Notification About Outdoor Pesticide Applications

The purpose of the following notification requirement is to enable individuals an opportunity to obtain information regarding outdoor pesticide application activities in their vicinity.

A. Requests for Notification; How Made

The owner, lessee or other legal occupant of a sensitive area may make a request to be notified about any outdoor pesticide application(s) which may occur within 500 feet of that sensitive area and any aerial application(s) which may occur within 1,000 feet of the sensitive area.

1. The request may be made in any fashion, so long as it is effective in informing the person receiving the request of the name, address, telephone number, and interest in receiving notification of the person making the request.
2. The request for notification should be made to the person responsible for management of the land on which the pesticide application will take place. If the person making the request for notification is uncertain as to the identity of the person to whom the request should be made, he/she may make the request for notification to the person who owns the land involved, as such ownership is ascertainable from the tax records of the municipality. That landowner shall then be responsible for assuring compliance with provisions of this section.

B. Procedure of Notification

Once a request for notification has been made as provided in Section 1(A), the person receiving the request shall cause notification to be given as follows:

1. General notification of intent to apply pesticides out-of-doors shall be given to the person making the request for notification. Such general notification may be given in any fashion, provided that it is effective in informing the person receiving the notice of the following:

- a. the approximate date(s) when pesticide(s) may be applied;
- b. the pesticide(s) which may be applied;
- c. in general terms, the manner of application; and
- d. the name, address and telephone number of a person responsible for the pesticide application from whom additional information may be obtained.
- e. If requested, the person responsible for managing the land shall make reasonable efforts to supply a copy of the MSDS(s) and/or the pesticide label(s). However such requests for additional information will not delay nor prohibit the intended pesticide application.

Where feasible, such general notification shall be given within one week after the request for notification is received and at least one day before any pesticide application is to occur. Such notification may cover outdoor pesticide applications which are planned over a period of up to one growing season.

2. If, following receipt of the general notification as provided by Section 1(B)(1) above, the person seeking notification believes there is a need for additional or updated information regarding impending pesticide application activities, he/she may make a further request for additional information from the person identified in the general notification. This request for additional information must specify the type of information needed, including, for example, more specific information regarding the date or dates on which pesticides will be applied when known. The person responsible for the notification shall make reasonable efforts to comply with such request for additional information.
3. If any person is dissatisfied with the efforts made by any other person at complying with these notification provisions, a complaint may be filed with the Board. The Board shall then make efforts to attempt to reach a reasonable and fair resolution between the parties.

Section 2. *Maine Pesticide Notification Registry for Non-Agricultural Pesticide Applications*

The Board shall maintain a list of individuals who must be notified of outdoor, non-agricultural pesticide applications in their vicinity. This list shall be referred to as the *Maine Pesticide Notification Registry*.

A. Individuals to be Included on the Registry

1. Individuals requesting to be listed on the *Maine Pesticide Notification Registry* shall pay all appropriate fees and provide the following information on forms supplied by the Board:

- a. Name;
 - b. Mailing address;
 - c. Listed registry residence, including street or road address and city;
 - d. Daytime and evening telephone number(s), one of which is designated as the primary contact number; and
 - e. The names and addresses of all landowners or lessees within 250 feet of the boundary of the listed registry residence.
2. Individuals may register more than one residence by completing additional forms and paying all appropriate fees.
 3. The effective period of the registry will be from March 1 to February 28 of the following year. Individuals must submit their request for inclusion on the next effective registry by December 31. All submissions received after that date will be included on the following registry. Individuals may notify the Board at any time of changes in their listed registry residence, however, changes will not take effect until the following registry. An individual will not be considered officially included on the *Maine Pesticide Notification Registry* unless their name appears on the current effective registry.
 4. The Board shall mail renewal notices to individuals listed on the *Maine Pesticide Notification Registry* on or before November 1 of each year. An individual must re-apply and pay all appropriate fees annually to remain on the registry for the next twelve month period.

B. Alerting Neighbors to the Presence of an Individual on the Registry

1. All individuals on the *Maine Pesticide Notification Registry* shall annually provide a letter to all landowners and lessees within 250 feet of their property boundary from whom they want to receive notification.
2. This letter, approved and supplied by the Board, must inform neighbors of the existence of the *Maine Pesticide Notification Registry*, the individual's request to be notified in the event of an outdoor pesticide application, the distance from the property boundary which shall cause notification to be given for non-agricultural pesticide applications, and the notification requirements of this chapter.
3. The individual on the registry requesting notification bears the burden of proof for demonstrating that this provision has been met.
4. Failure to distribute the letter will not prohibit an individual from being added to or remaining on the registry.

C. Registry Provided to Commercial Applicators

The *Maine Pesticide Notification Registry* shall be printed and distributed annually to affected licensed Commercial Master Applicators on or before its effective date of March 1. Newly licensed Commercial Master Applicators will be provided a copy of the current effective registry upon licensing.

D. Notification to Individuals on the *Maine Pesticide Notification Registry*

1. Commercial applicators shall notify an individual listed on the registry when performing an outdoor, non-agricultural pesticide application that is within 250 feet of the property boundary of the listed registry residence.
2. A person who receives a letter in accordance with Section 2(B) and who performs any outdoor, non-agricultural pesticide application within 250 feet to the property boundary of the listed registry residence shall notify the individual from whom the letter was given or sent.
3. Notification must consist of providing the following information to the individual on the registry:
 - a. The location of the outdoor pesticide application;
 - b. The date and approximate start time of the pesticide application (within a 24 hour time period) and, in the event of inclement weather, an alternative date or dates on which the application may occur;
 - c. The brand name and EPA registration number of the pesticide product(s) which will be used; and
 - d. The name and telephone number of the person or company making the pesticide application.
4. An individual on the registry who receives notification may request a copy of the pesticide product label or Material Safety Data Sheet. The person or company performing the pesticide application shall make reasonable efforts to comply with such request for additional information. However, such requests for additional information will not delay nor prohibit the person or company from performing the pesticide application as scheduled.
5. Notification must be received between 6 hours and 14 days prior to the pesticide application.
6. Notification must be made by telephone, personal contact or mail.
 - a. In cases where personal contact with the individual listed on the registry is not achieved, notification requirements are met via telephone if:

- i. the information is placed on a telephone answering device activated by calling the individual's primary contact telephone number; or
 - ii. the information is given to a member of the household or workplace contacted by dialing the primary contact telephone number.
 - b. If notification cannot be made after at least two telephone contact attempts and personal contact is not feasible, notification may be made by securely affixing the notification information in written form on the principal entry of the listed registry location.
7. The person or company performing the pesticide application bears the burden of proof for demonstrating that they have complied with this section.

E. Exceptions

1. Any person providing written notices to property owners in accordance with Chapter 51, "Notice of Aerial Pesticide Applications," shall be exempt from this section.
2. The following types of pesticide applications do not require notification under this section:
 - a. The application of pesticides indoors;
 - b. Agricultural pesticide applications;
 - c. The outdoor commercial application of pesticides to control vegetation in rights-of-way in certification and licensing category 6A (rights-of-way vegetation management);
 - d. The outdoor commercial application of pesticides in certification and licensing category 7A (structural general pest control) within five (5) feet of a human dwelling, office building, institution such as a school or hospital, store, restaurant or other occupied industrial, commercial or residential structure which is the intended target site;
 - e. The application of general use pesticides by hand or with non-powered equipment to control stinging insects;
 - f. The placement of pesticidal baits;
 - g. The injection of pesticides into trees or utility poles;
 - h. The placement of pesticide-impregnated devices on animals, such as ear tags and flea collars;

- i. The application of pesticidal pet supplies, such as shampoos and dusts;
- j. The application of disinfectants, germicides, bactericides and virucides, such as bleach. The use of disinfectants in the pressure-washing of the exterior of buildings is not exempt under this section;
- k. The application of insect repellents to the human body;
- l. The application of swimming pool products;
- m. The application of general use paints, stains, and wood preservatives and sealants applied with non-powered equipment or by hand or within an enclosure which effectively prevents the escape of spray droplets of the product being applied; and
- n. The injection of pesticides into wall voids.

F. Exemption from this section

If an individual on the current effective registry and a person or company performing pesticide applications subject to this rule can reach an agreement on notification provisions acceptable to both parties other than those described herein, then the requirements as described in this section may be waived. For such an exemption to be in effect, the details of the notification agreement must be placed in writing and signed by both parties. Either party may terminate the notification agreement with a 14-day, written notice.

G. Fee

The annual application fee for an individual requesting to be on the registry will be \$20.00. The Board may waive the fee for individuals who demonstrate an inability to pay, or where other extenuating circumstances exist which justify granting a waiver. Evidence of an individual's inability to pay shall include, but not be limited to, the individual's participation in any of the following programs:

1. Food Stamps
2. Temporary Assistance for Needy Families (TANF)
3. Supplemental Security Income (SSI)
4. Social Security Disability (SSD)
5. Maine Care (Medicaid)

Requests for a fee waiver must be in writing and be made by the individual at the time of application for listing on the registry. The written request must contain sufficient information for the Board to determine that a basis for granting a fee waiver has been demonstrated in accordance with this rule.

Section 3. Public Notice and Posting Requirements for Certain Pesticide Applications**A. Sidewalks and Trails**

Public notice must be provided consistent with Board policy for the outdoor commercial application of pesticides within category 6B to sidewalks and trails.

B. Posting**1. Categories Requiring Posting**

- a. 3A (outdoor ornamentals)
- b. 3B (turf)
- c. 6B (industrial/commercial/municipal vegetation management), except applications to sidewalks, trails, railroad sidings, and power substations
- d. 7A (general pest control)
- e. 7E (biting fly & other arthropod vectors)

2. Posting Requirements

Areas treated under the categories listed in Section 3B(1) shall be posted in a manner and at locations designed to reasonably assure that persons entering such area will see the notice. Such notice shall be posted before application activities commence and shall remain in place at least two days following the completion of the application. The sign shall be sufficient if it meets the following minimum specifications:

- a. The sign must be at least five (5) inches wide and four (4) inches high;
- b. The sign must be made of rigid, weather resistant material that will last at least forty-eight (48) hours when placed outdoors;
- c. The sign must be light colored (white, beige, yellow or pink) with dark, bold letters (black, blue or green);
- d. The sign must bear:
 - i. the word CAUTION in 72 point type;
 - ii. the words PESTICIDE APPLICATION in 30 point type or larger;
 - iii. the Board designated symbol;

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- iv. any reentry precautions from the pesticide labeling;
- v. the name of the company making the pesticide application and its telephone number;
- vi. the date and time of the application; and
- vii. a date and/or time to remove the sign.

C. Exemption from this section

- 1. The placement of marked bait stations in outdoor settings shall be exempt from this section.
 - 2. Any person providing notice in accordance with Chapter 51 - Notice of Aerial Pesticide Applications, Section III. - Ornamental Plant Applications, shall be exempt from this section.
-

STATUTORY AUTHORITY: 22 M.R.S.A. §1471-M(2)D

EFFECTIVE DATE:

September 22, 1998

AMENDED:

April 27, 1999

June 26, 2000

March 4, 2007 – Section 1(B)(e), filing 2007-68

December 26, 2011 – filing 2011-473

CORRECTIONS:

February, 2014 – agency names, formatting

AMENDED:

May 24, 2015 – filing 2015-076 (Final adoption, major substantive)

01 DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY

026 BOARD OF PESTICIDES CONTROL

Chapter 36: CERTIFICATION AND LICENSING PROVISIONS/MONITORS AND SPOTTERS FOR MAJOR FOREST INSECT AERIAL SPRAY PROGRAMS

SUMMARY: These regulations describe the requirements for certification and licensing of monitors and spotters for major forest insect aerial spray programs.

Section 1. Competency Standards for Certification - Monitor and Spotter

- A. No person shall be certified as a monitor or spotter unless he/she has demonstrated, by written exam, knowledge of pertinent subjects including pesticide labeling, safety, environmental concerns, pest organisms, pesticides, equipment, application techniques, Board regulations, guidelines, map reading, radio procedures, aerial navigation and orientation, meteorological conditions affecting spray deposition, and aerial spray patterns. Also required shall be knowledge of current methodology and technology for the control of pesticide drift to non-target areas and the potential adverse effect of pesticides on plants, animals or humans.
- B. No person shall be certified as a monitor or spotter unless he/she has 20/20 corrected vision.

Section 2. Certification Procedures for Monitors and Spotters

A. Initial Certification

- 1. Any person seeking to be certified as a monitor or spotter must pass a written monitor/spotter exam. The exam shall be closed book.
- 2. **Application for Exam.** All persons desiring to take the exam must request an application from the Board's office and submit all required information and fees.
 - a. Information shall include name, home address, Social Security number, company address and name and telephone number of supervisor.
 - b. A fee of \$10.00 shall accompany the application unless prior arrangements for payment are made with the Board.

3. **Appointment for Exams**
 - a. Exams will be available year-round on an appointment basis at the Board's office in Augusta. Appointments should be arranged at least 24 hours in advance of the desired date.
 - b. Exams will also be offered at the completion of organized training programs. The sponsors of such courses should contact the Board at least 15 days in advance of the desired date so that staff will be able to offer the exams.
 - c. Exams may also be offered at other locations designated by the Board staff. Appointments for these exams should be arranged by application with the Board's office in Augusta.
4. Study materials for the monitor and spotter exam are available from the Board's office in Augusta.
5. **Examinations.** All applicants shall complete the closed book monitor and spotter exam covering subjects specified in Section 1.
6. **Examination Procedure.** All applicants shall comply with these rules or forfeit their opportunity to complete the exam at a specified appointment.
 - a. Applicants should be present and ready to take the exam at the appointed time.
 - b. Applicants shall not talk during the examination period.
 - c. Applicants shall not be allowed to bring any books or papers into the examining room. Pencils and work sheets will be provided and all papers shall be collected at the end of the period.
 - d. Applicants shall not make notes of the exam and shall not leave the table during an exam unless authorized by the staff.
7. **Qualification.** An applicant desiring to qualify for monitor and spotter certification must achieve a passing score of 80 percent on the exam.
 - a. An applicant who fails an exam must wait at least 48 hours before retaking that exam. If an applicant fails the exam a second time, he/she must wait seven days before retaking the exam.
 - b. An applicant who violates any of the rules pertaining to examinations shall wait a minimum of 14 days before retesting.
8. **Expiration.** Certification under this section will expire on December 31st of the fifth year after the date of successful completion of the exam and on December

31st of every fifth year thereafter unless a special restricted certification period is assigned by the Board or Board staff.

B. Recertification

1. All certified monitors and spotters must earn 15 recertification credits during the certification period described in Section 2(A)7 in order to renew certification without having to be re-examined.
2. Recertification credits will be available through Board approved meetings including but not limited to industry and trade organization seminars, workshops where pesticide topics are presented and approved home study courses.
3. Credit will be allowed for topics including but not limited to:
 - a. Applicable laws, regulations and guidelines.
 - b. Environmental hazards.
 - c. Pesticide labeling.
 - d. Map reading.
 - e. Aerial navigation.
 - f. Radio procedures.
 - g. Meteorologic conditions affecting aerial spray.
 - h. Meteorological data gathering procedures.
 - i. Aerial application techniques.
4. Persons organizing courses for which they want credits awarded must contact the Board in writing at least 15 days in advance of the course and submit details of the pesticide topics, including titles and length of time devoted to them. Board staff will review course agendas and assign credit values. Board staff will monitor courses as time permits.
5. A minimum credit of one hour shall be assigned for each one hour of presentations on appropriate topics.
6. An individual conducting courses for which the Board does assign recertification credits will be eligible for two credits for each hour of presentation on appropriate topics.
7. For in state programs, each participant will complete a form to verify attendance at each program for which credit is allowed at the site. For out of state programs, applicators must notify the Board about attendance and send a registration

receipt or other proof of attendance, a copy of the agenda or other description of the presentations attended. The agenda must show the length of each presentation and describe what was covered.

8. A person who fails to accumulate the necessary credits will have to re-apply to take the exam required for initial certification.

Section 3. Licensing

- A. **Application.** Application for a monitor's or spotter's license shall be on forms provided by the Board.
- B. **Fee.** A fee of \$20.00 shall accompany each application.
- C. **Decision.** Within 1 day of receipt of application by the Board unless the applicant agrees to a longer period of time, the Director shall issue, renew or deny the license. The Director's decision shall be considered final agency action for purposes of 5 M.R.S.A. §11001 *et seq.*
- D. **Refusal to Renew.** The Board may refuse to renew a license if it is not in accordance with any of the requirements hereof or if the Board makes, as to the licensee, any of the findings set forth in 22 M.R.S.A. §1471-D(8), which describe the bases for a decision by the Administrative Court to suspend or revoke a license. If the Board determines that there is evidence sufficient to refuse to renew a license, it shall give notice and an opportunity for a hearing before the Board prior to making that determination final.
- E. **Expiration.** All monitor and spotter licenses will expire at the end of each calendar year.

Section 4. Special Monitor and Spotter Requirements

- A. No person shall act as a monitor or spotter without prior certification and issuance of a currently valid license from the Board for that purpose.
 - B. Monitors and spotters shall prepare written spray period reports for each and every spray period according to procedures outlined in Chapter 50.
-

STATUTORY AUTHORITY:
22 M.R.S.A. § 1471-D

EFFECTIVE DATE:
February 6, 1985

AMENDED:
August 17, 1996

EFFECTIVE DATE (ELECTRONIC CONVERSION):
March 1, 1997

CONVERTED TO MS WORD:
March 11, 2003

CORRECTIONS:
February, 2014 – agency names, formatting

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STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL
 28 STATE HOUSE STATION
 AUGUSTA, MAINE 04333

PAUL R. LEPAGE
 GOVERNOR

WALTER E. WHITCOMB
 COMMISSIONER

MEMORANDUM

Date: November 8, 2018
 To: Board Members
 From: Staff
 Subject: Staff Planning Session

Historically, board staff have met annually with the public board to discuss emerging issues and potential projects for the coming year. Staff recently held a planning session and developed a list of topics for the board's consideration. Staff would like the Board's input on which of the following items should receive priority when staff are planning their discretionary time.

- Water Quality
 - 2019 statewide groundwater monitoring
 - 2020 groundwater monitoring for hexazinone in proximity to blueberries
 - Stream sampling in conjunction with Maine DEP
- Compiling Use Data
 - Short term solution—Establish an Access database
 - Long term solution—Establish an online form linked to product registration, possibly in MEPERLS, for reporting of sales and use data
- Public Outreach
 - Got Pests? website renovation and update
 - Mobile kiosk for use at events and fairs
 - Maine Science Festival
 - Flower Shows

Overall goal: Work on collaborations with partners in Plant Health Program, Maine Natural Areas Program, DEP, Cooperative Extension, Master Gardener volunteers, Ag in the Classroom, IPM Council, etc.

MEGAN PATTERSON, DIRECTOR
 32 BLOSSOM LANE, MARQUARDT BUILDING



PHONE: (207) 287-2731
 WWW.THINKFIRSTSPRAYLAST.ORG

Budget Synopsis for November 16, 2018 Board Meeting

Information included is for the state fiscal year (7/1/17-6/30/18)

Revenues for FY 2018 primarily generated from:

- Applicator license fees--\$176K
- Product registration fees--\$2,036K
- EPA Cooperative Agreement Grant--\$351K

Legislative transfer of \$135K is annually given to the University of Maine for IPM education

Dicap Transfer (Dept. Wide Indirect Cost Allocation Plan) (\$197K)—Percentage of what we spend each month is used to pay for Dept. administrative staff (accountants, human resources, etc.), technology needs (computers, etc.) and other expenses that benefit all programs within the Dept. The funding is administered through the Commissioner's office.

Expenses for 2018 = \$1,650,557* Expenses are divided into two categories: Personnel Services and All Other.

Personnel Services

BPC funds 10 permanent full time positions and four full time seasonal positions that work in the BPC program. The only position currently unfilled is the full time permanent Environmental Specialist II position. However, several positions were unfilled for portions of the 2018 FY including the BPC Director, two ES II, Toxicologist, and the ES IV position.

BPC Positions

(full time permanent)

2 Office Associate II

1 Env. Specialist II

3 Env. Specialist III

2 Env. Specialist IV

1 Toxicologist

1 BPC Director

(full time seasonal)

4 Env. Specialist II

The BPC also funds five permanent full time positions in the Plant Health Program. Non-dedicated BPC funds cover the salaries and some other expenses of the Plant Health positions.

Plant Health Positions

(full time permanent)

2 Asst. Horticulturist

1 State Horticulturist

2 Entomologist III (IPM Specialist and State Apiarist)

All Other

Prof Services not by State (line 40)—Contracts with consultants and speakers, but also temp agencies \$46K (hiring temp workers)

Grants & Publications & Private Organizations (line 64)—Maine Mobile Health for 2017 and 2018 (\$11K)*

Statewide Cost Allocation Plan (STACAP) (line 85)—The State of Maine provides un-billed central services to State Programs that operate with Federal and/or special revenue funds. In order to recover the costs of providing these services, the State must prepare a Statewide Indirect Cost Allocation Plan or STACAP also known as SWCAP.

*Not charged in FY 2018--\$65 K for UMaine PAT/PSEP and \$50K for Maine CDC Mosquito Survey

BOARD OF PESTICIDES CONTROL - SUMMARY
014-01A-0287-01 CASH REPORT

	CURRENT FISCAL YEAR 2018 (BY MONTH)												TOTAL
	Jul-17	Aug-17	Sep-17	Oct-17	Nov-17	Dec-17	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	
BALANCE FORWARD	1,031,207.51	945,590.00	831,813.37	871,488.15	651,844.30	570,761.35	1,539,376.72	1,935,003.60	1,986,856.59	1,816,200.04	1,772,817.30	1,632,683.59	
REG INSECT & FUNGICIDES	32,160.00	20,640.00	11,680.00	10,880.00	84,960.00	1,048,480.00	485,248.00	143,840.00	70,700.00	77,600.00	27,040.00	23,680.00	2,036,908.00
SPECIAL LICENSES & LEASES	5,355.00	4,580.00	5,605.00	5,230.00	5,395.00	35,252.00	48,185.00	20,538.00	11,607.00	14,145.00	10,940.10	10,145.00	176,977.10
FED GRANTS FOR PUB HEALTH	-	-	-	-	-	-	-	-	-	-	-	4,057.32	4,057.32
REGISTRATION FEES	25.00	246.30	-	20.00	-	392.00	260.00	-	20.00	-	-	-	963.30
MISC SERVICES & FEES	-	-	-	-	9,439.45	-	-	-	3,752.68	-	-	-	13,192.13
MISC-INCOME	-	-	-	21.62	-	-	-	-	-	-	-	-	21.62
RECOVERED COST	-	-	-	-	-	-	-	82.50	-	-	-	-	82.50
ADJ OF ALL OTHER BALANCE FWD	-	-	143,901.25	947.01	9,562.93	10,189.26	-	-	-	-	-	-	164,600.45
DICAP TRANSFER	(15,441.97)	(13,676.03)	(15,937.02)	(13,401.70)	(27,543.70)	(20,678.21)	(13,331.28)	(15,833.93)	(12,281.97)	(13,894.21)	(15,389.47)	(19,975.95)	(197,385.44)
LEGIS TRANSFER OF REVENUE	-	-	-	-	-	-	-	-	(135,000.00)	-	-	-	(135,000.00)
TOTAL REVENUES	22,098.03	11,790.27	145,249.23	3,696.93	81,813.68	1,073,635.05	520,361.72	148,626.57	(61,202.29)	77,850.79	22,590.63	17,906.37	2,064,416.98
SALARIES AND WAGES	52,001.41	48,263.00	48,530.85	71,890.66	47,843.39	49,366.93	51,193.33	53,001.60	53,834.68	54,424.38	73,485.23	50,740.42	654,575.88
SALARIES AND WAGES	6,648.00	6,648.00	6,672.00	10,108.00	6,354.43	1,696.00	-	-	3,741.30	3,630.40	5,445.60	3,630.40	54,574.13
SALARIES AND WAGES	643.70	760.40	352.00	1,158.18	1,285.44	380.59	493.52	396.62	1,227.68	537.24	978.31	537.24	8,750.92
SALARIES AND WAGES	1,440.85	-	-	118.37	220.00	-	-	110.00	440.00	4,593.86	165.00	220.00	7,308.08
FRINGE BENEFITS	38,773.85	37,095.66	36,809.82	55,101.38	28,631.13	34,000.96	33,618.89	34,237.87	37,932.00	38,416.67	44,669.35	35,661.79	454,949.37
PROF. SERVICES, NOT BY STATE	4,376.11	5,778.59	4,494.93	3,906.37	3,606.47	2,214.02	2,691.17	2,994.90	2,767.22	3,346.59	3,658.03	6,954.97	46,789.37
TRAVEL EXPENSES, IN STATE	-	158.14	333.12	521.70	44.71	-	229.73	268.37	82.09	138.47	-	170.84	1,947.17
TRAVEL EXPENSES, OUT OF STATE	-	400.68	-	1,113.84	382.61	919.29	(277.80)	-	3,345.96	2,059.06	(1,011.95)	-	6,931.69
STATE VEHICLES OPERATION	-	-	7.00	-	-	-	-	-	-	-	-	-	7.00
RENTS	1,198.44	-	2,067.44	250.00	2,629.22	565.00	772.71	493.46	992.70	-	805.04	2,653.22	12,427.23
INSURANCE	-	-	3,116.24	-	-	-	-	-	-	-	-	-	3,116.24
GENERAL OPERATIONS	159.37	140.84	537.70	666.60	1,889.48	13,359.26	7,544.62	2,703.82	2,027.10	2,575.93	1,174.37	2,140.54	34,919.63
EMPLOYEE TRAINING	-	510.00	-	-	-	-	-	-	400.00	-	-	-	910.00
COMMODITIES - FOOD	-	-	-	-	17.64	10.96	-	-	33.88	106.18	21.40	-	190.06
TECHNOLOGY	(97.27)	22,029.54	-	66,158.45	64,149.25	-	25,510.62	-	-	8,262.00	23,801.05	95,409.82	305,223.46
CLOTHING	-	-	-	-	-	-	-	-	-	-	219.70	-	219.70
OFFICE & OTHER SUPPLIES	55.75	807.58	168.88	881.05	2,009.40	35.29	22.68	270.06	53.92	289.80	249.95	2,567.16	7,411.52
GRANTS TO PUB AND PRIV ORGNS	-	-	-	6,360.00	-	-	-	-	-	-	5,360.00	-	11,720.00
ADMINISTRATIVE CHARGES AND FEE	(20.00)	20.00	-	-	-	-	-	20.00	-	-	-	-	20.00
TRANSFERS	2,535.33	2,954.47	2,484.47	5,106.18	3,833.46	2,471.38	2,935.37	2,276.88	2,575.73	2,852.95	3,703.26	4,836.54	38,566.02
TOTAL EXPENDITURES	107,715.54	125,566.90	105,574.45	223,340.78	162,896.63	105,019.68	124,734.84	96,773.58	109,454.26	121,233.53	162,724.34	205,522.94	1,650,557.47
CURRENT CASH BALANCE	945,590.00	831,813.37	871,488.15	651,844.30	570,761.35	1,539,376.72	1,935,003.60	1,986,856.59	1,816,200.04	1,772,817.30	1,632,683.59	1,445,067.02	1,445,067.02

BOARD OF PESTICIDES CONTROL - PROJECTION THROUGH 12/31/2018

	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	TOTAL
BALANCE FORWARD	1,445,067.02	1,336,725.13	1,239,329.05	1,124,276.08	988,472.80	982,778.61	
Revenues:							
1407 REG INSECT & FUNGICIDES	15,680.00	22,240.00	10,560.00	15,000.00	125,000.00	1,050,000.00	1,238,480.00
1448 SPECIAL LICENSES & LEASES	7,845.00	4,820.00	2,560.00	5,145.00	3,000.00	35,000.00	58,370.00
2206 FED GRANTS FOR PUB HEALTH	-	-	-	-	-	-	-
2631 REGISTRATION FEES	-	-	-	-	-	-	-
2637 MISC SERVICES & FEES	-	-	-	-	-	-	-
2651 SALE LABELS CARTONS	-	-	-	-	-	-	-
2669 SALE MAILING LISTS	-	-	-	-	-	-	-
2671 SALE OF PROMOTIONAL ITEMS	-	-	-	-	-	-	-
2681 OVERPAYMENTS TO BE REFUNDED	-	-	-	-	-	-	-
2686 MISC-INCOME	-	-	5.00	-	-	-	5.00
2690 RECOVERED COST	-	-	-	-	-	-	-
2934 TRANS FROM GENERAL FD SURPLUS	-	-	-	-	-	-	-
2952 ADJ TO PRIOR YEAR BAL/UNALLOCT	-	-	-	-	-	-	-
2953 ADJ OF ALL OTHER BALANCE FWD	-	-	-	-	-	-	-
2955 ADJ OF PERS SERV BALANCE FWD	-	-	-	-	-	-	-
2968 REG TRANSFER UNALLOCATED	-	-	-	-	-	-	-
2978 DICAP TRANSFER	(26,089.23)	(15,542.14)	(16,002.95)	(16,482.11)	(16,818.75)	(17,172.75)	(108,107.93)
2979 TRANSFER FOR INDIRECT COST	-	-	-	-	-	-	-
2981 LEGIS TRANSFER OF REVENUE	-	-	-	-	-	-	-
TOTAL REVENUES	(2,564.23)	11,517.86	(2,877.95)	3,662.89	111,181.25	1,067,827.25	1,188,747.07
Expenditures:							
31 SALARIES AND WAGES	-	-	-	-	-	-	-
32 SALARIES AND WAGES	49,457.63	49,475.24	49,528.03	50,000.00	50,000.00	51,500.00	299,960.90
33 SALARIES AND WAGES	5,246.09	6,323.21	6,323.20	6,500.00	6,500.00	6,600.00	37,492.50
34 SALARIES AND WAGES	-	-	-	-	-	-	-
36 SALARIES AND WAGES	585.24	730.44	585.24	750.00	750.00	750.00	4,150.92
38 SALARIES AND WAGES	1,565.39	275.00	-	-	-	-	1,840.39
39 FRINGE BENEFITS	36,481.30	38,395.10	38,361.84	39,000.00	39,000.00	39,750.00	230,988.24
40 PROF. SERVICES, NOT BY STATE	3,119.71	4,205.49	4,337.40	4,500.00	4,660.00	4,250.00	25,072.60
41 PROF. SERVICES, BY STATE	-	-	-	-	-	-	-
42 TRAVEL EXPENSES, IN STATE	136.91	80.78	209.10	300.00	300.00	300.00	1,326.79
43 TRAVEL EXPENSES, OUT OF STATE	2,298.34	4,341.06	(391.58)	1,000.00	2,800.00	3,000.00	13,047.82
44 STATE VEHICLES OPERATION	-	-	-	-	-	-	-
45 UTILITY SERVICES	-	-	-	-	-	-	-
46 RENTS	864.59	1,548.27	726.12	775.00	800.00	800.00	5,513.98
47 REPAIRS	-	-	-	-	-	-	-
48 INSURANCE	2,460.12	-	129.60	-	-	-	2,589.72
49 GENERAL OPERATIONS	2,904.35	851.24	387.73	500.00	675.00	800.00	6,118.32
50 EMPLOYEE TRAINING	-	-	-	-	-	-	-
51 COMMODITIES - FOOD	15.88	155.16	-	-	-	-	171.04
53 TECHNOLOGY	-	10.02	8,390.26	8,500.00	8,500.00	8,500.00	33,900.28
54 CLOTHING	-	181.30	-	-	-	-	181.30
55 EQUIPMENT AND TECHNOLOGY	42.19	-	-	-	-	-	42.19
56 OFFICE & OTHER SUPPLIES	(1,563.51)	114.01	1,293.77	300.00	500.00	500.00	1,144.27
58 HIGHWAY MATERIALS	-	-	-	-	-	-	-
63 GRANTS TO CITIES AND TOWNS	-	-	-	25,000.00	-	-	25,000.00
64 GRANTS TO PUB AND PRIV ORGNS	-	-	-	-	-	-	-
67 ASSISTANCE AND RELIEF GRANT	-	-	-	-	-	-	-
72 EQUIPMENT	-	-	-	-	-	-	-
82 ADMINISTRATIVE CHARGES AND FEE	-	-	-	-	-	-	-
85 TRANSFERS	2,163.43	2,227.62	2,294.31	2,341.17	2,390.45	2,437.74	13,854.72
90 CHARGES TO ASSETS AND LIAB.	-	-	-	-	-	-	-
TOTAL EXPENDITURES	105,777.66	108,913.94	112,175.02	139,466.17	116,875.45	119,187.74	702,395.98
CURRENT CASH BALANCE	1,336,725.13	1,239,329.05	1,124,276.08	988,472.80	982,778.61	1,931,418.12	1,931,418.12

Proposed Administrative Consent Agreement Background Summary

Subject: Wise Acres Farm
424 Town House Road
Kenduskeag, Maine 04450

Date of Incident(s): June 7, 2017

Background Narrative: On June 15, 2017, a Board inspector completed an inspection with the owner of Wise Acres Farm in Kenduskeag.

The owner/applicator exceeded the maximum labeled application rate when applying Actinovate AG Biological Fungicide on June 7, 2017. The applicator did not wear the required respirator when mixing, loading, and applying the pesticide. Additionally, the owner did not have OSHA safety data sheets at a central information display as required by the federal Worker Protection Standard and the pesticide application records were incomplete.

Summary of Violation(s):

- Federal Worker Protection Standard, 40 CFR, Part 170. OSHA safety data sheets not provided at a central information display for workers.
- 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S. § 606 (2)(B) and 22 M.R.S. § 1471 D (8)(F). Using a pesticide inconsistent with its label directions (exceeded maximum labeled application rate, lack of respirator).
- 01- 026 C.M.R. Ch. 50, § 1(A), The applicator's pesticide application records were insufficient. Information that was missing included: application method, applicator name, applicator license number, town of application, target pest, documentation of sensitive areas, and weather data.

Rationale for Settlement: Lack of personal protective equipment, did not post the required safety data sheets for workers, insufficient pesticide applicator records, and exceeded the maximum labeled application rate.

Attachments: Proposed Consent Agreement

**STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION, AND FORESTRY
BOARD OF PESTICIDES CONTROL**

In the Matter of:)	
Wise Acres Farm)	ADMINISTRATIVE CONSENT AGREEMENT
424 Town House Road)	AND
Kenduskeag, Maine 04450)	FINDINGS OF FACT

This Agreement by and between Wise Acres Farm, (hereinafter called the "Grower") and the State of Maine Board of Pesticides Control (hereinafter called the "Board") is entered into pursuant to 22 M.R.S. §1471-M (2)(D) and in accordance with the Enforcement Protocol amended by the Board on December 13, 2013.

The parties to this Agreement agree as follows:

1. That the Grower produces agricultural crops for commercial purposes at a business that utilizes pesticides bearing language requiring conformance with the federal Worker Protection Standard, 40 CFR, Part 170 (WPS).
2. That the Grower employs one or more workers as defined under 40 CFR, Part 170.3 to assist in the production of the crops described in paragraph one.
3. That a Board inspector conducted an inspection at the Grower's facility on June 15, 2017.
4. That from the inspection described in paragraph three, it was determined that on June 7, 2017, the Grower applied 2 ounces of Actinovate AG Biological Fungicide ("Actinovate AG") to 3,600 square feet of strawberries. The label maximum is 1 ounce of Actinovate AG to 3,600 square feet of strawberries.
5. That the circumstances described in paragraphs one through four constitute use of a pesticide inconsistent with the product labeling and in violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S § 606 (2)(B) and 22 M.R.S. § 1471 D (8)(F).
6. That, as a result of the inspection described in paragraph three, it was also determined that the Grower did not have OSHA safety data sheets at a central information display as required by the federal Worker Protection Standard, 40 CFR, Part 170.
7. That the circumstances in paragraphs one through four, and six, constitute a violation of the federal Worker Protection Standard, 40 CFR, Part 170.
8. That during the inspection described in paragraph three, the inspector reviewed the pesticide label for Actinovate AG and documented that the use of this product requires that mixers, loaders, applicators, and other handlers wear a respirator meeting NIOSH standards of at least N-95, R-95, or P-95.
9. That the inspection showed that no respirator was worn when the Actinovate AG was mixed, loaded or applied on June 7, 2017, as described in paragraph four.
10. That circumstances described in paragraphs one through four, eight, and nine, constitute use of a pesticide inconsistent with the product labeling and in violation of 7 U.S.C. § 136j (a)(2)(G), 7 M.R.S § 606 (2)(B) and 22 M.R.S. § 1471 D (8)(F).

11. That 01- 026 C.M.R. ch. 50, § 1(A), requires that commercial agricultural producers shall maintain pesticide application records.
12. That from the inspection described in paragraph three, it was determined that the Grower's records were insufficient under 01- 026 C.M.R. ch. 50, § 1(A). Information that was missing included: application method, applicator name, applicator license number, town of application, target pest, documentation of sensitive areas, and weather data.
13. That the circumstances described in paragraphs one, three, four, eleven, and twelve, constitute a violation of 01- 026 C.M.R. ch. 50, § 1(A).
14. That the Board has regulatory authority over the activities described herein.
15. That the Grower expressly waives:
 - a. Notice of or opportunity for hearing;
 - b. Any and all further procedural steps before the Board; and
 - c. The making of any further findings of fact before the Board.
16. That this Agreement shall not become effective unless and until the Board accepts it.
17. That in consideration for the release by the Board of the causes of action which the Board has against the Grower resulting from the violations referred to in paragraphs five, seven, ten, and thirteen, the Grower agrees to pay to the State of Maine the sum of \$175. (Please make checks payable to Treasurer, State of Maine).

IN WITNESS WHEREOF, the parties have executed this Agreement of two pages.

WISE ACRES FARM

By: _____ Date: _____

Type or Print Name: _____

BOARD OF PESTICIDES CONTROL

By: _____ Date: _____

Megan Patterson, Director

APPROVED:

By: _____ Date: _____

Mark Randlett, Assistant Attorney General

Proposed Administrative Consent Agreement Background Summary

Subject: Paul Finden and Emily Rogals
387 High Street
Belfast, Maine 04971

Date of Incident(s): Late summer/early fall 2017

Background Narrative: Christopher Harley-White, a resident of Belfast, called the Board on October 5, 2017. He alleged that his abutting neighbors Paul Finden and Emily Rogals applied an herbicide that killed some of his grass and damaged some landscape trees and a shrub that were professionally planted. The complaint was investigated by a Board inspector. Initially Finden and Rogals denied ever purchasing or using herbicides or any involvement with the damage to Harley-White's property. The inspector later documented that Roundup herbicide was purchased on multiple occasions at a local hardware store by collecting and reviewing the store's customer item history report on Finden. A plant pathologist from the Maine Forest Service visited Harley-White's property and after seeing the symptoms on multiple tree species concluded the damage did not appear to be from natural causes. A Board inspector collected a soil sample from dead grass next to a damaged tree, and a composite foliage sample from affected trees. Both were positive for glyphosate and AMPA (a breakdown metabolite of glyphosate). Based on the evidence in this case, a consent agreement was mailed to Finden/Rogals. Finden later met with Board staff and admitted that his wife applied the herbicide to Harley-White's landscape trees. Rogals did this because the trees were shading her flower gardens and causing ice buildup on their driveway.

