Enforceability of Bulletins Live! Two

Kevin Kern, Pesticide Registration Specialist

Michigan Dept. of Agriculture & Rural Development

AAPCO ESA Workgroup Co-Chair

AAPCO Endangered Species Workgroup

- Gary Bahr (Co-Chair), Washington State Department of Agriculture
- Kevin Kern (Co-Chair), Michigan Dept. of Agriculture & Rural Development
- Harris Walters, Florida Department of Agriculture & Consumer Services
- Aaron Kreider, Office of the Indiana State Chemist
- Craig Romary, Nebraska Department of Agriculture
- Nick Sumner, Georgia Department of Agriculture
- Becky Langer-Curry, Bayer U.S. LLC
- Allison Cuellar, Texas Department of Agriculture
- Lukas Wagner, North Dakota Department of Agriculture
- Steve Dwinell, Vermont Agency of Agriculture, Food and Markets
- Perry Beale, Washington State Department of Agriculture, Natural Resources
- Kathryn Rifenburg, Oregon Department of Agriculture – Pesticide Program
- Kelly Navinsky-Wenzl, Kansas Department of Agriculture
- Gretchen Paluch, Iowa Department of Agriculture and Land Stewardship
- Kaci Buhl, Oregon Department of Agriculture
- Ken Everett, California Department of Pesticide Regulation
- Chava McKeel, Golf Course Superintendents Association of America
- Jasmine Courville, Tribal Pesicide Program Council

Purpose of workgroup – to provide a forum for improving AAPCO membership understanding of the ESA Strategy, questions on ESA Strategy, and providing information to OPP's ESA Strategy Team

Continuing Activities

- Bi-weekly or monthly meetings of WG

  (22 meetings since 11/22)
- Meetings with USEPA ESA Strategy Team – (8 meetings to date, includes both virtual and in-person)
- Collection of information for EPA consideration
- Development of questions regarding implementation strategy
- Discussions on enforceability of proposed label language
- Identification and implementation discussions on education and training needs

Upcoming Priorities

- Information gathering for State Level Conservation Programs
- Assist in formation of a third SFIREG Working Group – ESA Implementation
- Information sharing meetings with EPA ESA Team
- Engagement of PSEPs and EPA Regions

Enforcement Concerns Discussed

- Lack of a recordkeeping requirement
  - Was a bulletin accessed and referenced prior to an application?
  - What version of the bulletin was accessed?
  - Were use restrictions followed?

Enforcement Concerns Discussed

- Too much complexity will result in confusion and more violations
  - BLT must be readily available (connectivity and internet availability issues)
  - BLT must be easy to navigate and understand
  - PULA maps must be accurate and make sense
  - Pesticide use limitation language must be clear and enforceable

Diazinon AG600 Bulletin Language:

Code	Limitation
RPMDZ	Do not apply this product when soil is saturated, or when a storm event is likely to produce runoff from the treated area is forecasted (by NOAA/National Weather Service, or other similar forecasting service) to occur within 48 hours following application. Do not apply this product when: wind speeds exceed 10 mph when applying the product via airblast, or wind speeds exceed 15 mph when applying via ground boom or other methods. Do not apply this product when tank mixing with other neurotoxic pesticides (i.e., organophosphate, carbamate, pyrethroid, and neonicotinoid pesticides) at application rates that exceed 50 percent the maximum labeled rate of any pesticide active ingredient used in the tank mixture.

