Pesticide Label Changes Brought On by the Endangered Species Act

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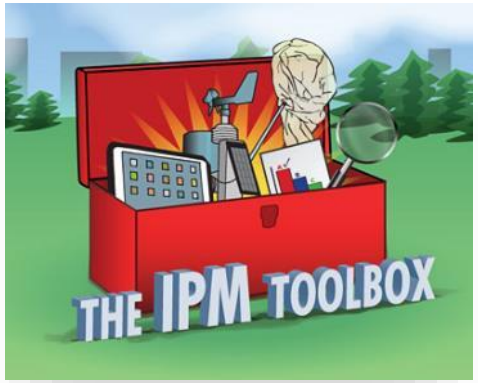

Northeastern IPM Center

April 29, 2025

USDA United States Department of Agriculture National Institute of Food and Agriculture

WSSA WEED SCIENCE SOCIETY OF AMERICA

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- Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and should not be construed to represent any official USDA or U.S. Government determination or policy.

Webinar Details

Webinar will end at 12:00pm

Live Transcription

A recording of this webinar will be available within a week

http://www.neipmc.org/go/ipmtoolbox

Northeastern IPM Center

We Welcome Your Questions

Please submit a question **at any time** using the Q&A feature to your right at any time

If you'd like to ask a question anonymously, please indicate that at the beginning of your query.

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Webinar Presenter

- **Niranjana Krishnan**

- Assistant Professor, Department of Entomology University of Maryland

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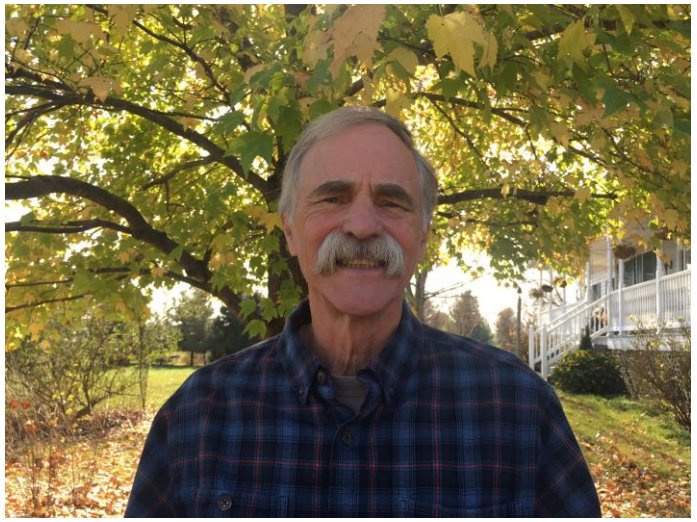
Webinar Presenter

- **Bill Chism**

- ***Chair, Endangered Species Act Committee,Weed Science Society of America***



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Webinar Presenter

- **Mark VanGessel**

- *Extension Weed Scientist and a faculty member in the Plant and Soil Science Department, University of Delaware*

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Webinar Presenter

- **Kurt Vollmer,**

- ***Extension Weed Management Specialist, University of Maryland***

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Some Questions for You

Northeastern IPM Center

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What is the Endangered Species Act (ESA)

- The ESA was first passed in 1973.
  - Requires government agencies to ensure any actions they take will not jeopardize any species that have been federally listed as endangered or threatened or their designated critical habitats

Canva Dream Lab

Government Agency Roles

EPA
Regulates pesticides and approves labels

FWS
Protects listed terrestrial and freshwater species

NMFS
Protects listed marine (saltwater) species

USDA
Analyzes impacts of mitigations for agriculture

The “Services”

Why Now? “Megasuit” settlement was finalized on **Sept 12, 2023**

"...the EPA **may not avoid compliance** with the ESA..."

Migrant Clinicians Network vs EPA. Dec 2023, 9th Circuit

It's déjà vu all over again. EPA comes before this court once more because of **its failure to abide by the law**....EPA cannot flout the will of Congress-of the people-just because it thinks it is too busy or understaffed.

Center for Food Safety v. Regan, Dec. 2022, 9th Circuit

"Before registering a pesticide, EPA must consult with the statutorily specified agencies that have expertise on risks to species' survival. **But for decades EPA routinely skipped that step when it registered pesticides**...."

Center for Biological Diversity v. EPA, Dec. 2022, DC Circuit

EPA has long had a **fraught relationship with the ESA**. It has made a habit of registering pesticides without making the required effects determination.

In re: Center for Biological Diversity and Center for Food Safety, Nov. 2022, DC Circuit

Over 1,700 Species are on the Endangered Species List

Over 900 species are potentially impacted by herbicides.
Over 850 species are potentially impacted by insecticides.

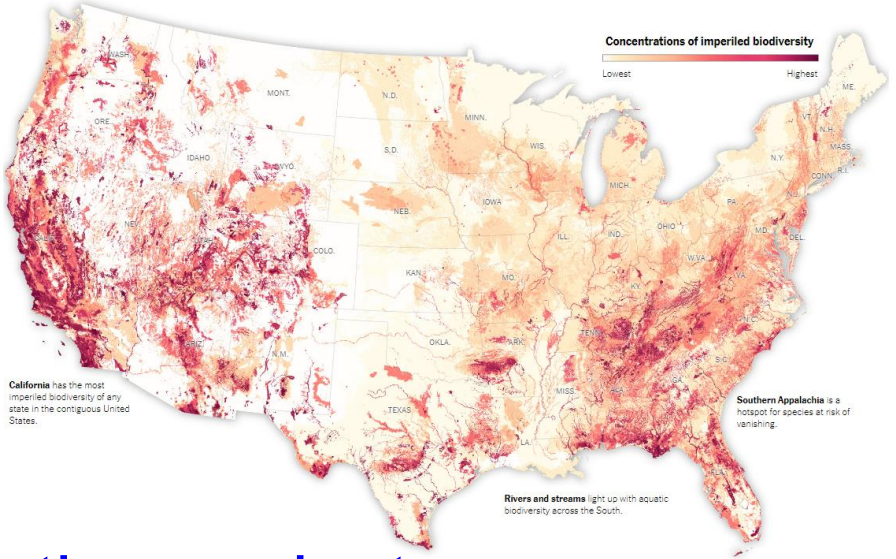
ESA Protection: People Say this is Too Complicated. But the EPA or Courts Had 3 Main Registration Choices

Option 1: Remove pesticide from the U.S. marketplace

- Any pesticide that could impact listed species or critical habitat could have its registration removed

Option 2: Restrict its use to only crops/sites in counties or states without listed species or critical habitat

- Map of listed species, more red shows larger populations (NY Times 2022 Map)



Option 3: Add mitigations to protect species

- Minimizes the number of impacted users, allows use in many crops/ sites and areas

Outlook: Would you prefer to not have access to the product or have access to it with mitigations?

Pesticide Labels Will Be Changing To Protect Threatened and Endangered (Listed) Species and Their Habitat

Only a few labels will be changing this year!

Timeline: When Could Labels Change?