Summary of Violation(s): CMR 01-026 Chapter 20 Section 6(D)2 No person may apply a pesticide to a property of another unless prior authorization for the pesticide application has been obtained from the owner, manager or legal occupant of that property.

Rationale for Settlement: Finden and Rogals did not have the property owners' authorization to apply a pesticide to their property and did not take the necessary steps to get that authorization.

Attachments: Proposed Consent Agreement

STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY
BOARD OF PESTICIDES CONTROL

In the Matter of:)
Paul Finden and Emily Rogals) ADMINISTRATIVE CONSENT AGREEMENT
387 High Street) AND
Belfast, Maine 04915) FINDINGS OF FACT

This Agreement by and between Paul Finden and Emily Rogals (hereinafter called "Finden & Rogals") and the State of Maine Board of Pesticides Control (hereinafter called the "Board") is entered into pursuant to 22 M.R.S. §1471-M (2)(D) and in accordance with the Enforcement Protocol amended by the Board on December 13, 2013.

The parties to this Agreement agree as follows:

1. That on October 5, 2017, the Board received a phone call from Christopher Harley-White who resides at 383 High Street in Belfast with his wife Kristin Robinson-White. C. Harley-White alleged that Finden & Rogals, his abutting neighbors at 387 High Street, applied herbicide that killed some of his grass and damaged some of his trees.
2. That on October 6, 2017, a board inspector called C. Harley-White to get additional information and to schedule an on-site inspection. C. Harley-White reported that two to three weeks prior, his wife noticed the tops of some of their trees were dying and turf grass near these trees was also dead and dying. The inspector scheduled an on-site inspection for October 10, 2017.
3. That on October 10, 2017, the board inspector met with C. Harley-White at his residence. In the spring of 2014, he and his wife had a six-foot-tall stockade fence installed on the northwest side of their property. About a month later they hired Farley & Son Landscape Company to plant conifer trees that were six to eight feet tall, and some ornamental hardwood trees and shrubs that included a hydrangea and two hawthorns along the fence. Both the fence and landscape plants were on the White's property.
4. That during the meeting in paragraph three the inspector noted that fourteen of the planted conifer trees and the hydrangea planted along the fence on C. Harley-White's property had dead tops or tops with die-back. The grass near these same trees appeared dead. The affected trees and grass were parallel to Finden & Rogals' driveway. Other conifer and deciduous trees planted at the same time were healthy and green as was the grass near them.
5. That on October 11, 2017, the inspector collected a soil sample from under the dead grass aligned with trees with dead and dying tops and a foliage sample from these same damage trees described in paragraphs three and four. Digital photos were taken of the sampled sites.
6. That on October 11th, the inspector also met with Finden & Rogals. Both stated they were opposed to the White's planting of the trees described in paragraphs three and four because the trees blocked sunlight to their gardens and would cause ice buildup on their driveway.
7. That lab results for the soil sample collected as described in paragraph five was positive for glyphosate at 5164 ppb and 1512 ppb AMPA (a breakdown metabolite of glyphosate). The vegetation sample described in paragraph five was positive for glyphosate at 7221 ppb and 98 ppb AMPA.

8. That on October 19, 2017, the board inspector phone Matt Tripp, the foreman at Farley & Son Landscape company who oversaw the landscape planting of trees and shrubs described in paragraph three. Tripp told the inspector that the neighbors (Finden & Rogals) did not want the trees planted there and that Emily Rogals stated that the trees will not be allowed to grow and shade her property. Tripp also told the inspector that Finden & Rogals did not like Christopher and his wife and that some very bad comments were made to that affect.
9. That at the Board's request, a plant pathologist with the Maine Forest Service examined the trees and site on November 20, 2017.
10. That in a letter to Board staff, the plant pathologist stated that the symptoms of the declining trees near the fence were not consistent with biotic (natural) causes. The trees were growing well, indicating the site was suitable for the trees, and that they had been taken care of since the time of planting. The timing and appearance of symptoms was not consistent with environmental stressors. The pathologist encouraged testing for herbicide exposure since certain herbicides can cause symptomology similar to that seen on the trees on C. Harley-White's property.
11. That on November 8, 2017, two Board inspectors interviewed Rogals outside her Belfast home. During that interview, Rogals was asked if either she or her husband ever purchased Roundup or a similar product containing glyphosate to kill weeds or brush. Rogals responded that neither she nor her husband have ever bought or used it since they are organic.
12. That during the interview described in paragraph eleven, Rogals completed a written statement stating that to her knowledge, neither she nor Finden ever used Roundup.
13. That part way through Rogal's written statement described in paragraph twelve, Rogals told the inspectors she wanted to put examples of how mean her neighbors (C. Harley-White family) had been to her family but it was too much to write. Rogals told the inspectors some examples, including the planting of trees without asking Finden & Rogals about it or even talking to them about it. "The trees are already causing our driveway to ice up more and blocking sun from our gardens."
14. That on October 10, 2017, a board inspector contacted Aubuchon store # 171 in Belfast. During that contact, the inspector inquired about and received pesticide purchase information for Paul Finden in the form of a customer item history report dated 10/10/17.
15. That a review of the customer item history report, indicated that Finden made multiple purchases of Roundup herbicide including the following: 7/18/16- Roundup 30 oz TRIG; 8/11/16 - Roundup 1.33 gallons PU; 11/6/16- Roundup Pump N Go 1; and 8/23/17-Roundup Concentrate PT.
16. That in addition to the Roundup purchased as described in paragraph fifteen, the customer item history report further indicates Finden purchased two hand held pressure sprayers on 5/15/16.
17. That the facts, including Finden & Rogals' objections to the trees being planted by the Whites adjacent to their driveway, the damage to those trees consistent with the application of an herbicide, the damage to the grass beside those trees consistent with the application of an herbicide, the existence of soil and foliage samples which tested positive for the presence of glyphosate and AMPA (active ingredient and metabolite of the active ingredient in Roundup), Rogals' statement that neither she nor her husband ever purchased or used Roundup because they were organic, and the store invoices showing that Finden purchased Roundup

and pressure sprayers, all show that Finden and/or Rogal applied Roundup to the trees on the White's property on at least one occasion and that they may have, in fact, made multiple applications.

- 18. That CMR 01-026 Chapter 20 Section 6(D)2 requires prior authorization from the property owner before a person can apply pesticides to their property.
- 19. That Finden & Rogals did not have the White's authorization for the application of pesticide to their property.
- 20. That the circumstances described in paragraphs one through nineteen constitute a violation of CMR 01-026 Chapter 20 Section 6(D)2.
- 21. That the Board has regulatory authority over the activities described herein.
- 22. That Finden & Rogals expressly waive:
 - A. Notice of or opportunity for hearing;
 - B. Any and all further procedural steps before the Board; and
 - C. The making of any further findings of fact before the Board.
- 23. That this Agreement shall not become effective unless and until the Board accepts it.

That in consideration for the release by the Board of the cause of action which the Board has against Finden & Rogals resulting from the violation referred to in paragraph twenty, Finden & Rogals agree to pay a penalty to the State of Maine in the sum of \$1500. (Please make checks payable to Treasurer, State of Maine).

IN WITNESS WHEREOF, the parties have executed this Agreement of three pages.

FINDEN & ROGALS

By: _____ Date: _____

Type or Print Name: _____

BOARD OF PESTICIDES CONTROL

By: _____ Date: _____

Megan Patterson, Director

APPROVED:

By: _____ Date: _____

Mark Randlett, Assistant Attorney General

From: jody spear
Sent: Wednesday, November 07, 2018 3:24 PM
To: Pesticides <Pesticides@maine.gov>
Cc:
Subject: [EXTERNAL SENDER] Fwd: Bad spud: GMO potato creator now fears its impact on human health | The Organic & Non-GMO Report

to: members of pesticide control board

For all the reasons cited in this interview, approval of the Innate [GM] potato should never have been granted. In addition to threats to human health from toxins that build up in concealed bruise areas, Rommens points out hazards to critically endangered bee colonies: GM potato pollen fed to bee larvae could be expected to alter their genetic makeup.

Rommens warns that GM potatoes entering the market should be evaluated for hidden bruises and infections and for levels of alpha-aminoadipate, tyramine, and other toxins. I would like to see more protective action in Maine: Please withdraw the approval.

Jody Spear, Harborside

<https://shar.es/aaampE>

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Bad spud: GMO potato creator now fears its impact on human health

 non-gmoreport.com/articles/bad-spud-gmo-potato-creator-now-fears-its-impact-on-human-health/



By [Ken Roseboro](#)

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New book, *Pandora's Potatoes*, describes genetic engineer's work to develop the Innate genetically modified potato and his misgivings about that work



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Of all the genetic engineers who have renounced the technology—Arpad Pusztai, Belinda Martineau, Thierry Vrain, John Fagan, and Michael Antoniou, among others—because of its shortsighted approach and ability to produce unintended and potentially toxic consequences, Caius Rommens' story may be the most compelling. Rommens was director of research at Simplot Plant Sciences from 2000 to 2013 where he led development of the company's genetically engineered Innate potato. But over time, Rommens started to have serious doubts about his work and worried about potential health risks from eating the GMO potatoes, which are now sold in 4,000 supermarkets in the U.S.

Rommens' concerns about the GMO potato led him to write a book, *Pandora's Potatoes*, which was recently published. The book is a case study on how a scientist's initial enthusiasm about genetic engineering turns to doubt and fear as he realizes the hazards the technology can create.

I recently interviewed Caius Rommens about his work developing the GMO potato and the misgivings he now has about it.

Please describe your work developing GMO potatoes and your position at Simplot.

Caius Rommens: I left my position as team leader at Monsanto to start an independent biotech effort at Simplot. During the twelve years I worked there, I designed a genetically modified potato that I believed was resistant to bruise and late blight, and that could be used to produce French fries that were less colored and less carcinogenic than normal fries.

The main genetic engineering of the Simplot GMO potatoes as described in your book was silencing genes called RNAi. What are some of the possible negative consequences of silencing genes?



Caius Rommens

CR: Silencing is not gene-specific. Any gene with a similar structure to the silencing construct may be silenced as well. It is even possible that the silencing that takes place inside the GM potatoes affects the genes of animals eating these GM potatoes. I am most concerned about bees that don't eat GM potatoes but may use GM potato pollen to feed their larvae. Based on my assessment of the literature, it appears that the silencing constructs are active in pollen.

You say that silencing the PPO (polyphenol oxidase, a gene responsible for browning in potatoes) gene increases toxins that accumulate in the GMO potatoes. Why are these toxins produced and what effects could these toxins produce on human health?

CR: Ex-colleagues of mine had shown that PPO-silencing increases the levels of alpha-amino adipate by about six-fold. Alpha-amino adipate is a neurotoxin, and it can also react with sugars to produce advanced glycoxidation products implicated in a variety of diseases.

(A Monsanto GM corn variety, LY038, was found to have high concentrations of alpha-amino adipate, and an application for its approval in Europe in 2009 was withdrawn after regulators raised safety questions.)

There is no data on the actual levels of alpha-amino adipate in GM potatoes, but I believe that Simplot should carefully determine these levels.

Similarly, ex-colleagues had shown that the damaged and bruised tissues of potatoes may accumulate high levels of tyramine, another toxin. Such damaged tissues are normally identified and trimmed, but they are concealed, or partially concealed, and much of it is not trimmed in GM potatoes. Therefore, it seems important that Simplot should determine the full spectrum of possible tyramine levels in their GM potatoes.

Another potential toxin is chaconine-malonyl. There is little known about this compound, but ex-colleagues had shown that it is increased by almost 200 percent upon PPO-silencing. This should probably be investigated.

Advertisements

In your book you write that the GMO potatoes don't eliminate bruising but just conceal it. Please explain.

CR: PPO-silencing prevents the darkening of bruises. The suppression of symptoms is so effective that we believed we had overcome the bruise issue. It took me a lot of time to understand that GM potatoes still have bruises—invisible bruises—that are just as damaged as the darkening bruises of normal potatoes. In other words, the invisible bruises still are entry points for pathogens and exit points for water, which are two important issues during storage.

In addition to the claim of eliminating bruises, Simplot says the Innate potato provides "protection against late blight pathogen," and "reduced asparagine, which contributes to reduced acrylamide in cooked potatoes." What are your reactions to these claims?



CR: The GM potato does contain a resistance gene that provides protection against late blight. The problem is that nobody knows how long the protection will last. Plant breeders have tested many different resistance genes in the past, and these genes are almost always overcome by quickly evolving pathogens.



Another issue is that late blight is usually accompanied by other pathogens. In humid regions of the world where late blight is most active, there are dozens of other pathogens. So, growing GM potatoes with a single resistance gene in, for example, Bangladesh is like getting vaccinated for one tropical disease and then moving to the tropics where there are many other diseases.



Next, the reduced asparagine levels do lower the amount of acrylamide in French fries, but these levels are already very low in normal fries. Simplot argues that the reduced acrylamide levels reduce carcinogenicity, but I could not find any reliable studies demonstrating that normal fries are carcinogenic.



The title of your book is Pandora's Potatoes. What led you to choose this title?



CR: During the five years after my departure from Simplot, I realized that I had not been rigorous enough in considering the possibility that my modifications might have caused unintended effects. I then studied the publicly available literature that was relevant to my past work, and identified a number of issues that had been hidden from my view. My GM potatoes had "hidden" issues—like Pandora's Box.



What do you think should be done with these GMO potatoes?



CR: I believe that, for the short term, GM potatoes entering the consumer market should be evaluated for the incidence of hidden bruise and infections and the range in levels of toxins such as alpha-aminoadipate and tyramine.



Do you think the problems you experienced in GMO potatoes will be similar in other GMO plants?

CR: It is my experience that genetic engineers are biased and narrow-minded. They may not be able to critically assess their own creations.

What is your perspective on genetic engineering now after your work with the GMO potato and misgivings about it?

CR: My concern about genetic engineering is that the absence of unintentional effects can never be guaranteed. It may take dozens of years before these effects reveal themselves, and we should be extremely cautious applying the technology.

What is your perspective on CRISPR/gene editing?

CR: The problem with CRISPR is that it changes the function of a gene in all tissues of an organism. This is a very important limitation, because gene changes are mostly “useful” only if implemented in a single tissue.

CRISPR has the same problems as genetic engineering. In my book, I explain that it requires manipulations in tissue culture that cause mutations. These mutations have a negative effect on crop performance and cannot be removed from certain crops including apple and potato.

What do you see as the best alternatives to GMO or conventional mono-cropped potatoes?

CR: Genetic engineering is meant to increase crop uniformity. I believe the opposite approach—to increase crop diversity—will be more effective in increasing the sustainability of farming.

I am most hopeful in the efforts of small companies such as Solynta (A Dutch company that has developed an innovative non-GMO technology for targeted breeding of potatoes). The main benefit of Solynta’s approach is that it breeds potatoes that have a simpler genetic structure than cultivated potatoes—more like that of wild potatoes—so that genetic traits can be combined much more effectively.

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Certification (Testing) and Recertification (Continuing Education) Requirements

The type and number of exams required to obtain certification varies depending on the type of license needed. All licensees are required to pass a core exam, which is a written test covering general pesticide information.

Private applicators must also pass a commodity exam which measures knowledge of pest management practices for a given crop or crop family. Private commodities include animal, vegetables, forestry, cranberry, blueberry, forage, greenhouse, orchard fruit, nursery, potatoes, small fruit and turf. A licensed grower can use pesticides to grow any commodity.

Commercial licensees must pass one or more category exam. Each category exam tests knowledge of pest management practices pertinent to the specific profession where pesticides are used, such as in forestry, lawn care or structural pest control. To obtain a *commercial master* license it is necessary to also pass a written regulation exam and a master exam.

Pesticide use is a rapidly changing technology. New products, new pests, application methods, safety standards and regulations are introduced every year. To be recertified, the BPC requires applicators to receive approved continuing education training, which is offered by BPC, University of Maine Cooperative Extension (UMCE), and industry and trade organizations. Credit is also accepted for attending out-of-state sessions. Recertification requirements are outlined below.

Type of License	Exams Required	Exam Fees	License Information	License Cost	Recertification Requirements
Agricultural Basic	<ul style="list-style-type: none"> Core 	None	Expires 10/31 of third year	\$15	3 hours in 3 years
Private	<ul style="list-style-type: none"> Core Commodity 	None	Expires 10/31 of third year	\$15	6 hours in 3 years
Commercial Master	<ul style="list-style-type: none"> Core Category Regulation exam Master exam 	\$10 for the core, each category exam and the regulation exam. \$40 for the master oral exam*	Expires 12/31 of third year	\$105	9 hours in 3 years
Commercial Operator	<ul style="list-style-type: none"> Core Category 	\$10 for the core and each category exam*	Expires 12/31 of third year	\$105	6 hours in 3 years

*Commercial exam and license fees are waived for government employees.

Testing Process

Agricultural Basic and Private License Exams

Exams are offered through county offices of UMCE. Applicants should call the BPC at 207-287-2731, to confirm licensing needs and testing locations. Exams may also be scheduled using the BPC online portal at www.maine.gov/bpc. Once exams are passed, the candidate is certified for three years and is eligible for a license.

Commercial Exams

Exams may be scheduled using the BPC online portal at www.maine.gov/bpc or by submitting an exam application form, available at www.thinkfirstspraylast.org, along with payment if required (see chart). Once exams are passed, the candidate is certified for three years and is eligible for a license.

Study Materials

The BPC strongly urges use of self-study materials available for purchase through UMCE's Pest Management Office, 491 College Ave, Orono, Maine 04473; telephone 207-581-3880 or 800-287-0279 or on their website: www.umaine.edu/ipm/pesticide-safety/



Maine Board of
Pesticides Control

Licensing Requirements for Pesticide Applicators in the State of Maine

Maine Board of Pesticides Control
www.thinkfirstspraylast.org
207-287-2731
pesticides@maine.gov



Applicator Licensing

Pesticides are important tools which, in the hands of skilled applicators, offer numerous benefits. Increased crop yields, reduced crop losses, safer highways, enhanced landscapes and infestation-free structures are just a few. As with any powerful tool, proper and effective use of pesticides depends upon the judgment of the trained applicator. . . especially when considering products which could potentially affect public health and natural resources.

The pesticide applicator *license* represents recognition of an individual's qualifications to use pesticides properly.

In order to become licensed in Maine, individuals must first earn *certification*, which shows proficiency in pest management, pesticide use and safety. This competence is demonstrated through successful completion of examinations offered by the **Board of Pesticides Control (BPC)**. This state agency then issues licenses to certified individuals once fees are paid and, if needed, insurance requirements are met.



Types of Licenses

The need for a pesticide applicator license depends upon the type of pesticide used and the circumstances in which the pesticide is applied. In Maine, pesticide applicator licenses fall into three major categories:

1) AGRICULTURAL BASIC

The *Agricultural Basic* pesticide applicator license is for growers who annually sell more than \$1,000 of plants or plant products intended for human consumption and who use only general-use (over-the-counter) pesticides on property owned or leased by them. These include:

- Growers of fruits, vegetables, herbs and grains for human consumption;
- Growers of the above crops who make bread, jam, french fries, wine, cider, juice, etc., or who sell produce to be processed into these products; and
- Greenhouse growers selling fruit, vegetable and herb seedlings.



2) PRIVATE

The *Private* applicator license is for those wishing to purchase and use restricted-use, as well as general-use, pesticides in the production of agricultural commodities on property owned or leased by them. These typically include:

- Farmers
- Greenhouse and nursery operators
- Orchardists
- Christmas tree growers
- Foresters

3) COMMERCIAL

The *Commercial* applicator license is for professionals using any pesticide in a variety of occupations. A commercial license is required in all of the following situations:

- Application of *any* restricted-use pesticide for purposes other than producing an agricultural commodity;
- Use of *any* pesticide as a service for which compensation is received. Examples include lawn and landscape care; tree and shrub care; and home pest control;

COMMERCIAL CONT.

- Use of *any* pesticide in a licensed food or eating establishment;
- Use of *any* pesticide in connection with duties as an official or employee of federal, state or local government, including municipal agencies, schools, universities and housing authorities; and
- Use of *any* pesticide on non-agricultural sites *open to public use*. Property is considered open to use by the public when the owner permits routine access by the public, even if a fee is charged for such use. Examples include office and apartment buildings and grounds; golf courses, campgrounds and other outdoor recreation facilities; hospitals and nursing homes; retail and commercial spaces.

Levels of Commercial Applicator Licensing:

- **Operator**—the minimum requirement for individuals employed as technicians under the supervision of a *licensed master applicator*. The operator license is in effect only if the employing company or organization has at least one licensed master applicator;
- **Master**—required for one individual within each company, organization, branch office or agency. This license is for the person responsible for major pest management decisions, for establishing policies related to proper pesticide use and for employee training and overall work practices, generally the owner, supervisor or manager.

What is a Pesticide?

The term pesticide covers a wide range of products. By definition, a pesticide is any substance used to kill, control or repel undesired insects, weeds fungi, bacteria, rodents or other organisms. Pesticides may be made from natural, biologic, or synthetic ingredients and some are approved for organic use. Pesticides include insecticides (bug killers); herbicides, (weed killers, including 'weed & feed' products); fungicides (disease controls); rodenticides; defoliant; growth regulators; and disinfectants (including mold controls).

Pesticides registered by the U.S. Environmental Protection Agency (EPA) are tested for human and environmental effects and registered for use—these products display an EPA registration number on the label. Some pesticide products are exempt from testing and registration by the EPA but are not exempt from registration by the BPC—these products do not have an EPA registration number on the label and have not been tested. General-use pesticides are available for use by homeowners and gardeners; however in some cases an applicator license is required to use general-use pesticides. Restricted-use pesticides are so designated by the EPA and always require an applicator license for use.



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Field Evaluation of Commercially Available Small Unmanned Aircraft Crop Spray Systems

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ABSTRACT. Agricultural research and development on small unmanned aircraft systems (UAS) has been directed toward UAS enabled sensing to detect features of interest. While compelling, there is an immediate need to increase the breadth and depth of UAS-based research, to move beyond sensing, and explore active intervention in agricultural production systems. This paper is focused on the concept of crop protection through ultra-precise, unmanned aerial application systems, and seeks to initiate research discussion in this important area of opportunity. Toward this end, two different, commercially available, small Unmanned Aerial Application Systems (sUAAS - defined as less than 55 lbs. maximum take-off weight) were evaluated for operational techniques and application system efficacy under dynamic field conditions. The performance of the factory supplied spray equipment systems are documented using traditional aerial spray testing methods that have been modified for UAS enabled application systems, referred to as small Unmanned Aerial Application Systems (sUAAS). Results from initial testing protocols indicate that the factory supplied systems are quite different in design and implementation, with spray test results that reflect this difference in design, in both deposition and spray swath. Further, it is apparent that with the advent of unmanned aerial application systems, and the unique characteristics of the integrated aircraft and application systems, there is a very real need for the development of standardized sUAAS testing procedures.

Keywords. Unmanned aircraft, unmanned aerial application systems, unmanned aerial spray systems, spray pattern testing, drone sprayer, wind tunnel testing

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Introduction

The opening of National Air Space to small unmanned aircraft is already becoming a “game changer” for agriculture. Unmanned aircraft systems (UAS) will offer an unparalleled opportunity to place sensors, robotics, and advanced information systems at desired locations for increasing production and improving efficiency of agricultural operations. Research on deployment of UAS for sensing agricultural systems continues to expand, with emphasis on early detection of stress, informing precision agriculture, and advances in phenotyping (Woldt et al., 2016).

At the same time, it is possible to envision unmanned aircraft systems that allow direct interaction within their proximal environment. These systems represent active engagement of the UAS in the agricultural production system and have the potential to continue the evolution of unmanned aircraft in agriculture. One area of promise is the use of unmanned aircraft for application of beneficial products for crop and/or animal agriculture. Toward this vision, this paper is focused on the concept of crop and/or animal protection through ultra-precise small unmanned aerial application systems (sUAAS -- or simplified to UAAS). As such, it seeks to initiate exploration and begin to solve fundamental science and engineering challenges, as these new aerial spray technologies continue to evolve.

While ultra-precise unmanned aircraft spray technologies exist and can be purchased, the technology is so new that standard methods for testing UAS spray system performance have not yet been developed. As a result, vendors are providing equipment that offers somewhat coarse guidance on achieving a desired application rate. This is understandable, given the lack of UAAS testing methods. The purpose of the research reported in this paper is to document the use of spray testing methods that have been modified from traditional piloted aerial testing protocols, to allow for use with UAAS. Two different, factory supplied UAAS were deployed, without any modifications, and results of the field-based research using the modified protocol for spray testing has been documented and reported.

Opportunities

Small unmanned aerial application systems will offer many opportunities for agriculture. Some of these opportunities are noted from agronomic prospects, entomology points of view, and plant pathology perspectives. As resistant weed populations continue to increase, a multifaceted approach to weed management will only become more critical. An important component of resistance management is early detection and rapid response. If resistant populations can be detected early they are often contained to a relatively small area of a field. These small 'patches' of resistant weeds provide an ideal opportunity for targeted herbicide applications. If unmanaged and allowed to go to seed, these patches will often spread over an entire field by the subsequent growing season. The potential economic gain from targeted herbicide applications to small resistant weed populations could be great when compared with the cost of field-wide herbicide programs.

Insect and mite infestations in crops often are not uniform, particularly when the pest colonizes the field from outside areas. Many examples of this exist, including grasshoppers which move into crop fields from nearby untilled areas where eggs overwinter, pivot corners or south facing portions of fields where spider mites may first develop, or infestations by aphids which fly into fields from a distance. Early detection of plant stress or injury by UAS may allow treatment of pest 'hot spots' by UAAS before the infestation becomes more widespread and increasingly costly to treat. Limiting the amount of pesticide applied would have economic benefits as well as ecological benefits by limiting the potential disruption by pesticides of natural biological controls in a field.

Like other pests, plant diseases often develop in seemingly random spots in fields that may be due to a number of conditions, such as wet spots in fields, recent pathogen introductions, spore showers, etc. Often, the pathogen continues to spread from these areas much further into growing crops dramatically increasing their impacts. The same advantages that early detection of diseases in fields of insects/mites and treatment of those spots with UAAS to limit spread, could also help to reduce mitigate overall impacts of disease. Spot treatment for some diseases may prevent or delay the need for widespread treatment of entire fields. Some examples may be the initial development of diseases, such as southern rust in corn, that often develop quickly. Southern rust is often treated with foliar fungicides because there is little plant resistance to it in commercially available corn hybrids and this disease has the potential to rapidly spread and cause severe yield loss under favorable weather conditions. Early detection and spot treatment may allow for more effective and economical control.

Background

Perhaps one of the earliest reported efforts to advance small unmanned aerial application systems can be found in the research reported by Huang et.al. in 2008 and 2009, in which the development of an unmanned aerial spray vehicle for highly accurate application of product is described in an ASABE conference proceeding, followed by an ASABE Applied Engineering in Agriculture journal article, respectively. The emphasis was on the enabling technology that would support a small unmanned aerial application system. Following this early work on enabling technology, Qiu et.al. (2012) describe

research in which a strong correlation is observed between unmanned helicopter flight altitude and speed, and the resulting spray deposition and uniformity. Continuing to build on their early work, a more exhaustive exploration of unmanned aerial application technologies can be found in the work by Huang et.al. (2013).

In order to improve spray uniformity, when using an unmanned helicopter, Bae and Koo (2013) developed a different airframe configuration in which roll balancing was pursued, with somewhat improved results. Additional research on spray drift and deposition can be found in the work by Xinyu et.al. (2014), in which effectiveness of the UAAS spray deposition was tested on a paddy field. Their results tend to indicate that the UAAS deposition efficiency is better than traditional spray systems. Additional research on spray efficiency has been reported by Qin et.al. (2014) in which water sensitive cards were placed at four different levels within a maize canopy. Their results pointed to recommendations for working height of the UAAS above canopy and a recommended spray swath width to achieve the maximum efficiency for the given aircraft/spray system.

Extending the technological and field testing further, Zhang et.al. (2015) developed a simulation model to predict aerial spray drift from an unmanned helicopter, and then ran an experimental verification test to evaluate the model performance. Comparison of the predicted and observed drift curves revealed a promising coincidence. Continuing to explore advances in UAAS, Ru et.al. (2015) developed and conducted flight testing on an electrostatic UAAS. Their results tend to indicate that flight height above canopy had a much greater impact on spray drift, and the electrostatic system offered negligible improvement in drift control. Given the flight characteristics of multi-rotor UAAS, Wang et.al. (2016 and 2016) explored the downwash flow field distribution and found it to be a viable method for analysis of spatial spray deposition distribution under various conditions of flight altitude and crosswind. Zhou and He (2016) report similar research in which water sensitive papers were placed in a crop, and the UAAS was flown at three different velocities. Results indicate that uniformity was improved while droplet density and percentage of spray coverage were decreased as the flight velocity increased.

More recently, Wang et.al. (2017) conducted spray drift research for a single rotor airframe, and concluded that more research is needed provide data to support spray drift control, and to establish aviation spray standards. Research by Chen et.al. (2017) evaluated different methods for testing effective spray width of UAAS, and provides guidance on selecting the more suitable protocols for evaluation of spray swath pattern. A fairly exhaustive study was conducted by Wang et.al. (2017) in which four different aircraft were tested with multiple trials, to develop more of a statistical approach to testing. The results of this study provide insight into the determination of spraying parameters, environmental conditions of UAAS operation, and the formulation of working practices for aerial spraying. A rather unique approach to aerial application is reported by Rodriguez et.al. (2017) in which Herbicide Ballistic Technology (ie, paintball gun type of system) is affixed to a UAAS and highly targeted application of herbicides is achieved in areas that are very difficult to access, and yet the ecosystems are extremely sensitive to herbicides. Finally, Teske et.al. (2018) are reporting on the use of simulation models CHARM+AGDISP to predict the drift and deposition of sprays released from rotary wing UAAS.

Brief comment on regulations

Upon a more in-depth review of the UAAS literature, it becomes apparent that most of the research has been conducted and reported in the Transactions of the Chinese Society of Agricultural Engineering. Perhaps one of the reasons for this can be traced to the regulatory environment for unmanned aircraft. The U.S. Federal Aviation Administration only recently allowed commercial flight of unmanned aircraft in the National Airspace System, through the promulgation of Part 107 rules and regulations for unmanned aircraft systems (FAA, 2016). While it is recognized that Part 107 does permit flight of UAS for commercial purposes, the regulations do not allow for using unmanned aircraft for aerial application systems. At the same time, the Part 137 FAA rules that govern agricultural aircraft operations (FAA, 2018) do not provide for the use of unmanned aircraft systems for aerial application of economic poisons. As a result, the use of unmanned aircraft for aerial application of economic poisons requires specific waivers to both sets of regulations (Part 107 and Part 137), and a certified pilot, or pilots, that hold appropriate pilot certifications for unmanned aircraft and aerial application. Currently, these requirements lead to confusion and difficulty in achieving legal status to fly unmanned aircraft with economic poisons as a payload. These challenges have resulted in minimum progress on UAAS research and development in the United States.

There is a long history of research, development and testing of piloted aerial application systems, including ASTM standards, and an in-depth base of literature on the topic. Piloted aircraft are large, perhaps up to 3,000 liter carrying capacity, and move at a rapid pace, with airspeeds up to 160 kts. At the same time, there is a similar depth of research and literature on spray nozzle testing in wind tunnel environments, to understand more about nozzle performance under dynamic conditions, in fast moving air streams, to emulate spray aircraft. However, with the emerging potential for sUAAS, there is a corresponding need to engage in research and development, to learn more about the performance of these new systems, including the types of applications for which they are most suited. This might include spot spraying of weed patches, edge spraying, spraying small infestations of invasive species in wetland ecosystems, application of dry granular product for mosquito control, as well as a host of other applications that fit the mission profile of a sUAAS platform. This research seeks to develop an initial exploration into field testing of commercially available sUAAS, without any modifications to the factory configuration.

Methods

Field / Flight Test

This study was conducted in an unpaved area surfaced with gravel in Burlinson County, near College Station, TX (30° 40' N, 96° 18' W). Two UASs, DJI Agras MG-1 (Dà-Jiāng Innovations, Shenzhen, Guangdong, China) and V6A (Homeland Surveillance and Electronics, Seattle, WA), were launched to determine the effect of application height and ground speed on spray pattern uniformity and spray droplet spectra characteristics. The MG-1 platform was equipped with XR11001 nozzles (TeeJet Technologies, Wheaton, Ill.) and V6A platform was equipped with CR80005 nozzles (Lechler). The nozzle pressures were 226 and 517 kPa, respectively, for the MG-1 and V6A models. The nozzle configuration was different for each airframe. The MG-1 has a “square nozzle pattern” with two nozzle following two nozzles along the flight path. The V6A has a more conventional boom, with the four nozzles in a single line, perpendicular to the direction of flight (see Table 1).

Table 1. UAS spray application system parameters.

Platform	Nozzle	# of nozzles	Pressure (kPa)	Flow Rate (ml/min.)
MG-1	XR11001	4 (square)	226	354
V6A	CR80005	4 (in line)	517	197

The treatments comprised of three application heights, 2, 3 and 4 m in cohort with four ground speeds, 1, 3, 5 and 7 m/s. Each treatment was replicated four times. A spray mix of tap water with Vision Pink™ dye (GarrCo Products, Converse, IN) at 20 ml/l was sprayed parallel to the prevailing wind over the centerline of an 11 m long x 1 mm diameter cotton string, suspended 1 m above the ground. The amount of fluorescent dye deposited on the cotton string was analyzed fluorometrically using the USDA Swath Analysis System (Hoffmann and Jank, unpublished). Fluorometric response on cotton string was used to assess pattern uniformity and effective swath.

The spectrometer (fluorometer) used for the system has a wavelength measurement range of 200-850 nm at a resolution of 1.5 nm. As the string went through the photocell, the strength of the emission signal at 405 nm would vary depending out how much dye had deposited on the string. The analysis software that was developed only read the signal strength at the 405 nm wavelength, which meant that ambient light did not interfere with the string signal. The string patterns were analyzed with custom USDA-ARS pattern analysis software. Each pattern from each replication first was evaluated individually to determine if the integrity of the deposition data was sufficient to be included in the analysis. The best example of this is if a strong crosswind were to move more than half of the spray off of the string. Those data would then not be included. In all cases, at least two patterns were used for the analysis. It was rare to have less than three replications included for the analysis. The good patterns were first centered using the centroid feature in the software. This feature determines the area under the curves and places the center of the area on the centerline. This helps to correct for the effect of crosswinds. The corrected patterns then were averaged and an effective swath was determined objectively by choosing the widest effective swath with a CV less than 25%. The data also were analyzed by documenting the CV for all treatments at a set effective swath of 4.6 m. This was another way to perform a direct comparison of the two application systems.

Spray droplet spectra were determined using water sensitive paper (WSP) samplers (26 x 76 cm) (Spraying Systems, Wheaton, Ill.). Five WSPs were inserted each into a paper clip attached to separate wooden blocks, and were placed 1-m apart on a table oriented parallel to the cotton string. Soon after spray application was conducted, WSPs were placed inside photographic negative sleeves and transported to the laboratory for analysis. Spray droplet spectra data were analyzed by the DropletScan™ scanner-based system (Whitney and Gardisser, 2003). The droplet spectra parameters measured were $D_{v0.1}$, $D_{v0.5}$, $D_{v0.9}$, percent area coverage and spray application rate. $D_{v0.1}$ is the droplet diameter (μm) where 10% of the spray volume was contained in droplets smaller than this value. Similarly, $D_{v0.5}$ and $D_{v0.9}$ are droplet diameters where 50% and 90% of the spray volume, respectively, contained droplets smaller than these values. $D_{v0.5}$ is commonly known as the Volume Median Diameter (VMD).

Spray Nozzle Test in Wind Tunnel

The spray-droplet spectrum for each UAS spray nozzle was evaluated using the low-speed wind tunnel at the Pesticide Application Technology Lab in North Platte, NE. The droplet spectrum for each treatment was analyzed using a Sympatec HELOS- VARIO/KR laser diffraction system with the R7 lens. The laser is controlled by WINDOX 5.7.0.0 software, which was operated on a computer adjacent to the wind tunnel. This lens is capable of detecting droplets in a range from 9 to 3,700 μm . The laser consists of two main components, an emitter housing containing the optical box and the source of the laser and a receiver housing containing the lens and detector element. The two laser housings were separated (1.2 m) on each side

of the wind tunnel and mounted on an aluminum optical bench rail that connected underneath the wind tunnel to ensure proper laser alignment. The spray plume was oriented perpendicular to the laser beam and traversed through the laser beam by means of a mechanical linear actuator. The actuator moves the nozzle at a constant speed of 0.2 m/s, such that the entire spray plume would pass through the laser beam. The distance from the nozzle tip to the laser was 30 cm. Treatments in this study were compared using the $D_{v0.1}$, $D_{v0.5}$, and $D_{v0.9}$ parameters (Creech et al., 2016).

Data Analysis

Data were sorted by aircraft platform type and were analyzed using Proc GLM procedure (SAS, 2012). Means with significant F -values were separated using Duncan's Multiple Range Test (DMRT) at $P = 5\%$.

Results

Field / Flight Test

The spray droplet spectra data presented in Tables 2 and 3 shows that the differences in droplet parameters were caused by the differences in nozzle type, nozzle orifice size, spray pressure and flow rate. The V6A model was equipped with lechler nozzle, CR80005, with a flow rate of 197 ml/min., while the MG-1 model was equipped with XR11001 nozzle with a flow rate of 354 ml/min. Flow rate has a direct relation to drop size. An increase in flow rate will increase the drop size; similarly a decrease in flow rate will decrease drop size. Pressure has an inverse relationship effect on drop size. An increase in pressure will reduce the drop size. A reduction in pressure will increase the drop size. The atomization of liquids into spray droplets depends upon a number of factors among others, such as spray volume and nozzle type (Creech et al., 2015; Hoffmann and Kirk, 2005; Whisenant et al., 1993). As expected, MG-1 model aircraft with a larger orifice size and flow rate produced larger spray droplets than those of V6A aerial delivery system.

Table 2. Effect of application height and ground speed on spray droplet spectra for UAS model MG-1.

Application Height (m)	$D_{v0.1}$	$D_{v0.5}$	$D_{v0.9}$	Coverage (%)	Liters/ha
2	152.7a	260.4a	371.9a	4.2a	15.3a
3	167.9a	265.1a	373.1a	5.6a	16.7a
4	148.6a	244.1a	347.3a	3.2a	11.5a
df =2,188	$F=2.4$ $P>0.1$	$F=1.5$ $P>0.2$	$F=1.6$ $P>0.2$	$F=2.3$ $P>0.1$	$F=1.0$ $P>0.4$
Ground Speed (m/s)	$D_{v0.1}$	$D_{v0.5}$	$D_{v0.9}$	Coverage (%)	Liters/ha
1	155.3ab	274.9ab	420.2a	9.4a	34.4a
3	146.7b	245.0bc	340.0c	2.5b	9.1b
5	184.9a	279.2a	379.3b	4.01b	9.3b
7	142.7b	231.2c	321.6c	1.4b	4.8b
df=3,188	$F=4.3$ $P>0.0056$	$F=5.0$ $P>0.0024$	$F=13.5$ $P<0.0001$	$F=14.5$ $P<0.0001$	$F=29.1$ $P<0.0001$

Means followed by the same lower case letters are not significantly different ($P = 5\%$).