OTF25	For this mitigation measure, salmonid habitat (referred to below as "fish habitat") is defined as surface waters accessible to salmon, including but not limited to lakes, reservoirs, rivers, streams, inundated floodplains, wetlands or natural ponds, estuaries, and marine near-shore areas. When determining buffer distances, measure from the ordinary high-water mark for rivers, streams, lakes, and tidally-influenced waters. For flooded habitats (inundated floodplains, e.g., Yolo Bypass), measure from the edge of the inundated area. For applications of diazinon, the required number of runoff mitigation points varies based upon the application rate and soil incorporation depth. Each application at a rate >1.5 to 2.5 (lbs a.i./Acre) with a soil incorporation depth between 0 to 1 inches requires 80 runoff mitigation points, while a soil incorporation depth >1 to 3 inches requires 50 runoff mitigation points, soil incorporation depth >3 to 7 inches requires 30 runoff mitigation points, and soil incorporation depth >7 inches requires 25 runoff mitigation points. Each application at a rate >0.5 to 1.5 (lbs a.i./Acre) with a soil incorporation depth between 0 to 1 inches requires 50 runoff mitigation points, while a soil incorporation depth >1 to 3 inches requires 30 runoff mitigation points, soil incorporation depth >3 to 7 inches requires 25 runoff mitigation points, and soil incorporation depth >7 inches requires 20 runoff mitigation points. Each application at a rate =<0.5 (lbs a.i./Acre) with a soil incorporation depth between 0 to 3 inches requires 25 runoff mitigation points, while a soil incorporation depth >3 to 5 inches requires 20 runoff mitigation points, and soil incorporation depth >5 inches requires 15 runoff mitigation points. How to determine the points necessary for selecting the correct mitigation: Step 1. Determine the number of runoff mitigation points needed for your pesticide application. To do this, simply determine the "Mitigation Points Required" based on your application method and rate. Step 2. Click the link https://www.epa.gov/endangered-species/drift-and-runoff-reduction-measures-and-associated-points and choose mitigation options from the table that provide an equal or greater value of points for runoff. Mitigation options can be added together, based on their point values.

Enforcement Concerns Discussed

- Expected lower verifiable compliance with bulletins & labeled mitigation measures
  - Adds an additional step or hurdle for the end user
  - “Provable” compliance may decrease as measures get more complicated

Intrepid 2F Bulletin Language:

Codes and Limitations Table

Code	Limitation
1b	Within this county, do not apply this product within one mile of sandy habitats that support wild lupine plants.

Enforcement Concerns Discussed

- Lack of applicator awareness
  - How much education is necessary?
  - What level of compliance assistance should be provided?
  - Most complex changes to label language since WPS.

Enforcement Concerns Discussed

- Applicator vs “Land Manager”
  - Who is ultimately responsible?
  - Disconnect makes enforcement very difficult
  - How is consistency achieved?
  - Applicator is responsible for following the label,but cannot make changes (like vegetative buffers) to their customers fields

Enforcement Concerns Discussed

- Customer vs Custom Applicator
  - Who is ultimately responsible?
  - How is communication of field conditions and mitigations addressed?
  - Do custom applicators understand and know how to apply requirements?

Enforcement Concerns Discussed

- Training requirements for investigation staff
  - Need to avoid a ‘kitchen sink’ scenario
  - Lack of field assessment experts to determine compliance
  - How to document and determine different aspects from the mitigations so that enforcement can stand in court?
  - Unless records are required, investigations will have to rely on applicator statements.

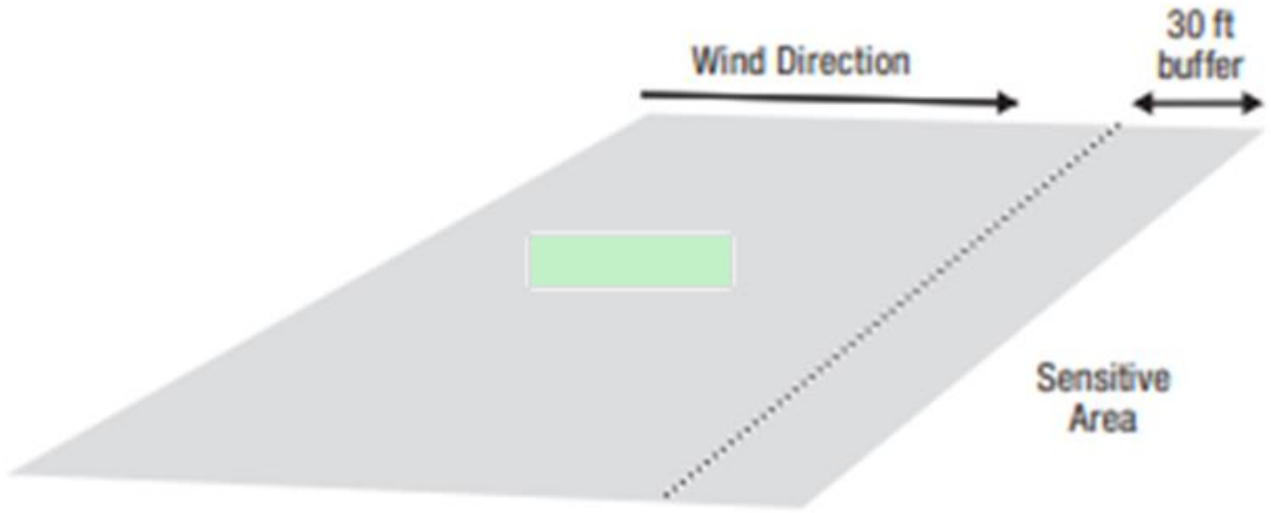
Inspectors may need to:

- Document that the applicator accessed the bulletin
- Document that the site/crop in question was actually within the PULA (ground truthing process?)
- Document that various mitigation measures were employed in that field and when
- Locate and interview land owners/managers
- Determine and document soil types
- Determine and document soil slopes
- Determine and document weather conditions at the time of application and preceding the application
- Determine and document soil saturation conditions
- Determine and document whether buffers or no spray zones were observed
- Be able to document and interpret environmental residues resulting from direct application, drift, runoff, drift plus runoff, or environmental loading

AAPCO SLA Survey - Enforcement Actions Related to Enlist Labels

- On January 11, 2022, EPA announced the details of the registration review of Enlist One Herbicide (EPA Reg. #62719-695) and Enlist Duo Herbicide (EPA Reg. #62719-649). On the same day EPA announced a plan to incorporate Endangered Species Act (ESA) protective measures for nontarget organisms and their habitat into future pesticide registration determinations.
- The 2022-2023 labels for the Enlist Herbicide products included specific requirements and restrictions for mitigation of both spray drift and runoff.
- AAPCO ESA Workgroup conducted a survey in February of 2024 to collect information from pesticide state lead agencies (SLAs and tribes) regarding their experiences and efforts implementing compliance with the new label mitigation measures.
- 28 responses, including 26 states and 2 tribes

Protection of Sensitive Areas



Applicator must maintain a 30 foot downwind buffer (in the direction in which the wind is blowing) from any area except:

1. Roads, paved or gravel surfaces.
2. Planted agricultural fields. (Except those crops listed in the "Susceptible Plants" section.)
3. Agricultural fields that have been prepared for planting.
4. Areas covered by the footprint of a building, shade house, silo, feed crib, or other man-made structure with walls and/or a roof.

To maintain the required downwind buffer zone:

- Measure wind direction prior to the start of any swath that is within 30 feet of a sensitive area.
- No application swath can be initiated in, or into an area that is within 30 feet of a sensitive area if the wind direction is towards the sensitive area.

Survey -Type of Drift Mitigation Noncompliance/Violation

- Drift to susceptible plants
- Excessive Wind Speed
- Protection of sensitive crops/vulnerable species
- Tank mix partner
- Application rate
- Not heeding inversion language
- No buffer from sensitive area/plants
- Wind was blowing toward nursery
- Wind blowing toward adjacent sensitive crop.
- Spray nozzle
- Recordkeeping

Management of Runoff

A variety of factors including soil type, slope, and weather conditions (e.g., rainfall) can influence volume and intensity of water running off the treated field. The applicator must evaluate all factors and make appropriate adjustments when applying this product. Land management, field condition and application practices that reduce, to the maximum extent practicable, runoff from treated fields, must be implemented by land managers/users of this product.

To reduce the potential for runoff and avoid off field impact from treated fields to maximum extent practicable, applicator must plan/schedule applications to maximize time between an application of this product and anticipated rainfall (or planned irrigation). Application must take place no less than 48 hours prior to irrigation or predicted rainfall (by NOAA/ National Weather Service, or other similar forecasting service).

For land with **Hydrologic Soil Groups* A & B**: The land manager/ applicator must effectively implement measures in the following tables to equal a **minimum of 4 credits**.