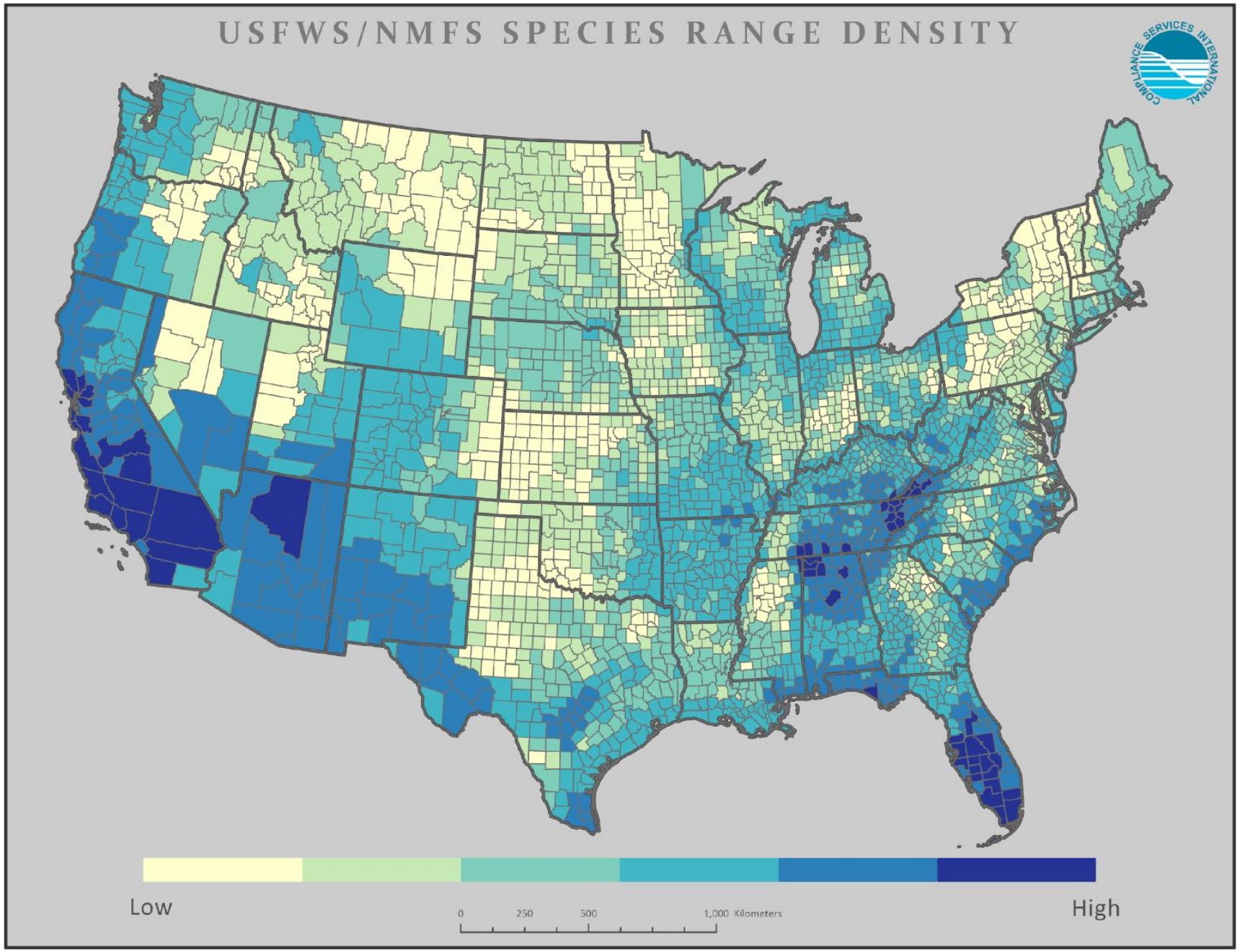
- Individual labels will have to be changed after notice and comment period
- This has started now and will continue for years to change pesticide labels
- Strategies are coming for all types of conventional pesticides:
  - All strategies should have similar mitigation elements
  - Herbicides finalized (August 2024),
  - Rodenticides finalized (2024???)
  - Insecticides (2025),
  - Fungicides (2026), and

Mead's Milkweed
US FWS

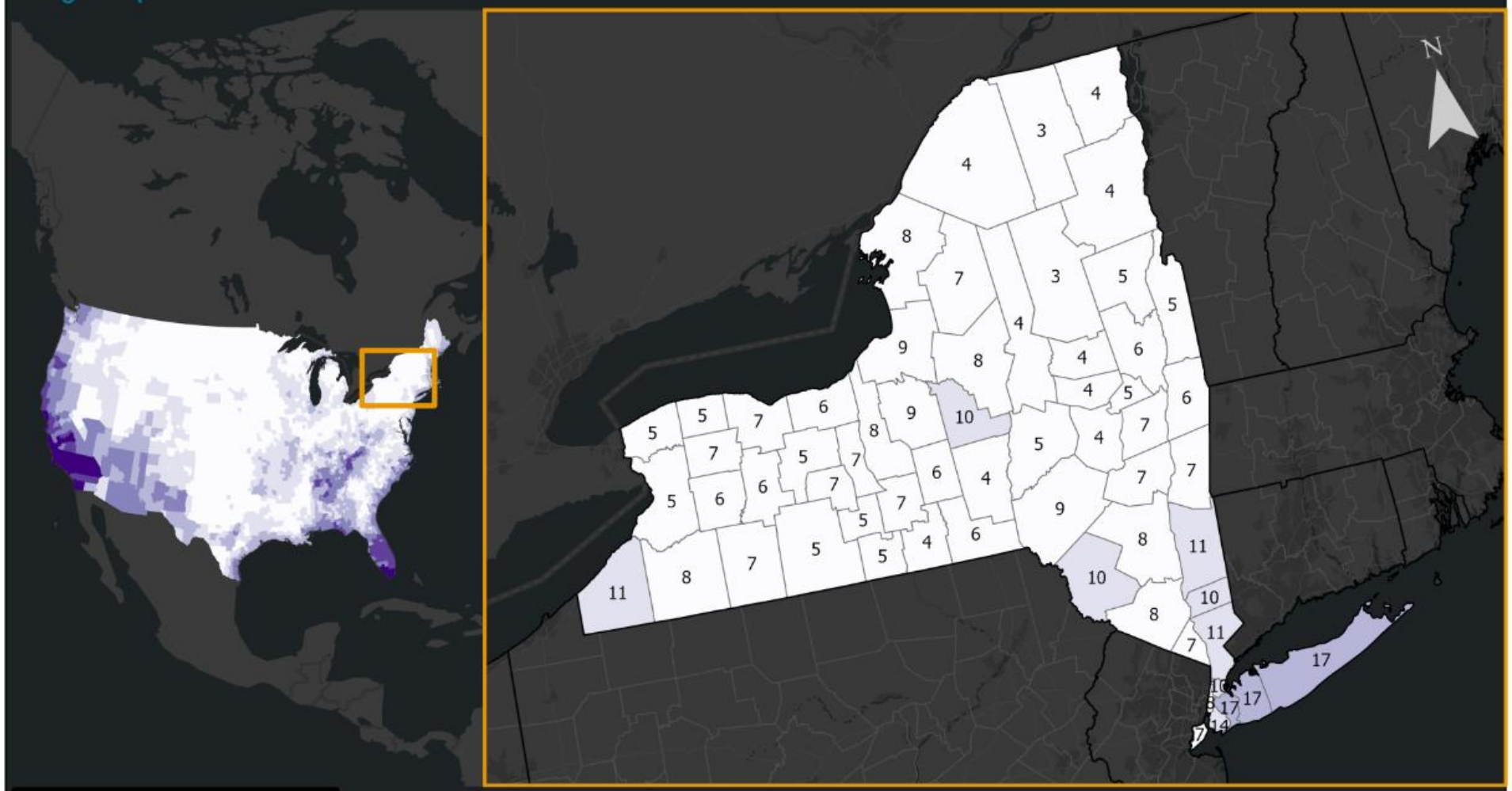
A National Situation with Local Implications