Table 3. Effect of application height and ground speed on spray droplet spectra for UAS model V6A.

Application Height (m)	D _{v0.1}	D _{v0.5}	D _{v0.9}	Coverage (%)	Liters/ha
2	124.7a	206.1a	292.7a	2.1a	7.0a
3	108.9b	174.1b	252.6b	2.0a	6.1a
4	111.9b	172.3b	242.1b	0.9b	2.7b
df=2,180	<i>F</i> =11.8 <i>P</i> <0.0001	<i>F</i> =28.5 <i>P</i> <0.0001	<i>F</i> =24.6 <i>P</i> <0.0001	<i>F</i> =7.3 <i>P</i> >0.0009	<i>F</i> =7.6 <i>P</i> >0.0007
Ground Speed (m/s)	D _{v0.1}	D _{v0.5}	D _{v0.9}	Coverage (%)	Liters/ha
1	116.3a	195.2a	291.9a	3.8a	12.3a
3	118.3a	192.0a	275.5b	1.6b	4.9b
5	116.1a	178.2b	246.3c	1.0bc	3.0bc
7	111.2a	174.3b	241.4c	0.4c	1.3c
df=3,180	<i>F</i> =1.5 <i>P</i> >0.2	<i>F</i> =6.6 <i>P</i> >0.0003	<i>F</i> =17.1 <i>P</i> <0.0001	<i>F</i> =31.7 <i>P</i> <0.0001	<i>F</i> =30.4 <i>P</i> <0.0001

Means followed by the same lower case letters are not significantly different ($P = 5\%$).

Application height significantly influenced spray droplet spectra for V6A; however the opposite was true for MG-1. Ground speed significantly influenced spray droplet spectra parameters for both aircraft systems. Spray coverage was higher at 1 m/s ground speed compared to 3 m/s for both aircrafts. While ground speed higher than 3 m/s did not increase coverage for MG-1 aircraft, increased ground speed did decrease coverage for V6A aircraft. Using N-3 UAV, 6 Pan et al. (2016) obtained better droplet distribution with higher spray coverage, increased deposition, smaller droplets and smaller coefficient of variation when a rotor UAV was flown at 1.0 m height over citrus trees. Qin et al. (2016) reported that an application height of 1.5 m and spraying speed at 5 m/s with HyB-15L UAV produced improved penetration and distribution of spray droplets on rice canopy. Qin et al. (2018) applied triadimefon fungicide on wheat canopy against powdery mildew and reported uniform distribution of spray droplets when N-3 UAV was launched at 5.0 m height at a speed of 4 m/s.

When analyzing the effect of application height on pattern uniformity for both platforms, the CV was determined with the swath fixed at 4.6 m (Table 4). This allowed for a direct comparison of each application system. Based on the results, overall, the CV for the MG-1 platform was best at 2 m application height. For the V6A, for the 2 and 3 m applications, resulted in very good spray application patterns. The CV for the 4 m application height was much higher most likely due to the smaller droplets from the spray being carried away from the target string. Similarly, the effect of ground speed for the two application systems on pattern uniformity at 4.6 m swath is presented in Table 5. Here, a ground speed of 3 m/s for the MG-1 resulted in the best pattern uniformity of 10.3% with all values less than 14%. For the V6A, the highest groundspeed of 7 m/s provided the best pattern uniformity with a CV of 14.7%. All other values were less than 20%.

Table 4. Swath pattern uniformity at 4.6 m swath at different application heights as indicated by coefficient of variation (%) for two commercially-available unmanned aerial application systems.

UAS models	Application Height (m)	CV (%)
MG-1	2	7.0b
	3	15.5a
	4	13.0a
$F=16.8; df=2,9$		$P > 0.0009$
V6A	2	15.5a
	3	13.5a
	4	22.3a
$F=2.3; df=2,9$		$P > 0.15$

Means followed by the same lower case letters are not significantly different at $P = 5\%$ (DMRT).

Table 5. Swath pattern uniformity at 4.6 m swath at different ground speeds as indicated by coefficient of variation (%) for two commercially-available unmanned aerial application systems.

UAS models	Ground Speed (m/s)	CV (%)
MG-1	1	11.0a
	3	10.3a
	5	13.3a
	7	12.7a
$F=0.27; df=3,8$		$P > 0.85$
V6A	1	19.7a
	3	18.0a
	5	16.0a
	7	14.7a
$F=0.26; df=3,8$		$P > 0.85$

Means followed by the same lower case letters are not significantly different at $P = 5\%$ (DMRT).

The effect of application height on effective swath for both application systems is presented in Table 6. For this analysis, the largest effective swath was chosen for each height which resulted in a CV of less than 25%. For the MG-1, the best effective swath (7.3 m) was achieved at the 2 m application height. Since spray drift increases with application height, being able to have the best effective swath at the lowest application height is an advantage. For the V6A, the 2 m application height also provided the largest effective swath (5.6 m). The effect of ground speed on effective swath was also determined (Table 7). This effective swath also was chosen where the CV remained below 25%. For the MG-1, the best effective swath (6.8 m) was at a groundspeed of 3 m/s, while for the V6A, the highest groundspeed of 7 m/s resulted in the largest effective swath (5.8 m).

Table 6. Effect of application height on effective swath for two commercially-available unmanned aerial application systems. Coefficient of variation was less than 25% for each effective swath.

UAS models	Application Height (m)	Effective Swath (m)
MG-1	2	7.3a
	3	6.6a
	4	5.5b
$F=9.34; df=2,9$		$P > 0.0064$
V6A	2	5.6a
	3	5.3a
	4	5.0a
$F=2.3; df=2,9$		$P > 0.70$

Means followed by the same lower case letters are not significantly different at $P = 5\%$ (DMRT).

Table 7. Effect of ground speed on effective swath for two commercially-available unmanned aerial application systems. Coefficient of variation was less than 25% for each effective swath.

UAS models	Ground Speed (m/s)	Effective Swath (m)
MG-1	1	6.6a
	3	6.8a
	5	6.0a
	7	6.4a
$F=0.32; df=3,8$		$P > 0.81$
V6A	1	5.2a
	3	5.2a
	5	5.2a
	7	5.8a
$F=0.25; df=3,8$		$P > 0.86$

Each of the strings for each of the treatments were analyzed with the USDA String Analysis software. Many factors play into the quality of the spray pattern such as height, droplet spectra, wind speed and direction. Figure 1 shows an example of a pattern from the V6A at 3 m height and a groundspeed of 7 m/s where all the conditions were near optimal, resulting in a “good” pattern. Here, the effective swath for this particular combination of application height and groundspeed would be 17’ as the CV still remains below 25%. A 19’ swath would exceed this CV limit.

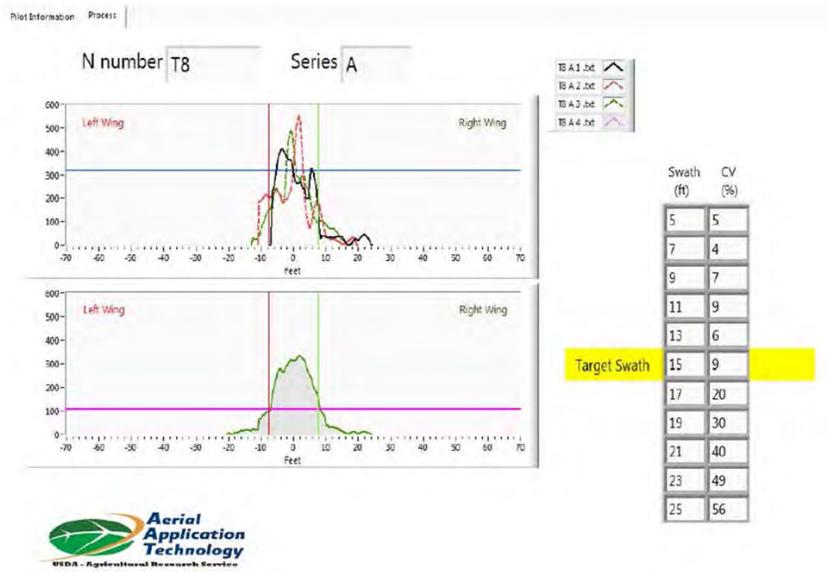


Figure 1. Sample average good pattern from the V6A at 3 m application height and a groundspeed of 7 m/s. The pattern is nice and symmetrical, but has fairly sharp edges around 18'. A good swath for this setup would be around 17'.

Figure 2 is from the same aircraft but at 4 m application height and a groundspeed of 1 m/s. The main issue with this setup is that there was a crosswind from both the left and the right on different passes. Since the aircraft was flying relatively high and has a smaller droplet spectrum, many of the spray droplets were not able to land on the 11 m string target. In one case, we see only the left side of the pattern. In another, the right side of the pattern. These environmental conditions contributed greatly to a “bad” pattern where the CV at 15’ was 58%.

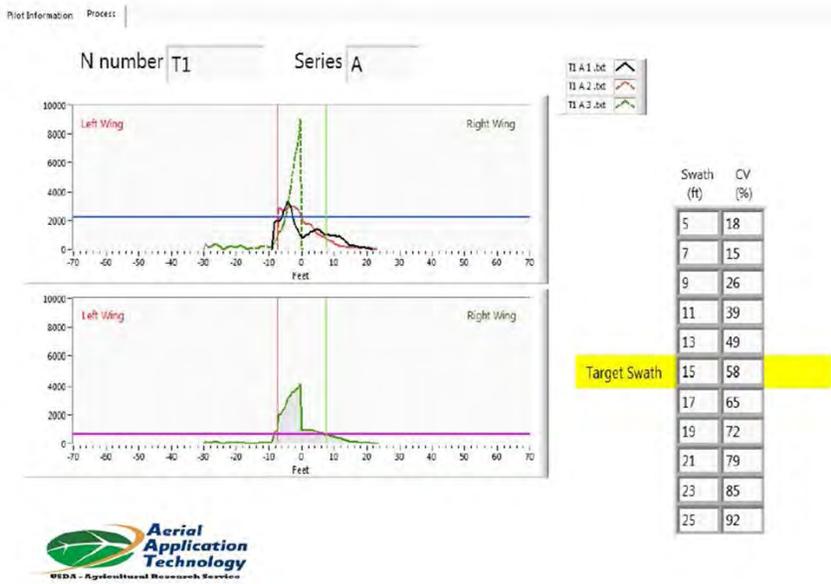


Figure 2. Sample average “bad” pattern from the V6A at 4 m height and 1 m/s. Due to the height, a smaller droplet spectra and crosswind from the left, many of the droplets were not able to land on the target string and thus, resulted in a “poor” pattern and large CV.

A nice sample pattern from the MG-1 at 2 m application height and a groundspeed of 7 m/s is shown in Figure 3. This pattern is broad and symmetrical, resulting in a very “good” pattern with an effective swath of 25’ at a 20% CV. The application height was low and the winds were light and in line with the sampling string, resulting in good deposition on the string target.

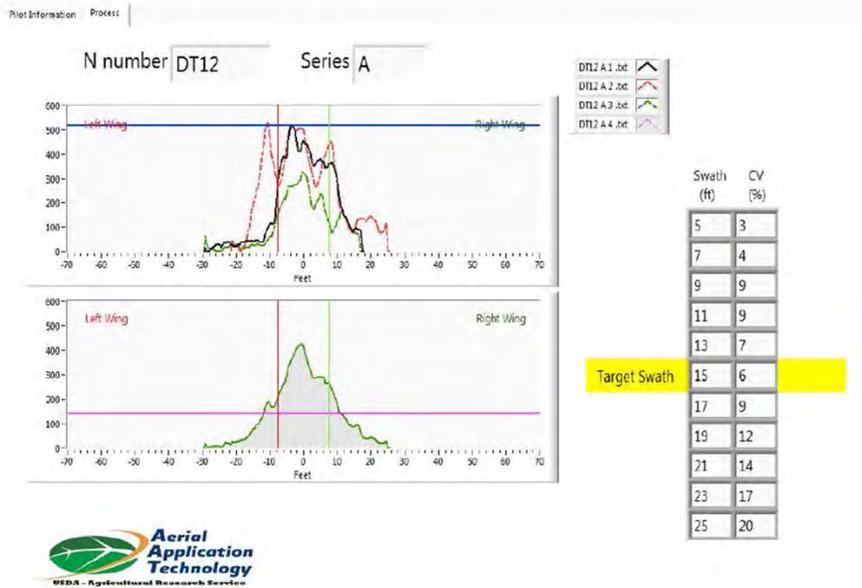


Figure 3. Sample average good pattern from the MG-1 at 2 m application height and a groundspeed of 7 m/s. The pattern is broad and symmetrical. A good pattern (20% CV) could be obtained even at a swath of 25’.

Figure 4 shows the results of the same aircraft flying at 4 m application height and 3 m/s groundspeed. Even with a larger droplet spectrum than the V6A, crosswinds from the left and the right caused portions of the spray to miss the string target, resulting in a “bad” spray pattern with a CV of 28% at 17’.

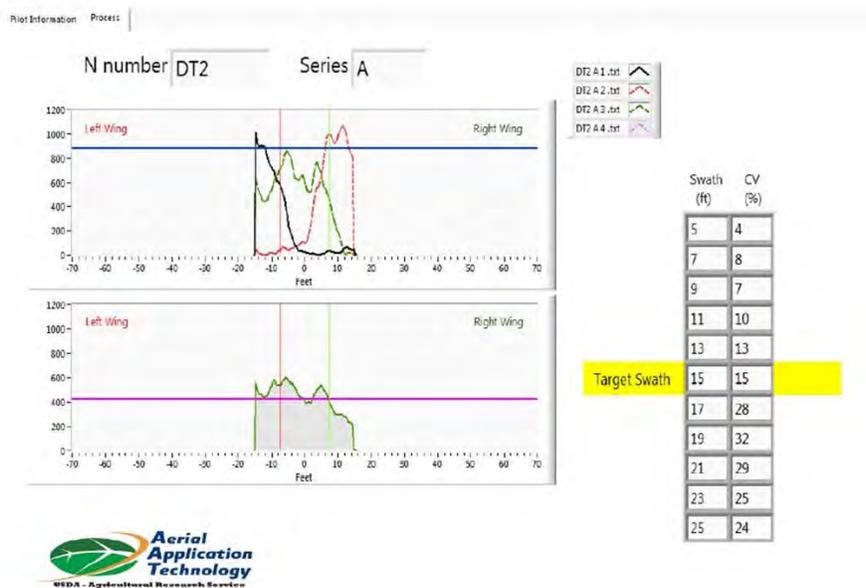


Figure 4. Sample average “bad” pattern from the MG-1 at 4 m height and 3 m/s. Due to the height and crosswind from both the left and the right, many of the droplets were not able to land on the target string and thus, resulted in a “poor” pattern and large CV.

Spray Nozzle Test in Wind Tunnel

Results from the spray nozzle test in the wind tunnel tend to indicate that both nozzles are quite different, with the CR80005 producing smaller droplets, and both nozzles producing very small droplets, when compared to traditional aerial application nozzles (Table 8). The relative span (RS) for both nozzles are fairly comparable. The percentage of droplets

less than 100um, and 200um convey the small droplet size from both nozzles, with the CR80005 representing the smaller.

Table 8. Spray nozzle performance in wind tunnel test

Nozzle	Orifice (mm)	Pressure (kPa)	Dv0.1	Dv0.5	Dv0.9	RS	V<100 μm	V<200 μm
XR11001	0.10	226	72.74	161.37	286.86	1.33	20.55	66.91
CR80005	0.05	517	54.14	112.71	190.05	1.20	40.61	92.36

Discussion and Conclusions

Aerial pesticide applications with current commercially available UAASs is definitely possible. Based on the results from this study, most of the application rates required on pesticide labels can be achieved with these platforms, provided they are operated at the correct groundspeed. The effective swath, given the original manufacturers setup, may vary anywhere between 5 and 7 m depending upon platform, application height and groundspeed. Good spray patterns based upon a coefficient of variation less than 25% have been demonstrated. However, the droplet spectra, overall, for both of these platforms is relatively small, which will make the spray more prone to drift. While the driftability of the sprays was not investigated in this study, previous research has shown a direct strong correlation between droplet size and spray drift. Depending on the target pest and the pesticide class (fungicide, insecticide, herbicide, etc.), the user may want to replace the OEM nozzles for other nozzles that may be more appropriate for their particular application. Traditional aerial application testing procedures were modified for this sUAAS spray test research, and as a result it is apparent that there is a need for standardized testing protocols, as interest in deployment of these systems continues to evolve.

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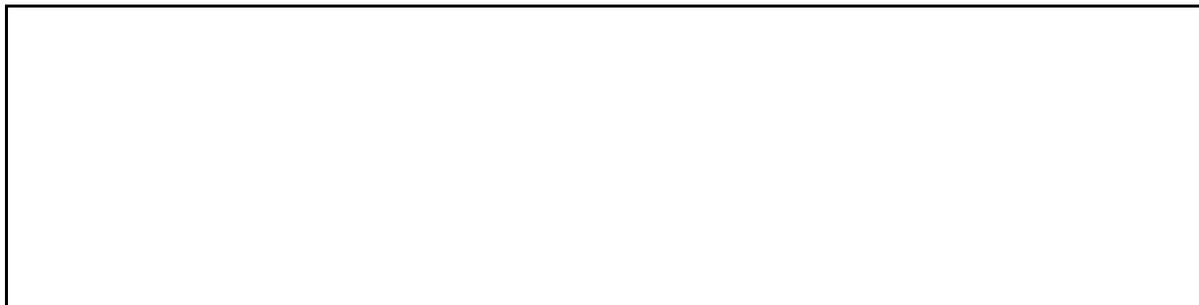
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From: EPA Pesticides Programs [mailto:oppt.epa@public.govdelivery.com]
Sent: Thursday, November 01, 2018 8:16 AM
To: Tomlinson, Mary E <Mary.E.Tomlinson@maine.gov>
Subject: [EXTERNAL SENDER] Pesticide Program Update: EPA Announces Changes to Dicamba Registration



EPA Announces Changes To Dicamba Registration

On October 31, 2018, U.S. Environmental Protection Agency (EPA) announced that it is extending the registration of dicamba for two years for “over-the-top” use (application to growing plants) to control weeds in fields for cotton and soybean plants genetically engineered to resist dicamba. This action was informed by input from and extensive collaboration between EPA, state regulators, farmers, academic researchers, pesticide manufacturers, and other stakeholders.

“EPA understands that dicamba is a valuable pest control tool for America’s farmers,” **said EPA Acting Administrator Andrew Wheeler**. “By extending the registration for another two years with important new label updates that place **additional** restrictions on the product, we are providing certainty to all stakeholders for the upcoming growing season.”

The following label changes were made to ensure that these products can continue to be used effectively while addressing potential concerns to surrounding crops and plants:

Dicamba registration decisions for 2019-2020 growing season

- Two-year registration (until December 20, 2020)
- Only certified applicators may apply dicamba over the top (those working under the supervision of a certified applicator may no longer make applications)
- Prohibit over-the-top application of dicamba on soybeans 45 days after planting and cotton 60 days after planting
- For cotton, limit the number of over-the-top applications from 4 to 2 (soybeans remain at 2 over-the-top applications)
- Applications will be allowed only from 1 hour after sunrise to 2 hours before sunset

- In counties where endangered species may exist, the downwind buffer will remain at 110 feet and there will be a **new 57-foot buffer** around the other sides of the field (the 110-foot downwind buffer applies to all applications, not just in counties where endangered species may exist)
- Clarify training period for 2019 and beyond, ensuring consistency across all three products
- Enhanced tank clean out instructions for the entire system
- Enhanced label to improve applicator awareness on the impact of low pH's on the potential volatility of dicamba
- Label clean up and consistency to improve compliance and enforceability

The registration for all dicamba products will automatically expire on December 20, 2020, unless EPA further extends it.

EPA has reviewed substantial amounts of new information and concluded that the continued registration of these dicamba products meets FIFRA's registration standards. The Agency has also determined that extending these registrations with the new safety measures will not affect endangered species.

Learn more: <https://www.epa.gov/ingredients-used-pesticide-products/registration-dicamba-use-genetically-engineered-crops>

EPA distributes its OPP Updates to external stakeholders and citizens who have expressed an interest in the Agency's pesticide program activities and decisions. This update service is part of EPA's continuing effort to improve public access to federal pesticide information.

For general questions about pesticides and pesticide poisoning prevention, contact the National Pesticide Information Center (NPIC) by email at npic@ace.orst.edu or by visiting the [NPIC website](#).

For information about ongoing activities in the Office of Pesticide Programs, [visit our homepage](#).

**A NATIONAL ROAD MAP
FOR INTEGRATED PEST MANAGEMENT
Revised September 21, 2018**

INTRODUCTION

Integrated Pest Management (IPM) is a sustainable, science-based, decision-making process that combines biological, cultural, physical and chemical tools to identify, manage and reduce risk from pests and pest management tools and strategies in a way that minimizes overall economic, health and environmental risks. Pests are defined as any organism (microbes, plants or animals) that poses economic, health, aesthetic or environmental risk. Pests are context-specific, so an organism that is a pest in one environment may be benign or beneficial in others.

IPM uses knowledge of pest and host biology, as well as biological and environmental monitoring, to respond to pest problems with management tactics and technologies designed to:

- Prevent unacceptable levels of pest damage.
- Minimize the risk to people, property, infrastructure, natural resources and the environment.
- Reduce the evolution of pest resistance to pesticides and other pest management practices.

IPM provides effective, all-encompassing strategies for managing pests in all arenas, including all forms of agricultural production, military landscapes, public health settings, schools, public buildings, wildlife management, residential facilities and communities, as well as public lands including natural, wilderness and aquatic areas. This National IPM Road Map identifies strategic directions for building and maintaining research, education and extension programs that focus on IPM priorities for each of these arenas. Examples of programmatic IPM principles for several federal agencies can be found in Appendix 1.

The goal of the IPM Road Map is to increase adoption, implementation and efficiency of effective, economical and safe pest management practices, and to develop new practices where needed. This is accomplished through information exchange and coordination among federal and non-federal researchers, technology innovators, educators, IPM practitioners and service providers, including land and natural resource managers, agricultural producers, structural pest managers and public and wildlife health officials. The IPM Road Map will be updated periodically by the Federal IPM Coordinating Committee (see pp. 10-11) as the science and practice of IPM evolve, with continuous input from numerous IPM experts, practitioners and stakeholders.

EVOLVING IPM CHALLENGES

Pest management systems are subject to constant change, and must necessarily respond and adapt to a variety of pressures. Pests may become resistant to pesticides, whether they are conventional or

biologically-based, or adapt to crop rotation, trapping or other control methods. The evolution of weed, microbe, and arthropod pest resistance is a complex problem with consequential costs to food security and public health that requires innovative solutions. Coordination between federal agencies, universities, communities and other stakeholders is needed to address the ecological, genetic, economic and socio-political factors that affect development, communication and effective implementation of IPM strategies and technologies to manage pests effectively, slow the rate of resistance evolution, preserve existing control measures and create effective new approaches.

The United States Environmental Protection Agency (EPA) regularly reviews registered pesticides and may restrict or cancel labeled uses when risks outweigh benefits. Environmental concerns, consumer demands and public opinion can significantly influence pest management practices. New and invasive disease-causing pathogens, weeds, vertebrate and arthropod pests are introduced more frequently as global trade and travel increase. Changing environmental conditions pose new challenges for maintaining effective pest management systems. Pest species expand their geographic and temporal ranges, occurring in expanded areas and both earlier and/or later in seasons, in response to changes in climate. Pest species interactions within and among trophic levels, and across landscapes, must also be considered when IPM strategies are being developed. IPM practitioners must strive to implement best management practices, using tools and strategies that work in concert with each other, to achieve desired outcomes while minimizing risks. Current and evolving conditions necessitate increased development and adoption of IPM practices and technologies. The National IPM Road Map serves to make these transitions as efficient as possible.

IPM was originally developed to manage agricultural pests but expanded into new arenas as its success in agriculture became clear. Federal, state and local governments now use IPM in residential, recreational and institutional facilities, biosecurity and natural wildland areas. A successful IPM in Schools program was created through state and federal cooperation, and many states and local governments have adopted IPM policies.

An emphasis of the National IPM Road Map is to prioritize responses that mitigate the adverse impacts of invasive species: non-native organisms whose introduction causes or is likely to cause economic or environmental harm, or harm to human, animal or plant health (Executive Order 13751). The arrival of invasive species often disrupts established IPM programs in the short-term, as emergency responses are undertaken to limit potential damage caused by the species of concern until scientists and practitioners become well-informed of the invasive pest's biology and ecology and management practices are developed and delivered. Invasive species are currently estimated to cause \$140 billion in economic losses annually. Some species act as vectors of parasites, viruses and bacteria, potentially leading to the spread of human illnesses, such as Zika.

The impact of invasive species in natural and human-created environments received national attention and federal support when Executive Order 13112 on Invasive Species was signed by President Clinton in 1999 and updated in December 2016 by Executive Order 13751, Safeguarding the Nation from the Impacts of Invasive Species. This Executive Order established the National Invasive Species Council to ensure that federal programs and activities to prevent and control invasive species are coordinated, effective and cost-efficient (www.invasivespecies.gov). Federal and state agencies are coordinating efforts and developing programs and policies in this effort. IPM programs are continually under

development at all levels to minimize the impact of invasive pest organisms, which can disrupt established and effective IPM practices.

IPM FOCUS AREAS

A primary goal of the National IPM Road Map is to increase adoption and efficiency of effective, economical and safe pest management practices through information exchange and coordination among federal and non-federal researchers, educators, technology innovators and IPM practitioners, including pesticide applicators and other service providers. Pesticide safety education that teaches pesticide applicators sound safety and stewardship practices in the safe and efficacious use of pesticides is an important component of IPM programming across focus areas.

Production Agriculture

The priority in this focus area is the development and delivery of diverse and effective pest management strategies and technologies that fortify our nation's food security and are economical to deploy, while also protecting public health, agricultural workers and the environment.

IPM experts, educators, practitioners and stakeholders expect pest management innovations will continue to evolve for food, fiber and ornamental crop production systems that improve their efficiency and effectiveness. IPM practices that prevent, avoid or mitigate pest damage have reduced negative impacts of agricultural production and associated environments by minimizing impairments to wildlife, water, air quality and other natural resources. Fruits, vegetables and other specialty crops make up a major portion of the human diet and require high labor input for production. Agricultural IPM programs help maintain high-quality agricultural food and fiber products, and coupled with pesticide safety and stewardship practices, help protect agricultural workers, consumers and the environment by keeping pesticide exposures within acceptable safety standards. Agricultural IPM programs also extend to and consider pest management in areas beyond production field borders, to places that can harbor or serve as a source of agricultural pests such as adjacent roadsides, rights-of-way, ditches, irrigation canals, storage and processing areas, compost and mulch piles and gravel pits.

Natural Resources

Our nation's forests, parks, wildlife refuges, military landscapes and other natural areas, as well as our public land and water resources, are under constant pressure from endemic pests and aggressive invasive species. Invasive pests diminish habitat quality by out-competing native species for resources, reducing biological diversity, richness and abundance; impairing grazing lands for livestock and foraging habitats for wildlife; and degrading or impairing many other uses of public lands, waters and natural areas. Americans value, and spend large amounts of time, in natural and recreational environments like lakes, streams, parks and other open spaces. Protecting the ecosystem functions, aesthetic standards and values of natural resources and recreational environments is as important as protecting public health and safety. IPM practices help minimize the adverse environmental effects of pest species on our natural areas. As we move into the future, commonly used and accepted metrics are needed to quantify the impact of IPM programs and practices in these environments.

Residential, Structural and Public Areas

For the general public, the greatest exposure to pests and control tactics occurs where people live, work, learn and recreate. IPM programs for schools and public buildings are excellent examples of successful education and implementation programs designed for institutional facilities. Priorities in this area include enhanced collaboration and coordination to expand these programs to other public institutions and infrastructure. Residential and commercial environments require different tools and educational materials than schools, and multifamily public housing structures present particular challenges, including addressing pest issues for people who are unable or unauthorized to manage pests themselves. Expanding IPM programs in these areas would reduce human health risks posed by pests and mitigate the adverse environmental effects of potentially harmful pest management practices. Preventing and controlling bed bug and cockroach infestations in multifamily and public housing and other built environments is a high priority.

POTENTIAL APPROACHES/STRATEGIES FOR STRENGTHENING IPM

Improve economic and social analyses of adopting and implementing IPM practices, including assessing the benefits of practice adoption

Improving the overall benefits resulting from the adoption of IPM practices is a critical component of the National IPM Road Map. Cost-benefit analyses of proposed IPM strategies should not be based solely on the monetary costs, but also includes consideration of the efficacy of managing the target pest, environmental and ecological health and function, aesthetic benefits, human-health protection and pest resistance-management benefits. Additionally, the personal costs of adoption to end users in terms of time management and other social costs must be considered.

Economics must be considered for IPM practices to be widely adopted and their benefits realized. Risks and benefits need to be defined and determined. A major factor in the adoption of IPM programs is whether the benefit to humans and the broader natural systems outweighs the cost of implementing an IPM practice. Evaluation of short- and long-term risks and benefits is needed. Attention should also be paid to understanding the social and cultural characteristics of pest management, because in some systems risks and benefits cannot be monetized and in others the costs and risks of pest management practices are primarily borne by one party and the benefits realized by other parties.

Reduce potential human health and safety risks from pests and related pest management strategies

IPM plays a major role in protecting human health. Public health is dependent upon a continual supply of safe, affordable, high quality food and fiber, often referred to as food security. IPM also protects human health through its contribution to food safety by reducing potential health risks from food-borne pathogens and reduced pesticide exposure, and further protects human health by reducing populations of insect vectors that transmit diseases to humans. Mosquito and vector-abatement districts across the country use integrated pest management practices to control potentially dangerous

disease vectors, while minimizing human and environmental pesticide exposure. Pesticide safety training and certification programs also help limit the public's exposure to pesticides.

Historically, the success of IPM adoption and implementation, and resulting benefits to the health of humans and the environment, was measured by tracking annual changes in the amount of pesticides used in the United States, measured in pounds of "active ingredient." For many reasons, pesticide usage reduction is an inadequate measure of IPM successes when used alone. Pounds of active ingredient used per acre does not address the evolving nature of pesticide chemistries (differences in frequency and rate of application, toxicity, modes of action or human exposure), nor does it consider changes in the pest complex being managed, including the introduction of invasive species or resurgence of native pests. Also, in many cases, routine usage data are not available.

IPM practices, technologies and innovations have helped pest managers have move away from calendar-based spray programs to more informed use of integrated management combining pesticides, biological, mechanical and cultural controls in a way that minimizes economic, health and environmental risks. These innovations include advances in pest monitoring, use of predictive models to target vulnerable pest life stages, new spray technologies to reduce off-target drift, new planting systems, population-suppression strategies such as mating disruption, use of disease resistant cultivars or weed seed bank management, advances in scientific knowledge of pest and host biology and ecology, and use of biological controls, biopesticides and biotechnology.

Minimize adverse environmental effects from pests and related management practices

IPM programs are designed to protect agricultural, urban, and natural environments from the damage incurred from native and non-native pest species while minimizing adverse effects on soil, water, air and non-target organisms. IPM practices in agriculture promote healthy crop environments while conserving organisms that are beneficial to those agricultural systems, including pollinators, natural enemies and soil flora and fauna. By reducing non-target impacts, IPM helps maximize the positive contributions that agricultural land use can make to watershed health and function and minimize the impacts pest control can have on non-pest organisms. IPM practices, tools and technologies enable land managers to target pest species while minimizing environmental risks to natural ecosystems. Examples include using trained dogs for detecting marsh-destroying nutria or brown tree snakes in cargo. Other examples include releases of *Wolbachia*-inserted mosquitoes to reduce risk of mosquito-vectoring avian diseases in the Hawaiian Islands and management of additional species on lands and structures managed by many federal agencies.

RESEARCH, TECHNICAL DEVELOPMENT, EDUCATION, COMMUNICATION AND IMPLEMENTATION

In order to continue IPM development and adoption, and increase the benefits it provides nationally, it is critical to enhance investment in:

- New strategies and tactics for pest management.
- Public and private education infrastructure, including existing land-grant university IPM and pesticide safety education programs.
- Communication about the importance and effectiveness of IPM.
- Adoption and implementation of IPM plans and programs.

Research Needs

The IPM toolbox is in a continuous state of evolution. Introduction of new pesticides, changes to existing pesticide labels resulting from EPA registration review, the influx of invasive species, development of new technologies, and federal, state and local fiscal constraints on funding all influence the furtherance of IPM research. Research needs in IPM range from basic investigations of pest and host biology to the development of new pest management strategies and tools, and their integration into decision support systems.

Technical Development

While there have been dramatic improvements in pest management practices during the last four decades, there continues to be a critical need for new options that provide effective, economical and environmentally sound management of pests. Rapidly evolving molecular genetic approaches, including genetic engineering, gene silencing, gene editing, gene-drive systems and other genetic-based IPM practices are being developed. Geographic Information Systems that analyze layers of data from computers, satellites, aerial photography, drones, soil sensors, crop sensors or handheld GPS units are enabling new mapping capabilities and spatial analyses of soils, crop health and pest and weed infestations to allow farmers to better predict pest outbreaks and identify problem areas within their fields. Variable-rate technology tools provide growers with abilities to vary the application rate of crop inputs, enabling more spatially and temporally targeted management of pests. Drift-reduction technologies that enable more precise deposition of pesticides and reduce pesticide drift to non-target areas are being developed and adopted. As these and other technologies are delivered, they are likely to significantly impact IPM moving forward.

National research and technology development goals and objectives identified by the Federal IPM Coordinating Committee include (non-prioritized list):

- Investigate local and regional climatic effects on all aspects of IPM.
- Determine pest biology and biotic/abiotic interactions to develop and deliver tools and tactics to manage pests across all IPM arenas and localities.
- Develop management tactics for specific settings (including crops, parks, homes, forests, natural landscapes, wetlands, infrastructure and workplaces) to prevent or minimize pest damage.
- Develop diagnostic tools for identifying pathogens, arthropods, vertebrates and weed pest species, and how they may differ in certain geographic areas and crops.
- Develop and deliver more rapid diagnostic tools for detection and management of pests and pesticide resistance in pest populations, including aquatic pests, plant diseases, arthropods, vertebrates and weeds.
- Develop low-risk suppression tactics, including use of biopesticides, biological control and products of both traditional breeding and molecular genetic technology.
- Develop monitoring tools, action thresholds and suppression tactics and tools for existing and emerging pests that vector human diseases.
- Develop efficacious suppression strategies that are cost-effective to implement.

- Develop a more thorough understanding of adverse non-target impacts of pest management tactics and means of mitigating those impacts, including impacts on society and culture.
- Develop a more-thorough understanding of beneficial impacts of pest management strategies, including impacts on society and culture.
- Expand web-based resources for IPM systems.
- Integrate postharvest pest management approaches for food and fiber products in both field and storage.
- Develop and implement new pesticide chemistries and application technologies.
- Encourage and support the development of areawide IPM projects to more effectively manage pests on regional or landscape scales.
- Encourage and support research that addresses barriers to the adoption of promising IPM technologies like agricultural uses of Unmanned Aerial Vehicles, social acceptance of molecular genetic approaches, etc.
- Develop economic models for IPM that inform research on new pest management strategies, as well as decision tools for growers to implement management.
- Develop research-based educational strategies for delivering IPM to practitioners.
- Investigate economic and risk-management models that consider the costs, benefits and risks of IPM adoption.
- Encourage and support research to assess economic, environmental, health and social barriers to, and impacts of, adoption of IPM.
- Evaluate and demonstrate the utility of precision agriculture technology to more accurately monitor and evaluate pest presence and the evolution and spread of resistant pests.
- Evaluate and demonstrate the efficacy of precision agriculture IPM tactics deployed within or across growing seasons and landscapes, including GPS-guided aerial or ground-based sensing or imagery systems, alone or integrated with tillage; or precision delivery systems to apply the right pesticide or microbial agent at the right dose, in the right place, at the right time.

Education and Communication

A diverse and evolving pest complex requires a cadre of trained individuals with enhanced skills that ensure human health, food security and environmental protection. It is important for practitioners to have sound knowledge of pest and host biology, soil and ecosystems functioning, and to acquire new skills to conduct research and implement IPM strategies using new technologies, including biotechnology, reduced-risk pesticides, cultural practices, resistance management and biocontrols. It is also important to have an interdisciplinary cadre of researchers and educators that includes natural and social scientists and educators to engage practitioners in the process – this cannot be a top down process. To be successful, effective IPM communication and education must be both ground up (end-user led initiatives and communication of issues to the researchers and educators) as well as top down. The end-user input is critical to identify problems as well as to develop innovative solutions. Collaboration with pesticide safety education programs will ensure a significant number of applicators are trained each year on topics critical to the safe use of pesticides. Additional training programs should be implemented to educate and equip IPM practitioners with up-to-date information ranging from basic IPM principles to advanced skills in various technical categories.

Significant effort and support is needed for IPM education programs at U.S. universities to ensure training for the next generation of IPM scientists and practitioners. This effort should include outreach to the public so that the challenges of pest management and the benefits IPM delivers across multiple systems is better understood. Goals of this effort include:

- Create public awareness and understanding of IPM programs and their economic, health and environmental benefits through education programs in schools, colleges and the workplace; through organizations for education, mentoring and technical assistance initiatives for beginning farmers and ranchers and similar programs; and through creative use of media, with attention to underserved and disadvantaged populations.
- Ensure a multi-directional flow of pest management information by expanding existing and developing new collaborative relationships with public- and private-sector cooperators, including end-users.
- Spotlight successful IPM programs and practices at the local, regional and national level to engender support and promote informed discussion and involvement from stakeholders and consumers who understand the benefits of public investment in IPM.

Adoption and Implementation of IPM

IPM research, education and outreach must continue to be conducted and communicated between federal, state and local partners to ensure widespread adoption and implementation of evolving IPM practices. Outreach and education with the public is also critical. Promoting IPM practices and technology, and communicating relevant information about the value of IPM to producers, homeowners, land managers and the public, continues to be a major need. The following activities will contribute to the adoption of IPM:

- Engage with user groups to understand the value and challenges of incentive programs, both those existing and proposed, to adopt IPM practices. Develop user incentives for IPM adoption reflecting the value of IPM to society and reduced risks to users. Work with existing risk-management programs, including federal crop insurance, and incentive programs such as the Natural Resources Conservation Service's Environmental Quality Incentives Program (EQIP) and other farm conservation programs to fully incorporate IPM tactics as rewarded practices.
- Research how best to provide educational opportunities for IPM practitioners to learn new communication skills that improve their extension and outreach practices, and enable them to engage new and unique audiences in ways that help overcome potential barriers such as language, cultural sensitivities, lack of internet access, disabilities, etc.
- Improve public awareness and understanding of IPM programs and their economic, health and environmental benefits.
- Leverage federal and state resources to enable on-site research, extension, education and training for end users to ensure long-term adoption and implementation of IPM practices including the safe use of pesticides.
- Develop ways to spotlight successful IPM programs, including areawide management efforts.