For land with **Hydrologic Soil Groups* C & D**: The land manager/ applicator must effectively implement the measures in the following tables to equal a **minimum of 6 credits**.

Mitigation Measures			Credits
Reduce number of applications - Reduced number of applications of Enlist products per year. Applications may be made at any time during crop development but must maintain a minimum 12-day retreatment interval.		3 applications	0
		2 applications	2
		1 application	4
Residue Tillage Management: no-till, strip-till, ridge-till, and mulch-till			4
Vegetative Filter Strips	30 ft off-field vegetative buffer on down slope	HSG A or B	2
		HSG C or D	0
	100 ft off-field vegetative buffer on down slope	HSG A or B	4
		HSG C or D	1
Field border: border with dense vegetative stands with a minimum width of 30 ft.			2
Cover Crop			2
Vegetative Barrier: Permanent strips of dense vegetation along the contours of the field with a minimum width of 3 ft.			2
Contour Buffer Strips or Terrace			2
Grassed Waterway			2
Water and Sediment Basin			1
Contour Farming or Contour Strip Cropping			1

*Hydrologic Soil Group (HSG) definitions: A = Sand, loamy sand, or sandy loam; B = Sandy clay loam; C = Silt loam or loam; D = Clay loam, silty clay loam, sandy clay, silty clay or clay.

Applicators/Land Managers must meet minimum criteria described for each mitigation measure as outlined on to receive credits.

Mixing Steps

Begin with half-tank full of water carrier. Begin agitation and continue throughout mixing process. Add products in order, one at a time allowing

Survey -Type of Runoff Mitigation Noncompliance/Violation

- Use observation was conducted but soils/runoff mitigation measures were not documented. No SOP is in place for determining compliance.

- Applicator is not really focused on the runoff mitigation measures, because failure to comply does not usually result in a noticeable off-target movement incident.

Survey -Ensuring Compliance with Emerging Label Mitigation Measures

- Training and tools needed for inspectors on the drift and runoff mitigation measures – were measures implemented and did they work?

- *Order of events* and *availability of information* presents challenges
  - Original complaint alleges drift
  - Identity of the products applied is not known at the time of the site visit
  - Assessment of mitigation measures takes place when incident is reported

- *Land management practice* information presents challenges
  - Assess to site if landowner and application are not the same person
  - Cover crop information not immediately visible or available

- Rare to receive alleged runoff complaints, unless it involves a cultivated crop adjacent to the target field

Survey -Ensuring Compliance with Emerging Label Mitigation Measures

- Practicality of the runoff mitigation measures credit system and the ability of growers and applicators to comply with this label language.

  - It is common for a for-hire applicator to make an application to a field which is rented and farmed by one individual on a single season basis and owned by a third party.
  - Implementation of long-term modifications of a field such as terrace farming, and grassed waterways are often decisions made by the landowner not the farmer or the applicator.
  - A for-hire applicator may be dependent on the farmer to plant a cover crop that Fall to meet the label required mitigation credits. This presents challenges on ensuring the practice was implemented months after the pesticide application and for holding the applicator accountable for a task outside of their control.

Survey -Ensuring Compliance with Emerging Label Mitigation Measures

- No recordkeeping requirements to document application date, weather conditions, hydrologic soil group(s) and mitigation measures.
  - Private and commercial applicators
  - Voluntary admissions

- Based on the information available in the USDA-NRCS Web Soil Survey Maps, a given field could have more than one hydrologic soil group type. Labeling does not clarify how to proceed if part of the field is HSG A or B and the other part of the field is HSG C or D.

- Critical habitat needs to be pinpointed accurately and a blanket of entire county when critical habitat might be several miles away from an application site.

2 responses - Enlist and Enlist Duo are not labeled for use in state

4 responses - No concerns

2 responses - Not currently conducting inspections/investigations

Get Involved! Provide Feedback!

- Currently, no representation from EPA Regions 2 or 3

- Please provide feedback on surveys or questionnaires. This is a chance to provide EPA feedback and thoughts specific to your state!

➢Take a look at EPA's new Ecological Mitigation Menu website!

https://www.epa.gov/pesticides/mitigation-menu

Questions?