Every county in the US has at least one ESA-listed species and impacts are local. These need to be addressed locally by the end user.

Darker the color the greater density of species



Count of All ESA-Listed Species in New York Counties (October 2024)



This product is for informational purposes only. Users of this product should review or consult its primary data sources to assess the usability of the information.

Species counts are based on unique "Entity ID" records in spatial data representing current range downloaded from the US Fish & Wildlife ECOS and NOAA Fisheries Species Directory websites, accessed October 1, 2024. Entities include species with the following listing statuses under the Endangered Species Act (ESA): Candidate, Endangered, Proposed Endangered, Threatened, Proposed Threatened, Similarity of Appearance (Endangered), Similarity of Appearance (Threatened), and Experimental Population, Non-Essential.

Label Changes to Protect Listed Species and Their Critical Habitat

There are three types of label changes possible, aimed at mitigating the following:

1. Pesticide Usage Limitation Areas (PULAs)
   Impacts to specific geographic locations where listed species or their critical habitat are found
2. Spray drift
3. Runoff/Erosion

Herbicide Strategy: Finding Required Mitigations

For conventional agricultural uses, mitigations have to be determined for each field, not an entire farm

Required spray buffer and runoff/erosion mitigation can be different for each herbicide and crop combination.

Mitigations may appear on up to 3 places:

- On the product label
- Label may direct user to Bulletins Live! Two (BLT) webpage https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins
- Label may direct user to Mitigation Menu webpage https://www.epa.gov/pesticides/mitigation-menu

Pesticide Use Limitation Areas (PULAs)

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11.0 MANDATORY RUNOFF MITIGATION:

- **DO NOT** apply when soils are saturated or above field capacity.
- **DO NOT** apply during rain.

You must achieve a minimum of three points for the crop uses listed on this label unless otherwise stipulated below. Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA) that has a Bulletin in BLT. If you are located inside a PULA, follow the instructions in the bulletin.

If the application site is located outside a PULA, runoff/erosion mitigation is required for this product unless certain field/application parameters are present at the time of application (i.e., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc). Access EPA's Mitigation Menu Website at www.epa.gov/pesticides/mitigation-menu for a full list of field/application parameters to evaluate whether your field is subject to runoff/erosion mitigation.

If the application does not meet the specified field/application parameters, a minimum of three points for the crop uses listed on this label must be achieved. The applicator must choose among the mitigation and/or mitigation relief measures on EPA's Mitigation Menu Website to meet or exceed these points before applying this product. The website includes the full menu of runoff/erosion mitigation and mitigation relief measures. The following are examples:

Pesticide Use Limitation Areas (PULAs)

- EPA identifies geographic areas most critical to conserve a listed species and then adds buffers (1,000 feet or less) to account for potential offsite transport from a treated field.

- If a field is in a PULA use of certain pesticides may be restricted
  OR
  additional mitigations may be required

- If Bulletins Live! Two shows your field is outside of a PULA, it is in your best interest to document that there are no limitations within the month of your pesticide application.
  - You can check Bulletins Live! Two up to 6 months before the application

Bulletins Live! Two -- View the Bulletins

For assistance in using Bulletins Live! Two, view the tutorial. Also see background, notes and a quick start guide for BLT.

Directions

This tool displays Pesticide Use Limitation Areas (PULAs) for products with active Endangered Species Protection Bulletins. To generate a printable bulletin, please follow these steps:

1. Navigate to your intended pesticide application area by using the "Location Search" tool or panning and zooming on the map itself.
2. Select your Application Month from the Application Date dropdown.
3. Search specific pesticide product(s) by entering the EPA product registration

Unpin

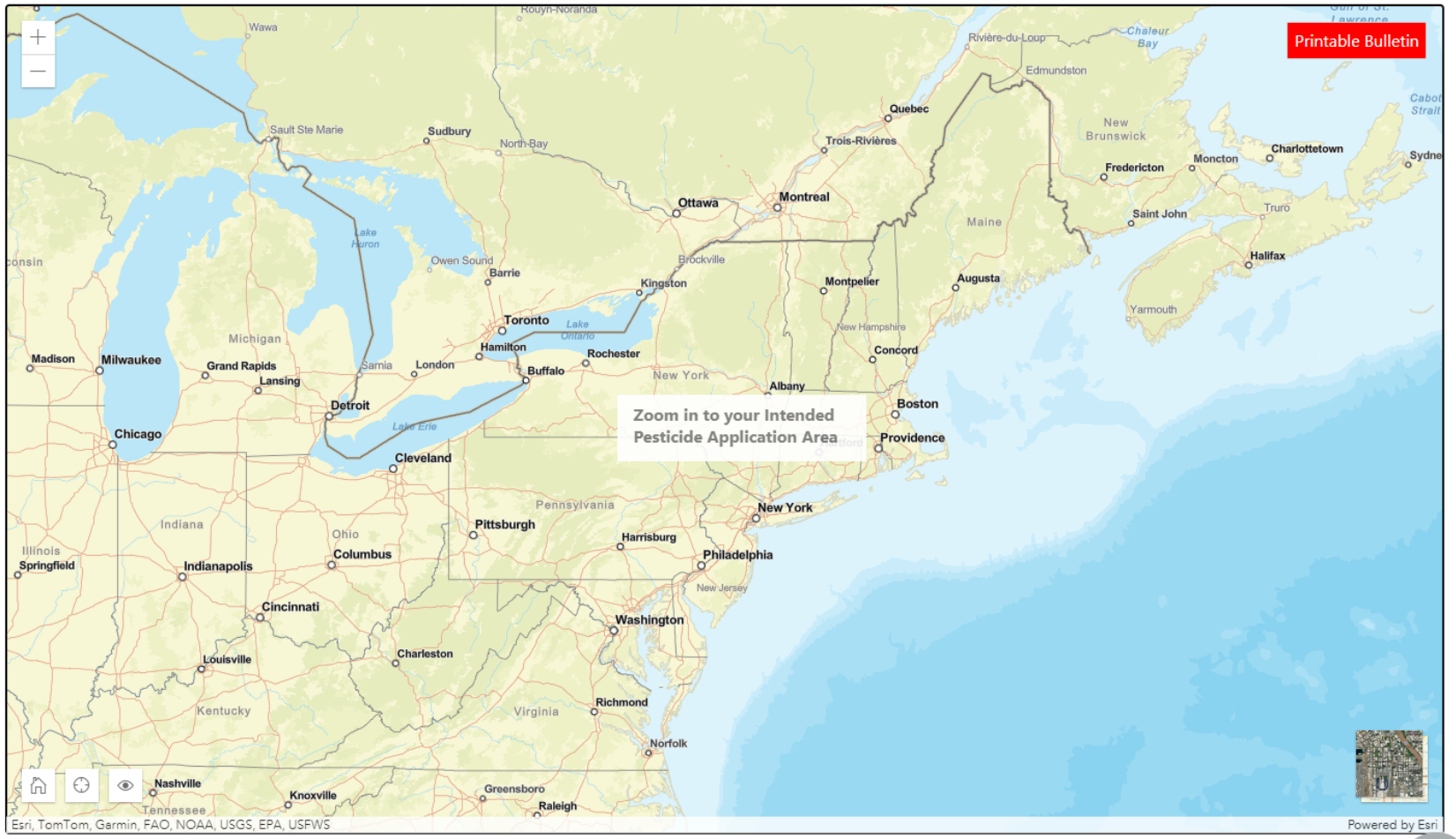
Location Search:

Find Place

Application Month:

April 2025

EPA Registration Number:



Endangered Species Protectio

Application Month: July 2023
Product: All products with limitatio

1 Areas where pesticide use must be limited are identified on t located beside the map to help pinpoint these locations.

2 Look below at the Pesticide Use Limitation Summary Table. selected Active Ingredient(s) (ALs) or Product(s) with pesticide printed map. Locate the Active Ingredient (AI) or Product you int table and identify the code in the last column. This code indicate limitation associated with that AI or Product. A limitation descrip be found below in the Codes and Limitations Table. If multiple P Limitation Areas (PULAs) are visible on the map, these tables p the highlighted PULA.

If you are applying a pesticide that contains more than one A multiple Products, then multiple codes may apply. Follow the lim when using this pesticide.

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ESPP Contact: ESPP@epa.gov Phone: 1-844-44

Endangered Species Protection

Pesticide Use Limitation Summary Tabl

Product	AI	Use	Method
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Cotton	Ground spray
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Soybean	Ground spray
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray
TAVIUM PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray

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Endangered Species Protection Bulletin

TAVIUM PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray	Liquid	D120
XTENDIMAX WITH VAPORGRIP TECHNOLOGY (264-1210) Alternate: M1768 Herbicide	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray	Liquid	D120
XTENDIMAX WITH VAPORGRIP TECHNOLOGY (264-1210) Alternate: M1768 Herbicide	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120

Codes and Limitations Table

Code	Limitation
D120	To protect federally listed threatened and endangered species, both a 310-foot in-field wind-directional spray drift buffer and a 57-foot omnidirectional in-field buffer are required. If applying to dicamba-tolerant soybeans with a qualified hooded sprayer, both a 240-foot in-field wind-directional spray drift buffer and a 57-foot omnidirectional in-field buffer are required to protect federally listed threatened and endangered species. Please see the label for a link to the website(s) with your product's qualified hooded sprayers. The following areas may be included in the buffer distance composition when directly adjacent to the treated field edges: 1. Roads, paved or gravel surfaces, mowed grassy areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated field. 2. Planted agricultural fields containing dicamba-resistant plantings of cotton and soybeans. 3. Areas covered by the footprint of a building, silo, or other man made structure with walls and or roof.

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Questions?

Northeastern IPM Center

Spray Drift

9.1 MANDATORY SPRAY DRIFT MITIGATIONS

9.1.1 For Aerial and Ground Boom Applications:

- **DO NOT** apply when wind speeds exceed 15 miles per hour at the application site.
- Select nozzle and pressure that deliver medium or coarser spray droplets as indicated in nozzle manufacturer's catalogues and in accordance with American Society of Agricultural & Biological Engineers standards 572.1 and 641 (ASABE S572 and S641).
- During application, the Sustained Wind Speed, as defined by the National Weather Service (standard averaging period of 2 minutes) must register between 3 and 15 miles per hour.
- Wind speed must be measured at the release height or higher, in an area free from obstructions such as trees, buildings, and farm equipment.
- **DO NOT** apply during temperature inversions.

9.1.2 For Aerial Applications:

- When applying to crops via aerial application equipment, the spray boom must be mounted on the aircraft to minimize drift caused by wing tip or rotor blade vortices.
- Wind speed and direction must be measured on location using a windsock, an anemometer (including systems to measure wind speed or velocity on an aircraft), or an aircraft smoke system.
- When the wind speed is between 11 to 15 miles per hour, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- When the wind speed is between 11 to 15 miles per hour, applicators must use a minimum of 3/4 swath displacement upwind at the downwind edge of the field. Otherwise, applicators must use a minimum of 1/2 swath displacement upwind at the downwind edge of the field.
- **DO NOT** release spray at a height greater than 10 ft above the crop canopy unless a greater application height is required for pilot safety.

9.1.3 For Ground Boom Application:

- Spray at the appropriate boom height based on nozzle selection and nozzle spacing, but **DO NOT** exceed a boom height of 24 inches above target pest or crop canopy. Set boom to lowest effective height over the target pest or crop canopy based on equipment manufacturer's directions.
- Wind speed and direction must be measured on location using a windsock or anemometer (including systems to measure wind speed or velocity using application equipment).

9.2 Mandatory Spray Drift Buffers

9.2.1 For aerial and ground applications, maintain a downwind buffer between the last spray row and the protection area as follows:

Application Method	Droplet Size Distribution (DSD)	Minimum Buffer Distance
Aerial	medium	50 ft
Ground	medium to coarser	10 ft

Protection areas include all areas with the following exceptions which can be included in the buffer footage, provided that people are not present within the application exclusion zone during the application, and they will not be contacted by the pesticide, either directly or through drift (see 40 CFR 170.405(a) and 40 CFR 170.505(a)):

- Agricultural fields, including untreated portions of the treated field.
- Roads, paved or gravel surfaces, mowed grassy areas adjacent to field, and areas of bare ground from recent plowing or grading that are contiguous with the treated area.
- Buildings and their perimeters, silos, or other man-made structures with walls and/or roof.
- Areas maintained as a mitigation measure for runoff/erosion or drift control, such as vegetative filter strips (VFS), field borders, hedgerows, Conservation Reserve Program lands (CRP), and other mitigation measures identified by EPA on the mitigation menu.[1]
- Managed wetlands including constructed wetlands on the farm.
- On-farm contained irrigation water resources that are not connected to adjacent water bodies, including on-farm irrigation canals and ditches, water conveyances, managed irrigation/runoff retention basins, and tailwater collection ponds.