MEASURING IPM PERFORMANCE

Through policies, directives, rules, regulations and laws, federal, state and local governments place high priority on accountability systems. Such systems are based on performance measurements, including setting goals and objectives and measuring achievement. Federally-funded IPM program activity performance can also be evaluated.

The establishment of measurable IPM goals and the development of methods to measure progress should be appropriate to the specific IPM activity undertaken. Performance measures may be conducted on a pilot scale or on a geographic scale and scope that corresponds to an IPM program or activity. Examples of potential performance measures are:

Outcome: Effective IPM practices that are economical and lessen environmental risk are adopted.

Performance Measures:

- *Adoption of IPM Practices* - Design and conduct surveys that document the adoption of IPM practices specific to regional production concerns in specific crops or in the management of specific pests.
- *Impacts and Outcomes of IPM Adoption* - Document and demonstrate the impacts and outcomes of IPM adoption, including short- medium- and long-term changes.
- *Economic, Environmental or Health Benefits* - Evaluate IPM programs based on their ability to improve economic, environmental or health benefits, and to project these economic results to a regional or national basis that predicts large-scale impacts.
- *Public Awareness* - Develop measures of public awareness and acceptance of IPM.
- *Training and Technology* - Document educational training and technology adoption in IPM programming that mitigates pesticide exposures and reduces the evolution of pesticide resistance.

Outcome: Potential human health risks from pests and the use of pest management practices are reduced.

Performance Measures:

- *Pesticide Exposure* - Relate dietary exposure to pesticides to IPM practice adoption using U.S. Department of Agriculture Agricultural Marketing Service Pesticide Data Program and any other available data.
- *Human Health Impacts* - Document changes in human health impacts caused by pests (such as asthma cases related to cockroach infestations, insect-vectored diseases, allergic reactions to plants, etc.) relative to changes in IPM adoption.

Outcome: Adverse environmental effects from pests and the use of pest management practices are mitigated.

Performance Measures:

- *Endemic Pest Control* - Document the changes in endemic pest levels and damage following adoption and implementation of IPM practices.

- *Invasive Species Damage and Invasion* - Document the increasing or decreasing rates of incursion and damage of selected invasive species following adoption and implementation of IPM practices.
- *Contaminants* - Document reduction in the movement and accumulation of contaminants used to manage pests and relate those to specific IPM tools and practices.
- *Environmental Health Improvements* - Document long-term improvements in environmental health in local landscapes following adoption and implementation of IPM practices.

IPM LEADERSHIP AND COORDINATION

The Federal IPM Coordinating Committee (FIPMCC):

The FIPMCC was established in 2001 by USDA Secretary Ann Veneman. It is composed of representatives of all federal agencies with IPM research, implementation or education programs, and may include other public and private sector participants as appropriate. The function of the FIPMCC is to provide interagency guidance on IPM policies, programs and budgets. A key responsibility of the FIPMCC is to provide strategic direction for IPM by:

- (1) Clearly defining, prioritizing, and articulating the goals of the federal IPM effort.
- (2) Making sure IPM efforts and resources are focused on the goals.
- (3) Ensuring that appropriate measurements toward progress in attaining the goals are in place.

The FIPMCC reports to the Secretary of Agriculture through the USDA Office of Pest Management Policy. The national IPM effort stems from a partnership of federal governmental institutions working with stakeholders on diverse pest management issues. Leadership, management and coordination of these IPM efforts occur at many levels to more completely address the needs of stakeholders. The role of the committee is to provide guidance in the establishment of goals and priorities for IPM programs across all IPM focus areas. To achieve this, the FIPMCC regularly communicates with stakeholders, including the Regional Integrated Pest Management Centers, land-grant universities and other public and private entities.

The USDA-funded Regional IPM Centers play a major role in gathering information concerning the practice and status of IPM, and in the development and implementation of an adaptable and responsive National IPM Road Map. The Regional IPM Centers have a broad, coordinating role in the communication and regional coordination of IPM.

Federal Membership of FIPMCC:

- United States Department of Agriculture
 - Office of Pest Management Policy
 - Agricultural Research Service
 - National Institute of Food and Agriculture
 - Animal & Plant Health Inspection Service

- Natural Resources Conservation Service
- National Agricultural Statistics Service
- Economic Research Service
- Forest Service
- Environmental Protection Agency
- Department of the Interior
 - National Park Service
 - Bureau of Land Management
 - Fish & Wildlife Service
- Department of Defense
- Centers for Disease Control
- Department of Housing and Urban Development
- General Services Administration
- Agency for International Development
- Smithsonian Gardens
- By Invitation of FIPMCC
 - Western Integrated Pest Management Center
 - Southern Integrated Pest Management Center
 - North Central Integrated Pest Management Center
 - Northeastern Integrated Pest Management Center
 - IR-4 Project
 - National IPM Coordinating Committee

Concluding Remarks

The goal of the National Road Map for Integrated Pest Management is to increase the adoption and efficiency of effective, economical and safe IPM practices. This is facilitated through information exchange and coordination among federal and non-federal researchers, educators, technology innovators, IPM practitioners and service providers, including land and natural resource managers, agricultural producers, structural pest managers, and public and wildlife health officials. The IPM Road Map is intended to be a living document that will be updated periodically by the Federal IPM Coordinating Committee as the science and practice of IPM evolves, with continuous input from numerous IPM experts, practitioners, and stakeholders. We hope that the information in the Road Map is meaningful and timely, and will help inform the development and implementation of IPM programs in the future.

Appendix 1. Principles of an Integrated Pest Management Program

Examples:

- A. U.S. Fish and Wildlife Service, Department of the Interior
- B. National Park Service, Department of the Interior
- C. U.S. Environmental Protection Agency
- D. U.S. Air Force

Appendix 1A.

PRINCIPLES OF INTEGRATED PEST MANAGEMENT (IPM) - U.S. Fish and Wildlife Service, Department of Interior

These IPM principles are the foundation for pest management planning and implementation.

- **Understand the site management objectives; establish short- and long-term priorities.** Decide on your site objectives for pest management; use Specific, Measurable, Achievable, Realistic, and Time-based (SMART) objectives when choosing tools.
- **Prevent species from becoming a pest at your site.**
Prevention is the first line of defense against any pest species.
- **Identify and monitor the pest species.**
Know the life history and the conditions that support the pest(s).
- **Understand the physical (air, water, food, shelter, temperature, and light) and biological factors that affect the number and distribution of pests and any natural enemies.** Conserve natural enemies when implementing any strategy.
- **Build partnerships and consensus with stakeholders, such as communities and decision-makers.**
- **Review available tools and best management practices (BMP) for pest management.** Tools and strategies can include: 1) no action, 2) physical (manual and mechanical), 3) cultural, 4) biological, and 5) chemicals.
- **Establish the “action thresholds.”**
Decide at the level of pests/damage you will implement a management action to control the pest population.
- **Obtain approval, define responsibilities, and implement preventive, BMPs and control treatments in accordance with applicable laws, regulations, policies and an Integrated Pest Management Plan.**
- **Practice adaptive management.**
Evaluate results of implemented management strategies through authorized monitoring; determine if objectives have been achieved, and modify strategies, if necessary.
- **Maintain written records.**
Document decisions and the treatments implemented, and record monitoring results.
- **Outreach and education.**
Inform staff of the pest management issues in and around the site, and prepare informative materials for outreach to visitors and others, if appropriate.

Appendix 1B.

National Park Service, U.S. Department of the Interior

11-Step Integrated Pest management Process

The Process

We use the following 11-step process to develop and implement an effective IPM strategy:

1. Describe your site management objectives and establish short and long term priorities.
2. Build consensus with stakeholders-occupants, decision makers and technical experts (ongoing).
3. Document decisions and maintain records.
4. Know your resource (site description and ecology).
5. Know your pest. Identify potential pest species, understand their biology, and conditions conducive to support the pest(s) (air, water, food, shelter, temperature, and light).
6. Monitor pests, pathways, and human and environmental factors, including population levels and phenological data.
7. Establish "action thresholds," the point at which no additional damage or pest presence can be tolerated.
8. Review available tools and best management practices. Develop a management strategy specific to your site and the identified pest(s). Tools can include: 1) no action, 2) physical, 3) mechanical, 4) cultural, 5) biological, and 6) chemical management strategies.
9. Define responsibilities and implement the lowest risk, most effective pest management strategy, in accordance with applicable laws, regulations, and policies.
10. Evaluate results; determine if objectives have been achieved; modify strategy if necessary (adaptive management).
11. Education and outreach. Continue the learning cycle, return to Step 1.

Questions to Consider:

Some important questions to consider while determining an effective IPM strategy include the following:

- ♣ Is it a pest? (Is it interfering with your management objectives?)
- ♣ Is it a native or non-native organism?
- ♣ What conditions foster the pest?
- ♣ What management zone is it in?
- ♣ What are the chances of successful management?

https://www.nature.nps.gov/biology/ipm/Documents/11step_IPM_Process.pdf

Appendix 1C.

U.S. Environmental Protection Agency Principles of IPM

Traditional pest control involves the *routine* application of pesticides. IPM, in contrast:

- Focuses on pest prevention.
- Uses pesticides only as needed.

This provides a more effective, environmentally sensitive approach. IPM programs take advantage of all appropriate pest management strategies, including the judicious use of pesticides. Preventive pesticide application is limited because the risk of pesticide exposure may outweigh the benefits of control, especially when non-chemical methods provide the same results. IPM is not a single pest control method but rather involves integrating multiple control methods based on site information obtained through:

- inspection;
- monitoring; and
- reports

Consequently, every IPM program is designed based on the pest prevention goals and eradication needs of the situation. Successful IPM programs use this four-tiered implementation approach:

- Identify pests and monitor progress
- Set action thresholds
- Prevent
- Control

Identify Pests and Monitor Progress - Correct pest identification is required to:

- Determine the best preventive measures.
- Reduce the unnecessary use of pesticides.

Additionally, correct identification will prevent the elimination of beneficial organisms. When monitoring for pests:

- Maintain records for each building detailing:
 - monitoring techniques;
 - location; and
 - inspection schedule.
- Record monitoring results and inspection findings, including recommendations.

Many monitoring techniques are available and often vary according to the pest. Successful IPM programs routinely monitor:

- pest populations;
- areas vulnerable to pests; and

- the efficacy of prevention and control methods.

IPM plans should be updated in response to monitoring results.

Set Action Thresholds - An action threshold is the pest population level at which the pest's presence is a:

- nuisance;
- health hazard; or
- economic threat.

Setting an action threshold is critical to guiding pest control decisions. A defined threshold will focus the size, scope, and intensity of an IPM plan.

Prevent Pests - IPM focuses on prevention by removing conditions that attract pests, such as food, water, and shelter. Preventive actions include:

- Reducing clutter.
- Sealing areas where pests enter the building (weatherization).
- Removing trash and overgrown vegetation.
- Maintaining clean dining and food storage areas.
- Installing pest barriers.
- Removing standing water.
- Educating building occupants on IPM.

Control Pests - Pest control is required if action thresholds are exceeded. IPM programs use the most effective, lowest risk options considering the risks to the applicator, building occupants, and environment. Control methods include:

- Pest trapping.
- Heat/cold treatment.
- Physical removal.
- Pesticide application.

Documenting pest control actions is critical in evaluating success and should include:

- An on-site record of each pest control service, including all pesticide applications, in a searchable, organized system.
- Evidence that non-chemical control methods were considered and implemented.
- Recommendations for preventing future pest problems.

<https://www.epa.gov/managing-pests-schools/introduction-integrated-pest-management#Principles>

Appendix 1D. U.S. Air Force

From the 2017 U.S. Air Force Pollinator Conservation Reference Guide providing information to supplement the U.S. Air Force Pollinator Conservation Strategy (Strategy) developed jointly by Air Force Civil Engineer Center and U.S. Fish and Wildlife Service.

HIGHLIGHTS

- The elements of integrated pest management (IPM) are:
 - Describe the pest problem
 - Identify and describe the site and its ecology and management goals for the habitat and the pest
 - Know the pests and their natural enemies
 - Prevent pests at your site
 - Monitor the pest
 - Establish an action threshold (the level of damage or number of pests at which a pest control measures will be implemented)
 - Decide what methods, strategies, or tools will be used to control the pest
 - Notify neighbors, such as beekeepers, who may be affected by onsite pest management actions
 - Implement the lowest risk, most effective methods and tools. Conserve natural enemies of the pest
 - Evaluate the results and adapting and modifying the strategy, as needed.
 - Keep records

RELEVANT SECTION OF AFI

- AFI 32-1053, Integrated Pest Management Program

STATEMENT OF NEED AND JUSTIFICATION

A Certificate and Order for Filing Temporary Administrative Rules accompanies this form.

Department of Agriculture, Natural Resource Program Area, Pesticides Program
Agency and Division

603

Administrative Rules Chapter Number

In the Matter of: Adopting OAR 603-057-0391

Rule Caption: (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)
Limitations on Pesticide Products Containing Aminocyclopyrachlor

Statutory Authority: ORS 561.020; ORS 634.306; ORS 634.322(6); ORS 634.900; ORS chapter 183

Other Authority: ORS chapter 634

Stats. Implemented: ORS chapter 634

Need for the Temporary Rule(s):

Based on current information, there are at least four locations in central Oregon where ponderosa pine, lodgepole pine, and possibly other valuable tree species have been negatively impacted by the herbicide aminocyclopyrachlor. This herbicide was applied to certain rights-of-way (ROW) for weed control. In November 2014, an Oregon Department of Agriculture (ODA) Pesticide Investigator noticed a moderate number of dead and dying trees on Forest Service property in the Sisters area, near the ROW. In early 2015, a formal pesticide investigation was initiated by ODA; aminocyclopyrachlor was detected during environmental sampling.

The U.S. Department of Agriculture's (USDA) U.S. Forest Service also investigated the dead and damaged trees and prepared a report in 2015. The Forest Service concluded that the tree mortality and dieback was likely caused by application of aminocyclopyrachlor in the ROW. The Forest Service issued an updated report in Spring 2018, in which it reiterated its earlier conclusion that aminocyclopyrachlor was likely the cause of the damage, and found that the severity of the damage has increased substantially since its 2015 report. The areas previously treated with aminocyclopyrachlor continue to decline, and there are increasing numbers of dead trees. The Forest Service has identified 1,454 dead or dying trees along Highway 20 near Sisters. Some of these trees are old-growth ponderosa pines that are 150-300 years old. Because aminocyclopyrachlor is a newer herbicide, it is unknown how many trees stressed from past applications of aminocyclopyrachlor will die in the future.

ODA is also reviewing information provided by U.S. Forest Service personnel regarding observations of valuable trees in Washington and Montana that may also have been affected by the use of aminocyclopyrachlor. Time is required to collect additional data from these locations.

Documents Relied Upon, and where they are available:

Report, June 12, 2015: Dieback and mortality of ponderosa and lodgepole pines associated with herbicide applications along roads on the Deschutes National Forest, by the USDA Forest Service. Available upon request from the Oregon Department of Agriculture.

Report, Spring 2018 Update: Dieback and mortality of ponderosa pine along Highway 20 associated with herbicide applications near Sisters, Oregon, by the USDA Forest Service. Available upon request from the Oregon Department of Agriculture.

Oregon Department of Agriculture Agricultural Use Investigation, Case Name: Hwy 20/USFS, ODOT: Case No.150404. Case No. 140163. Available upon request from the Oregon Department of Agriculture

Justification of Temporary Rule(s):

The Department currently lacks the information needed to fully evaluate the scope of the damage to valuable trees and to develop potential future regulatory measures. Failure to act promptly would result in serious prejudice to the public because additional valuable tree species near ROWs could be damaged by application of aminocyclopyrachlor. This temporary rule will protect desirable trees along and near ROWs while the Department completes its evaluation of aminocyclopyrachlor; collaborates with state, county, and federal partners; and determines potential future regulatory action.


Authorized Signer

Lisa Charpilletz Hanson
Printed name

9/28/18
Date

Administrative Rules Unit, Archives Division, Secretary of State, 800 Summer Street NE, Salem, Oregon 97310.

Limitations on Pesticide Products Containing Aminocyclopyrachlor

OAR 603-057-0391

(1) It is prohibited to apply any product containing aminocyclopyrachlor on rights-of-ways.

(2) Failure to comply with section (1) above may result in one or more of the following actions:

- (a) Revocation, suspension or refusal to issue or renew the license or certification of an applicant, licensee or certificate holder;
- (b) Imposition of a civil penalty;
- (c) Any other enforcement action authorized under any law.

FOR PUBLICATION

**UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

LEAGUE OF UNITED LATIN
AMERICAN CITIZENS; PESTICIDE
ACTION NETWORK NORTH AMERICA;
NATURAL RESOURCES DEFENSE
COUNCIL; CALIFORNIA RURAL
LEGAL ASSISTANCE FOUNDATION;
FARMWORKERS ASSOCIATION OF
FLORIDA; FARMWORKER JUSTICE
GREENLATINOS; LABOR COUNCIL
FOR LATIN AMERICAN
ADVANCEMENT; LEARNING
DISABILITIES ASSOCIATION OF
AMERICA; NATIONAL HISPANIC
MEDICAL ASSOCIATION; PINEROS Y
CAMPELINOS UNIDOS DEL
NOROESTE; UNITED FARM WORKERS,
Petitioners,

STATE OF NEW YORK; STATE OF
MARYLAND; STATE OF VERMONT;
STATE OF WASHINGTON;
COMMONWEALTH OF
MASSACHUSETTS; DISTRICT OF
COLUMBIA; STATE OF CALIFORNIA;
STATE OF HAWAII,
Intervenors,

v.

No. 17-71636

OPINION

ANDREW WHEELER, Acting
Administrator of the U.S.
Environmental Protection Agency;
and U.S. ENVIRONMENTAL
PROTECTION AGENCY,
Respondents.

On Petition for Review of an Order of the
Environmental Protection Agency

Argued and Submitted July 9, 2018
Seattle, Washington

Filed August 9, 2018

Before: Ferdinand F. Fernandez and Jacqueline H.
Nguyen, Circuit Judges, and Jed S. Rakoff,* District Judge.

Opinion by Judge Rakoff;
Dissent by Judge Fernandez

* The Honorable Jed S. Rakoff, United States District Judge for the
Southern District of New York, sitting by designation.

SUMMARY**

Pesticides

The panel granted a petition for review, and vacated the Environmental Protection Agency's ("EPA") 2017 order maintaining a tolerance for the pesticide chlorpyrifos, and remanded to the EPA with directions to revoke all tolerances and cancel all registrations for chlorpyrifos within 60 days.

The Federal Food, Drug, and Cosmetic Act ("FFDCA") authorizes the EPA to regulate the use of pesticides on foods according to specific statutory standards, and grants the EPA a limited authority to establish tolerances for pesticides meeting statutory qualifications. The EPA is subject to safety standards in exercising its authority to register pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA").

The EPA argued that FFDCA's section 346a(g)(2)'s administrative process deprived this Court of jurisdiction until the EPA issues a response to petitioner's administrative objections under section 346a(g)(2)(C), which it has not done to date.

The panel held that section 346a(h)(1) of the FFDCA does not "clearly state" that obtaining a section (g)(2)(C) order in response to administrative objections is a jurisdictional requirement. The panel held that section 346a(h)(1) contains no jurisdictional label, is structured as a

** This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

limitation on the parties rather than the court, and only references an exhaustion process that is outlined in a separate section of the statute.

The panel held that in light of the strong individual interests against requiring exhaustion and weak institutional interests in favor of it, petitioners need not exhaust their administrative objections and were not precluded from raising issues on the merits.

Turning to the merits, the panel held that there was no justification for the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children. The panel further held that the EPA cannot refuse to act because of possible contradiction in the future by evidence. The panel held that the EPA was in direct contravention of the FFDCA and FIFRA.

Judge Fernandez dissented. Judge Fernandez would hold that there is no jurisdiction over the petition for review under FFDCA and FIFRA, and dismiss the petition.

COUNSEL

Patti A. Goldman (argued), Marisa C. Ordonia, and Kristen L. Boyles, Earthjustice, Seattle, Washington, for Petitioners.

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Phillip R. Dupré (argued) and Erica M. Zilioli, Attorneys, Environmental Defense Section; Jeffrey H. Wood, Acting Assistant Attorney General; Environment and Natural Resources Division, United States Department of Justice, Washington, D.C.; Mark Dyner, Office of the General

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Susan J. Kraham and Edward Lloyd, Columbia Environmental Clinic, Morningside Heights Legal Services, New York, New York, for Amicus Curiae Congressman Henry Waxman.

Shaun A. Goho, Emmett Environmental Law & Policy Clinic, Harvard Law School, Cambridge, Massachusetts, for Amici Curiae Health Professional Organizations.

OPINION

RAKOFF, District Judge:

Over nearly two decades, the U.S. Environmental Protection Agency (“EPA”) has documented the likely adverse effects of foods containing the residue of the pesticide chlorpyrifos on the physical and mental development of American infants and children, often lasting into adulthood. In such circumstances, federal law commands that the EPA ban such a pesticide from use on food products unless “there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide.” 21 U.S.C. § 346a(b)(2)(A)(ii). Yet, over the past decade and more, the EPA has stalled on banning chlorpyrifos, first by largely ignoring a petition properly filed pursuant to law seeking such a ban, then by temporizing in response to repeated orders by this Court to respond to the petition, and, finally, in its latest tactic, by denying outright our jurisdiction to review the ultimate denial of the petition, even while offering no defense on the merits. If Congress’s statutory mandates are to mean anything, the time has come to put a stop to this patent evasion.

Petitioners seek review of an EPA order issued March 29, 2017 (the “2017 Order” or “Order”) that denied a 2007 petition to revoke “tolerances,” i.e. limited allowances, for the use of chlorpyrifos on food products. Petitioners argue that the EPA does not have the authority to maintain the tolerances for chlorpyrifos under the Federal Food, Drug, and Cosmetic Act (“FFDCA”), which authorizes the EPA to “leave in effect a tolerance for a pesticide chemical residue in or on a food only if the Administrator determines that the tolerance is safe”—with “safe,” in turn, defined to mean that the EPA “has determined that there is a reasonable certainty that no harm will result from aggregate exposure to the

pesticide chemical residue.” 21 U.S.C. § 346a(b)(2)(A)(i)–(ii). Respondent, the EPA, has never made any such determination and, indeed, has itself long questioned the safety of permitting chlorpyrifos to be used within the allowed tolerances. The EPA, therefore, does not defend the 2017 Order on the merits. Instead, the EPA argues that, despite petitioners having properly-filed administrative objections to the 2017 Order more than a year ago, and despite the statutory requirement that the EPA respond to such objections “as soon as practicable,” the EPA’s utter failure to respond to the objections deprives us of jurisdiction to adjudicate whether the EPA exceeded its statutory authority in refusing to ban use of chlorpyrifos on food products.

We hold that obtaining a response to objections before seeking review by this Court is a claim-processing rule that does not restrict federal jurisdiction, and that can, and here should, be excused. There being no other reason not to do so, we grant the petition on the merits.

BACKGROUND

A. *The Statutory Framework*

The FFDCA authorizes the EPA to regulate the use of pesticides on foods according to specific statutory criteria. 21 U.S.C. §§ 301–399i. The FFDCA prescribes that food with “any pesticide chemical residue . . . shall be deemed unsafe” and barred from movement in interstate commerce. *Id.* § 346a(a)(1). However, it grants the EPA a limited authority to establish tolerances for pesticides meeting statutory qualifications, enabling foods bearing residues of those pesticides within these tolerances to move in interstate commerce. *See id.* § 346a(a), (a)(4), (b)(1).

The EPA’s ability to establish tolerances depends on a safety finding. “The Administrator may establish or leave in effect a tolerance . . . only if the Administrator determines that the tolerance is safe.” *Id.* § 346a(b)(2)(A)(i). A tolerance qualifies as safe if “the Administrator has determined that there is a *reasonable certainty* that *no* harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information.” *Id.* § 346a(b)(2)(A)(ii) (emphasis added). To make such a determination, the EPA must perform a safety analysis to “ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure” and “publish a specific determination regarding the safety of the pesticide chemical residue for infants and children. *Id.* § 346(b)(2)(C)(ii)(I)–(II). Furthermore, even after establishing a tolerance, the EPA bears continuous responsibility to ensure that the tolerance continues to satisfy the FFDCA’s safety standard; the FFDCA provides that the Administrator may “leave in effect a tolerance . . . only if the Administrator determines that the tolerance is safe” and “shall modify or revoke a tolerance if the Administrator determines it is not safe.” *Id.* § 346a(b)(2)(A)(i).

The EPA is subject to these same safety standards in exercising its authority to register pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”). *See* 7 U.S.C. § 136a(a). The EPA Administrator must register a pesticide—which is a requirement for pesticides to be distributed or sold—when, among other qualifications, the pesticide does not have “unreasonable adverse effects on the environment.” *Id.* § 136a(c)(5) (D). FIFRA incorporates the FFDCA’s safety standard into the definition of “unreasonable adverse effects” to include “a human dietary risk from residues that result from a use of a

pesticide in or on any food inconsistent with the standard under [the FFDCA].” *Id.* § 136(bb). FIFRA requires the EPA to reevaluate pesticides periodically after approval. *Id.*

While the EPA can act on its own initiative to establish, modify or revoke a tolerance under the FFDCA, 21 U.S.C. § 346a(e)(1), “[a]ny person may file . . . a petition proposing the issuance of [such] a regulation.” *Id.* § 346a(d)(1). After “due consideration,” the EPA Administrator must issue either a proposed or final regulation or an order denying the petition. *Id.* § 346a(d)(4)(A). After this response, “any person may file objections thereto with the Administrator.” *Id.* § 346a(g)(2)(A). The FFDCA directs that the Administrator “shall issue an order [known as a “g(2)(C) order”] stating the action taken upon each . . . objection” “[a]s soon as practicable.” *Id.* § 346a(g)(2)(C). “[A]ny person who will be adversely affected” by that order or the underlying regulation “may obtain judicial review by filing in the United States Court of Appeals” a petition for review. *Id.* § 346a(h)(1).

B. *The History of this Litigation*

This case arises from a 2007 petition filed under 21 U.S.C. § 346a(d) proposing that the EPA revoke tolerances for the pesticide chlorpyrifos (the “2007 Petition” or the “Petition”). Chlorpyrifos, an organophosphate pesticide initially developed as a nerve gas during World War II, was approved in 1965 in the United States as a pesticide for agricultural, residential, and commercial purposes. Chlorpyrifos kills insects by suppressing acetylcholinesterase, an enzyme that acts as a neurotransmitter in various organisms, including humans. The EPA has set chlorpyrifos residue tolerances for 80 food crops, including fruits, nuts, and vegetables. *See* 40 C.F.R. § 180.342. The 2007 Petition, filed by the Pesticide Action

Network North America (“PANNA”) and the Natural Resources Defense Council (“NRDC”), presented scientific studies showing that children and infants who had been exposed prenatally to low doses of chlorpyrifos suffer harms such as reduced IQ, attention deficit disorders, and delayed motor development, that last into adulthood.

Prior to the Petition’s filing, the EPA already had concerns about chlorpyrifos. After reviewing the registration for chlorpyrifos in 1998 under the amended FFDCA’s heightened safety standards that required considering cumulative exposure and the specific risks to children, the EPA cancelled all residential uses. Although the EPA continued to allow the use of chlorpyrifos as a pesticide on food crops, *see* 40 C.F.R. § 180.342, it required that “risk mitigation measures” be implemented while a full reassessment of chlorpyrifos was undertaken, as continued usage of chlorpyrifos without additional precautions “would present risks inconsistent with FIFRA.” EPA 738-R-01-007 “Interim Reregistration Eligibility Decision for Chlorpyrifos” (Feb. 2002)). This “interim reregistration” also announced future plans to reduce or revoke entirely chlorpyrifos tolerance levels for certain crops, citing “acute dietary risks” for “infants, all children, and nursing females.” *Id.*

Despite these earlier expressions of concern, the EPA failed to take any decisive action in response to the 2007 Petition, notwithstanding that the EPA’s own internal studies continued to document serious safety risks associated with chlorpyrifos use, particularly for children. A 2008 EPA Science Issue Paper, reviewing existing scientific studies, “preliminarily concluded that chlorpyrifos likely played a role” in low birth rate and delays in infant mental development observed in human cohort studies. A Science

Advisory Panel convened in 2008 concurred that chlorpyrifos exposures “can lead to neurochemical and behavioral alterations [in the young] that persist into adulthood.” A Science Advisory Panel convened in 2011 found “persuasive” evidence “that there are enduring effects on the Central Nervous System . . . from chlorpyrifos exposure at or above 1.0 mg/kg,” and that chlorpyrifos exposure is associated with adverse neurodevelopmental effects in children, including abnormal reflexes, pervasive development disorder, and attention and behavior problems.

Yet, even after all of these EPA studies, by 2012 the EPA still had not responded to the 2007 Petition. PANNA and NRDC thereupon petitioned this Court for a writ of mandamus to force the EPA to take action. We initially dismissed the mandamus petition, without prejudice to its renewal, based on the EPA’s representation that it had a “concrete timeline for final agency action” to be taken on the 2007 Petition by February 2014. *In re PANNA*, 532 F. App’x 649, 651 (9th Cir. 2013). When the EPA failed to respond to the 2007 Petition by September 2014, PANNA and NRDC again petitioned for mandamus, which we granted, ordering the EPA to issue a final response on the 2007 Petition by October 2015. *In re PANNA*, 798 F.3d 809, 815 (9th Cir. 2015).¹ We found the EPA’s delay in responding to the 2007 Petition “egregious,” especially “[i]n view of [the] EPA’s own assessment of the dangers to human health posed by this pesticide,” noting that the EPA had recently “reported that chlorpyrifos poses such a significant threat to water supplies that a nationwide ban on the pesticide may be justified.” *Id.* at 811, 814.

¹ Unless otherwise indicated, case quotations omit all internal quotation marks, alterations, footnotes, and citations.

Notwithstanding the deadline set by this Court, the EPA did not initially respond to the 2007 Petition until November 2015, when it issued a proposed rule revoking all tolerances for chlorpyrifos. Chlorpyrifos; Tolerance Revocations, 80 Fed. Reg. 69,080 (Nov. 6, 2015); *see* 21 U.S.C. § 346a(d)(4)(A)(ii). Describing the various scientific studies’ “consistency of finding neurodevelopmental effects” as “striking,” *id.* at 69,090, the EPA stated that it was “unable to conclude that the risk from aggregate exposure from the use of chlorpyrifos meets the safety standard of [21 U.S.C. § 346a(b)(2)(A)(i)]” *id.* at 69,080.

Yet the EPA still equivocated and delayed. Accordingly, in December 2015, we ordered the EPA “to take final action by December 30, 2016 on its proposed revocation rule.” *In re PANNA*, 808 F.3d 402, 402 (9th Cir. 2015). In June 2016, the EPA requested a six-month extension to continue scientific analysis, a request we characterized as “another variation on a theme of partial reports, missed deadlines, and vague promises of future action that has been repeated for the past nine years.” *In re PANNA*, 840 F.3d 1014, 1015 (9th Cir. 2016). We found that a six-month delay was “not justified” in light of the previous time extensions and the EPA’s “continued failure to respond to the pressing health concerns presented by chlorpyrifos,” but granted a three-month extension to March 2017. *Id.*

In the meantime, the EPA issued a 2016 Risk Assessment concluding that estimated dietary exposure to chlorpyrifos at existing tolerances exceeded what was acceptable for all population groups analyzed, with the highest risks for young children. The Risk Assessment found that scientific literature “as a whole provides evidence of long-lasting neurodevelopmental disorders” linked to chlorpyrifos exposure, with any remaining scientific

uncertainties insufficient to “undermine or reduce the confidence in the findings of the epidemiology studies.” The EPA concluded that its analysis of chlorpyrifos “continues to indicate that the risk from the potential aggregate exposure does not meet the FFDCSA safety standard” and that “expected residues of chlorpyrifos on most individual food crops exceed the ‘reasonable certainty of no harm’ safety standard.” Chlorpyrifos; Tolerance Revocations; Notice of Data Availability and Request for Comment, 81 Fed. Reg. 81,049, 81,050 (Nov. 17, 2016).

Then, in the Order at issue in this case, the EPA reversed its position and denied the 2007 Petition on the merits, leaving chlorpyrifos tolerances in effect. Chlorpyrifos; Order Denying PANNA and NRDC’s Petition To Revoke Tolerances, 82 Fed. Reg. 16,581 (Apr. 5, 2017). The Order did not refute the agency’s previous scientific findings on chlorpyrifos or its conclusion that chlorpyrifos violated the FFDCSA safety standard. Instead, the EPA stated that it would not revoke tolerances as “the science addressing neurodevelopmental effects remains unresolved.” *Id.* at 16,583. The EPA stated that it would not complete “any associated tolerance revocation of chlorpyrifos without first attempting to come to a clearer scientific resolution,” *id.*, and claimed to have “discretion to determine the schedule” for reviewing the existing chlorpyrifos tolerances as long as it completed the chlorpyrifos registration review by FIFRA’s deadline of October 1, 2022, *id.* at 16,590.

PANNA and NRDC moved for further mandamus relief in this Court, arguing that the 2017 Order failed to respond adequately to the 2007 Petition. We denied their motion as premature because the EPA had “done what we ordered it to do,” i.e. responded to the 2007 Petition, since the 2017 Order formally denied it. *In re PANNA*, 863 F.3d 1131, 1132 (9th

Cir. 2017). Petitioners then petitioned this Court for review of the 2017 Order. Petitioners concurrently filed objections in the EPA's administrative review process. Thereafter, we permitted several states that had also filed objections to the Order to intervene in this matter.

The EPA does not defend this suit on the merits, but argues that § 346a(g)(2)'s administrative process deprives this Court of jurisdiction until the EPA issues a response to petitioners' administrative objections, *see* § 346a(g)(2)(C), which it has not done to date.

DISCUSSION

A. *Jurisdiction*

The term “jurisdiction” refers specifically to “a court’s adjudicatory authority.” *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 160 (2010). Therefore, “a rule should not be referred to as jurisdictional unless it governs a court’s adjudicatory capacity, that is, its subject-matter or personal jurisdiction.” *Henderson ex rel. Henderson v. Shinseki*, 562 U.S. 428, 435 (2011). In other words, “jurisdictional statutes speak to the power of the court rather than to the rights or obligations of the parties.” *Landgraf v. USI Film Prods.*, 511 U.S. 244, 274 (1994).

The Supreme Court has emphasized the necessity of observing “the important distinctions between jurisdictional prescriptions and claim-processing rules.” *Reed Elsevier*, 559 U.S. at 161. Claim-processing rules “seek to promote the orderly progress of litigation by requiring that the parties take certain procedural steps at certain specified times.” *Henderson*, 562 U.S. at 435. Claim-processing rules may be “important and mandatory,” but, as they do not “govern[] a

court's adjudicatory capacity," they can be waived by the parties or the court. *Id.*

The Supreme Court has adopted a "bright line" test for determining when to classify statutory restrictions as jurisdictional. *Arbaugh v. Y&H Corp.*, 546 U.S. 500, 516 (2006). A rule qualifies as jurisdictional only if "Congress has clearly stated that the rule is jurisdictional." *Sebelius v. Auburn Reg'l Med. Ctr.*, 568 U.S. 145, 153 (2013). "[A]bsent such a clear statement," the Supreme Court has cautioned, "courts should treat the restriction as nonjurisdictional in character," with the specific goal of "ward[ing] off profligate use of the term 'jurisdiction.'" *Id.* In considering whether Congress has spoken clearly, courts consider both the language of the statute and its "context, including . . . [past judicial] interpretation[s] of similar provisions." *Reed Elsevier*, 559 U.S. at 168.

"[T]hreshold requirements that claimants must complete, or exhaust, before filing a lawsuit" are typically "treated as nonjurisdictional." *Id.* at 166. Accordingly, "we have rarely found exhaustion statutes to be a jurisdictional bar." *McBride Cotton & Cattle Corp. v. Veneman*, 290 F.3d 973, 978 (9th Cir. 2002) (holding that requirement of "exhaust[ing] all administrative appeal procedures . . . before [a] person may bring an action in a court" was not jurisdictional); *see also Anderson v. Babbitt*, 230 F.3d 1158, 1162 (9th Cir. 2000) (same for provision that "[n]o decision which at the time of its rendition is subject to [administrative] appeal . . . shall be considered final so as to be agency action subject to judicial review"); *Rumbles v. Hill*, 182 F.3d 1064, 1067 (9th Cir. 1999) (same for provision that "[n]o action shall be brought . . . until such administrative remedies as are available are exhausted"),

overruled on other grounds by Booth v. Churner, 532 U.S. 731 (2001).

Section 346a(h)(1), the FFDCA's judicial review provision, provides:

In a case of actual controversy as to the validity of any regulation issued under subsection (e)(1)(C), or any order issued under subsection (f)(1)(C) or (g)(2)(C), or any regulation that is the subject of such an order, any person who will be adversely affected by such order or regulation may obtain judicial review by filing in the United States Court of Appeals for the circuit wherein that person resides or has its principal place of business, or in the United States Court of Appeals for the District of Columbia Circuit, within 60 days after publication of such order or regulation, a petition praying that the order or regulation be set aside in whole or in part.

The (g)(2)(C) order referenced above is the order “stating the action taken upon each such objection and setting forth any revision to the regulation or prior order that the Administrator has found to be warranted,” which the EPA must issue at the conclusion of the administrative objections process outlined in § 346a(g)(2). *Id.* § 346a(g)(2)(C).

We must consider whether § 346a(h)(1) “clearly states” that obtaining a (g)(2)(C) order in response to administrative objections is a jurisdictional requirement. It does not. Section 346a(h)(1) “is written as a restriction on the rights of plaintiffs to bring suit, rather than as a limitation on the power of the federal courts to hear the suit.” *Payne v.*

Peninsula Sch. Dist., 653 F.3d 863, 869 (9th Cir. 2011) (en banc). It delineates the process for a party to obtain judicial review, by filing suit in one of two venues within a specified time, not the adjudicatory capacity of those courts.

In *Henderson*, the Supreme Court evaluated a similarly structured provision, which provided that, “to obtain [judicial] review” of a final decision of the Board of Veterans’ Appeals, “a person adversely affected . . . shall file a notice of appeal with the Court.” 562 U.S. at 438. The Court found this language did “not suggest, much less provide clear evidence, that the provision was meant to carry jurisdictional consequences.” *Id.* Similarly, in *Payne*, we held that an exhaustion requirement providing that “before the filing of a civil action . . . , the [administrative] procedures . . . shall be exhausted” was not a jurisdictional limit on the courts, but a requirement for plaintiffs that could be waived. 653 F.3d at 867, 869. Like the provision evaluated in *Payne*, the focus of § 346a(h)(1) on the requirements for petitioners “strongly suggests that the restriction may be enforced by defendants but that the exhaustion requirement may be waived or forfeited.” *Id.* at 869.

Further, § 346a(h)(1) “does not speak in jurisdictional terms or refer in any way to the jurisdiction of the [federal] courts.” *Zipes v. Trans World Airlines, Inc.*, 455 U.S. 385, 394 (1982). The word “jurisdiction” never appears. The reference to the United States Courts of Appeals “simply clarifies that, when determining in which court of competent jurisdiction they will file their claim, . . . litigants have a choice of venue.” *Merritt v. Countrywide Fin. Corp.*, 759 F.3d 1023, 1038 (9th Cir. 2012) (classifying provision that an action “may be brought in any United States district court, or in any other court of competent jurisdiction” as

non-jurisdictional claim-processing rule despite its being labeled “Jurisdiction of courts; limitations on actions”).

Section 346a(h)(1) similarly lacks mandatory language with “jurisdictional import.” *Auburn Reg’l Med. Ctr.*, 568 U.S. at 154. It merely provides that a person “*may* obtain judicial review.” 21 U.S.C. § 346a(h)(1) (emphasis added). In *Auburn Regional Medical Center*, the Supreme Court evaluated a provision with similar language, which instructed that a health care provider “may obtain a hearing” by the Provider Reimbursement Review Board if “such provider files a request for a hearing within 180 days after notice of the intermediary’s final determination.” 568 U.S. at 154. The Court held that the provision did “not speak in jurisdictional terms” in part because it lacked “words with jurisdictional import” like “the mandatory word ‘shall.’” *Id.* Similarly, this Court has held that “permissive, non-mandatory language such as ‘may file’ . . . weighs considerably against a finding that [the provision] is jurisdictional.” *Merritt*, 759 F.3d at 1037.

Aside from listing a (g)(2)(C) order as one of the orders available for judicial review, § 346a(h)(1) provides no indication that the administrative process required to produce a (g)(2)(C) order is a condition of the courts’ jurisdiction. The objections process itself is detailed in Section 346a(g)(2), a separate provision focused entirely on administrative processes rather than on judicial review. The Supreme Court has repeatedly found that a requirement’s “appear[ance] as an entirely separate provision” from the one concerning judicial review is a significant indicator of lack of Congressional intent to make that requirement jurisdictional. *Zipes*, 455 U.S. at 393–94; *see also Reed Elsevier*, 559 U.S. at 164; *Arbaugh*, 546 U.S. at 515.

The fact that (g)(2)(C) orders issued at the conclusion of administrative objections appear on § 346a(h)(1)'s list of orders for judicial review, while (d)(4)(A) orders issued in response to petitions do not, is not in itself suggestive as to whether obtaining a (g)(2)(C) order is a jurisdictional limitation. In evaluating statutes that similarly list administrative actions available for judicial review, the Supreme Court has observed that “[t]he mere fact that some acts are made reviewable should not suffice to support an implication of exclusion as to others.” *Verizon Md., Inc. v. Pub. Serv. Comm’n*, 535 U.S. 635, 643 (2002). “The right to review is too important to be excluded on such slender and indeterminate evidence of legislative intent.” *Abbott Labs. v. Gardner*, 387 U.S. 136, 141 (1967), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99, 105 (1977).

The Dissent finds the language of § 346a(h)(5) suggestive of a Congressional intent to “preclude[] possible bypassing of the § 346a(g)(2) provisions.” Dissent at 37. We disagree. Section 346a(h)(5) provides that “[a]ny issue as to which review is or was obtainable under this subsection shall not be the subject of judicial review under any other provision of law.” This is a limitation on the availability of judicial review under *other* statutory provisions, not a pronouncement as to the internal requirements of § 346a(h)(1) jurisdiction. Similarly, *NRDC v. Johnson*, 461 F.3d 164 (2006), the Second Circuit case cited by the Dissent to support its position that § 346a(h)(5) limits this Court’s jurisdiction, is inapposite. In that case, the Second Circuit held that “Section 346a(h) limits judicial review *to the courts of appeals*,” rejecting an attempt by plaintiffs to challenge a tolerance by filing directly in federal *district* court under the APA, rather than filing in a federal appellate court pursuant to § 346a(h)(1). *Id.* at 173 (emphasis added). While *Johnson* also stated that § 346a(h) “forecloses such

[appellate court] review prior to the exhaustion of administrative remedies,” *id.*, this was pure dictum and particularly inapposite here, since the question of whether such exhaustion was jurisdictional was not presented in that case, which expressly was concerned only with whether “decisions to leave tolerances in effect are reviewable in the district courts.” *Id.* at 167.

We are also mindful what it would mean for future review of EPA decisions if we were to find obtaining a (g)(2)(C) order to be a jurisdictional requirement. In seeking to “bring some discipline” to the classification of provisions as jurisdictional, the Supreme Court has repeatedly considered how the classification of the rule in question would impact future claims. *See Auburn Reg'l Med. Ctr.*, 568 U.S. at 153–54 (examining “what it would mean” for the review process if a provision were found jurisdictional); *see also Henderson*, 562 U.S. at 434 (addressing the “considerable practical importance” that attaches to the jurisdictional label, including how jurisdictional rules “may . . . result in the waste of judicial resources and may unfairly prejudice litigants”). The impact of a jurisdictional finding must be considered within the context of the administrative process Congress was establishing in the relevant statute, and the values that process was meant to protect. For example, in *Henderson*, the Supreme Court addressed the impact of a jurisdictional finding on the process established by Congress for adjudicating veterans’ benefits claims considering the “solicitude of Congress for veterans” reflected in the review scheme. *Id.*

Applying this analysis to the present case, a jurisdictional finding would mean that under no circumstances could persons obtain judicial review of a denial of a petition prior to an EPA response to an

administrative objection, even under exigent circumstances where the EPA was unwilling or unable to act. The EPA could evade judicial review simply by declining to issue a (g)(2)(c) order in response to an objection, requiring petitioners to seek writs of mandamus to order EPA action on objections. The history of this very case vividly illustrates this danger.

The language Congress used hardly suggests an intention to allow this scenario. Section 346a(g)(2) instructs the EPA to respond “as soon as practicable” to objections filed. Providing only a brief administrative review process makes sense. By the time an administrative objection is filed, the EPA has already fully considered the petition at issue and issued either a “final regulation” or, as here, “an order denying the petition.” 21 U.S.C. § 346a(d)(4)(A)(iii).

Furthermore, § 346a(h)(1) provides direct access to the Courts of Appeals to challenge such EPA determinations. Broad, efficient, and prompt access to judicial review is consistent with the other values expressed by the statutory scheme: prioritizing public involvement in monitoring tolerances, as evidenced by the § 346a(d) petition process; and requiring quick EPA responses to changing scientific evidence, as evidenced by the EPA’s continuing obligation to ensure that tolerances remain in compliance with the FFDCA’s safety standards. *See* § 346a(b)(2)(A)(i).

We have recognized that “determining what has and what has not been exhausted . . . may prove an inexact science” and that “questions about whether administrative proceedings would be futile, or whether dismissal of a suit would be consistent with the general purposes of exhaustion, are better addressed through a fact-specific assessment of the affirmative defense than through an inquiry about whether the court has the power to decide the case at all.” *Payne*,

653 F.3d at 870. Finding that a (g)(2)(C) order is a jurisdictional prerequisite would mean that courts would have no ability to analyze whether the administrative process was serving an important role in furthering the development of necessary evidence or was of little value for the issue in question, no matter the significance or the urgency of the question awaiting judicial review.

The EPA makes three main arguments that § 346a(g)(2)(C) is in fact jurisdictional. None are persuasive.

First, the EPA argues that a 1996 amendment to the language of the FFDCA's judicial review provision changing the reviewable orders listed in § 346a(h)(1), indicated a Congressional intent to condition jurisdiction over any orders not listed in Section 346a(h)(1) on their completion of the administrative appeals process. The EPA provides no support for this account of Congressional motivation, which it loosely suggests was a response to a D.C. Circuit decision from nearly a decade earlier finding that the language in the prior version did not require completing an administrative hearing process before filing for judicial review. In fact, the legislative history indicates that the amended statute "retain[ed] most of the existing provisions" regarding judicial review. H.R. Rep. No. 104-669(II), at 49 (1996). But even assuming that Congress's intent with this amendment was to have orders issued in response to petitions go through the § 346a(g)(2) administrative objections process prior to judicial review, that does not bear on the relevant question here, whether Congress intended the new rule as a claims-processing rule or a jurisdictional limitation on the courts.

Second, the EPA argues that the structure of the administrative objections process itself indicates that the process was intended as a jurisdictional requirement, rather

than a claims-processing rule. This argument relies almost entirely on the similarity between § 346a(g)(2)'s objections process and an administrative appeal process that we found jurisdictional in *Gallo Cattle Co. v. United States Department of Agriculture*, 159 F.3d 1194 (9th Cir. 1998). However, *Gallo* was premised on a view of statutory exhaustion that is inconsistent with subsequent Supreme Court precedent and later decisions in this circuit. Compare *id.* at 1197 (“[S]tatutorily-provided exhaustion requirements deprive the court of jurisdiction . . .”), with *McBride*, 290 F.3d at 980 (“[N]ot all statutory exhaustion requirements are created equal. Only statutory exhaustion requirements containing sweeping and direct language deprive a federal court of jurisdiction.”). We have specifically cautioned against reliance on prior cases like *Gallo*, “decided without the benefit of the Supreme Court’s recent admonitions against profligate use of the term jurisdictional.” *Merritt*, 759 F.3d at 1039. Moreover, even without this change in case law, *Gallo* would be inapposite. Unlike § 346a(h)(1), the provision evaluated in *Gallo* was explicitly jurisdictional, providing that “[t]he district courts of the United States . . . are hereby vested with jurisdiction to review [the administrative] ruling.” *Gallo*, 159 F.3d at 1197 (emphasis added).

Finally, the EPA argues that this Court’s statement in its most recent decision in the prior mandamus action forecloses this conclusion. It does not. That decision denied PANNA and the NRDC’s petition for further mandamus relief because it was premised on the ground that the 2017 Order failed to meet the requirements for a final order. Rejecting that view and finding that the 2017 Order was a final denial of the 2007 Petition, this Court instructed PANNA and the NRDC that “[f]iling objections and awaiting their resolution by the EPA Administrator is a prerequisite to obtaining

judicial review of [the] EPA's final response to the petition. Only at that point may we consider the merits of [the] EPA's final agency action." *In re PANNA*, 863 F.3d at 1133. Aside from the fact that none of this language spoke to the jurisdictional issue but only to the issue of exhaustion, the instant appeal is clearly in a different posture. In compliance with our prior ruling, petitioners filed their objections, but the EPA has failed to issue a timely (g)(2)(c) order in response.

In sum, we hold that § 346a(h)(1) is not jurisdictional. It contains no jurisdictional label, is structured as a limitation on the parties rather than the courts, and only references an exhaustion process that is outlined in a separate section of the statute.

B. *Exhaustion*

Where, as here, exhaustion of administrative remedies is not jurisdictional, we "must determine whether to excuse the faulty exhaustion and reach the merits, or require the petitioner to exhaust . . . administrative remedies before proceeding in court." *Rivera v. Ashcroft*, 394 F.3d 1129, 1139 (9th Cir. 2004), *superseded by statute on other grounds as stated in Iasu v. Smith*, 511 F.3d 881, 886 (9th Cir. 2007). "In determining whether exhaustion is required, federal courts must balance the interest of the individual in retaining prompt access to a federal judicial forum against countervailing institutional interests favoring exhaustion." *McCarthy v. Madigan*, 503 U.S. 140, 146 (1992), *superseded by statute on other grounds as stated in Booth*, 532 U.S. 731.

The Supreme Court has identified the two key institutional interests favoring exhaustion as "the twin purposes of protecting administrative agency authority and

promoting judicial efficiency.” *Id.* at 145. Not all cases implicate these interests to an equal degree. Exhaustion protects an agency’s authority “when the action under review involves exercise of the agency’s discretionary power or when the agency proceedings in question allow the agency to apply its special expertise.” *Id.* Exhaustion also protects an agency’s authority by providing the agency “an opportunity to correct its own mistakes with respect to the programs it administers.” *Woodford v. Ngo*, 548 U.S. 81, 89 (2006). “[E]xhaustion principles apply with special force when frequent and deliberate flouting of administrative processes could weaken an agency’s effectiveness by encouraging disregard of its procedures.” *McCarthy*, 503 U.S. at 145.

The institutional interest in requiring exhaustion to protect agency authority appears particularly weak in the present case. The challenged action, permitting the use of chlorpyrifos on food products, does not involve exercise of the EPA’s general discretion, but must take place in compliance with strict statutory directives. The questions presented in this appeal are in no way factual or procedural questions implicating the agency’s “special expertise.” This is not a situation, for example, where the EPA determined a pesticide was safe and the science underlying that determination is challenged. Rather, the purely legal questions here concern the statutory requirements of the FFDCA, and, accordingly, are suited to judicial determination. The crux of petitioners’ challenge is that the EPA has found that chlorpyrifos is not safe and therefore cannot maintain a tolerance for it.

Allowing the petition to proceed would not reward failure to properly exhaust administrative remedies. “Proper exhaustion demands compliance with an agency’s deadlines

and other critical procedural rules because no adjudicative system can function effectively without imposing some orderly structure on the course of its proceedings.” *Woodford*, 548 U.S. at 90–91.

Here, petitioners timely submitted objections to the order denying the 2007 petition to revoke tolerances, fulfilling all of their exhaustion obligations except for the one not within their control—obtaining the EPA’s response to the objections. Petitioners’ objections were filed 13 months ago, and the key issue therein—whether the EPA was statutorily obligated to revoke the tolerance for chlorpyrifos—was first raised to the EPA over a decade ago in the 2007 Petition. This timeline has provided the EPA more than ample opportunity to correct any mistakes on its own. But, despite the statutory requirement that the EPA respond to the objections “as soon as practicable,” it has failed to do so. The history of this litigation supports the inference that the EPA is engaging in yet more delay tactics to avoid our reaching the merits of the sole statutory issue raised here: whether chlorpyrifos must be banned from use on food products because the EPA has not determined that there is a “reasonable certainty” that no harm will result from its use, even under the established tolerances.

The second institutional interest identified by the Supreme Court as potentially favoring exhaustion, judicial economy, counsels against requiring further administrative exhaustion in this instance. Exhaustion offers the greatest support for judicial efficiency where it either permits the agency to “correct its own errors” such that the “judicial controversy may well be mooted, or at least piecemeal appeals may be avoided,” or where administrative review “may produce a useful record for subsequent judicial consideration, especially in a complex or technical factual

context.” *McCarthy*, 503 U.S. at 145. Here, it is just the opposite. Since 2012, we have issued five separate decisions related to the EPA’s inaction on the chlorpyrifos tolerances. Declining to waive exhaustion at this point would make this our sixth decision on the matter without once reaching the merits, setting the stage for yet another “piecemeal appeal[]” if the EPA should someday issue a response to the petitioners’ objection—something the EPA itself has strongly hinted may not come about until 2022, if then. Similarly, further development of the administrative record is of no use to judicial efficiency at this point in the proceedings; there are no factual questions, let alone “complex or technical” ones, at issue—only legal questions. And on the merits of these legal questions, the EPA offers no defense of its inaction, effectively conceding its lawlessness.

While both institutional interests favoring exhaustion are weak, this petition invokes two of the “three broad sets of circumstances in which the interests of the individual weigh heavily against requiring administrative exhaustion.” *McCarthy*, 503 U.S. at 146. First, the Supreme Court has recognized that exhaustion may be excused where “requiring resort to the administrative remedy may occasion undue prejudice to subsequent assertion of a court action. Such prejudice may result, for example, from an unreasonable or indefinite timeframe for administrative action.” *Id.* at 146–47. Most often, an administrative remedy is deemed inadequate “because of delay by the agency.” *Id.* Here, the EPA’s expressed intent to withhold action for years to come is “unreasonable” as applied here, especially as petitioners’ objections concern no factual issues that would require additional time to investigate. The EPA has had over a year to respond to the objections already, with no result.

In *Coit Independence Joint Venture v. Federal Savings & Loan Insurance*, 489 U.S. 561, 586–87 (1989), the Supreme Court held that a claimant was not required to wait for a decision on its administrative appeal before seeking judicial review where the administrative appeal had been pending for over 13 months as of the date of oral argument, and there was no “clear and reasonable time limit on [the agency’s] consideration of . . . claims.” *See also Smith v. Ill. Bell Tel. Co.*, 270 U.S. 587, 591–92 (1926) (holding that a claimant “is not required indefinitely to await a decision of the [administrative] tribunal before applying to a federal court for equitable relief”). Like the regulation evaluated in *Coit*, the EPA’s interpretation of the FFDCA’s administrative review provision as providing limitless time to respond to objections would give the agency “virtually unlimited discretion to bury large claims like [petitioners’] in the administrative process, and to stay judicial proceedings for an unconscionably long period of time.” *Coit*, 489 U.S. at 586. The delay is particularly prejudicial here where the continued use of chlorpyrifos is associated with severe and irreversible health effects. *See Bowen v. City of New York*, 476 U.S. 467, 483 (1986) (concluding that disability-benefit claimants “would be irreparably injured were the exhaustion requirement now enforced against them”); *Aircraft & Diesel Equip. Corp. v. Hirsch*, 331 U.S. 752, 773 (1947) (directing consideration of “irreparable injury flowing from delay incident to following the prescribed procedure” in determining whether to require exhaustion). Petitioners have been waiting over a year for EPA action on their objections, and over eleven years for an EPA decision on chlorpyrifos tolerances, while being

continually exposed to the chemical's effects. This is a sufficient basis to waive or otherwise excuse exhaustion.²

In light of the strong individual interests against requiring exhaustion and weak institutional interests in favor of it, we conclude that petitioners need not exhaust their administrative objections and are not precluded from raising before us the issues at hand on the merits.³

C. The Merits

We now turn to the merits. Petitioners argue that the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children is flatly inconsistent with the FFDCFA. Specifically, petitioners argue that a need for additional scientific research is not a valid ground for maintaining a tolerance that, after nearly two decades of studies, has not been determined safe to "a reasonable certainty," and that the EPA cannot delay a decision on tolerances to coordinate that decision with registration review under FIFRA.

The EPA presents no arguments in defense of its decision. Accordingly, the EPA has forfeited any merits-

² Exhaustion may also be excused where "the administrative body is shown to be biased or has otherwise predetermined the issue before it." *McCarthy*, 503 U.S. at 148. The history detailed above strongly suggests that the EPA, for whatever reason, has decided not to ban chlorpyrifos under any circumstances, even when its own internal studies show that it could not possibly make the factual findings necessary to avoid a ban.

³ Because we find judicial review available under § 346a(h)(1), we will not address petitioners' alternative argument that judicial review is available under FIFRA, 7 U.S.C. § 136n(b).

based argument. *See Martinez v. Sessions*, 873 F.3d 655, 660 (9th Cir. 2017).

The FFDCA states unequivocally that the Administrator “shall modify or revoke a tolerance if the Administrator determines it is not safe.” § 346a(b)(2)(A)(i). A tolerance is safe when “the Administrator has determined that there is a *reasonable certainty* that *no* harm will result from aggregate exposure to the pesticide, including all anticipated dietary exposures and all other exposures for which there is reliable information.” § 346a(b)(2)(A)(ii) (emphasis added). Accordingly, the EPA bears a continuing obligation to revoke tolerances that it can no longer find with a “reasonable certainty” are safe.

The EPA’s 2016 risk assessment concluded that its analysis of chlorpyrifos “continues to indicate that the risk from potential aggregate exposure does not meet the FFDCA safety standard” and that “expected residues of chlorpyrifos on most individual food crops exceed the ‘reasonable certainty of no harm’ safety standard.” This finding was the EPA’s final safety determination before the 2017 EPA Order. The 2017 Order declined to revoke chlorpyrifos tolerances but did not make a finding of reasonable certainty that the tolerances were safe. Instead, it found “significant uncertainty” as to the health effects of chlorpyrifos, which is at odds with a finding of “reasonable certainty” of safety under § 346a(b)(2)(A)(ii) and therefore mandates revoking the tolerance under § 346a(b)(2)(A)(i).

“[H]owever desirable it may be for [the] EPA to consult [a Scientific Advisory Board] and even to revise its conclusion in the future, that is no reason for acting against its own science findings in the meantime.” *Chlorine Chemistry Council v. EPA*, 206 F.3d 1286, 1290 (D.C. Cir. 2000). The EPA cannot refuse to act “because of the

possibility of contradiction in the future by evidence unavailable at the time of action – a possibility that will *always* be present.” *Id.* at 1290–91 (emphasis in original). Chlorpyrifos similarly does not meet the statutory requirement for registration under FIFRA, which incorporates the FFDCA’s safety standard. As we have previously counseled, “evidence may be imperfect [and] the feasibility inquiry is formidable,” but there remains no justification for the “EPA’s continued failure to respond to the pressing health concerns presented by chlorpyrifos,” which has now placed the agency in direct contravention of the FFDCA and FIFRA. *In re PANNA*, 840 F.3d at 105.

Accordingly, we **GRANT** the petition for review. The EPA’s 2017 Order maintaining chlorpyrifos is **VACATED**, and the case is remanded to the EPA with directions to revoke all tolerances and cancel all registrations for chlorpyrifos within 60 days.

FERNANDEZ, Circuit Judge, dissenting:

League of United Latin American Citizens, Pesticide Action Network North America (PANNA), Natural Resources Defense Council (NRDC), California Rural Legal Assistance Foundation, Farmworkers Association of Florida, Farmworker Justice GreenLatinos, Labor Council for Latin American Advancement, Learning Disabilities Association of America, National Hispanic Medical Association, Pineros Y Campesinos Unidos del Noroeste, and United Farm Workers (collectively, “LULAC”) petition for review of the Environmental Protection Agency’s (EPA) 2017 order denying a 2007 petition to revoke all tolerances for the pesticide chlorpyrifos (hereafter “the Pesticide”). *See* Chlorpyrifos; Order Denying PANNA and NRDC’s Petition

to Revoke Tolerances, 82 Fed. Reg. 16,581, 16,583 (Apr. 5, 2017) (the “2017 Order”).¹ In the briefs (not in the petition for review), LULAC and the States ask for a writ of mandamus ordering EPA to respond to the objections they filed to the 2017 Order. In their brief, the States also ask for a writ of mandamus compelling the EPA to issue a final rule revoking chlorpyrifos tolerances.

The EPA regulates the use of pesticides on food pursuant to the Federal Food, Drug, and Cosmetic Act² (FFDCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).³ At present, the Pesticide is registered as an insecticide for food crops and non-food settings. In the view of LULAC and the States, the Pesticide is unsafe⁴ and the EPA should modify or revoke the tolerances it has established for the Pesticide pursuant to FFDCA. *See* 21 U.S.C. § 346a(a)(1)(A), (b)(1). For that matter, they believe that the EPA should cancel the Pesticide’s registration for food crops under FIFRA. *See* 7 U.S.C. § 136a(g)(1)(A)(v). In September 2007, PANNA and NRDC filed an administrative petition with the EPA seeking revocation of the Pesticide’s FFDCA food tolerances and cancellation of its FIFRA registrations (the 2007 Petition). On April 5, 2017, the EPA issued the 2017 Order in which it denied the 2007 Petition. *See* 82 Fed. Reg. at 16,581.

¹ The States of New York, Maryland, Vermont, Washington, California, and Hawaii, as well as the Commonwealth of Massachusetts and the District of Columbia (collectively, “the States”), are Intervenor in support of LULAC’s petition.

² 21 U.S.C. §§ 301–399g.

³ 7 U.S.C. §§ 136–136y.

⁴ *See* 21 U.S.C. § 346a(a)(1).

LULAC and certain states filed objections to the 2017 Order on June 5, 2017, and on that same date, LULAC filed the instant petition for review of the merits of the 2017 Order.

JURISDICTION

The majority holds that we have jurisdiction over the petition for review. I disagree. Of course, we do have jurisdiction to determine whether we have jurisdiction over the petition for review. *See Special Invs. Inc. v. Aero Air Inc.*, 360 F.3d 989, 992 (9th Cir. 2004). Nonetheless, “[w]e presume that federal courts lack jurisdiction unless the contrary appears affirmatively from the record.” *DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 342 n.3, 126 S. Ct. 1854, 1861 n.3, 164 L. Ed. 2d 589 (2006). Thus, “the party asserting federal jurisdiction . . . has the burden of establishing it.” *Id.* Here LULAC⁵ attempts to meet that burden by pointing to the judicial review provisions of FFDCFA. *See* 21 U.S.C. § 346a(h).⁶ It also relies on FIFRA. *See* 7 U.S.C. § 136n(b). The States also point to 5 U.S.C. §§ 704, 706 as a possible source of jurisdiction. In my view, all of those attempts fail. Hence I would dismiss the petition.

A. Jurisdiction Under FFDCFA

The 2017 Order was issued pursuant to § 346a(d)(4)(A)(iii). In seeking to obtain FFDCFA jurisdiction, LULAC relies upon § 346a(h)(1) which, as pertinent here, provides that:

⁵ What I determine hereafter regarding LULAC also applies to the States unless otherwise indicated.

⁶ Hereafter, all references to § 346a are to 21 U.S.C. § 346a.

In a case of actual controversy as to the validity of . . . any order issued under subsection . . . (g)(2)(C) [of this section], . . . any person who will be adversely affected by such order . . . may obtain judicial review by filing in the United States Court of Appeals for the circuit wherein that person resides or has its principal place of business . . . a petition praying that the order . . . be set aside in whole or in part.

Unfortunately for LULAC's argument, the subsection referred to in the above quotation from § 346a(h)(1) is the subsection that provides for the EPA to issue an order following objections to a previous order of the EPA and that agency's processing of those objections. *See* § 346a(g)(2). That, by the way, is the process to which we pointed the parties in our earlier consideration of the EPA's proceedings regarding the Pesticide and stated that only after the review was completed "may we consider the merits of EPA's 'final agency action.'" *Nat. Res. Def. Council, Inc. v. U.S. EPA (In re PANNA)*, 863 F.3d 1131, 1133 (9th Cir. 2017). Specifically, § 346a(g)(2)(A) provides that a person may file objections to an order issued under § 346a(d)(4), as the 2017 Order was. The EPA may then hold a public evidentiary hearing upon request or upon its own initiative. *See* § 346a(g)(2)(B). An appropriate "order stating the action taken upon each such objection and setting forth any revision to the . . . prior order" must then be issued. *Id.* at (C). Pursuant to the plain reading of the above subsection taken

as a whole,⁷ then, and only then, can judicial review in this court be sought pursuant to § 346a(h)(1).

But, says LULAC, the requirement is no more than a claim-processing rule⁸ rather than a true jurisdictional rule.⁹ The majority agrees; I am not convinced. Here Congress was very careful and very specific about the class of cases—the limited kind of orders—over which it wished to give the courts of appeals direct review. It made it plain that we could not review the EPA’s actions in this specific area until the agency had developed and considered a full record regarding objections and the like. Before that occurred, judicial review was not available; we had no authority whatsoever to consider the issue. As the Second Circuit Court of Appeals has pointed out, § 346a(h)(1) is “unique in that it only commits certain specific agency actions to appellate court review.” *Nat. Res. Def. Council v. Johnson*, 461 F.3d 164, 172 (2d Cir. 2006). In light of that careful restriction on judicial review, it is not at all likely that Congress would

⁷ See *Nuclear Info. & Res. Serv. v. U.S. Dep’t of Transp. Research & Special Programs Admin.*, 457 F.3d 956, 960 (9th Cir. 2006).

⁸ See *Henderson ex rel. Henderson v. Shinseki*, 562 U.S. 428, 435, 131 S. Ct. 1197, 1203, 179 L. Ed. 2d 159 (2011) (claim-processing rules merely “seek to promote the orderly progress of litigation by requiring that the parties take certain procedural steps at certain specified times”).

⁹ “‘Jurisdiction’ refers to ‘a court’s adjudicatory authority.’” *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 160, 130 S. Ct. 1237, 1243, 176 L. Ed. 2d 18 (2010). “Accordingly, the term ‘jurisdictional’ properly applies only to ‘prescriptions delineating the classes of cases (subject-matter jurisdiction) . . .’ implicating that authority.” *Id.* at 160–61, 13 S. Ct. at 1243; see also *Payne v. Peninsula Sch. Dist.*, 653 F.3d 863, 868 (9th Cir. 2011) (en banc), *overruled on other grounds by Albino v. Baca*, 747 F.3d 1162, 1171 (9th Cir. 2014) (en banc).

have authorized our seizing jurisdiction before the specific agency action was concluded. Lest there be any doubt, Congress also precluded possible bypassing of the § 346a(g)(2) provisions when it directed that no “judicial review under any other provision of law” would be permitted. Section 346a(h)(5); *see also Johnson*, 461 F.3d at 172–74. And that is further emphasized by the fact that the section does not speak in general language of finality or exhaustion;¹⁰ it, rather, states specifically when we can assume review authority over the particular matters. Had Congress contemplated appellate court review before the EPA completed the process required by § 346a(g)(2)(C), it could easily have inserted orders under § 346a(d)(4), or, more specifically, § 346a(d)(4)(A)(iii) into the judicial review provisions of § 346a(h)(1), which, of course, it did not do. Rather, it expressly allowed judicial review only over the agency’s ruling on objections that had to be filed with the agency, and not before. *See Gallo Cattle Co. v. U.S. Dep’t of Agric.*, 159 F.3d 1194, 1197–98 (9th Cir. 1998); *see also McBride Cotton & Cattle Corp. v. Veneman*, 290 F.3d 973, 979–80 (9th Cir. 2002) (discussing *Gallo Cattle*). That is particularly telling because earlier iterations of the review provisions contained no such jurisdictional limitations. *See Nat’l Coal. Against the Misuse of Pesticides v. Thomas*, 809 F.2d 875, 878–79 (D.C. Cir. 1987).

In short, I see no basis for deconstructing that carefully constructed jurisdictional scheme and thereby inviting

¹⁰ *Cf. Anderson v. Babbitt*, 230 F.3d 1158, 1162 (9th Cir. 2000); *Rumbles v. Hill*, 182 F.3d 1064, 1067 (9th Cir. 1999).

premature attacks on matters committed to the expertise of the agency in the first instance.¹¹

B. Jurisdiction under FIFRA

LULAC then argues that because it not only asked for the EPA to revoke all tolerances for the Pesticide but also asked the EPA to cancel all registrations for the Pesticide, the 2007 Petition to the EPA arose under both the FFDCA and FIFRA. Thus, it argues, it need not abide by the FFDCA review provisions, but can rely on the jurisdictional provisions of the FIFRA to establish our jurisdiction. *See* 7 U.S.C. § 136n(b). I do not agree.

Rather, I am persuaded by the cogent reasoning of the Second Circuit Court of Appeals in a strongly similar situation. *See Johnson*, 461 F.3d at 176. In that case, pursuant to the FFDCA provisions, NRDC also challenged the EPA's setting of tolerances for residues on food of five pesticides (not including the Pesticide). *Id.* at 169–70. NRDC added that their registration should be cancelled pursuant to FIFRA. *Id.* at 176. NRDC had brought its action in the district court, and on appeal the Second Circuit determined that the district court did not have jurisdiction to review the EPA determination under the FFDCA because, as § 346(a)(h)(1), (5) provide, jurisdiction over those claims was limited to the courts of appeals. *Id.* at 172–76. NRDC

¹¹ Because the completion of the administrative process is jurisdictional, I do not consider LULAC's fallback argument that it would be futile to pursue the prescribed process. *See Sun v. Ashcroft*, 370 F.3d 932, 941 (9th Cir. 2004); *see also Ross v. Blake*, ___ U.S. ___, ___, 136 S. Ct. 1850, 1857, 195 L. Ed. 2d 117 (2016); *Gallo Cattle*, 159 F.3d at 1197.

then argued that the district court still had jurisdiction pursuant to FIFRA. The court replied:

However, FIFRA's grant of jurisdiction to the district courts is irrelevant. The NRDC Appellants "challenge the registration of pesticides under FIFRA only through their challenge to the tolerances set under the [F]FDCA." Essentially, therefore, the violations of FIFRA alleged by the NRDC Appellants "amount to challenges to the methodologies used in reaching the reassessment determinations at issue" in this case. As such, these challenges represent an "issue as to which review is or was obtainable under Section 346a(h). Section 346a(h)(5) precludes judicial review of these issues "under any other provision of law." The NRDC Appellants' attempt to find independent jurisdiction for their claims under FIFRA is thus precluded by the express language of § 346a(h)(5). The NRDC Appellants' claims are reviewable only in the courts of appeals, and only after they have exhausted the statutory provisions for administrative review.

Id. at 176 (citations omitted).

I accept that reasoning and the same reasoning should apply here. It would foreclose LULAC's argument. LULAC essentially argues that the EPA has erred in maintaining tolerances for the Pesticide, which is an unsafe insecticide, and for that same reason it argues that the EPA must forthwith revoke registration of the Pesticide. It argues

that it should not have to wait for the EPA to rule on its registration claim, but that is just an allotrope of its central arguments against waiting for relief under the FFDCAs tolerances provision with which its FIFRA argument is “inextricably intertwined.” *See Ctr. for Biological Diversity v. U.S. EPA*, 847 F.3d 1075, 1089 (9th Cir. 2017). Therefore, the FIFRA provision does not offer a way to avoid the judicial review provisions of the FFDCAs in this instance.

Thus, I would dismiss the petition for review for lack of jurisdiction.¹²

WRIT OF MANDAMUS

In its briefs, LULAC asks us to issue a writ of mandamus¹³ directing that the EPA respond to its objections within sixty days. However, LULAC did not file a petition for issuance of that writ and, therefore, made no attempt to comply with the Federal Rules of Appellate Procedure when it filed its petition for review of the merits of the 2017 Order. *See Fed. R. App. P. 21(a), (c); see also Fed. R. App. P. 20*. I see no reason to treat LULAC’s petition for review as, in fact, one for a writ of mandamus. It was not, and could not have been, a mere instance of mislabeling a request for relief that was sought. Had LULAC intended to seek a writ of

¹² I do not overlook the States’ argument regarding 5 U.S.C. §§ 704, 706 (the Administrative Procedure Act provisions). But those provisions do not confer direct review jurisdiction upon this court. *See Gallo Cattle*, 159 F.3d at 1198; *see also Califano v. Sanders*, 430 U.S. 99, 106–07, 97 S. Ct. 980, 985, 51 L. Ed. 2d 192 (1977). Therefore, they add nothing of substance to the petition for review issues now before us.

¹³ *See* 28 U.S.C. § 1651(a); *see also Cal. Cmty. Against Toxics v. U.S. EPA (In re A Cmty. Voice)*, 878 F.3d 779, 783 (9th Cir. 2017).

mandamus, rather than a merits review, that would have been most peculiar because on that same day LULAC had just filed its objections to the 2017 Order. It could not honestly complain about delay in considering its objections at that point. Were I to decide otherwise, I would essentially ignore our holding, which was handed down after this petition for review was filed, but before the briefs were filed, and which declared that PANNA and NRDC must file their objections and await resolution of those objections by the EPA before we would consider the merits of the EPA's actions regarding the Pesticide. *See Nat. Res. Def. Council*, 863 F.3d at 1133.

Thus, this case is quite unlike cases where we decided that a party improperly sought to appeal an interim procedural order rather than a decision on the merits of a case, but we also considered whether we should construe the appeal as a petition for a writ of mandamus. *See Kum Tat Ltd. v. Linden Ox Pasture, LLC*, 845 F.3d 979, 983 (9th Cir. 2017) (discussing order denying arbitration request); *Johnson v. Consumerinfo.com, Inc.*, 745 F.3d 1019, 1023 & n.2 (9th Cir. 2014) (discussing order compelling arbitration and staying judicial proceedings); *see also United States v. Davis*, 953 F.2d 1482, 1497–98 (10th Cir. 1992) (dismissing request for mandamus by defense counsel in criminal conviction appeal where no petition had been filed); *EEOC v. Neches Butane Prods. Co.*, 704 F.2d 144, 146, 151–52 (5th Cir. 1983) (denying request that an appeal from a stay of proceedings pending compliance with discovery orders be treated as a mandamus petition where requesting party was represented by competent counsel and should have filed a petition therefor); *Jones & Guerrero Co., Inc. v. Sealift Pac.*, 650 F.2d 1072, 1073–74 (9th Cir. 1981) (per curiam) (refusing to construe appeal from order remanding case to

Guam Superior Court as a petition for mandamus where no mandamus petition filed).

In short, I would decline to treat LULAC's petition as one for a writ of mandamus. Of course, I express no opinion on whether or when LULAC can or should file a petition for a writ of mandamus because LULAC deems the EPA's consideration of the objections to have been unduly delayed. *See PANNA v. U.S. EPA (In re PANNA)*, 798 F.3d 809, 813 (9th Cir. 2015); *Telecomms. Research & Action Ctr. v. FCC*, 750 F.2d 70, 80 (D.C. Cir. 1984).

Thus, I respectfully dissent from parts A and B of the Discussion in the majority opinion. As a result, I do not decide the issue in part C although I do find the discussion therein does have some persuasive value.

No. 17-71636

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

LEAGUE OF UNITED LATIN AMERICAN CITIZENS, et al.,

Petitioners,

STATE OF NEW YORK, et al.,

Petitioner-Intervenors,

v.

ANDREW WHEELER, Acting Administrator, United States Environmental
Protection Agency, and THE UNITED STATES ENVIRONMENTAL
PROTECTION AGENCY,

Respondents.

ON PETITION FOR JUDICIAL REVIEW OF ACTION BY THE UNITED
STATES ENVIRONMENTAL PROTECTION AGENCY

PETITION FOR *EN BANC* AND PANEL REHEARING

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INTRODUCTION

Respondents United States Environmental Protection Agency (“EPA”) and Acting EPA Administrator Andrew Wheeler hereby seek *en banc* and panel rehearing of the Court’s August 9, 2018, decision. The decision granted the petition for review of EPA’s order entitled “Chlorpyrifos: Order Denying PANNA and NRDC’s Petition to Revoke Tolerances,” 82 Fed. Reg. 16,581 (Apr. 5, 2017) (hereinafter “Initial Denial Order”). It then directed EPA to revoke the tolerances and cancel the pesticide registrations for chlorpyrifos.

In counsel’s judgment, the purposes for rehearing are met here. First, EPA seeks rehearing *en banc* or panel rehearing on the panel’s finding of jurisdiction to review the agency action. The Initial Denial Order is not an action Congress granted jurisdiction to review. On this point, the “panel decision conflicts with a decision of [this court] . . . and consideration by the full court is therefore necessary to secure and maintain uniformity of the court’s decisions.” Fed. R. App. P. 35(b)(1)(A). Specifically, the panel’s decision conflicts with *In re PANNA*, 863 F.3d 1131 (9th Cir. 2017), and *Nader v. EPA*, 859 F.2d 747 (9th Cir. 1988).

Second, EPA seeks *en banc* or panel rehearing on the panel’s remedy directing EPA to take specific actions upon vacatur of the Initial Denial Order. The “panel decision conflicts with a decision of the United States Supreme Court . . . and consideration by the full court is therefore necessary to secure and maintain uniformity of the court’s decisions.” Fed. R. App. P. 35(b)(1)(A). The panel’s order

limiting EPA's options on remand conflicts with Supreme Court precedent holding that where an agency's order is not sustainable on the record, a court should vacate the underlying decision and remand for further consideration by the agency, rather than directing specific action. *See Fed. Power Comm'n v. Idaho Power Co.*, 344 U.S. 17, 20 (1952) (“[T]he function of the reviewing court ends when an error of law is laid bare. At that point the matter once more goes to the Commission for reconsideration.”); *see also Camp v. Pitts*, 411 U.S. 138, 143 (1973).