[1] *Growers must ensure that pesticide use does not cause degradation of the CRP habitat.*

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Spray Drift Buffers – Percent Scale

- Buffers are downwind only
- Buffers are to protect “unmanaged areas”
- Managed areas outside of the treated area can be part of the spray drift buffer, such as agricultural field, roads, CRP land, and mowed areas

USDA NIFA

- There are over 15 ways to reduce buffer distances.
- Some applications do NOT need buffers such as spot treatments, tree injections, chemigation.

Table 8. Mitigation measures identified when making broadcast ground applications.

Mitigation Measures	% Reduction in Distance[5]
Application Parameters	
Reduced single application rate	% reduction corresponds to application rate reduction from maximum on pesticide product label[2]
High boom, fine to medium-coarse DSD[1]	55%
High boom, coarse DSD[1]	65%
Low boom, very fine to fine DSD[1]	40%
Low boom, fine to medium-coarse DSD[1]	65%
Low boom, coarse DSD[1]	75%
Over-the-top Hooded Sprayer	50%
Row-middle Hooded Sprayer	75%
Sprays below crop using drop nozzles or layby nozzles	50%
Spray drift reducing adjuvants, Medium DSD	30%
Spray drift reducing adjuvants, Coarse or Very coarse DSD	15%
Reduced Proportion of Field Treated (Number of Ground Application Equipment Passes)[3]	
1 pass	75%
2-4 passes	35%
5-10 passes	15%
Other Mitigation Measures	
Downwind windbreak[4]/hedgerow/riparian/forest/woodlots/shrubland	50% for basic windbreak/hedgerow 75% for advanced windbreak/hedgerow 100% for riparian/forests/woodlots/shrubland ≥ 60 ft width
Relative humidity is 60% or more at time of application	10%

DSD = droplet size distribution

Low boom height=release height is less than 2 feet above the ground

high boom=release height is greater than 2 feet above the ground

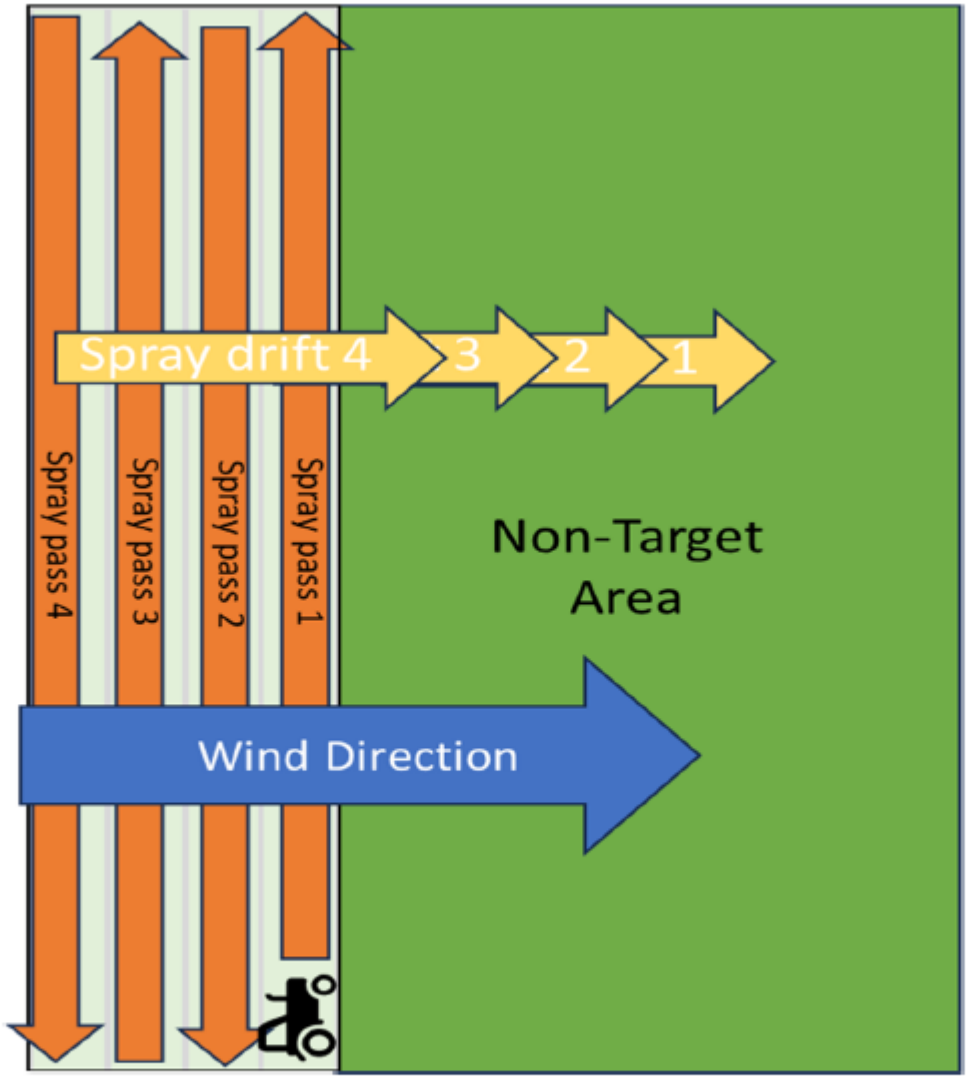
[1] This % reduction assumes use of high boom, very fine to fine droplet size for ground.

[2] Example 10% reduction in the spray drift buffer for 10% lower single application rate than labeled maximum single application rate.

[3] A spray drift buffer applies to downwind non-target areas. The reduced number of passes applies to the upwind part of the treated field.

[4] Artificial windbreaks (*e.g.*, a curtain or netting) are also applicable.

[5] After mitigation reductions in the spray buffer are applied, round to the nearest 5ft increment (*e.g.*, 50ft, 35ft)



Spray Drift Example: Reduce Proportion of Field Treated

Figure 6. Cumulative spray drift in non-target area from tractor passes on four parallel rows on treated area. For example, if this was a ground application and the applicator only made 4 passes of their field, then they could reduce identified spray drift buffer distance by 35%.

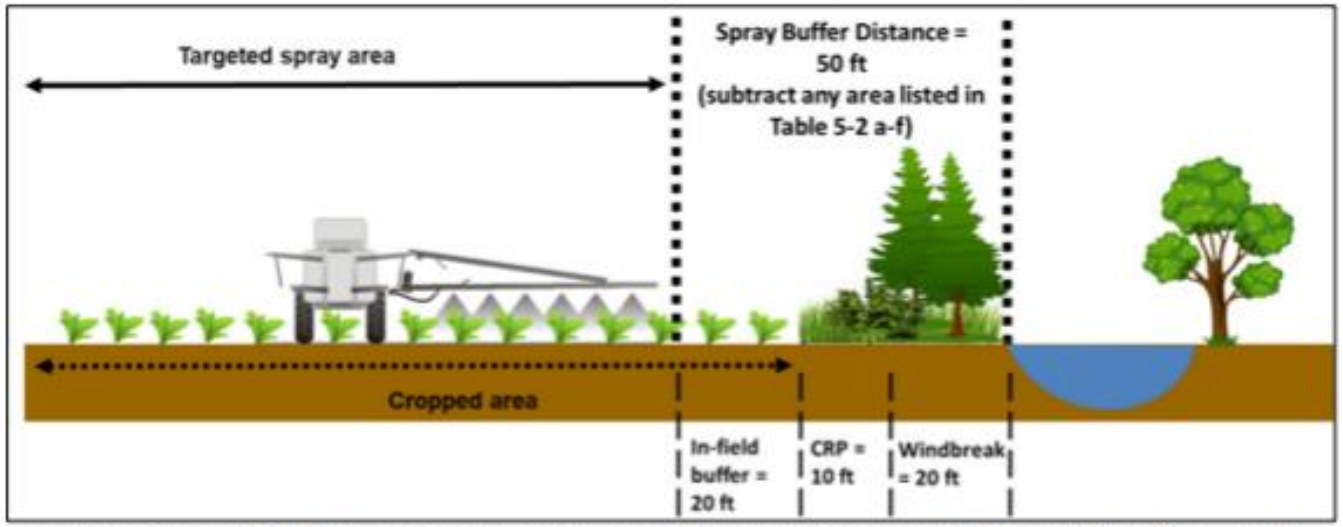


Figure 7. Diagram of the field (cropped area) with a downwind ecological spray drift buffer which includes a portion of the cropped area because the adjacent managed areas are less than the identified spray drift buffer distance.[25]

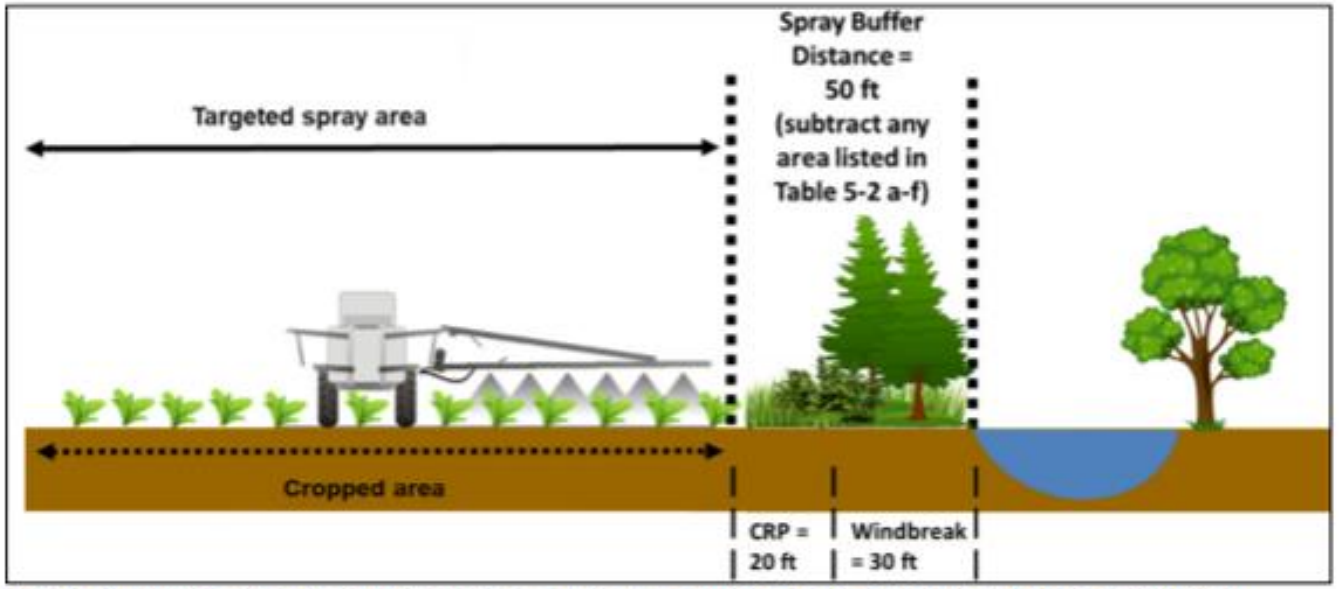


Figure 8. Diagram of the field (cropped area) with no cropped area included in the downwind ecological spray drift buffer because adjacent managed areas are equal to the identified spray drift buffer distance.[25]

Spray Drift Example: 50 Foot Buffer Requirement

Windbreak-Shelterbelt Criteria

All	50% reduction	75% reduction
downwind of the pesticide application and non-target area		
must run full length of treated area		
dense foliage, non-managed area is not visible from upwind side		
planted to CRP standards		
maintained for functionality		
Tree height	same height or above the application release height	≥ 2X the application release high
Species and Width	1-row of trees and/or shrubs or a 4-ft.-wide strip of nonwoody vegetation	≥ 2 rows of trees and/or shrubs with a mixture of vegetation types (e.g., trees, shrubs, herbs), or that have ≥ 8 ft. of depth for herbaceous (nonwoody) vegetation
Semi permeable manmade structure, curtain, netting raised prior to application	same height or above the application release height	same height or above the application release height

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Spray drift mitigation - buffers

Ground boom applications 10ft buffer on downwind side of field

Can be reduced to 0 ft with use of oil emulsion drift-reducing adjuvant constituting 2.5% of the volume of the finished spray tank mix

Or use of hooded sprayer, row middle sprayer, or wind-break is present

Aerial applications 50ft buffer on downward side

Reductions with coarse droplets and drift-reducing adjuvant constituting 2.5% of the volume of the finished spray tank mix

Reductions with windbreaks

Can be reduced to 0 ft if using multiple options

Runoff

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11.0 MANDATORY RUNOFF MITIGATION:

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- **DO NOT** apply during rain.

You must achieve a minimum of three points for the crop uses listed on this label unless otherwise stipulated below. Applicators must access and search Bulletins Live! Two (BLT) at https://www.epa.gov/pesticides/bulletins within six months of the application to determine whether the application site falls within a Pesticide Use Limitation Area (PULA) that has a Bulletin in BLT. If you are located inside a PULA, follow the instructions in the bulletin.

If the application site is located outside a PULA, runoff/erosion mitigation is required for this product unless certain field/application parameters are present at the time of application (i.e., subsurface or tile drains with controlled outlet, perimeter berm systems, irrigation tailwater return systems, spot treatment, etc). Access EPA's Mitigation Menu Website at www.epa.gov/pesticides/mitigation-menu for a full list of field/application parameters to evaluate whether your field is subject to runoff/erosion mitigation.