Third, in the event the Court's decision is not reversed in its entirety, EPA seeks panel rehearing on the requirement that EPA cancel chlorpyrifos registrations under the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”). The panel “overlooked or misapprehended,” Fed. R. App. P. 40(a)(2), that EPA's revocation of tolerances under the Federal Food, Drug, and Cosmetic Act (“FFDCA”) would not necessitate cancellation of all registrations under FIFRA. The Court's order to do so also conflicts with procedural requirements governing cancellation of registrations under FIFRA. Accordingly, the Court should either rescind or narrow any relief pursuant to FIFRA.

BACKGROUND

I. Statutory and Regulatory Background

EPA regulates pesticides under both the FFDCA and FIFRA. The FFDCA authorizes the establishment of “tolerances,” which set maximum levels of pesticide residue in food. 21 U.S.C. § 346a. Without a tolerance, pesticide residues on food are

considered unsafe. *Id.* § 346a(a). EPA may establish a tolerance only if it determines that the tolerance is “safe,”¹ but it must modify or revoke a tolerance if the tolerance is not “safe.” *Id.* § 346a(b)(2)(A)(i).

The FFDCA contains a multi-step process for the establishment, modification, or revocation of tolerances. When an administrative petition to establish, modify, or revoke a tolerance is filed, EPA must give “due consideration” to that petition and take one of three actions: (i) issue a final regulation establishing, modifying, or revoking a tolerance; (ii) issue and take comments on a proposed regulation under section 346a(e) and thereafter issue a final regulation; or (iii) issue an initial order denying the petition. *Id.* § 346a(d)(4)(A).

When EPA issues a regulation or initial order under section 346a(d)(4)(A), “any person” may then file written objections with EPA under section 346a(g). *Id.* § 346a(g)(2)(A)-(B). After considering any objections and any hearing, if held, EPA must issue a final order resolving the objections. This order encapsulates its “[f]inal decision,” *id.* § 346a(g)(2)(C) (emphasis added), which is subject to judicial review in the courts of appeals, *id.* § 346a(h). “Upon the filing of such a petition, the court shall have exclusive jurisdiction to affirm or set aside the order” *Id.* § 346a(h)(2).

FIFRA requires EPA registration of all pesticides prior to their distribution or sale. 7 U.S.C. § 136a(a). EPA must approve an application for a pesticide registration

¹ “Safe” means “a reasonable certainty that no harm will result from aggregate exposure to the pesticide chemical residue” 21 U.S.C. § 346a(b)(2)(A)(ii).

if, among other things, the pesticide will not cause “unreasonable adverse effects on the environment,” *id.* § 136a(c)(5)(D), defined as “any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide” *and—if* pesticides are used on food crops—the FFDCA safety standard. 7 U.S.C. § 136(bb). Thus, EPA considers the FFDCA’s safety standard under FIFRA when assessing registration of a pesticide for food uses. EPA does not address that standard when registering pesticides with only non-food uses.

Congress established the procedures for involuntary cancellation of a registration in FIFRA, 7 U.S.C. § 136d(b). Under that provision, EPA must first provide the U.S. Department of Agriculture and the FIFRA Scientific Advisory Panel with an opportunity to review a draft notice of intent to cancel and then wait at least 60 days before issuing that notice. 7 U.S.C. § 136d(b). That notice provides registrants and others with an opportunity to request an adjudicatory hearing before cancellation becomes effective. *See id.* § 136d(b), (d); 40 C.F.R. Part 164 subpart B.

II. Procedural History

In 2007, Pesticide Action Network of North America (“PANNA”) and Natural Resources Defense Council (“NRDC”) petitioned EPA to revoke all FFDCA tolerances and cancel all FIFRA registrations for chlorpyrifos (hereinafter the “Administrative Petition”). 82 Fed. Reg. at 16,583. EPA then resolved some of the claims raised. *Id.* at 16,583. In September 2014, PANNA and NRDC filed a petition

for a writ of mandamus to force EPA to respond to the remaining claims. *See generally In re PANNA*, No. 14-72794 (9th Cir.). This Court ordered EPA to “issue either a proposed or final revocation rule or a full and final response” to the Administrative Petition by October 31, 2015. *In re PANNA*, 798 F.3d 809, 815 (9th Cir. 2015). In November 2015, EPA proposed to respond to the Administrative Petition by “revok[ing] all chlorpyrifos tolerances” 82 Fed. Reg. at 16,583. The Court then ordered EPA to take final action by March 31, 2017. *In re PANNA*, 808 F.3d 402, 402-03 (9th Cir. 2015); *In re PANNA*, 840 F.3d 1014, 1015 (9th Cir. 2016).

On March 29, 2017, EPA took action. It denied the Administrative Petition pursuant to 21 U.S.C. § 346a(d)(4)(A)(iii). 82 Fed. Reg. at 16,581. PANNA and NRDC then moved for further relief in the mandamus action. *In re PANNA*, Case No. 14-72794, Dkt. No. 55-1 (Apr. 5, 2017). This Court denied the motion. “Now that EPA has issued its denial, substantive objections must first be made through the administrative process mandated by [the FFDCA].” *In re PANNA*, 863 F.3d 1131, 1132-33 (9th Cir. 2017) (citations omitted). Once EPA issues a final order, only then can the Court “consider the merits of EPA’s ‘final agency action.’” *Id.*

On June 5, 2017, Petitioners filed this Petition for Review. On the same day, Petitioners filed with EPA administrative objections to the Initial Denial Order pursuant to 21 U.S.C. § 346a(g)(2)(A).

III. Panel Opinion

The panel's divided August 9, 2018, opinion, written by Judge Rakoff, sitting by designation, had three substantive rulings relevant to this rehearing request. *First*, the Court held it had jurisdiction to review EPA's Initial Denial Order. *Second*, on the merits of Petitioners' challenge to the Initial Denial Order, the Court held that EPA had acted unlawfully in maintaining the tolerances for chlorpyrifos because the Initial Denial Order did not make an affirmative safety finding (as the Court concluded was required by the FFDCA), instead finding "significant uncertainty" as to the pesticide's health effects. Slip Op. at 31. *Third*, as to remedy, the Court ordered without substantive discussion that "[t]he EPA's 2017 Order maintaining chlorpyrifos is VACATED, and the case is remanded to the EPA with directions to revoke all tolerances and cancel all registrations for chlorpyrifos within 60 days." Slip Op. at 32.

Judge Fernandez dissented, stating he would dismiss the petition for review for lack of jurisdiction. Slip Op. at 40.

ARGUMENT

I. *En Banc* or Panel Rehearing Should Be Granted to Reverse the Panel's Finding of Jurisdiction.

Congress only authorized judicial review of specific agency actions in the FFDCA. *See NRDC v. Johnson*, 461 F.3d 164, 172 (2d Cir. 2006) ("[T]he [F]FDCA contains no single, overarching provision governing judicial review—instead subjecting discrete agency actions to specialized review provisions.") (quotations

omitted). Only EPA’s “[f]inal decision,” following an objections process in 21 U.S.C. § 346a(g), is subject to judicial review. *Id.* § 346a(h)(1). For those decisions, “the court shall have exclusive jurisdiction to affirm or set aside” the actions. *Id.* § 346a(h)(2). But no language of the FFDCA grants jurisdiction to review an order issued under section 346a(d)(4)—such as the Initial Denial Order here—either before or after the administrative objections process. *See id.*

The FFDCA specifically identifies the administrative actions subject to judicial review: “any regulation issued under subsection (e)(1)(C), or any order issued under subsection (f)(1)(C) or (g)(2)(C), or any regulation that is the subject of such an order.” *Id.* § 346a(h)(1). For those actions, an “adversely affected” party may petition the courts of appeals “praying that the order or regulation be set aside” *Id.* The FFDCA does not grant jurisdiction to review orders issued under section 346a(d)(4), such as the Initial Denial Order. Therefore, there is simply no jurisdiction for review. As the Supreme Court has stressed, when a statute names only specific agency actions for judicial review, “[c]ourts are required to give effect to Congress’ express inclusions and exclusions, not disregard them.” *Nat’l Ass’n of Mfrs. v. DOD*, 138 S. Ct. 617, 631 (2018).

The panel’s conclusion that section 346a(h)(1) “lacks mandatory language with ‘jurisdictional import,’” Slip Op. at 19 (quoting *Sebelius v. Auburn Reg’l Med. Ctr*, 568 U.S. 145, 154 (2013)), is facially at odds with the text of the statute. First, section 346a(h) is entitled “Judicial review.” Second, section 346a(h)(1) specifically identifies

which orders may be the subject of a petition for review, and does not include orders issued under section 346a(d)(4). Third, section 346a(h)(2), captioned “Record and jurisdiction,” makes “the filing of such a petition”—*i.e.*, a petition for review of an order specifically enumerated in section 346a(h)(1)—an express condition of the Court’s exercise of “exclusive jurisdiction.” Lastly, section 346a(h)(5) states that “[a]ny issue as to which review is or was obtainable under this subsection shall not be subject to judicial review under any other provision of law.” Nowhere does the FFDCA provide any jurisdiction for this Court to review a denial order issued under section 346a(d)(4).

Judge Fernandez, in his dissent, explained these jurisdictional requirements:

Here Congress was very careful and very specific about the class of cases— the limited kind of orders—over which it wished to give the courts of appeals direct review. It made it plain that we could not review the EPA’s actions in this specific area until the agency had developed and considered a full record regarding objections and the like. Before that occurred, judicial review was not available; we had no authority whatsoever to consider the issue.

Slip Op. at 36-37.

The Second Circuit similarly recognized the FFDCA’s jurisdictional requirements in *Johnson*:

By specifically referencing Section 346a(g)(2)(C), Section 346a(h)(1) permits review of those orders issued pursuant to Section 346a(g). Section 346a(g), in turn, permits objections to orders issued pursuant to Section 346a(d)(4), which resolve petitions to establish, modify, or revoke a tolerance under Section 346a(d)(1). Thus, if it is or was possible to obtain review under the administrative review procedures of Section 346a(g), then Section 346a(h) limits judicial review

to the courts of appeals and forecloses such review prior to the exhaustion of administrative remedies.

461 F.3d at 173. Although the panel was correct that this was dictum, Slip Op. at 21, “given the extensive analysis of the statute . . . , it is rather persuasive *dictum*.” *Matter of Clark*, 738 F.2d 869, 874 n.6 (7th Cir. 1984).

Moreover, the panel’s conclusion also conflicts with a prior decision by this Court. *Nader* involved a materially identical judicial review provision under a prior version of the FFDCA.² *See* 859 F.2d at 751-52. As here, *Nader* addressed EPA’s initial denial of an administrative petition to revoke tolerances.³ Petitioners sought judicial review of EPA’s initial denial order without first going through the administrative objections process. *Id.* at 751. This Court found it lacked jurisdiction to review the initial denial order:

If the party seeks to invoke judicial review under § 348(g), however, objection under § 348(f) is a prerequisite. By its plain terms, section 348(g) permits judicial review in this court only of orders issued under subsection (f). Subsection (f) permits persons adversely affected by the denial of a petition to file objections with the Administrator and seek a hearing. *The jurisdiction of the court encompasses orders pertaining to administrative objections, not the grant or denial of the petition in the first instance.* Had Congress intended to permit direct review of petition denials, it would have

² Respondents did not cite *Nader* in their brief, nor was it addressed by the Panel.

³ *Nader* addressed a prior version of the FFDCA, wherein EPA set tolerances for raw agricultural commodities under 21 U.S.C. § 346a and tolerances for processed food under 21 U.S.C. § 348. When Congress amended the FFDCA in 1996, it collapsed EPA’s tolerance-setting authority into a single section (§ 346a, as amended), and imported the administrative objections and judicial review provisions in then-section 348(f) and (g) into the current version of section 346a(g) and (h). *See* 21 U.S.C. § 348(f), (g) (1994), attached at Addendum page A48.

conferred jurisdiction over orders issued under subsection (c). Subsection (f) would have been superfluous.

Id. at 751–52 (emphasis added).

This Court similarly recognized in the antecedent mandamus case that a section 346a(g)(2)(C) order is a necessary prerequisite for judicial review:

Now that EPA has issued its denial, substantive objections must first be made through the administrative process mandated by statute. *See* 21 U.S.C. §§ 346a(g)(2), (h)(1); 40 C.F.R. §§ 178.65, 180.30(b). PANNA implicitly recognizes as much by acknowledging that “[f]iling objections *and awaiting their resolution* by the EPA Administrator is a prerequisite to obtaining judicial review” of EPA’s final response to the petition. *Only at that point may we consider the merits* of EPA’s “final agency action.” *See* 5 U.S.C. § 704.

In re PANNA, 863 F.3d 1131, 1132-33 (9th Cir. 2017) (emphasis added; some citations omitted).

The panel, however, mistakenly classified the administrative exhaustion requirements in the FFDCA as claims-processing rules. These simply “require[] that the parties take certain procedural steps at certain specified times.” Slip Op. at 15 (quoting *Henderson ex rel. Henderson v. Shinseki*, 562 U.S. 428, 435 (2011)). But, unlike section 346a(h)(2) (“the court shall have exclusive jurisdiction to affirm or set aside the order”), those claims-provisions did “not speak in jurisdictional terms or refer in any way to jurisdiction.” *Henderson*, 562 U.S. at 438 (quotation omitted). And “obtaining a (g)(2)(C) order,” Slip Op. at 17, under the FFDCA is not a mere “procedural step,” *id.* at 15. Rather, the resulting (g)(2)(C) order from the objections process is *itself* the action subject to judicial review. Thus, a section 346a(g)(2)(C)

order—as distinguished from a section 346a(d)(4) order—is one of the “classes of [orders] . . . falling within a court’s adjudicatory authority.” *Kontrick v. Ryan*, 540 U.S. 443, 455 (2004) (discussing jurisdiction).

Indeed, the FFDCa’s jurisdictional bar on review of initial denial orders under section 346a(d)(4) is far afield from cases involving true claims-processing rules. Claims-processing rules include statutory deadlines that encourage parties to timely assert their rights. *See* Slip Op. at 18 (citing *Henderson*, 562 U.S. at 438 (180-day deadline to file appeal not jurisdictional), and *Auburn Reg’l Med. Ctr.*, 568 U.S. at 154 (same)). But in both *Henderson* and *Auburn Regional Medical Center*, there was no question as to *what* decision was subject to review and whether it could be reviewed *if* timely filed. The issue was whether missing those deadlines would strip the reviewing body of jurisdiction. Here, by contrast, the panel reviewed and set aside an agency action that the Court is not authorized to review under *any* circumstances.⁴

Because an initial decision denying an administrative petition under 21 U.S.C. § 346a(d)(4)(A)(iii) is simply not within the jurisdiction of this Court to review and the panel’s decision is inconsistent with this circuit’s precedent, rehearing *en banc* is appropriate.

⁴ The panel also erred by relying on cases addressing whether exhaustion requirements under one statute prevented a court from exercising jurisdiction under another statute because here, there is no provision granting jurisdiction under another statute. *See* Slip Op. at 18, 20 (citing *Payne v. Peninsula School Dist.*, 653 F.3d 863, 872 (9th Cir. 2011) (*en banc*) and *Verizon Maryland Inc. v. PSC*, 535 U.S. 635 (2002)).

II. *En Banc* or Panel Rehearing Should Be Granted to Reverse the Panel's Decision Directing EPA to Take Specific Actions.

The panel ultimately ordered EPA to take specific actions—i.e., revoke all FFDCA tolerances for chlorpyrifos pursuant to 21 U.S.C. § 346a(d)(4)(A) and cancel all FIFRA registrations pursuant to 7 U.S.C. § 136d(b). These specific directions limiting EPA's discretion on remand, in the context of these statutes, exceeded the remedial authority granted the courts by Congress. Instead, the panel should have vacated the Initial Denial Order and remanded for further proceedings.

The Supreme Court has repeatedly held that agency action found unlawful should simply be vacated and remanded to the agency for further consideration. *See, e.g., Federal Power Comm'n*, 344 U.S. at 20; *Pitts*, 411 U.S. at 143. The Supreme Court further explained:

If the record before the agency does not support the agency action [or] if the agency has not considered all relevant factors . . . , the proper course, except in rare circumstances, is to remand to the agency for additional investigation or explanation. The reviewing court is not generally empowered to conduct a *de novo* inquiry into the matter being reviewed and to reach its own conclusions based on such an inquiry.

Florida Power & Light Co. v. Lorion, 470 U.S. 729, 744 (1985).

Indeed, the FFDCA itself expressly limits the remedy this Court may order. “Upon the filing of such a petition, the court shall have exclusive jurisdiction *to affirm or set aside* the order or regulation complained of” 21 U.S.C. § 346a(h)(2) (emphasis added). This is also the approach to remedy envisioned by the Administrative Procedure Act, which provides the standard of review in this matter.

See 5 U.S.C. § 706(2) (reviewing court may “hold unlawful and set aside agency action”); *Nw. Coal. for Alternatives to Pesticides v. EPA*, 544 F.3d 1043, 1047 (9th Cir. 2008) (standard of review for FFDCA challenges is provided by the APA). Under the APA, “[w]hen a court determines that an agency’s action failed to follow Congress’s clear mandate the appropriate remedy is to vacate that action.” *Cal. Wilderness Coal. v. Dep’t of Energy*, 631 F.3d 1072, 1095 (9th Cir. 2011).

The panel erred by directing EPA to take specific actions—revocation of the FFDCA tolerances and cancellation of the FIFRA registrations—within 60 days upon remand. Slip Op. at 32. After a record-based remand such as this, the FFDCA leaves EPA the authority to issue, consistent with the holding of the Court and any further record to be developed, a new or revised response to the Administrative Petition under section 346a(d)(4).⁵ For example, rather than a blanket revocation of all tolerances, the FFDCA gives EPA the discretion to deny the petition if finding the FFDCA’s safety standard was met. Or, if warranted by a revised safety finding, EPA might merely reduce some or all of the tolerances, or revoke only some of the tolerances. Whatever order or regulation EPA issues would then be subject to objections and requests for hearing pursuant to section 346a(g)(2). Where tolerances are revoked, EPA would separately consider whether cancellation of any—or only

⁵ EPA intends to issue a revocation order under section 346(d)(4) if rehearing is denied.

some—of the FIFRA registrations was warranted under the standards applicable to that statute. *See* § III, *supra*.

The panel was merely empowered to vacate the Initial Denial Order and remand for further consideration in light of the panel’s holding that EPA may not “decline[] to revoke chlorpyrifos tolerances [without] mak[ing] a finding of reasonable certainty that the tolerances were safe.” Slip Op. at 31. Its overbroad order that EPA categorically revoke all tolerances and registrations—issued without any consideration of the statutory scheme or briefing on proper remedy—justifies rehearing.

III. If Broader Rehearing Is Not Granted, Panel Rehearing Should Be Granted to Modify the Relief Ordered Under FIFRA.

Although the panel found EPA’s Initial Denial Order deficient only under the FFDCA, it also ordered EPA to cancel all registrations for chlorpyrifos under FIFRA within 60 days. Slip Op. at 32. The panel reasoned that “[c]hlorpyrifos similarly does not meet the statutory requirement for registration under FIFRA [because FIFRA] incorporates the FFDCA’s safety standard.” Slip Op. at 32. This is an inaccurate—or at least incomplete—statement. FIFRA incorporates the safety standard of the FFDCA only with respect to *food-use* pesticides. And even where the FFDCA safety standard is applicable under FIFRA, automatic cancellation is not required. Accordingly, at a minimum, the panel should reconsider the remedy—upon which it received no briefing—and decline to order specific actions under FIFRA.

First, the panel could not order revocation under FIFRA on this record.

Petitioners argued—and the Court held—that the Initial Denial Order failed to meet the required safety finding under the FFDCA. Even assuming the Court appropriately ordered revocation of the tolerances under the FFDCA, the Court failed to identify any authority to directly order cancellation of the registrations under FIFRA. Before that could occur, EPA must first implement the procedures that apply under FIFRA before cancelling a registration. Specifically, when revoking a tolerance, 21 U.S.C. § 346a(l)(1) directs EPA to coordinate that revocation with any necessary action under FIFRA. EPA has several options and could “seek voluntary cancellation of those uses or amendment of those registrations or may initiate cancellation under section 6 [of FIFRA].” Guilaran Decl. ¶ 6 (attached at A53). The propriety of these alternatives was not before the panel, nor are they foreclosed by its reasoning.

Second, FIFRA precludes EPA from lawfully cancelling registrations within 60 days, as ordered by the panel. FIFRA “establishes a detailed, multi-step process that EPA *must* follow when it wants to cancel or suspend a registration.” *Reckitt Benckiser, Inc. v. Jackson*, 762 F. Supp. 2d 34, 42 (D.D.C. 2011). EPA must allow the U.S. Department of Agriculture and the FIFRA Scientific Advisory Panel to review any notice of cancellation for 60 days. 7 U.S.C. § 136d(b). And any cancellation does not become effective for 30 days—during which time the registrant may attempt to cure the problem or a person adversely affected may request a formal adjudicatory hearing. *See id.* § 136d(b), (d).

Third, the panel’s remedy—premised on an application of the FFDCA’s safety standard to FIFRA—was overbroad. Revocation of tolerances under the FFDCA could provide a foundation for cancelling registrations for food uses under FIFRA. But it does not require cancellation of the remaining registrations for non-food uses, such as mosquito control, fire ant mounds, or sod farms. EPA may cancel a pesticide registration when it finds that the pesticide would have “unreasonable adverse effects on the environment,” which means (1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, *or* (2) where use of the pesticide results in residues on food that are unsafe under the FFDCA. 7 U.S.C. § 136(bb).

The first part of the FIFRA definition is the so-called “risk-benefit” standard, which requires EPA to do risk-benefit balancing in deciding whether to register pesticides. That standard is not the same as the FFDCA’s “risk only” food safety standard, which applies only to food-use pesticides. Chlorpyrifos products are registered for both food and non-food uses.⁶ Accordingly, the Court should not have simply applied the FFDCA standard to conclude that all chlorpyrifos registrations are inconsistent with FIFRA. Instead, the appropriate standard for assessing non-food use pesticides is the “risk-benefit” standard. That was not

⁶ Walsh Declaration ¶ 5 (28 chlorpyrifos pesticide products are registered exclusively for non-food uses), attached at A57-58.

before the panel, which should not have extended its ruling to affect non-food use pesticides for which tolerance revocation is not relevant.

CONCLUSION

For the foregoing reasons, rehearing should be granted.

Respectfully submitted,

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SEPTEMBER 24, 2018

**CERTIFICATE OF COMPLIANCE WITH
FEDERAL RULE OF APPELLATE PROCEDURE 32(A)**

I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Garamond, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Circuit Rule 40-1(a) because it contains 4,179 words, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii), according to the count of Microsoft Word.

s/Phillip R. Dupré

PHILLIP R. DUPRÉ

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system on September 24, 2018. I certify that all participants in the case registered as CM/ECF users will receive service via the appellate CM/ECF system.

s/ Phillip R. Dupré

PHILLIP R. DUPRÉ

ADDENDUM

Panel Opinion A1

21 U.S.C. § 348 (1994) A48

Declaration of Yu-Ting Guilaran A51

Declaration of Michael Walsh A56

FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

LEAGUE OF UNITED LATIN
 AMERICAN CITIZENS; PESTICIDE
 ACTION NETWORK NORTH AMERICA;
 NATURAL RESOURCES DEFENSE
 COUNCIL; CALIFORNIA RURAL
 LEGAL ASSISTANCE FOUNDATION;
 FARMWORKERS ASSOCIATION OF
 FLORIDA; FARMWORKER JUSTICE
 GREENLATINOS; LABOR COUNCIL
 FOR LATIN AMERICAN
 ADVANCEMENT; LEARNING
 DISABILITIES ASSOCIATION OF
 AMERICA; NATIONAL HISPANIC
 MEDICAL ASSOCIATION; PINEROS Y
 CAMPESINOS UNIDOS DEL
 NOROESTE; UNITED FARM WORKERS,
Petitioners,

STATE OF NEW YORK; STATE OF
 MARYLAND; STATE OF VERMONT;
 STATE OF WASHINGTON;
 COMMONWEALTH OF
 MASSACHUSETTS; DISTRICT OF
 COLUMBIA; STATE OF CALIFORNIA;
 STATE OF HAWAII,
Intervenors,

v.

No. 17-71636

OPINION

ANDREW WHEELER, Acting
Administrator of the U.S.
Environmental Protection Agency;
and U.S. ENVIRONMENTAL
PROTECTION AGENCY,
Respondents.

On Petition for Review of an Order of the
Environmental Protection Agency

Argued and Submitted July 9, 2018
Seattle, Washington

Filed August 9, 2018

Before: Ferdinand F. Fernandez and Jacqueline H.
Nguyen, Circuit Judges, and Jed S. Rakoff,* District Judge.

Opinion by Judge Rakoff;
Dissent by Judge Fernandez

* The Honorable Jed S. Rakoff, United States District Judge for the
Southern District of New York, sitting by designation.

SUMMARY**

Pesticides

The panel granted a petition for review, and vacated the Environmental Protection Agency's ("EPA") 2017 order maintaining a tolerance for the pesticide chlorpyrifos, and remanded to the EPA with directions to revoke all tolerances and cancel all registrations for chlorpyrifos within 60 days.

The Federal Food, Drug, and Cosmetic Act ("FFDCA") authorizes the EPA to regulate the use of pesticides on foods according to specific statutory standards, and grants the EPA a limited authority to establish tolerances for pesticides meeting statutory qualifications. The EPA is subject to safety standards in exercising its authority to register pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA").

The EPA argued that FFDCA's section 346a(g)(2)'s administrative process deprived this Court of jurisdiction until the EPA issues a response to petitioner's administrative objections under section 346a(g)(2)(C), which it has not done to date.

The panel held that section 346a(h)(1) of the FFDCA does not "clearly state" that obtaining a section (g)(2)(C) order in response to administrative objections is a jurisdictional requirement. The panel held that section 346a(h)(1) contains no jurisdictional label, is structured as a

** This summary constitutes no part of the opinion of the court. It has been prepared by court staff for the convenience of the reader.

limitation on the parties rather than the court, and only references an exhaustion process that is outlined in a separate section of the statute.

The panel held that in light of the strong individual interests against requiring exhaustion and weak institutional interests in favor of it, petitioners need not exhaust their administrative objections and were not precluded from raising issues on the merits.

Turning to the merits, the panel held that there was no justification for the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children. The panel further held that the EPA cannot refuse to act because of possible contradiction in the future by evidence. The panel held that the EPA was in direct contravention of the FFDCA and FIFRA.

Judge Fernandez dissented. Judge Fernandez would hold that there is no jurisdiction over the petition for review under FFDCA and FIFRA, and dismiss the petition.

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OPINION

RAKOFF, District Judge:

Over nearly two decades, the U.S. Environmental Protection Agency (“EPA”) has documented the likely adverse effects of foods containing the residue of the pesticide chlorpyrifos on the physical and mental development of American infants and children, often lasting into adulthood. In such circumstances, federal law commands that the EPA ban such a pesticide from use on food products unless “there is a reasonable certainty that no harm will result from aggregate exposure to the pesticide.” 21 U.S.C. § 346a(b)(2)(A)(ii). Yet, over the past decade and more, the EPA has stalled on banning chlorpyrifos, first by largely ignoring a petition properly filed pursuant to law seeking such a ban, then by temporizing in response to repeated orders by this Court to respond to the petition, and, finally, in its latest tactic, by denying outright our jurisdiction to review the ultimate denial of the petition, even while offering no defense on the merits. If Congress’s statutory mandates are to mean anything, the time has come to put a stop to this patent evasion.

Petitioners seek review of an EPA order issued March 29, 2017 (the “2017 Order” or “Order”) that denied a 2007 petition to revoke “tolerances,” i.e. limited allowances, for the use of chlorpyrifos on food products. Petitioners argue that the EPA does not have the authority to maintain the tolerances for chlorpyrifos under the Federal Food, Drug, and Cosmetic Act (“FFDCA”), which authorizes the EPA to “leave in effect a tolerance for a pesticide chemical residue in or on a food only if the Administrator determines that the tolerance is safe”—with “safe,” in turn, defined to mean that the EPA “has determined that there is a reasonable certainty that no harm will result from aggregate exposure to the

pesticide chemical residue.” 21 U.S.C. § 346a(b)(2)(A)(i)–(ii). Respondent, the EPA, has never made any such determination and, indeed, has itself long questioned the safety of permitting chlorpyrifos to be used within the allowed tolerances. The EPA, therefore, does not defend the 2017 Order on the merits. Instead, the EPA argues that, despite petitioners having properly-filed administrative objections to the 2017 Order more than a year ago, and despite the statutory requirement that the EPA respond to such objections “as soon as practicable,” the EPA’s utter failure to respond to the objections deprives us of jurisdiction to adjudicate whether the EPA exceeded its statutory authority in refusing to ban use of chlorpyrifos on food products.

We hold that obtaining a response to objections before seeking review by this Court is a claim-processing rule that does not restrict federal jurisdiction, and that can, and here should, be excused. There being no other reason not to do so, we grant the petition on the merits.

BACKGROUND

A. *The Statutory Framework*

The FFDCA authorizes the EPA to regulate the use of pesticides on foods according to specific statutory criteria. 21 U.S.C. §§ 301–399i. The FFDCA prescribes that food with “any pesticide chemical residue . . . shall be deemed unsafe” and barred from movement in interstate commerce. *Id.* § 346a(a)(1). However, it grants the EPA a limited authority to establish tolerances for pesticides meeting statutory qualifications, enabling foods bearing residues of those pesticides within these tolerances to move in interstate commerce. *See id.* § 346a(a), (a)(4), (b)(1).

The EPA's ability to establish tolerances depends on a safety finding. "The Administrator may establish or leave in effect a tolerance . . . only if the Administrator determines that the tolerance is safe." *Id.* § 346a(b)(2)(A)(i). A tolerance qualifies as safe if "the Administrator has determined that there is a *reasonable certainty* that *no* harm will result from aggregate exposure to the pesticide chemical residue, including all anticipated dietary exposures and all other exposures for which there is reliable information." *Id.* § 346a(b)(2)(A)(ii) (emphasis added). To make such a determination, the EPA must perform a safety analysis to "ensure that there is a reasonable certainty that no harm will result to infants and children from aggregate exposure" and "publish a specific determination regarding the safety of the pesticide chemical residue for infants and children. *Id.* § 346(b)(2)(C)(ii)(I)–(II). Furthermore, even after establishing a tolerance, the EPA bears continuous responsibility to ensure that the tolerance continues to satisfy the FFDCA's safety standard; the FFDCA provides that the Administrator may "leave in effect a tolerance . . . only if the Administrator determines that the tolerance is safe" and "shall modify or revoke a tolerance if the Administrator determines it is not safe." *Id.* § 346a(b)(2)(A)(i).

The EPA is subject to these same safety standards in exercising its authority to register pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act ("FIFRA"). *See* 7 U.S.C. § 136a(a). The EPA Administrator must register a pesticide—which is a requirement for pesticides to be distributed or sold—when, among other qualifications, the pesticide does not have "unreasonable adverse effects on the environment." *Id.* § 136a(c)(5) (D). FIFRA incorporates the FFDCA's safety standard into the definition of "unreasonable adverse effects" to include "a human dietary risk from residues that result from a use of a

pesticide in or on any food inconsistent with the standard under [the FFDCA].” *Id.* § 136(bb). FIFRA requires the EPA to reevaluate pesticides periodically after approval. *Id.*

While the EPA can act on its own initiative to establish, modify or revoke a tolerance under the FFDCA, 21 U.S.C. § 346a(e)(1), “[a]ny person may file . . . a petition proposing the issuance of [such] a regulation.” *Id.* § 346a(d)(1). After “due consideration,” the EPA Administrator must issue either a proposed or final regulation or an order denying the petition. *Id.* § 346a(d)(4)(A). After this response, “any person may file objections thereto with the Administrator.” *Id.* § 346a(g)(2)(A). The FFDCA directs that the Administrator “shall issue an order [known as a “g(2)(C) order”] stating the action taken upon each . . . objection” “[a]s soon as practicable.” *Id.* § 346a(g)(2)(C). “[A]ny person who will be adversely affected” by that order or the underlying regulation “may obtain judicial review by filing in the United States Court of Appeals” a petition for review. *Id.* § 346a(h)(1).

B. *The History of this Litigation*

This case arises from a 2007 petition filed under 21 U.S.C. § 346a(d) proposing that the EPA revoke tolerances for the pesticide chlorpyrifos (the “2007 Petition” or the “Petition”). Chlorpyrifos, an organophosphate pesticide initially developed as a nerve gas during World War II, was approved in 1965 in the United States as a pesticide for agricultural, residential, and commercial purposes. Chlorpyrifos kills insects by suppressing acetylcholinesterase, an enzyme that acts as a neurotransmitter in various organisms, including humans. The EPA has set chlorpyrifos residue tolerances for 80 food crops, including fruits, nuts, and vegetables. *See* 40 C.F.R. § 180.342. The 2007 Petition, filed by the Pesticide Action

Network North America (“PANNA”) and the Natural Resources Defense Council (“NRDC”), presented scientific studies showing that children and infants who had been exposed prenatally to low doses of chlorpyrifos suffer harms such as reduced IQ, attention deficit disorders, and delayed motor development, that last into adulthood.

Prior to the Petition’s filing, the EPA already had concerns about chlorpyrifos. After reviewing the registration for chlorpyrifos in 1998 under the amended FFDCA’s heightened safety standards that required considering cumulative exposure and the specific risks to children, the EPA cancelled all residential uses. Although the EPA continued to allow the use of chlorpyrifos as a pesticide on food crops, *see* 40 C.F.R. § 180.342, it required that “risk mitigation measures” be implemented while a full reassessment of chlorpyrifos was undertaken, as continued usage of chlorpyrifos without additional precautions “would present risks inconsistent with FIFRA.” EPA 738-R-01-007 “Interim Reregistration Eligibility Decision for Chlorpyrifos” (Feb. 2002)). This “interim reregistration” also announced future plans to reduce or revoke entirely chlorpyrifos tolerance levels for certain crops, citing “acute dietary risks” for “infants, all children, and nursing females.” *Id.*

Despite these earlier expressions of concern, the EPA failed to take any decisive action in response to the 2007 Petition, notwithstanding that the EPA’s own internal studies continued to document serious safety risks associated with chlorpyrifos use, particularly for children. A 2008 EPA Science Issue Paper, reviewing existing scientific studies, “preliminarily concluded that chlorpyrifos likely played a role” in low birth rate and delays in infant mental development observed in human cohort studies. A Science

Advisory Panel convened in 2008 concurred that chlorpyrifos exposures “can lead to neurochemical and behavioral alterations [in the young] that persist into adulthood.” A Science Advisory Panel convened in 2011 found “persuasive” evidence “that there are enduring effects on the Central Nervous System . . . from chlorpyrifos exposure at or above 1.0 mg/kg,” and that chlorpyrifos exposure is associated with adverse neurodevelopmental effects in children, including abnormal reflexes, pervasive development disorder, and attention and behavior problems.

Yet, even after all of these EPA studies, by 2012 the EPA still had not responded to the 2007 Petition. PANNA and NRDC thereupon petitioned this Court for a writ of mandamus to force the EPA to take action. We initially dismissed the mandamus petition, without prejudice to its renewal, based on the EPA’s representation that it had a “concrete timeline for final agency action” to be taken on the 2007 Petition by February 2014. *In re PANNA*, 532 F. App’x 649, 651 (9th Cir. 2013). When the EPA failed to respond to the 2007 Petition by September 2014, PANNA and NRDC again petitioned for mandamus, which we granted, ordering the EPA to issue a final response on the 2007 Petition by October 2015. *In re PANNA*, 798 F.3d 809, 815 (9th Cir. 2015).¹ We found the EPA’s delay in responding to the 2007 Petition “egregious,” especially “[i]n view of [the] EPA’s own assessment of the dangers to human health posed by this pesticide,” noting that the EPA had recently “reported that chlorpyrifos poses such a significant threat to water supplies that a nationwide ban on the pesticide may be justified.” *Id.* at 811, 814.

¹ Unless otherwise indicated, case quotations omit all internal quotation marks, alterations, footnotes, and citations.

Notwithstanding the deadline set by this Court, the EPA did not initially respond to the 2007 Petition until November 2015, when it issued a proposed rule revoking all tolerances for chlorpyrifos. Chlorpyrifos; Tolerance Revocations, 80 Fed. Reg. 69,080 (Nov. 6, 2015); *see* 21 U.S.C. § 346a(d)(4)(A)(ii). Describing the various scientific studies’ “consistency of finding neurodevelopmental effects” as “striking,” *id.* at 69,090, the EPA stated that it was “unable to conclude that the risk from aggregate exposure from the use of chlorpyrifos meets the safety standard of [21 U.S.C. § 346a(b)(2)(A)(i)]” *id.* at 69,080.

Yet the EPA still equivocated and delayed. Accordingly, in December 2015, we ordered the EPA “to take final action by December 30, 2016 on its proposed revocation rule.” *In re PANNA*, 808 F.3d 402, 402 (9th Cir. 2015). In June 2016, the EPA requested a six-month extension to continue scientific analysis, a request we characterized as “another variation on a theme of partial reports, missed deadlines, and vague promises of future action that has been repeated for the past nine years.” *In re PANNA*, 840 F.3d 1014, 1015 (9th Cir. 2016). We found that a six-month delay was “not justified” in light of the previous time extensions and the EPA’s “continued failure to respond to the pressing health concerns presented by chlorpyrifos,” but granted a three-month extension to March 2017. *Id.*

In the meantime, the EPA issued a 2016 Risk Assessment concluding that estimated dietary exposure to chlorpyrifos at existing tolerances exceeded what was acceptable for all population groups analyzed, with the highest risks for young children. The Risk Assessment found that scientific literature “as a whole provides evidence of long-lasting neurodevelopmental disorders” linked to chlorpyrifos exposure, with any remaining scientific

uncertainties insufficient to “undermine or reduce the confidence in the findings of the epidemiology studies.” The EPA concluded that its analysis of chlorpyrifos “continues to indicate that the risk from the potential aggregate exposure does not meet the FFDCSA safety standard” and that “expected residues of chlorpyrifos on most individual food crops exceed the ‘reasonable certainty of no harm’ safety standard.” Chlorpyrifos; Tolerance Revocations; Notice of Data Availability and Request for Comment, 81 Fed. Reg. 81,049, 81,050 (Nov. 17, 2016).

Then, in the Order at issue in this case, the EPA reversed its position and denied the 2007 Petition on the merits, leaving chlorpyrifos tolerances in effect. Chlorpyrifos; Order Denying PANNA and NRDC’s Petition To Revoke Tolerances, 82 Fed. Reg. 16,581 (Apr. 5, 2017). The Order did not refute the agency’s previous scientific findings on chlorpyrifos or its conclusion that chlorpyrifos violated the FFDCSA safety standard. Instead, the EPA stated that it would not revoke tolerances as “the science addressing neurodevelopmental effects remains unresolved.” *Id.* at 16,583. The EPA stated that it would not complete “any associated tolerance revocation of chlorpyrifos without first attempting to come to a clearer scientific resolution,” *id.*, and claimed to have “discretion to determine the schedule” for reviewing the existing chlorpyrifos tolerances as long as it completed the chlorpyrifos registration review by FIFRA’s deadline of October 1, 2022, *id.* at 16,590.