If the application does not meet the specified field/application parameters, a minimum of three points for the crop uses listed on this label must be achieved. The applicator must choose among the mitigation and/or mitigation relief measures on EPA's Mitigation Menu Website to meet or exceed these points before applying this product. The website includes the full menu of runoff/erosion mitigation and mitigation relief measures. The following are examples:

Mitigation for Runoff/Erosion – Point System

- Designed to protect listed species and critical habitat up to 1,000 feet downslope.
- Some areas outside of treated area can be included in the 1,000 feet, such as ag fields, roads, gravel surfaces, field buffers, conservation reserve land, etc.
- Herbicides will need 0 to 9 mitigation points, which will be listed on label
- There are ~40 ways to reduce runoff/erosion mitigations.
- Some applications do not need buffers, such as spot treatments, tree injections, chemigation, field has permanent berms, or tailwater return systems, etc.

Runoff/Erosion DRAFT Points – each herbicide by crop combination can have different points

Crop	2,4-D	Dicamba	Diuron	Metolachlor	Oxyfluorfen	Paraquat	Pendimethalin	Trifluralin
Alfalfa	NA	NA	9	NA	NA	0	3	5
Citrus	3	NA	9	NA	5	0	3	5
Corn	6	6	6	6	7	0	3	5
Cotton	NA	6	6	6	5	0	3	5
Grapes	3	NA	9	NA	7	0	5	5
Other Orchards	6	NA	9	NA	5	0	3	5
Other Grains	6	3	6	1	NA	0	3	5
Rice	NA	NA	NA	NA	NA	0	NA	NA
Soybeans	6	6	NA	6	5	0	NA	5
Vegetable/ Ground Fruit*	6	6	6	6	5	0	3	5
Wheat	6	6	6	NA	NA	0	NA	5

Metolachlor / s-metolachlor = points range from 1 to 9 depending on PULA area (soybeans, VGF, & aquatic areas are higher).

NA = not applicable because not registered.