PANNA and NRDC moved for further mandamus relief in this Court, arguing that the 2017 Order failed to respond adequately to the 2007 Petition. We denied their motion as premature because the EPA had “done what we ordered it to do,” i.e. responded to the 2007 Petition, since the 2017 Order formally denied it. *In re PANNA*, 863 F.3d 1131, 1132 (9th

Cir. 2017). Petitioners then petitioned this Court for review of the 2017 Order. Petitioners concurrently filed objections in the EPA's administrative review process. Thereafter, we permitted several states that had also filed objections to the Order to intervene in this matter.

The EPA does not defend this suit on the merits, but argues that § 346a(g)(2)'s administrative process deprives this Court of jurisdiction until the EPA issues a response to petitioners' administrative objections, *see* § 346a(g)(2)(C), which it has not done to date.

DISCUSSION

A. *Jurisdiction*

The term “jurisdiction” refers specifically to “a court’s adjudicatory authority.” *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 160 (2010). Therefore, “a rule should not be referred to as jurisdictional unless it governs a court’s adjudicatory capacity, that is, its subject-matter or personal jurisdiction.” *Henderson ex rel. Henderson v. Shinseki*, 562 U.S. 428, 435 (2011). In other words, “jurisdictional statutes speak to the power of the court rather than to the rights or obligations of the parties.” *Landgraf v. USI Film Prods.*, 511 U.S. 244, 274 (1994).

The Supreme Court has emphasized the necessity of observing “the important distinctions between jurisdictional prescriptions and claim-processing rules.” *Reed Elsevier*, 559 U.S. at 161. Claim-processing rules “seek to promote the orderly progress of litigation by requiring that the parties take certain procedural steps at certain specified times.” *Henderson*, 562 U.S. at 435. Claim-processing rules may be “important and mandatory,” but, as they do not “govern[] a

court's adjudicatory capacity," they can be waived by the parties or the court. *Id.*

The Supreme Court has adopted a "bright line" test for determining when to classify statutory restrictions as jurisdictional. *Arbaugh v. Y&H Corp.*, 546 U.S. 500, 516 (2006). A rule qualifies as jurisdictional only if "Congress has clearly stated that the rule is jurisdictional." *Sebelius v. Auburn Reg'l Med. Ctr.*, 568 U.S. 145, 153 (2013). "[A]bsent such a clear statement," the Supreme Court has cautioned, "courts should treat the restriction as nonjurisdictional in character," with the specific goal of "ward[ing] off profligate use of the term 'jurisdiction.'" *Id.* In considering whether Congress has spoken clearly, courts consider both the language of the statute and its "context, including . . . [past judicial] interpretation[s] of similar provisions." *Reed Elsevier*, 559 U.S. at 168.

"[T]hreshold requirements that claimants must complete, or exhaust, before filing a lawsuit" are typically "treated as nonjurisdictional." *Id.* at 166. Accordingly, "we have rarely found exhaustion statutes to be a jurisdictional bar." *McBride Cotton & Cattle Corp. v. Veneman*, 290 F.3d 973, 978 (9th Cir. 2002) (holding that requirement of "exhaust[ing] all administrative appeal procedures . . . before [a] person may bring an action in a court" was not jurisdictional); *see also Anderson v. Babbitt*, 230 F.3d 1158, 1162 (9th Cir. 2000) (same for provision that "[n]o decision which at the time of its rendition is subject to [administrative] appeal . . . shall be considered final so as to be agency action subject to judicial review"); *Rumbles v. Hill*, 182 F.3d 1064, 1067 (9th Cir. 1999) (same for provision that "[n]o action shall be brought . . . until such administrative remedies as are available are exhausted"),

overruled on other grounds by Booth v. Churner, 532 U.S. 731 (2001).

Section 346a(h)(1), the FFDCA's judicial review provision, provides:

In a case of actual controversy as to the validity of any regulation issued under subsection (e)(1)(C), or any order issued under subsection (f)(1)(C) or (g)(2)(C), or any regulation that is the subject of such an order, any person who will be adversely affected by such order or regulation may obtain judicial review by filing in the United States Court of Appeals for the circuit wherein that person resides or has its principal place of business, or in the United States Court of Appeals for the District of Columbia Circuit, within 60 days after publication of such order or regulation, a petition praying that the order or regulation be set aside in whole or in part.

The (g)(2)(C) order referenced above is the order “stating the action taken upon each such objection and setting forth any revision to the regulation or prior order that the Administrator has found to be warranted,” which the EPA must issue at the conclusion of the administrative objections process outlined in § 346a(g)(2). *Id.* § 346a(g)(2)(C).

We must consider whether § 346a(h)(1) “clearly states” that obtaining a (g)(2)(C) order in response to administrative objections is a jurisdictional requirement. It does not. Section 346a(h)(1) “is written as a restriction on the rights of plaintiffs to bring suit, rather than as a limitation on the power of the federal courts to hear the suit.” *Payne v.*

Peninsula Sch. Dist., 653 F.3d 863, 869 (9th Cir. 2011) (en banc). It delineates the process for a party to obtain judicial review, by filing suit in one of two venues within a specified time, not the adjudicatory capacity of those courts.

In *Henderson*, the Supreme Court evaluated a similarly structured provision, which provided that, “to obtain [judicial] review” of a final decision of the Board of Veterans’ Appeals, “a person adversely affected . . . shall file a notice of appeal with the Court.” 562 U.S. at 438. The Court found this language did “not suggest, much less provide clear evidence, that the provision was meant to carry jurisdictional consequences.” *Id.* Similarly, in *Payne*, we held that an exhaustion requirement providing that “before the filing of a civil action . . . , the [administrative] procedures . . . shall be exhausted” was not a jurisdictional limit on the courts, but a requirement for plaintiffs that could be waived. 653 F.3d at 867, 869. Like the provision evaluated in *Payne*, the focus of § 346a(h)(1) on the requirements for petitioners “strongly suggests that the restriction may be enforced by defendants but that the exhaustion requirement may be waived or forfeited.” *Id.* at 869.

Further, § 346a(h)(1) “does not speak in jurisdictional terms or refer in any way to the jurisdiction of the [federal] courts.” *Zipes v. Trans World Airlines, Inc.*, 455 U.S. 385, 394 (1982). The word “jurisdiction” never appears. The reference to the United States Courts of Appeals “simply clarifies that, when determining in which court of competent jurisdiction they will file their claim, . . . litigants have a choice of venue.” *Merritt v. Countrywide Fin. Corp.*, 759 F.3d 1023, 1038 (9th Cir. 2012) (classifying provision that an action “may be brought in any United States district court, or in any other court of competent jurisdiction” as

non-jurisdictional claim-processing rule despite its being labeled “Jurisdiction of courts; limitations on actions”).

Section 346a(h)(1) similarly lacks mandatory language with “jurisdictional import.” *Auburn Reg’l Med. Ctr.*, 568 U.S. at 154. It merely provides that a person “*may* obtain judicial review.” 21 U.S.C. § 346a(h)(1) (emphasis added). In *Auburn Regional Medical Center*, the Supreme Court evaluated a provision with similar language, which instructed that a health care provider “may obtain a hearing” by the Provider Reimbursement Review Board if “such provider files a request for a hearing within 180 days after notice of the intermediary’s final determination.” 568 U.S. at 154. The Court held that the provision did “not speak in jurisdictional terms” in part because it lacked “words with jurisdictional import” like “the mandatory word ‘shall.’” *Id.* Similarly, this Court has held that “permissive, non-mandatory language such as ‘may file’ . . . weighs considerably against a finding that [the provision] is jurisdictional.” *Merritt*, 759 F.3d at 1037.

Aside from listing a (g)(2)(C) order as one of the orders available for judicial review, § 346a(h)(1) provides no indication that the administrative process required to produce a (g)(2)(C) order is a condition of the courts’ jurisdiction. The objections process itself is detailed in Section 346a(g)(2), a separate provision focused entirely on administrative processes rather than on judicial review. The Supreme Court has repeatedly found that a requirement’s “appear[ance] as an entirely separate provision” from the one concerning judicial review is a significant indicator of lack of Congressional intent to make that requirement jurisdictional. *Zipes*, 455 U.S. at 393–94; *see also Reed Elsevier*, 559 U.S. at 164; *Arbaugh*, 546 U.S. at 515.

The fact that (g)(2)(C) orders issued at the conclusion of administrative objections appear on § 346a(h)(1)'s list of orders for judicial review, while (d)(4)(A) orders issued in response to petitions do not, is not in itself suggestive as to whether obtaining a (g)(2)(C) order is a jurisdictional limitation. In evaluating statutes that similarly list administrative actions available for judicial review, the Supreme Court has observed that “[t]he mere fact that some acts are made reviewable should not suffice to support an implication of exclusion as to others.” *Verizon Md., Inc. v. Pub. Serv. Comm’n*, 535 U.S. 635, 643 (2002). “The right to review is too important to be excluded on such slender and indeterminate evidence of legislative intent.” *Abbott Labs. v. Gardner*, 387 U.S. 136, 141 (1967), *abrogated on other grounds by Califano v. Sanders*, 430 U.S. 99, 105 (1977).

The Dissent finds the language of § 346a(h)(5) suggestive of a Congressional intent to “preclude[] possible bypassing of the § 346a(g)(2) provisions.” Dissent at 37. We disagree. Section 346a(h)(5) provides that “[a]ny issue as to which review is or was obtainable under this subsection shall not be the subject of judicial review under any other provision of law.” This is a limitation on the availability of judicial review under *other* statutory provisions, not a pronouncement as to the internal requirements of § 346a(h)(1) jurisdiction. Similarly, *NRDC v. Johnson*, 461 F.3d 164 (2006), the Second Circuit case cited by the Dissent to support its position that § 346a(h)(5) limits this Court’s jurisdiction, is inapposite. In that case, the Second Circuit held that “Section 346a(h) limits judicial review *to the courts of appeals*,” rejecting an attempt by plaintiffs to challenge a tolerance by filing directly in federal *district* court under the APA, rather than filing in a federal appellate court pursuant to § 346a(h)(1). *Id.* at 173 (emphasis added). While *Johnson* also stated that § 346a(h) “forecloses such

[appellate court] review prior to the exhaustion of administrative remedies,” *id.*, this was pure dictum and particularly inapposite here, since the question of whether such exhaustion was jurisdictional was not presented in that case, which expressly was concerned only with whether “decisions to leave tolerances in effect are reviewable in the district courts.” *Id.* at 167.

We are also mindful what it would mean for future review of EPA decisions if we were to find obtaining a (g)(2)(C) order to be a jurisdictional requirement. In seeking to “bring some discipline” to the classification of provisions as jurisdictional, the Supreme Court has repeatedly considered how the classification of the rule in question would impact future claims. *See Auburn Reg’l Med. Ctr.*, 568 U.S. at 153–54 (examining “what it would mean” for the review process if a provision were found jurisdictional); *see also Henderson*, 562 U.S. at 434 (addressing the “considerable practical importance” that attaches to the jurisdictional label, including how jurisdictional rules “may . . . result in the waste of judicial resources and may unfairly prejudice litigants”). The impact of a jurisdictional finding must be considered within the context of the administrative process Congress was establishing in the relevant statute, and the values that process was meant to protect. For example, in *Henderson*, the Supreme Court addressed the impact of a jurisdictional finding on the process established by Congress for adjudicating veterans’ benefits claims considering the “solicitude of Congress for veterans” reflected in the review scheme. *Id.*

Applying this analysis to the present case, a jurisdictional finding would mean that under no circumstances could persons obtain judicial review of a denial of a petition prior to an EPA response to an

administrative objection, even under exigent circumstances where the EPA was unwilling or unable to act. The EPA could evade judicial review simply by declining to issue a (g)(2)(c) order in response to an objection, requiring petitioners to seek writs of mandamus to order EPA action on objections. The history of this very case vividly illustrates this danger.

The language Congress used hardly suggests an intention to allow this scenario. Section 346a(g)(2) instructs the EPA to respond “as soon as practicable” to objections filed. Providing only a brief administrative review process makes sense. By the time an administrative objection is filed, the EPA has already fully considered the petition at issue and issued either a “final regulation” or, as here, “an order denying the petition.” 21 U.S.C. § 346a(d)(4)(A)(iii).

Furthermore, § 346a(h)(1) provides direct access to the Courts of Appeals to challenge such EPA determinations. Broad, efficient, and prompt access to judicial review is consistent with the other values expressed by the statutory scheme: prioritizing public involvement in monitoring tolerances, as evidenced by the § 346a(d) petition process; and requiring quick EPA responses to changing scientific evidence, as evidenced by the EPA’s continuing obligation to ensure that tolerances remain in compliance with the FFDCA’s safety standards. *See* § 346a(b)(2)(A)(i).

We have recognized that “determining what has and what has not been exhausted . . . may prove an inexact science” and that “questions about whether administrative proceedings would be futile, or whether dismissal of a suit would be consistent with the general purposes of exhaustion, are better addressed through a fact-specific assessment of the affirmative defense than through an inquiry about whether the court has the power to decide the case at all.” *Payne*,

653 F.3d at 870. Finding that a (g)(2)(C) order is a jurisdictional prerequisite would mean that courts would have no ability to analyze whether the administrative process was serving an important role in furthering the development of necessary evidence or was of little value for the issue in question, no matter the significance or the urgency of the question awaiting judicial review.

The EPA makes three main arguments that § 346a(g)(2)(C) is in fact jurisdictional. None are persuasive.

First, the EPA argues that a 1996 amendment to the language of the FFDCA's judicial review provision changing the reviewable orders listed in § 346a(h)(1), indicated a Congressional intent to condition jurisdiction over any orders not listed in Section 346a(h)(1) on their completion of the administrative appeals process. The EPA provides no support for this account of Congressional motivation, which it loosely suggests was a response to a D.C. Circuit decision from nearly a decade earlier finding that the language in the prior version did not require completing an administrative hearing process before filing for judicial review. In fact, the legislative history indicates that the amended statute "retain[ed] most of the existing provisions" regarding judicial review. H.R. Rep. No. 104-669(II), at 49 (1996). But even assuming that Congress's intent with this amendment was to have orders issued in response to petitions go through the § 346a(g)(2) administrative objections process prior to judicial review, that does not bear on the relevant question here, whether Congress intended the new rule as a claims-processing rule or a jurisdictional limitation on the courts.

Second, the EPA argues that the structure of the administrative objections process itself indicates that the process was intended as a jurisdictional requirement, rather

than a claims-processing rule. This argument relies almost entirely on the similarity between § 346a(g)(2)'s objections process and an administrative appeal process that we found jurisdictional in *Gallo Cattle Co. v. United States Department of Agriculture*, 159 F.3d 1194 (9th Cir. 1998). However, *Gallo* was premised on a view of statutory exhaustion that is inconsistent with subsequent Supreme Court precedent and later decisions in this circuit. Compare *id.* at 1197 (“[S]tatutorily-provided exhaustion requirements deprive the court of jurisdiction . . .”), with *McBride*, 290 F.3d at 980 (“[N]ot all statutory exhaustion requirements are created equal. Only statutory exhaustion requirements containing sweeping and direct language deprive a federal court of jurisdiction.”). We have specifically cautioned against reliance on prior cases like *Gallo*, “decided without the benefit of the Supreme Court’s recent admonitions against profligate use of the term jurisdictional.” *Merritt*, 759 F.3d at 1039. Moreover, even without this change in case law, *Gallo* would be inapposite. Unlike § 346a(h)(1), the provision evaluated in *Gallo* was explicitly jurisdictional, providing that “[t]he district courts of the United States . . . are hereby vested with jurisdiction to review [the administrative] ruling.” *Gallo*, 159 F.3d at 1197 (emphasis added).

Finally, the EPA argues that this Court’s statement in its most recent decision in the prior mandamus action forecloses this conclusion. It does not. That decision denied PANNA and the NRDC’s petition for further mandamus relief because it was premised on the ground that the 2017 Order failed to meet the requirements for a final order. Rejecting that view and finding that the 2017 Order was a final denial of the 2007 Petition, this Court instructed PANNA and the NRDC that “[f]iling objections and awaiting their resolution by the EPA Administrator is a prerequisite to obtaining

judicial review of [the] EPA's final response to the petition. Only at that point may we consider the merits of [the] EPA's final agency action." *In re PANNA*, 863 F.3d at 1133. Aside from the fact that none of this language spoke to the jurisdictional issue but only to the issue of exhaustion, the instant appeal is clearly in a different posture. In compliance with our prior ruling, petitioners filed their objections, but the EPA has failed to issue a timely (g)(2)(c) order in response.

In sum, we hold that § 346a(h)(1) is not jurisdictional. It contains no jurisdictional label, is structured as a limitation on the parties rather than the courts, and only references an exhaustion process that is outlined in a separate section of the statute.

B. *Exhaustion*

Where, as here, exhaustion of administrative remedies is not jurisdictional, we "must determine whether to excuse the faulty exhaustion and reach the merits, or require the petitioner to exhaust . . . administrative remedies before proceeding in court." *Rivera v. Ashcroft*, 394 F.3d 1129, 1139 (9th Cir. 2004), *superseded by statute on other grounds as stated in Iasu v. Smith*, 511 F.3d 881, 886 (9th Cir. 2007). "In determining whether exhaustion is required, federal courts must balance the interest of the individual in retaining prompt access to a federal judicial forum against countervailing institutional interests favoring exhaustion." *McCarthy v. Madigan*, 503 U.S. 140, 146 (1992), *superseded by statute on other grounds as stated in Booth*, 532 U.S. 731.

The Supreme Court has identified the two key institutional interests favoring exhaustion as "the twin purposes of protecting administrative agency authority and

promoting judicial efficiency.” *Id.* at 145. Not all cases implicate these interests to an equal degree. Exhaustion protects an agency’s authority “when the action under review involves exercise of the agency’s discretionary power or when the agency proceedings in question allow the agency to apply its special expertise.” *Id.* Exhaustion also protects an agency’s authority by providing the agency “an opportunity to correct its own mistakes with respect to the programs it administers.” *Woodford v. Ngo*, 548 U.S. 81, 89 (2006). “[E]xhaustion principles apply with special force when frequent and deliberate flouting of administrative processes could weaken an agency’s effectiveness by encouraging disregard of its procedures.” *McCarthy*, 503 U.S. at 145.

The institutional interest in requiring exhaustion to protect agency authority appears particularly weak in the present case. The challenged action, permitting the use of chlorpyrifos on food products, does not involve exercise of the EPA’s general discretion, but must take place in compliance with strict statutory directives. The questions presented in this appeal are in no way factual or procedural questions implicating the agency’s “special expertise.” This is not a situation, for example, where the EPA determined a pesticide was safe and the science underlying that determination is challenged. Rather, the purely legal questions here concern the statutory requirements of the FFDCA, and, accordingly, are suited to judicial determination. The crux of petitioners’ challenge is that the EPA has found that chlorpyrifos is not safe and therefore cannot maintain a tolerance for it.

Allowing the petition to proceed would not reward failure to properly exhaust administrative remedies. “Proper exhaustion demands compliance with an agency’s deadlines

and other critical procedural rules because no adjudicative system can function effectively without imposing some orderly structure on the course of its proceedings.” *Woodford*, 548 U.S. at 90–91.

Here, petitioners timely submitted objections to the order denying the 2007 petition to revoke tolerances, fulfilling all of their exhaustion obligations except for the one not within their control—obtaining the EPA’s response to the objections. Petitioners’ objections were filed 13 months ago, and the key issue therein—whether the EPA was statutorily obligated to revoke the tolerance for chlorpyrifos—was first raised to the EPA over a decade ago in the 2007 Petition. This timeline has provided the EPA more than ample opportunity to correct any mistakes on its own. But, despite the statutory requirement that the EPA respond to the objections “as soon as practicable,” it has failed to do so. The history of this litigation supports the inference that the EPA is engaging in yet more delay tactics to avoid our reaching the merits of the sole statutory issue raised here: whether chlorpyrifos must be banned from use on food products because the EPA has not determined that there is a “reasonable certainty” that no harm will result from its use, even under the established tolerances.

The second institutional interest identified by the Supreme Court as potentially favoring exhaustion, judicial economy, counsels against requiring further administrative exhaustion in this instance. Exhaustion offers the greatest support for judicial efficiency where it either permits the agency to “correct its own errors” such that the “judicial controversy may well be mooted, or at least piecemeal appeals may be avoided,” or where administrative review “may produce a useful record for subsequent judicial consideration, especially in a complex or technical factual

context.” *McCarthy*, 503 U.S. at 145. Here, it is just the opposite. Since 2012, we have issued five separate decisions related to the EPA’s inaction on the chlorpyrifos tolerances. Declining to waive exhaustion at this point would make this our sixth decision on the matter without once reaching the merits, setting the stage for yet another “piecemeal appeal[]” if the EPA should someday issue a response to the petitioners’ objection—something the EPA itself has strongly hinted may not come about until 2022, if then. Similarly, further development of the administrative record is of no use to judicial efficiency at this point in the proceedings; there are no factual questions, let alone “complex or technical” ones, at issue—only legal questions. And on the merits of these legal questions, the EPA offers no defense of its inaction, effectively conceding its lawlessness.

While both institutional interests favoring exhaustion are weak, this petition invokes two of the “three broad sets of circumstances in which the interests of the individual weigh heavily against requiring administrative exhaustion.” *McCarthy*, 503 U.S. at 146. First, the Supreme Court has recognized that exhaustion may be excused where “requiring resort to the administrative remedy may occasion undue prejudice to subsequent assertion of a court action. Such prejudice may result, for example, from an unreasonable or indefinite timeframe for administrative action.” *Id.* at 146–47. Most often, an administrative remedy is deemed inadequate “because of delay by the agency.” *Id.* Here, the EPA’s expressed intent to withhold action for years to come is “unreasonable” as applied here, especially as petitioners’ objections concern no factual issues that would require additional time to investigate. The EPA has had over a year to respond to the objections already, with no result.

In *Coit Independence Joint Venture v. Federal Savings & Loan Insurance*, 489 U.S. 561, 586–87 (1989), the Supreme Court held that a claimant was not required to wait for a decision on its administrative appeal before seeking judicial review where the administrative appeal had been pending for over 13 months as of the date of oral argument, and there was no “clear and reasonable time limit on [the agency’s] consideration of . . . claims.” *See also Smith v. Ill. Bell Tel. Co.*, 270 U.S. 587, 591–92 (1926) (holding that a claimant “is not required indefinitely to await a decision of the [administrative] tribunal before applying to a federal court for equitable relief”). Like the regulation evaluated in *Coit*, the EPA’s interpretation of the FFDCA’s administrative review provision as providing limitless time to respond to objections would give the agency “virtually unlimited discretion to bury large claims like [petitioners’] in the administrative process, and to stay judicial proceedings for an unconscionably long period of time.” *Coit*, 489 U.S. at 586. The delay is particularly prejudicial here where the continued use of chlorpyrifos is associated with severe and irreversible health effects. *See Bowen v. City of New York*, 476 U.S. 467, 483 (1986) (concluding that disability-benefit claimants “would be irreparably injured were the exhaustion requirement now enforced against them”); *Aircraft & Diesel Equip. Corp. v. Hirsch*, 331 U.S. 752, 773 (1947) (directing consideration of “irreparable injury flowing from delay incident to following the prescribed procedure” in determining whether to require exhaustion). Petitioners have been waiting over a year for EPA action on their objections, and over eleven years for an EPA decision on chlorpyrifos tolerances, while being

continually exposed to the chemical's effects. This is a sufficient basis to waive or otherwise excuse exhaustion.²

In light of the strong individual interests against requiring exhaustion and weak institutional interests in favor of it, we conclude that petitioners need not exhaust their administrative objections and are not precluded from raising before us the issues at hand on the merits.³

C. The Merits

We now turn to the merits. Petitioners argue that the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children is flatly inconsistent with the FFDCFA. Specifically, petitioners argue that a need for additional scientific research is not a valid ground for maintaining a tolerance that, after nearly two decades of studies, has not been determined safe to "a reasonable certainty," and that the EPA cannot delay a decision on tolerances to coordinate that decision with registration review under FIFRA.

The EPA presents no arguments in defense of its decision. Accordingly, the EPA has forfeited any merits-

² Exhaustion may also be excused where "the administrative body is shown to be biased or has otherwise predetermined the issue before it." *McCarthy*, 503 U.S. at 148. The history detailed above strongly suggests that the EPA, for whatever reason, has decided not to ban chlorpyrifos under any circumstances, even when its own internal studies show that it could not possibly make the factual findings necessary to avoid a ban.

³ Because we find judicial review available under § 346a(h)(1), we will not address petitioners' alternative argument that judicial review is available under FIFRA, 7 U.S.C. § 136n(b).

based argument. *See Martinez v. Sessions*, 873 F.3d 655, 660 (9th Cir. 2017).

The FFDCA states unequivocally that the Administrator “shall modify or revoke a tolerance if the Administrator determines it is not safe.” § 346a(b)(2)(A)(i). A tolerance is safe when “the Administrator has determined that there is a *reasonable certainty* that *no* harm will result from aggregate exposure to the pesticide, including all anticipated dietary exposures and all other exposures for which there is reliable information.” § 346a(b)(2)(A)(ii) (emphasis added). Accordingly, the EPA bears a continuing obligation to revoke tolerances that it can no longer find with a “reasonable certainty” are safe.

The EPA’s 2016 risk assessment concluded that its analysis of chlorpyrifos “continues to indicate that the risk from potential aggregate exposure does not meet the FFDCA safety standard” and that “expected residues of chlorpyrifos on most individual food crops exceed the ‘reasonable certainty of no harm’ safety standard.” This finding was the EPA’s final safety determination before the 2017 EPA Order. The 2017 Order declined to revoke chlorpyrifos tolerances but did not make a finding of reasonable certainty that the tolerances were safe. Instead, it found “significant uncertainty” as to the health effects of chlorpyrifos, which is at odds with a finding of “reasonable certainty” of safety under § 346a(b)(2)(A)(ii) and therefore mandates revoking the tolerance under § 346a(b)(2)(A)(i).

“[H]owever desirable it may be for [the] EPA to consult [a Scientific Advisory Board] and even to revise its conclusion in the future, that is no reason for acting against its own science findings in the meantime.” *Chlorine Chemistry Council v. EPA*, 206 F.3d 1286, 1290 (D.C. Cir. 2000). The EPA cannot refuse to act “because of the

possibility of contradiction in the future by evidence unavailable at the time of action – a possibility that will *always* be present.” *Id.* at 1290–91 (emphasis in original). Chlorpyrifos similarly does not meet the statutory requirement for registration under FIFRA, which incorporates the FFDCA’s safety standard. As we have previously counseled, “evidence may be imperfect [and] the feasibility inquiry is formidable,” but there remains no justification for the “EPA’s continued failure to respond to the pressing health concerns presented by chlorpyrifos,” which has now placed the agency in direct contravention of the FFDCA and FIFRA. *In re PANNA*, 840 F.3d at 105.

Accordingly, we **GRANT** the petition for review. The EPA’s 2017 Order maintaining chlorpyrifos is **VACATED**, and the case is remanded to the EPA with directions to revoke all tolerances and cancel all registrations for chlorpyrifos within 60 days.

FERNANDEZ, Circuit Judge, dissenting:

League of United Latin American Citizens, Pesticide Action Network North America (PANNA), Natural Resources Defense Council (NRDC), California Rural Legal Assistance Foundation, Farmworkers Association of Florida, Farmworker Justice GreenLatinos, Labor Council for Latin American Advancement, Learning Disabilities Association of America, National Hispanic Medical Association, Pinos Y Campesinos Unidos del Noroeste, and United Farm Workers (collectively, “LULAC”) petition for review of the Environmental Protection Agency’s (EPA) 2017 order denying a 2007 petition to revoke all tolerances for the pesticide chlorpyrifos (hereafter “the Pesticide”). *See* Chlorpyrifos; Order Denying PANNA and NRDC’s Petition

to Revoke Tolerances, 82 Fed. Reg. 16,581, 16,583 (Apr. 5, 2017) (the “2017 Order”).¹ In the briefs (not in the petition for review), LULAC and the States ask for a writ of mandamus ordering EPA to respond to the objections they filed to the 2017 Order. In their brief, the States also ask for a writ of mandamus compelling the EPA to issue a final rule revoking chlorpyrifos tolerances.

The EPA regulates the use of pesticides on food pursuant to the Federal Food, Drug, and Cosmetic Act² (FFDCA) and the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).³ At present, the Pesticide is registered as an insecticide for food crops and non-food settings. In the view of LULAC and the States, the Pesticide is unsafe⁴ and the EPA should modify or revoke the tolerances it has established for the Pesticide pursuant to FFDCA. *See* 21 U.S.C. § 346a(a)(1)(A), (b)(1). For that matter, they believe that the EPA should cancel the Pesticide’s registration for food crops under FIFRA. *See* 7 U.S.C. § 136a(g)(1)(A)(v). In September 2007, PANNA and NRDC filed an administrative petition with the EPA seeking revocation of the Pesticide’s FFDCA food tolerances and cancellation of its FIFRA registrations (the 2007 Petition). On April 5, 2017, the EPA issued the 2017 Order in which it denied the 2007 Petition. *See* 82 Fed. Reg. at 16,581.

¹ The States of New York, Maryland, Vermont, Washington, California, and Hawaii, as well as the Commonwealth of Massachusetts and the District of Columbia (collectively, “the States”), are Intervenor in support of LULAC’s petition.

² 21 U.S.C. §§ 301–399g.

³ 7 U.S.C. §§ 136–136y.

⁴ *See* 21 U.S.C. § 346a(a)(1).

LULAC and certain states filed objections to the 2017 Order on June 5, 2017, and on that same date, LULAC filed the instant petition for review of the merits of the 2017 Order.

JURISDICTION

The majority holds that we have jurisdiction over the petition for review. I disagree. Of course, we do have jurisdiction to determine whether we have jurisdiction over the petition for review. *See Special Invs. Inc. v. Aero Air Inc.*, 360 F.3d 989, 992 (9th Cir. 2004). Nonetheless, “[w]e presume that federal courts lack jurisdiction unless the contrary appears affirmatively from the record.” *DaimlerChrysler Corp. v. Cuno*, 547 U.S. 332, 342 n.3, 126 S. Ct. 1854, 1861 n.3, 164 L. Ed. 2d 589 (2006). Thus, “the party asserting federal jurisdiction . . . has the burden of establishing it.” *Id.* Here LULAC⁵ attempts to meet that burden by pointing to the judicial review provisions of FFDCFA. *See* 21 U.S.C. § 346a(h).⁶ It also relies on FIFRA. *See* 7 U.S.C. § 136n(b). The States also point to 5 U.S.C. §§ 704, 706 as a possible source of jurisdiction. In my view, all of those attempts fail. Hence I would dismiss the petition.

A. Jurisdiction Under FFDCFA

The 2017 Order was issued pursuant to § 346a(d)(4)(A)(iii). In seeking to obtain FFDCFA jurisdiction, LULAC relies upon § 346a(h)(1) which, as pertinent here, provides that:

⁵ What I determine hereafter regarding LULAC also applies to the States unless otherwise indicated.

⁶ Hereafter, all references to § 346a are to 21 U.S.C. § 346a.

In a case of actual controversy as to the validity of . . . any order issued under subsection . . . (g)(2)(C) [of this section], . . . any person who will be adversely affected by such order . . . may obtain judicial review by filing in the United States Court of Appeals for the circuit wherein that person resides or has its principal place of business . . . a petition praying that the order . . . be set aside in whole or in part.

Unfortunately for LULAC's argument, the subsection referred to in the above quotation from § 346a(h)(1) is the subsection that provides for the EPA to issue an order following objections to a previous order of the EPA and that agency's processing of those objections. *See* § 346a(g)(2). That, by the way, is the process to which we pointed the parties in our earlier consideration of the EPA's proceedings regarding the Pesticide and stated that only after the review was completed "may we consider the merits of EPA's 'final agency action.'" *Nat. Res. Def. Council, Inc. v. U.S. EPA (In re PANNA)*, 863 F.3d 1131, 1133 (9th Cir. 2017). Specifically, § 346a(g)(2)(A) provides that a person may file objections to an order issued under § 346a(d)(4), as the 2017 Order was. The EPA may then hold a public evidentiary hearing upon request or upon its own initiative. *See* § 346a(g)(2)(B). An appropriate "order stating the action taken upon each such objection and setting forth any revision to the . . . prior order" must then be issued. *Id.* at (C). Pursuant to the plain reading of the above subsection taken

as a whole,⁷ then, and only then, can judicial review in this court be sought pursuant to § 346a(h)(1).

But, says LULAC, the requirement is no more than a claim-processing rule⁸ rather than a true jurisdictional rule.⁹ The majority agrees; I am not convinced. Here Congress was very careful and very specific about the class of cases—the limited kind of orders—over which it wished to give the courts of appeals direct review. It made it plain that we could not review the EPA’s actions in this specific area until the agency had developed and considered a full record regarding objections and the like. Before that occurred, judicial review was not available; we had no authority whatsoever to consider the issue. As the Second Circuit Court of Appeals has pointed out, § 346a(h)(1) is “unique in that it only commits certain specific agency actions to appellate court review.” *Nat. Res. Def. Council v. Johnson*, 461 F.3d 164, 172 (2d Cir. 2006). In light of that careful restriction on judicial review, it is not at all likely that Congress would

⁷ See *Nuclear Info. & Res. Serv. v. U.S. Dep’t of Transp. Research & Special Programs Admin.*, 457 F.3d 956, 960 (9th Cir. 2006).

⁸ See *Henderson ex rel. Henderson v. Shinseki*, 562 U.S. 428, 435, 131 S. Ct. 1197, 1203, 179 L. Ed. 2d 159 (2011) (claim-processing rules merely “seek to promote the orderly progress of litigation by requiring that the parties take certain procedural steps at certain specified times”).

⁹ “‘Jurisdiction’ refers to ‘a court’s adjudicatory authority.’” *Reed Elsevier, Inc. v. Muchnick*, 559 U.S. 154, 160, 130 S. Ct. 1237, 1243, 176 L. Ed. 2d 18 (2010). “Accordingly, the term ‘jurisdictional’ properly applies only to ‘prescriptions delineating the classes of cases (subject-matter jurisdiction) . . .’ implicating that authority.” *Id.* at 160–61, 13 S. Ct. at 1243; see also *Payne v. Peninsula Sch. Dist.*, 653 F.3d 863, 868 (9th Cir. 2011) (en banc), *overruled on other grounds by Albino v. Baca*, 747 F.3d 1162, 1171 (9th Cir. 2014) (en banc).

have authorized our seizing jurisdiction before the specific agency action was concluded. Lest there be any doubt, Congress also precluded possible bypassing of the § 346a(g)(2) provisions when it directed that no “judicial review under any other provision of law” would be permitted. Section 346a(h)(5); *see also Johnson*, 461 F.3d at 172–74. And that is further emphasized by the fact that the section does not speak in general language of finality or exhaustion;¹⁰ it, rather, states specifically when we can assume review authority over the particular matters. Had Congress contemplated appellate court review before the EPA completed the process required by § 346a(g)(2)(C), it could easily have inserted orders under § 346a(d)(4), or, more specifically, § 346a(d)(4)(A)(iii) into the judicial review provisions of § 346a(h)(1), which, of course, it did not do. Rather, it expressly allowed judicial review only over the agency’s ruling on objections that had to be filed with the agency, and not before. *See Gallo Cattle Co. v. U.S. Dep’t of Agric.*, 159 F.3d 1194, 1197–98 (9th Cir. 1998); *see also McBride Cotton & Cattle Corp. v. Veneman*, 290 F.3d 973, 979–80 (9th Cir. 2002) (discussing *Gallo Cattle*). That is particularly telling because earlier iterations of the review provisions contained no such jurisdictional limitations. *See Nat’l Coal. Against the Misuse of Pesticides v. Thomas*, 809 F.2d 875, 878–79 (D.C. Cir. 1987).

In short, I see no basis for deconstructing that carefully constructed jurisdictional scheme and thereby inviting

¹⁰ *Cf. Anderson v. Babbitt*, 230 F.3d 1158, 1162 (9th Cir. 2000); *Rumbles v. Hill*, 182 F.3d 1064, 1067 (9th Cir. 1999).

premature attacks on matters committed to the expertise of the agency in the first instance.¹¹

B. Jurisdiction under FIFRA

LULAC then argues that because it not only asked for the EPA to revoke all tolerances for the Pesticide but also asked the EPA to cancel all registrations for the Pesticide, the 2007 Petition to the EPA arose under both the FFDCA and FIFRA. Thus, it argues, it need not abide by the FFDCA review provisions, but can rely on the jurisdictional provisions of the FIFRA to establish our jurisdiction. *See* 7 U.S.C. § 136n(b). I do not agree.

Rather, I am persuaded by the cogent reasoning of the Second Circuit Court of Appeals in a strongly similar situation. *See Johnson*, 461 F.3d at 176. In that case, pursuant to the FFDCA provisions, NRDC also challenged the EPA's setting of tolerances for residues on food of five pesticides (not including the Pesticide). *Id.* at 169–70. NRDC added that their registration should be cancelled pursuant to FIFRA. *Id.* at 176. NRDC had brought its action in the district court, and on appeal the Second Circuit determined that the district court did not have jurisdiction to review the EPA determination under the FFDCA because, as § 346(a)(h)(1), (5) provide, jurisdiction over those claims was limited to the courts of appeals. *Id.* at 172–76. NRDC

¹¹ Because the completion of the administrative process is jurisdictional, I do not consider LULAC's fallback argument that it would be futile to pursue the prescribed process. *See Sun v. Ashcroft*, 370 F.3d 932, 941 (9th Cir. 2004); *see also Ross v. Blake*, ___ U.S. ___, ___, 136 S. Ct. 1850, 1857, 195 L. Ed. 2d 117 (2016); *Gallo Cattle*, 159 F.3d at 1197.

then argued that the district court still had jurisdiction pursuant to FIFRA. The court replied:

However, FIFRA's grant of jurisdiction to the district courts is irrelevant. The NRDC Appellants "challenge the registration of pesticides under FIFRA only through their challenge to the tolerances set under the [F]FDCA." Essentially, therefore, the violations of FIFRA alleged by the NRDC Appellants "amount to challenges to the methodologies used in reaching the reassessment determinations at issue" in this case. As such, these challenges represent an "issue as to which review is or was obtainable under Section 346a(h). Section 346a(h)(5) precludes judicial review of these issues "under any other provision of law." The NRDC Appellants' attempt to find independent jurisdiction for their claims under FIFRA is thus precluded by the express language of § 346a(h)(5). The NRDC Appellants' claims are reviewable only in the courts of appeals, and only after they have exhausted the statutory provisions for administrative review.

Id. at 176 (citations omitted).

I accept that reasoning and the same reasoning should apply here. It would foreclose LULAC's argument. LULAC essentially argues that the EPA has erred in maintaining tolerances for the Pesticide, which is an unsafe insecticide, and for that same reason it argues that the EPA must forthwith revoke registration of the Pesticide. It argues

that it should not have to wait for the EPA to rule on its registration claim, but that is just an allotrope of its central arguments against waiting for relief under the FFDCAs tolerances provision with which its FIFRA argument is “inextricably intertwined.” *See Ctr. for Biological Diversity v. U.S. EPA*, 847 F.3d 1075, 1089 (9th Cir. 2017). Therefore, the FIFRA provision does not offer a way to avoid the judicial review provisions of the FFDCAs in this instance.

Thus, I would dismiss the petition for review for lack of jurisdiction.¹²

WRIT OF MANDAMUS

In its briefs, LULAC asks us to issue a writ of mandamus¹³ directing that the EPA respond to its objections within sixty days. However, LULAC did not file a petition for issuance of that writ and, therefore, made no attempt to comply with the Federal Rules of Appellate Procedure when it filed its petition for review of the merits of the 2017 Order. *See* Fed. R. App. P. 21(a), (c); *see also* Fed. R. App. P. 20. I see no reason to treat LULAC’s petition for review as, in fact, one for a writ of mandamus. It was not, and could not have been, a mere instance of mislabeling a request for relief that was sought. Had LULAC intended to seek a writ of

¹² I do not overlook the States’ argument regarding 5 U.S.C. §§ 704, 706 (the Administrative Procedure Act provisions). But those provisions do not confer direct review jurisdiction upon this court. *See Gallo Cattle*, 159 F.3d at 1198; *see also Califano v. Sanders*, 430 U.S. 99, 106–07, 97 S. Ct. 980, 985, 51 L. Ed. 2d 192 (1977). Therefore, they add nothing of substance to the petition for review issues now before us.

¹³ *See* 28 U.S.C. § 1651(a); *see also Cal. Cmty. Against Toxics v. U.S. EPA (In re A Cmty. Voice)*, 878 F.3d 779, 783 (9th Cir. 2017).

mandamus, rather than a merits review, that would have been most peculiar because on that same day LULAC had just filed its objections to the 2017 Order. It could not honestly complain about delay in considering its objections at that point. Were I to decide otherwise, I would essentially ignore our holding, which was handed down after this petition for review was filed, but before the briefs were filed, and which declared that PANNA and NRDC must file their objections and await resolution of those objections by the EPA before we would consider the merits of the EPA's actions regarding the Pesticide. *See Nat. Res. Def. Council*, 863 F.3d at 1133.

Thus, this case is quite unlike cases where we decided that a party improperly sought to appeal an interim procedural order rather than a decision on the merits of a case, but we also considered whether we should construe the appeal as a petition for a writ of mandamus. *See Kum Tat Ltd. v. Linden Ox Pasture, LLC*, 845 F.3d 979, 983 (9th Cir. 2017) (discussing order denying arbitration request); *Johnson v. Consumerinfo.com, Inc.*, 745 F.3d 1019, 1023 & n.2 (9th Cir. 2014) (discussing order compelling arbitration and staying judicial proceedings); *see also United States v. Davis*, 953 F.2d 1482, 1497–98 (10th Cir. 1992) (dismissing request for mandamus by defense counsel in criminal conviction appeal where no petition had been filed); *EEOC v. Neches Butane Prods. Co.*, 704 F.2d 144, 146, 151–52 (5th Cir. 1983) (denying request that an appeal from a stay of proceedings pending compliance with discovery orders be treated as a mandamus petition where requesting party was represented by competent counsel and should have filed a petition therefor); *Jones & Guerrero Co., Inc. v. Sealift Pac.*, 650 F.2d 1072, 1073–74 (9th Cir. 1981) (per curiam) (refusing to construe appeal from order remanding case to

Guam Superior Court as a petition for mandamus where no mandamus petition filed).

In short, I would decline to treat LULAC's petition as one for a writ of mandamus. Of course, I express no opinion on whether or when LULAC can or should file a petition for a writ of mandamus because LULAC deems the EPA's consideration of the objections to have been unduly delayed. *See PANNA v. U.S. EPA (In re PANNA)*, 798 F.3d 809, 813 (9th Cir. 2015); *Telecomms. Research & Action Ctr. v. FCC*, 750 F.2d 70, 80 (D.C. Cir. 1984).

Thus, I respectfully dissent from parts A and B of the Discussion in the majority opinion. As a result, I do not decide the issue in part C although I do find the discussion therein does have some persuasive value.

United States Court of Appeals for the Ninth Circuit

Office of the Clerk
95 Seventh Street
San Francisco, CA 94103

Information Regarding Judgment and Post-Judgment Proceedings

Judgment

- This Court has filed and entered the attached judgment in your case. Fed. R. App. P. 36. Please note the filed date on the attached decision because all of the dates described below run from that date, not from the date you receive this notice.

Mandate (Fed. R. App. P. 41; 9th Cir. R. 41-1 & -2)

- The mandate will issue 7 days after the expiration of the time for filing a petition for rehearing or 7 days from the denial of a petition for rehearing, unless the Court directs otherwise. To file a motion to stay the mandate, file it electronically via the appellate ECF system or, if you are a pro se litigant or an attorney with an exemption from using appellate ECF, file one original motion on paper.

Petition for Panel Rehearing (Fed. R. App. P. 40; 9th Cir. R. 40-1)

Petition for Rehearing En Banc (Fed. R. App. P. 35; 9th Cir. R. 35-1 to -3)

(1) A. Purpose (Panel Rehearing):

- A party should seek panel rehearing only if one or more of the following grounds exist:
 - ▶ A material point of fact or law was overlooked in the decision;
 - ▶ A change in the law occurred after the case was submitted which appears to have been overlooked by the panel; or
 - ▶ An apparent conflict with another decision of the Court was not addressed in the opinion.
- Do not file a petition for panel rehearing merely to reargue the case.

B. Purpose (Rehearing En Banc)

- A party should seek en banc rehearing only if one or more of the following grounds exist:

- ▶ Consideration by the full Court is necessary to secure or maintain uniformity of the Court's decisions; or
- ▶ The proceeding involves a question of exceptional importance; or
- ▶ The opinion directly conflicts with an existing opinion by another court of appeals or the Supreme Court and substantially affects a rule of national application in which there is an overriding need for national uniformity.

(2) Deadlines for Filing:

- A petition for rehearing may be filed within 14 days after entry of judgment. Fed. R. App. P. 40(a)(1).
- If the United States or an agency or officer thereof is a party in a civil case, the time for filing a petition for rehearing is 45 days after entry of judgment. Fed. R. App. P. 40(a)(1).
- If the mandate has issued, the petition for rehearing should be accompanied by a motion to recall the mandate.
- *See* Advisory Note to 9th Cir. R. 40-1 (petitions must be received on the due date).
- An order to publish a previously unpublished memorandum disposition extends the time to file a petition for rehearing to 14 days after the date of the order of publication or, in all civil cases in which the United States or an agency or officer thereof is a party, 45 days after the date of the order of publication. 9th Cir. R. 40-2.

(3) Statement of Counsel

- A petition should contain an introduction stating that, in counsel's judgment, one or more of the situations described in the "purpose" section above exist. The points to be raised must be stated clearly.

(4) Form & Number of Copies (9th Cir. R. 40-1; Fed. R. App. P. 32(c)(2))

- The petition shall not exceed 15 pages unless it complies with the alternative length limitations of 4,200 words or 390 lines of text.
- The petition must be accompanied by a copy of the panel's decision being challenged.
- An answer, when ordered by the Court, shall comply with the same length limitations as the petition.
- If a pro se litigant elects to file a form brief pursuant to Circuit Rule 28-1, a petition for panel rehearing or for rehearing en banc need not comply with Fed. R. App. P. 32.

- The petition or answer must be accompanied by a Certificate of Compliance found at Form 11, available on our website at www.ca9.uscourts.gov under *Forms*.
- You may file a petition electronically via the appellate ECF system. No paper copies are required unless the Court orders otherwise. If you are a pro se litigant or an attorney exempted from using the appellate ECF system, file one original petition on paper. No additional paper copies are required unless the Court orders otherwise.

Bill of Costs (Fed. R. App. P. 39, 9th Cir. R. 39-1)

- The Bill of Costs must be filed within 14 days after entry of judgment.
- See Form 10 for additional information, available on our website at www.ca9.uscourts.gov under *Forms*.

Attorneys Fees

- Ninth Circuit Rule 39-1 describes the content and due dates for attorneys fees applications.
- All relevant forms are available on our website at www.ca9.uscourts.gov under *Forms* or by telephoning (415) 355-7806.

Petition for a Writ of Certiorari

- Please refer to the Rules of the United States Supreme Court at www.supremecourt.gov

Counsel Listing in Published Opinions

- Please check counsel listing on the attached decision.
- If there are any errors in a published opinion, please send a letter **in writing within 10 days** to:
 - ▶ Thomson Reuters; 610 Opperman Drive; PO Box 64526; Eagan, MN 55123 (Attn: Jean Green, Senior Publications Coordinator);
 - ▶ and electronically file a copy of the letter via the appellate ECF system by using “File Correspondence to Court,” or if you are an attorney exempted from using the appellate ECF system, mail the Court one copy of the letter.

United States Court of Appeals for the Ninth Circuit

BILL OF COSTS

This form is available as a fillable version at:

<http://cdn.ca9.uscourts.gov/datastore/uploads/forms/Form%2010%20-%20Bill%20of%20Costs.pdf>.

Note: If you wish to file a bill of costs, it **MUST** be submitted on this form and filed, with the clerk, with proof of service, within 14 days of the date of entry of judgment, and in accordance with 9th Circuit Rule 39-1. A late bill of costs must be accompanied by a motion showing good cause. Please refer to FRAP 39, 28 U.S.C. § 1920, and 9th Circuit Rule 39-1 when preparing your bill of costs.

v. 9th Cir. No.

The Clerk is requested to tax the following costs against:

Cost Taxable under FRAP 39, 28 U.S.C. § 1920, 9th Cir. R. 39-1	REQUESTED <i>(Each Column Must Be Completed)</i>				ALLOWED <i>(To Be Completed by the Clerk)</i>			
	No. of Docs.	Pages per Doc.	Cost per Page*	TOTAL COST	No. of Docs.	Pages per Doc.	Cost per Page*	TOTAL COST
Excerpt of Record	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Opening Brief	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Answering Brief	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Reply Brief	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Other**	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>	<input type="text"/>	<input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
TOTAL:				\$ <input type="text"/>	TOTAL: \$ <input type="text"/>			

* *Costs per page:* May not exceed .10 or actual cost, whichever is less. 9th Circuit Rule 39-1.

** *Other:* Any other requests must be accompanied by a statement explaining why the item(s) should be taxed pursuant to 9th Circuit Rule 39-1. Additional items without such supporting statements will not be considered.

Attorneys' fees **cannot** be requested on this form.

Form 10. Bill of Costs - Continued

I, , swear under penalty of perjury that the services for which costs are taxed were actually and necessarily performed, and that the requested costs were actually expended as listed.

Signature

("s/" plus attorney's name if submitted electronically)

Date

Name of Counsel:

Attorney for:

(To Be Completed by the Clerk)

Date

Costs are taxed in the amount of \$

Clerk of Court

By: , Deputy Clerk

§ 348. Food additives**(a) Unsafe food additives; exception for conformity with exemption or regulation**

A food additive shall, with respect to any particular use or intended use of such additives, be deemed to be unsafe for the purposes of the application of clause (2)(C) of section 342(a) of this title, unless—

(1) it and its use or intended use conform to the terms of an exemption which is in effect pursuant to subsection (i) of this section; or

(2) there is in effect, and it and its use or intended use are in conformity with, a regulation issued under this section prescribing the conditions under which such additive may be safely used.

While such a regulation relating to a food additive is in effect, a food shall not, by reason of bearing or containing such an additive in accordance with the regulation, be considered adulterated within the meaning of clause (1) of section 342(a) of this title.

(b) Petition for regulation prescribing conditions of safe use; contents; description of production methods and controls; samples; notice of regulation

(1) Any person may, with respect to any intended use of a food additive, file with the Secretary a petition proposing the issuance of a regulation prescribing the conditions under which such additive may be safely used.

(2) Such petition shall, in addition to any explanatory or supporting data, contain—

(A) the name and all pertinent information concerning such food additive, including, where available, its chemical identity and composition;

(B) a statement of the conditions of the proposed use of such additive, including all directions, recommendations, and suggestions proposed for the use of such additive, and including specimens of its proposed labeling;

(C) all relevant data bearing on the physical or other technical effect such additive is intended to produce, and the quantity of such additive required to produce such effect;

(D) a description of practicable methods for determining the quantity of such additive in or on food, and any substance formed in or on food, because of its use; and

(E) full reports of investigations made with respect to the safety for use of such additive, including full information as to the methods and controls used in conducting such investigations.

(3) Upon request of the Secretary, the petitioner shall furnish (or, if the petitioner is not the manufacturer of such additive, the petitioner shall have the manufacturer of such additive furnish, without disclosure to the petitioner) a full description of the methods used in, and the facilities and controls used for, the production of such additive.

(4) Upon request of the Secretary, the petitioner shall furnish samples of the food additive involved, or articles used as components thereof, and of the food in or on which the additive is proposed to be used.

(5) Notice of the regulation proposed by the petitioner shall be published in general terms by the Secretary within thirty days after filing.

(c) Approval or denial of petition; time for issuance of order; evaluation of data; factors

(1) The Secretary shall—

(A) by order establish a regulation (whether or not in accord with that proposed by the petitioner) prescribing, with respect to one or more proposed uses of the food additive involved, the conditions under which such additive may be safely used (including, but not limited to, specifications as to the particular food or classes of food in or in which such additive may be used, the maximum quantity which may be used or permitted to remain in or on such food, the manner in which such additive may be added to or used in or on such food, and any directions or other labeling or packaging requirements for such additive deemed necessary by him to assure the safety of such use), and shall notify the petitioner of such order and the reasons for such action; or

(B) by order deny the petition, and shall notify the petitioner of such order and of the reasons for such action.

(2) The order required by paragraph (1)(A) or (B) of this subsection shall be issued within ninety days after the date of filing of the petition, except that the Secretary may (prior to such ninetieth day), by written notice to the petitioner, extend such ninety-day period to such time (not more than one hundred and eighty days after the date of filing of the petition) as the Secretary deems necessary to enable him to study and investigate the petition.

(3) No such regulation shall issue if a fair evaluation of the data before the Secretary—

(A) fails to establish that the proposed use of the food additive, under the conditions of use to be specified in the regulation, will be safe: *Provided*, That no additive shall be deemed to be safe if it is found to induce cancer when ingested by man or animal, or if it is found, after tests which are appropriate for the evaluation of the safety of food additives, to induce cancer in man or animal, except that this proviso shall not apply with respect to the use of a substance as an ingredient of feed for animals which are raised for food production, if the Secretary finds (i) that, under the conditions of use and feeding specified in proposed labeling and reasonably certain to be followed in practice, such additive will not adversely affect the animals for which such feed is intended, and (ii) that no residue of the additive will be found (by methods of examination prescribed or approved by the Secretary by regulations, which regulations shall not be subject to subsections (f) and (g) of this section) in any edible portion of such animal after slaughter or in any food yielded by or derived from the living animal; or

(B) shows that the proposed use of the additive would promote deception of the consumer in violation of this chapter or would otherwise result in adulteration or in misbranding of food within the meaning of this chapter.

(4) If, in the judgment of the Secretary, based upon a fair evaluation of the data before him, a

tolerance limitation is required in order to assure that the proposed use of an additive will be safe, the Secretary—

(A) shall not fix such tolerance limitation at a level higher than he finds to be reasonably required to accomplish the physical or other technical effect for which such additive is intended; and

(B) shall not establish a regulation for such proposed use if he finds upon a fair evaluation of the data before him that such data do not establish that such use would accomplish the intended physical or other technical effect.

(5) In determining, for the purposes of this section, whether a proposed use of a food additive is safe, the Secretary shall consider among other relevant factors—

(A) the probable consumption of the additive and of any substance formed in or on food because of the use of the additive;

(B) the cumulative effect of such additive in the diet of man or animals, taking into account any chemically or pharmacologically related substance or substances in such diet; and

(C) safety factors which in the opinion of experts qualified by scientific training and experience to evaluate the safety of food additives are generally recognized as appropriate for the use of animal experimentation data.

(d) Regulation issued on Secretary's initiative

The Secretary may at any time, upon his own initiative, propose the issuance of a regulation prescribing, with respect to any particular use of a food additive, the conditions under which such additive may be safely used, and the reasons therefor. After the thirtieth day following publication of such a proposal, the Secretary may by order establish a regulation based upon the proposal.

(e) Publication and effective date of orders

Any order, including any regulation established by such order, issued under subsection (c) or (d) of this section, shall be published and shall be effective upon publication, but the Secretary may stay such effectiveness if, after issuance of such order, a hearing is sought with respect to such order pursuant to subsection (f) of this section.

(f) Objections and public hearing; basis and contents of order; statement

(1) Within thirty days after publication of an order made pursuant to subsection (c) or (d) of this section, any person adversely affected by such an order may file objections thereto with the Secretary, specifying with particularity the provisions of the order deemed objectionable, stating reasonable grounds therefor, and requesting a public hearing upon such objections. The Secretary shall, after due notice, as promptly as possible hold such public hearing for the purpose of receiving evidence relevant and material to the issues raised by such objections. As soon as practicable after completion of the hearing, the Secretary shall by order act upon such objections and make such order public.

(2) Such order shall be based upon a fair evaluation of the entire record at such hearing, and shall include a statement setting forth in detail the findings and conclusions upon which the order is based.

(3) The Secretary shall specify in the order the date on which it shall take effect, except that it shall not be made to take effect prior to the ninetieth day after its publication, unless the Secretary finds that emergency conditions exist necessitating an earlier effective date, in which event the Secretary shall specify in the order his findings as to such conditions.

(g) Judicial review

(1) In a case of actual controversy as to the validity of any order issued under subsection (f) of this section, including any order thereunder with respect to amendment or repeal of a regulation issued under this section, any person who will be adversely affected by such order may obtain judicial review by filing in the United States Court of Appeals for the circuit wherein such person resides or has his principal place of business, or in the United States Court of Appeals for the District of Columbia Circuit, within sixty days after the entry of such order, a petition praying that the order be set aside in whole or in part.

(2) A copy of such petition shall be forthwith transmitted by the clerk of the court to the Secretary, or any officer designated by him for that purpose, and thereupon the Secretary shall file in the court the record of the proceedings on which he based his order, as provided in section 2112 of title 28. Upon the filing of such petition the court shall have jurisdiction, which upon the filing of the record with it shall be exclusive, to affirm or set aside the order complained of in whole or in part. Until the filing of the record the Secretary may modify or set aside his order. The findings of the Secretary with respect to questions of fact shall be sustained if based upon a fair evaluation of the entire record at such hearing.

(3) The court, on such judicial review, shall not sustain the order of the Secretary if he failed to comply with any requirement imposed on him by subsection (f)(2) of this section.

(4) If application is made to the court for leave to adduce additional evidence, the court may order such additional evidence to be taken before the Secretary and to be adduced upon the hearing in such manner and upon such terms and conditions as to the court may seem proper, if such evidence is material and there were reasonable grounds for failure to adduce such evidence in the proceedings below. The Secretary may modify his findings as to the facts and order by reason of the additional evidence so taken, and shall file with the court such modified findings and order.

(5) The judgment of the court affirming or setting aside, in whole or in part, any order under this section shall be final, subject to review by the Supreme Court of the United States upon certiorari or certification as provided in section 1254 of title 28. The commencement of proceedings under this section shall not, unless specifically ordered by the court to the contrary, operate as a stay of an order.

(h) Amendment or repeal of regulations

The Secretary shall by regulation prescribe the procedure by which regulations under the foregoing provisions of this section may be amended or repealed, and such procedure shall

conform to the procedure provided in this section for the promulgation of such regulations.

(i) Exemptions for investigational use

Without regard to subsections (b) to (h), inclusive, of this section, the Secretary shall by regulation provide for exempting from the requirements of this section any food additive, and any food bearing or containing such additive, intended solely for investigational use by qualified experts when in his opinion such exemption is consistent with the public health.

(June 25, 1938, ch. 675, § 409, as added Sept. 6, 1958, Pub. L. 85-929, § 4, 72 Stat. 1785; amended June 29, 1960, Pub. L. 86-546, § 2, 74 Stat. 255; Oct. 10, 1962, Pub. L. 87-781, title I, § 104(f)(1), 76 Stat. 785; Nov. 8, 1984, Pub. L. 98-620, title IV, § 402(25)(B), 98 Stat. 3359.)

AMENDMENTS

1984—Subsec. (g)(2). Pub. L. 98-620 struck out provision that required the court to advance on the docket and expedite the disposition of all causes filed therein pursuant to this section.

1962—Subsec. (c)(3)(A). Pub. L. 87-781 excepted proviso from applying to use of a substance as an ingredient of feed for animals raised for food production, if under conditions of use specified in proposed labeling, and which conditions are reasonably certain to be followed in practice, such additive will not adversely affect the animals and no residue will be found in any edible portion of such animal after slaughter, or in any food from the living animal.

1960—Subsec. (g)(2). Pub. L. 86-546 substituted “forthwith transmitted by the clerk of the court to the Secretary, or any officer” for “served upon the Secretary, or upon any officer”, “shall file in the court the record of the proceedings on which he based his order, as provided in section 2112 of title 28” for “shall certify and file in the court a transcript of the proceedings and the record on which he based his order”, and “Upon the filing of such petition the court shall have jurisdiction, which upon the filing of the record with it shall be exclusive,” for “Upon such filing, the court shall have exclusive jurisdiction”, and inserted sentence authorizing the Secretary to modify or set aside his order until the filing of the record.

EFFECTIVE DATE OF 1984 AMENDMENT

Amendment by Pub. L. 98-620 not applicable to cases pending on Nov. 8, 1984, see section 403 of Pub. L. 98-620, set out as an Effective Date note under section 1657 of Title 28, Judiciary and Judicial Procedure.

EFFECTIVE DATE OF 1962 AMENDMENT; EXCEPTIONS

Amendment by Pub. L. 87-781 effective Oct. 10, 1962, see section 107 of Pub. L. 87-781, set out as an Effective Date of 1962 Amendment note under section 321 of this title.

EFFECTIVE DATE

Section effective Sept. 6, 1958, see section 6(a) of Pub. L. 85-929, set out as an Effective Date of 1958 Amendment note under section 342 of this title.

TRANSFER OF FUNCTIONS

Functions vested in Secretary of Health, Education, and Welfare [now Health and Human Services] in establishing tolerances for pesticide chemicals under this section together with authority to monitor compliance with tolerances and effectiveness of surveillance and enforcement and to provide technical assistance to States and conduct research under this chapter and section 201 et seq. of Title 42, The Public Health and Welfare, transferred to Administrator of Environmental Protection Agency by Reorg. Plan No. 3 of 1970,

§ 2(a)(4), eff. Dec. 2, 1970, 35 F.R. 15623, 84 Stat. 2086, set out in the Appendix to Title 5, Government Organization and Employees.

MORATORIUM ON AUTHORITY OF SECRETARY WITH RESPECT TO SACCHARIN

Pub. L. 95-203, § 3, Nov. 23, 1977, 91 Stat. 1452, as amended by Pub. L. 96-88, title V, § 509(b), Oct. 17, 1979, 93 Stat. 695; Pub. L. 96-273, June 17, 1980, 94 Stat. 536; Pub. L. 97-42, § 2, Aug. 14, 1981, 95 Stat. 946; Pub. L. 98-22, § 2, Apr. 22, 1983, 97 Stat. 173; Pub. L. 99-46, May 24, 1985, 99 Stat. 81; Pub. L. 100-71, title I, § 101, July 11, 1987, 101 Stat. 431; Pub. L. 102-142, title VI, Oct. 28, 1991, 105 Stat. 910, provided that: “During the period ending May 1, 1997, the Secretary—

“(1) may not amend or revoke the interim food additive regulation of the Food and Drug Administration of the Department of Health and Human Services applicable to saccharin and published on March 15, 1977 (section 180.37 of part 180, subchapter B, chapter 1, title 21, Code of Federal Regulations (42 Fed. Reg. 14638)), or

“(2) may, except as provided in section 4 [enacting section 343a of this title, amending sections 321 and 343 of this title, and enacting provisions set out as notes under section 343 of this title] and the amendments made by such section, not take any other action under the Federal Food, Drug, and Cosmetic Act [this chapter] to prohibit or restrict the sale or distribution of saccharin, any food permitted by such interim food additive regulation to contain saccharin, or any drug or cosmetic containing saccharin, solely on the basis of the carcinogenic or other toxic effect of saccharin as determined by any study made available to the Secretary before the date of the enactment of this Act [Nov. 23, 1977] which involved human studies or animal testing, or both.”

For definition of “saccharin” as used in this note, see section 2(d) of Pub. L. 95-203.

SECTION REFERRED TO IN OTHER SECTIONS

This section is referred to in sections 321, 331, 342, 379e, 453, 601, 1033 of this title; title 7 section 450i; title 15 section 1262; title 35 section 155.

§ 349. Bottled drinking water standards; publication in Federal Register

Whenever the Administrator of the Environmental Protection Agency prescribes interim or revised national primary drinking water regulations under section 300g-1 of title 42, the Secretary shall consult with the Administrator and within 180 days after the promulgation of such drinking water regulations either promulgate amendments to regulations under this chapter applicable to bottled drinking water or publish in the Federal Register his reasons for not making such amendments.

(June 25, 1938, ch. 675, § 410, as added Dec. 16, 1974, Pub. L. 93-523, § 4, 88 Stat. 1694.)

§ 350. Vitamins and minerals

(a) Authority and limitations of Secretary; applicability

(1) Except as provided in paragraph (2)—

(A) the Secretary may not establish, under section 321(n), 341, or 343 of this title, maximum limits on the potency of any synthetic or natural vitamin or mineral within a food to which this section applies;

(B) the Secretary may not classify any natural or synthetic vitamin or mineral (or combination thereof) as a drug solely because it exceeds the level of potency which the Secretary determines is nutritionally rational or useful;

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

<p>League of United Latin American Citizens, et al.</p> <p style="text-align: center;">Petitioners,</p> <p style="text-align: center;">v.</p> <p>Andrew Wheeler, Acting Administrator of the U.S. Environmental Protection Agency, et al.</p> <p style="text-align: center;">Respondents.</p>

No. 17-71636

DECLARATION OF YU-TING GUILARAN

I, Yu-Ting Guilaran, am over 18 years of age, and I am competent to be a witness in this proceeding. I give this Declaration based on my own personal knowledge and experience from working in the Office of Pesticide Programs at the U.S. Environmental Protection Agency (“EPA” or “Agency”).

1. I currently serve as Director of the Pesticide Re-Evaluation Division in the Office of Pesticide Programs (“OPP”) at the EPA, a position I have held since 2016. My office is located at One Potomac Yard, 2777 S. Crystal Drive, Arlington, VA, 22202.

2. In my role as Director of the Pesticide Re-Evaluation Division (PRD), I am responsible for managing the periodic review for registered pesticide products, known as “registration review”, pursuant to section 3(g) of the Federal Insecticide, Fungicide and Rodenticide Act (“FIFRA”). The general purpose of registration review is to assure

that existing pesticides continue to meet the applicable standards for registration under FIFRA. In my role as director of PRD, I have overseen the registration review of many chemicals and am familiar with the necessary statutory standards pesticides need to satisfy to remain registered under FIFRA.

3. Before serving in my current role, I held numerous staff and managerial positions in EPA beginning in 1992, and have been with OPP since 2014. My previous role included being the Director of the Biological and Economic Analysis Division in OPP.

4. In order to register a pesticide, EPA must determine that the pesticide product, when used in a manner consistent with its labeling, will not cause unreasonable adverse effects on the environment. FIFRA section 3(c)(5). The term “unreasonable adverse effects on the environment” is defined in FIFRA section 2(bb) and includes two parts: “(1) any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide, or (2) a human dietary risk from residues that result from a use of a pesticide in or on any food inconsistent with the standard under section 346a of Title 21.”

5. EPA does not register pesticides that do not meet this FIFRA registration standard. The second half of the definition for “unreasonable adverse effects” comes into play only for pesticides resulting in residues in or on food (also called “food-use pesticides”). For “food-use pesticides”, the Agency is required to determine that such pesticide does not cause a human dietary risk inconsistent with the safety standard in section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA). That safety standard is a “risk-only” standard, i.e., it requires consideration only of the risks to human health –

not the benefits of the use of the pesticide – and a determination that there is a “reasonable certainty of no harm” from aggregate exposure to residues of the pesticide chemical, which includes dietary exposures and other non-occupational exposures.¹ Generally, where the Agency can make this determination, it will establish a tolerance or exemption to cover the residues, which permits food containing these pesticide residues to be sold in interstate commerce and allows EPA to register the pesticide. Where that finding cannot be made, the tolerance or exemption cannot be established for the pesticide, and EPA will not register the pesticide.

6. If that finding can no longer be supported for an already-registered “food-use pesticide” and the tolerance covering those residues is revoked, those food uses would no longer meet the FIFRA unreasonable adverse effects standard and could not be maintained. EPA would need to take action under FIFRA to address that underlying registration. For example, EPA may seek voluntary cancellation of those uses or amendment of those registrations or may initiate cancellation under section 6.

7. In addition to making the determination that a “food-use pesticide” does not cause a human dietary risk inconsistent with the FFDCA safety standard (usually through the establishment of a tolerance or exemption from the requirement of a tolerance under the FFDCA), EPA considers the non-dietary risks (for example, occupational risks and risks to the environment) from that pesticide under the first part of the unreasonable adverse effects definition. In contrast to the “risk-only” standard applied to the evaluation of pesticide tolerances under the FFDCA, this approach is a “risk-benefit” standard, where EPA registers a pesticide or a specific pesticide use when

¹ This aggregation may include exposures resulting from “non-food-use pesticides.”

the potential benefits to be gained from use of the pesticide outweigh the potential risks from use of the pesticide. Only upon determining that the “food-use pesticide” meets both the safety component for assessing the dietary risk and the risk-benefit component for non-dietary risks can EPA register the pesticide.

8. For a pesticide that is not used on food (also called “non-food-use pesticides”), there is no human dietary risk, so the pesticide does not have to meet the FFDCSA safety standard set forth in the second part of the unreasonable adverse effects definition. For example, use on golf courses does not result in residues in or on food. No tolerance is necessary to support non-food uses before the Agency can register them. In those instances, EPA may register the pesticide uses if the “non-food use pesticide” meets the first part of the definition of unreasonable adverse effects on the environment. Under that “risk-benefit” approach, EPA considers whether there are any potential risks from use on the golf course, and if so, whether benefits of use on the golf course outweigh those risks. Where such benefits outweigh the risks, the pesticide is registered.

9. It is important to note that many pesticides are registered for use on food and on non-food sites on the same registration. For such products, EPA assesses all uses under the “risk-benefit” standard and applies the additional safety standard to ensure that use of the pesticide does not pose a human dietary risk inconsistent with that standard.

10. In order to cancel the registration of any pesticide, EPA must follow the procedures set forth in section 6 of FIFRA. If a registrant requests voluntary cancellation of its registration, EPA must provide an opportunity for public comment on the cancellation under section 6(f). In order to cancel a registration without the consent of the registrant, EPA must issue a notice of intent to cancel under section 6(b) of FIFRA,

containing the Agency's reasons for concluding that the pesticide generally causes unreasonable adverse effects on the environment. The process under section 6(b) provides registrants an opportunity to cure the defects or to request a trial-type hearing before cancellation becomes effective. EPA must follow these procedures even if EPA has revoked a tolerance for the relevant pesticide under the FFDCA.

11. At this time, the Agency does not have a basis for concluding that all "non-food uses" of chlorpyrifos cause unreasonable adverse effects on the environment. EPA has intended to consider the risks and benefits associated with the non-food uses of chlorpyrifos as part of the registration review for that chemical, which must be completed by October 1, 2022. EPA has not yet completed its evaluation of the human health risks associated with chlorpyrifos, including non-food uses. EPA has not yet conducted an ecological risk assessment for the purpose of registration review or assessed the specific benefits of non-food uses in order to make a risk-benefit determination. EPA cannot currently support cancellation under the "risk-benefit" standard applicable to these uses without these findings.

I hereby declare and affirm, subject to the penalties of perjury, that the foregoing statement is true and correct.


Yu-Ting Guilaran 9/12/2018

**IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT**

<p>League of United Latin American Citizens, et al.</p> <p style="text-align: center;">Petitioners,</p> <p style="text-align: center;">v.</p> <p>Andrew Wheeler, Acting Administrator of the U.S. Environmental Protection Agency, et al.</p> <p style="text-align: center;">Respondents.</p>

No. 17-71636

DECLARATION OF MICHAEL WALSH

I, Michael Walsh, am over 18 years of age, and I am competent to be a witness in this proceeding. I give this Declaration based on my own personal knowledge or on a review of information contained in the records of the U.S. Environmental Protection Agency (“EPA” or “Agency”).

1. I currently serve as Product Manager 11 in the Registration Division in the Office of Pesticide Programs (“OPP”) at the EPA, a position I have held since March 2015. My office is located at One Potomac Yard, 2777 S. Crystal Drive, Arlington, VA, 22202.

2. In my role as Product Manager 11, I have overseen and been responsible for the registration of conventional chemical pesticide products, including chlorpyrifos, pursuant to section 3 of the Federal Insecticide, Fungicide and Rodenticide Act

(“FIFRA”). As part of that registration process, I am responsible for reviewing and approving pesticide labeling.

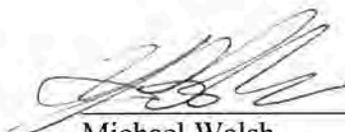
3. Before serving in my current role, I held several staff positions in OPP beginning in July 1991, including serving as a reviewer in the Herbicide Branch in the Registration Division. In these positions, I have been involved in reviewing proposed and existing label language for unregistered and registered pesticide products and generating formatting, editorial, and risk management comments on that labeling, which includes revised language where necessary to comply with current labeling requirements and to mitigate risks identified as part of pesticide product registration and reregistration processes under FIFRA section 4, and in the registration review process under FIFRA section 3(g).

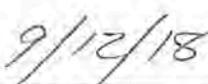
4. At various times during the months of August and September 2018, I conducted a search of the Office of Pesticide Programs Information Network (“OPPIN”) to identify all of the currently registered products containing the pesticide chlorpyrifos (CAS # 2921-88-2). OPPIN is the pesticide database that the EPA uses to track all registered pesticide products. All registered pesticides products are listed in the database. In addition, I used the EPA Pesticide Product Label System (“PPLS”), which is a publicly available pesticide product label repository, to locate the pesticide product labels for all currently registered chlorpyrifos products to determine the approved use patterns. OPPIN and PPLS are relied upon by the Agency and are the best available tools for generating this information.

5. Based on my search results, I calculated that there are 79 currently registered pesticide products containing the pesticide chlorpyrifos, which are registered to

over 20 different registrants. Of those 79 products, at least 28 products are registered only for “non-food uses” (that is, a use that is not expected to result in the presence of pesticide residues on food) and at least 45 other products are registered for a combination of “non-food uses” and “food uses” (that is, uses expected to result in residues on food). Based on my review of registered product labels, the approved “non-food uses” for currently registered chlorpyrifos products include, but are not limited to, golf courses, turf, road medians, exterior areas of industrial plants, mosquito control, sod farm treatments, commercial nurseries, ornamentals, non-food areas of manufacturing plants, warehouses, railroad boxcars, cut flowers, roach bait stations, wood treatment, and fire ant control. Chlorpyrifos is also registered for use on numerous food crops, including soybeans and corn.

I hereby declare and affirm, subject to the penalties of perjury, that the foregoing statement is true and correct.


Michael Walsh


Date

**Form 11. Certificate of Compliance Pursuant to
9th Circuit Rules 35-4 and 40-1 for Case Number 17-71636**

Note: This form must be signed by the attorney or unrepresented litigant *and attached to the back of each copy of the petition or answer.*

I certify that pursuant to Circuit Rule 35-4 or 40-1, the attached petition for panel rehearing/petition for rehearing en banc/answer to petition (check applicable option):

Contains words (petitions and answers must not exceed 4,200 words), and is prepared in a format, type face, and type style that complies with Fed. R. App. P. 32(a)(4)-(6).

or

Is in compliance with Fed. R. App. P. 32(a)(4)-(6) and does not exceed 15 pages.

Signature of Attorney or Unrepresented Litigant Date

("s/" plus typed name is acceptable for electronically-filed documents)

From: Tony Cofer <tony.cofer@agi.alabama.gov>
Date: Thursday, August 9, 2018 at 4:35 PM
To: Amy Sullivan <aapco.sfireg@gmail.com>
Subject: Chlorpyrifos Court Ruling

Court Orders Ban on Harmful Pesticide, Says EPA Violated Law

WASHINGTON (AP) — A federal appeals court ruled Thursday that the Trump administration endangered public health by keeping the widely used pesticide chlorpyrifos (clor-PEER-i-fos) on the market despite extensive scientific evidence that even tiny levels of exposure can harm babies' brains.

The 9th U.S. Circuit Court of Appeals in San Francisco ordered the Environmental Protection Agency to remove chlorpyrifos from sale in the United States within 60 days.

A coalition of farmworkers and environmental groups sued last year after then-EPA chief Scott Pruitt reversed an Obama-era effort to ban chlorpyrifos, which is widely sprayed on citrus fruits, apples and other crops. The attorneys general for several states joined the case against EPA, including California, New York and Massachusetts.

In a split decision, the court said Thursday that Pruitt, a Republican forced to resign earlier this summer amid ethics scandals, violated federal law by ignoring the conclusions of agency scientists that chlorpyrifos is harmful.

"The panel held that there was no justification for the EPA's decision in its 2017 order to maintain a tolerance for chlorpyrifos in the face of scientific evidence that its residue on food causes neurodevelopmental damage to children," Appeals Court Judge Jed S. Rakoff wrote in the majority's opinion.

EPA spokesman Michael Abboud said the agency was reviewing the decision. It could appeal the ruling to the Supreme Court.

Environmental groups and public health advocates hailed the court's action as a major victory.

"Some things are too sacred to play politics with, and our kids top the list," said Erik Olson, senior director of health and food at the Natural Resources Defense Council. "The court has made it clear that children's health must come before powerful polluters. This is a victory for parents everywhere who want to feed their kids fruits and veggies without fear it's harming their brains or poisoning communities."

Chlorpyrifos was created by Dow Chemical Co. in the 1960s. It remains among the most widely used agricultural pesticides in the United States, with the chemical giant selling about 5 million pounds domestically each year through its subsidiary Dow AgroSciences.

Dow did not immediately respond to an email seeking comment. In past statements, the company has contended the chemical helps American farmers feed the world "with full respect for human health and the environment."

Chlorpyrifos belongs to a family of organophosphate pesticides that are chemically similar to a chemical warfare agent developed by Nazi Germany before World War II.

As a result of its wide use as a pesticide over the past four decades, traces of chlorpyrifos are commonly found in sources of drinking water. A 2012 study at the University of California at Berkeley found that 87 percent of umbilical-cord blood samples tested from newborn babies contained detectable levels of the pesticide.

Under pressure from federal regulators, Dow voluntarily withdrew chlorpyrifos for use as a home insecticide in 2000. EPA also placed "no-spray" buffer zones around sensitive sites, such as schools, in 2012.

In October 2015, the Obama administration proposed banning the pesticide's use on food. Pruitt reversed that effort in March 2017, adopting Dow's position that the science showing chlorpyrifos is harmful was inconclusive and flawed.

Tony L. Cofer
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