Mitigations

Location

County-based relief

Field Characteristics

Slope ≤3%

Coarse-textured soils

In-field Measures

Irrigation water management

Conservation tillage

Cover crops

Vegetative strips

Reservoir tillage

Field-adjacent Measures

Grass waterway

Vegetative filter

Vegetative ditch

Riparian area

Terrestrial habitat

Other

Mitigation tracking

Specialist or Conservation program

Two from: in-field, field-adjacent, or runoff/discharge

Pesticide Specific

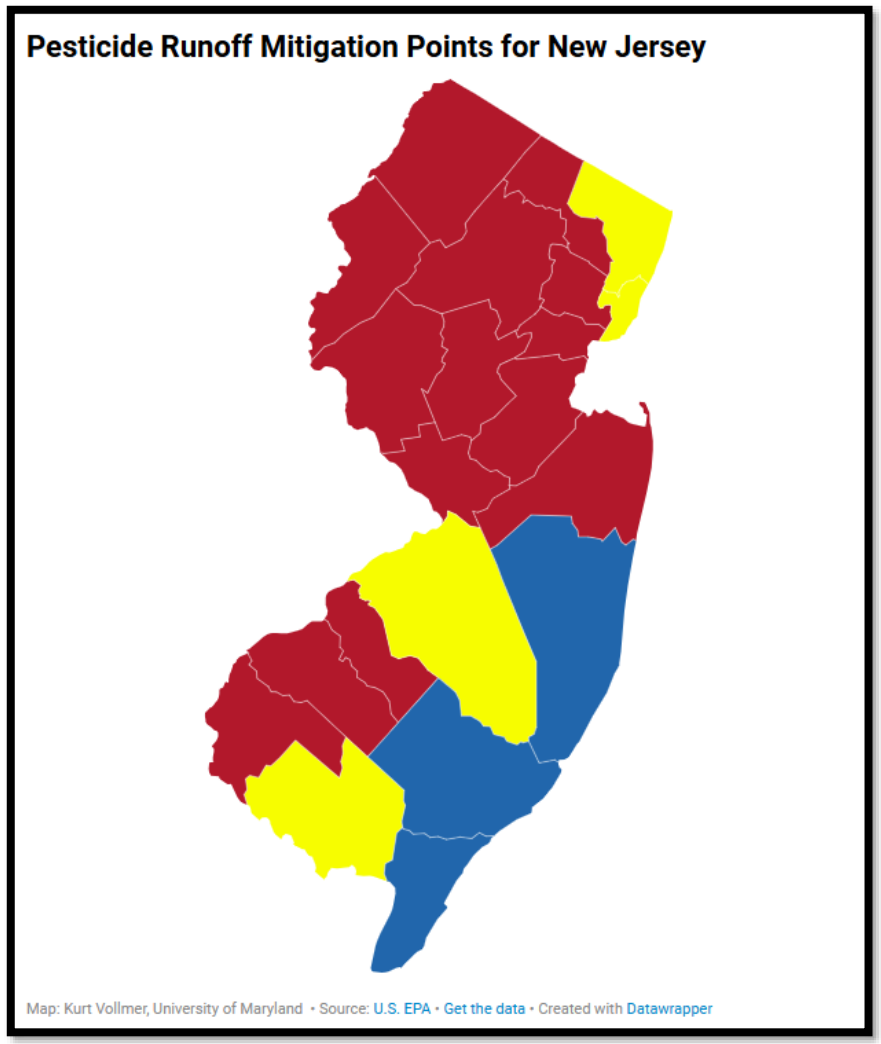
Annual rate reduction

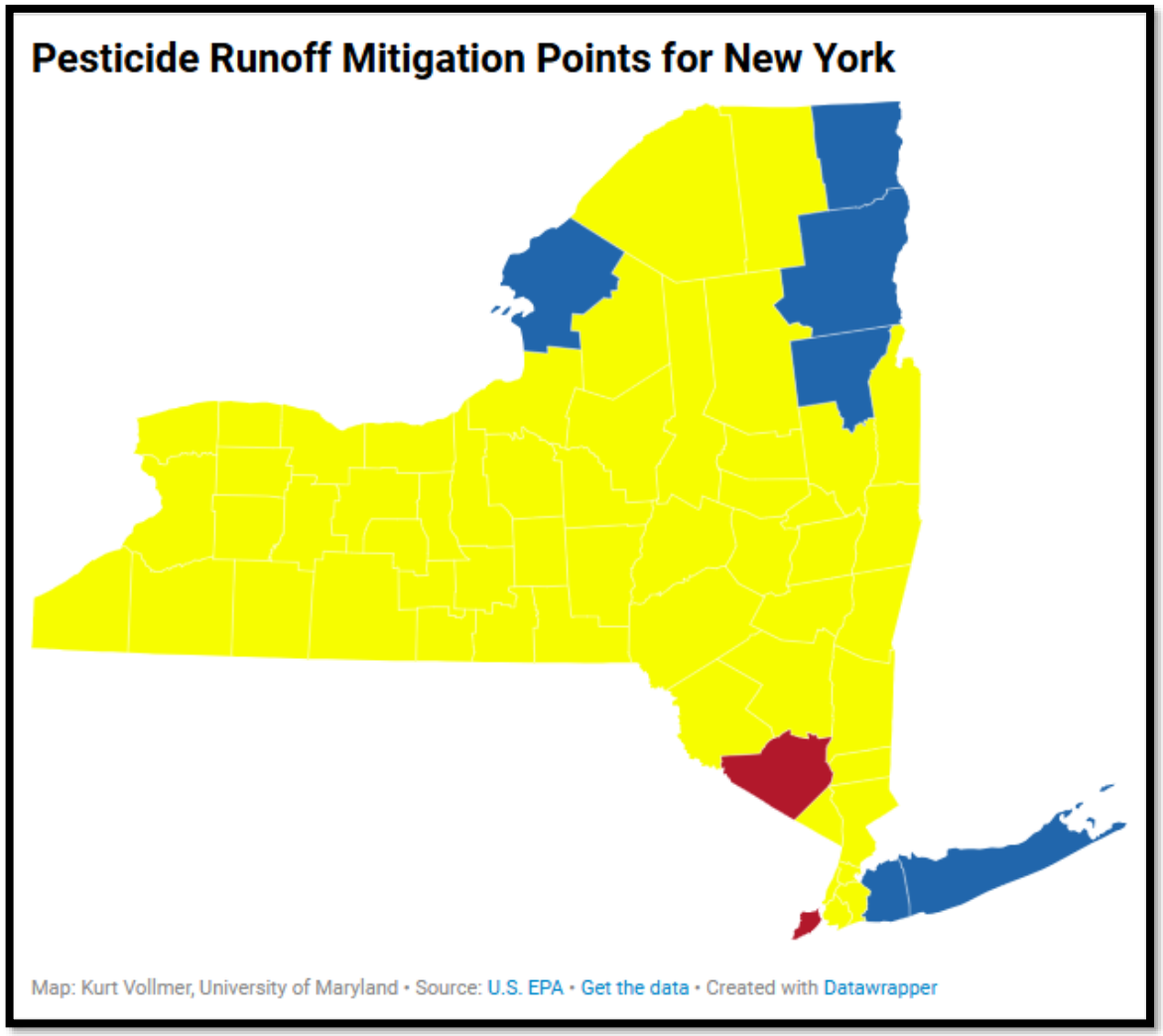
Reduction % field treated

Soil incorporation

Location – County Based Relief

= 0 points = 2 points = 3 points





Field Characteristics

Mitigation	Qualifying Practices	Points
Field slope	Field slope ≤3% (naturally low slope or flat fields; flat laser leveled fields)	2
Predominantly sandy soils	>50% sand, loamy sand, or sandy loam soil without a restrictive layer that impedes the movement of water through the soil	2

In-Field Measures

Mitigation	Qualifying Practices	Points
Conservation tillage	• No-till, including perennial crops (e.g., orchards that are not tilled)	3
	• Reduced tillage, strip tillage, ridge tillage, mulch tillage	2
Reservoir tillage	• Reservoir tillage, furrow diking, basin tillage	3
Contour farming	• Contour farming, contour tillage, contour orchard and perennial crops	2
Vegetative strips – In-field	• Inter-row vegetated strips, strip cropping or intercropping, alley cropping, prairie strips, contour buffer strips, contour strip cropping, vegetative barrier (occurring in a contoured field)	2
Terrace farming	• Terrace farming, terracing, field terracing	2
Cover crop or continuous ground cover	• Cover crop or continuous groundcover; with tillage	1
	• Short-term cover crop or continuous groundcover; no tillage	2
	• Long-term cover crop or continuous groundcover; no tillage	3

Field-Adjacent Measures

Mitigation	Qualifying Practices	Points
Grassed waterway	• Grassed waterway	2
Vegetative filter strips	• 20 to 30 ft wide	1
	• 30 to <60 ft wide	2
	• ≥60 ft wide	3
Vegetative ditch	• Vegetative ditch	1
Riparian forest buffer; riparian herbaceous cover	• 20 to 30 ft wide	1
	• 30 to <60 ft wide	2
	• ≥60 ft wide	3

Pesticide Specific

Mitigation Relief	Qualifying Practices	Points
Annual application rate reduction	• Any application 10% to <30% less than the maximum labeled annual application rate	1
	• Any application 30% to <60% less than the maximum labeled annual application rate	2
		3
Reduction in prop field treated (banc application, partial field treatment, ground precision sprayer, smart sprayer, or other specialized method)		2
		3
	• Portion of field not treated: ≥60%	4
Soil incorporation	• Watering-in or mechanical incorporation before a runoff producing event.	1

Liberty Ultra

Annual Application = 58 fl oz/A
Single Application = 29 fl oz/A
Allowable applications = 2 in-crop per acre per year

Other

Mitigation	Qualifying Practices	Points
Mitigation tracking	Documented at the field or farm level, using paper or electronic format	1
Working with or following recommendations from a technical specialist	• Have technical training, education and/or experience in that provides training and practice in the area of runoff or erosion mitigation. • Participate in continued education or training which should include run off and erosion control. • Have experience advising on conservation measures designed to develop site specific runoff and erosion plans.	1
	or	
Participating in a qualifying conservation program	• The program provides advice from technical experts. • The program provides site-specific guidance. • The program focuses on reducing or managing runoff and/or erosion. • The program provides documentation of program enrollment. • The program includes verification of implementation of the recommended measures or activities.	2
Using mitigation measures from multiple categories	• Practices must be used from at least 2 of the following categories: in-field, field-adjacent, or systems that capture runoff and discharge • Examples: 1 in-field measure + 1 field-adjacent measure OR 1 in-field measure + 1 system that captures runoff and discharge OR 1 field-adjacent measure + 1 system that captures runoff and discharge	1

ESA is Successful: 99% of Listed Species are Still Alive and 291 Species Have Been Delisted (some examples)

Animals	Plants
Bald eagles	Eggert's sunflower
Peregrine falcons	Maguire daisy
Manatees	Mountain golden heather
Sea turtles	Robbins' cinquefoil
Southern sea otter	San Clemente Island bush mallow
Maguire primrose	San Clemente Island lotus
Black-footed ferret	San Clemente Island paintbrush
Gray wolf	sandplain gerardia
	seabeach amaranth
	small whorled pogonia
	Tennessee coneflower
	Texas wild rice
	Virginia round-leaf birch
	Santa Cruz Island Dudleya
	Santa Cruz Island bedstraw

Maguire Daisy, US FWS

Eggert's sunflower,CBD

ESA: Compliance and Will It Go Away?

- Compliance with label mitigations.
  - State Lead Agencies will enforce labels.
  - Each state will decide the best way to do that.

- Will it go away?
  - Any modifications would require bipartisan support (e.g., some years Congress can’t even pass the Budget).
  - The ESA has been successfully functioning for 50 years, and people want to protect golden eagles, Florida manatees, etc.

Conclusion

- Work collaboratively
- The ESA assessment process is very new and still evolving
- Growers will have to look at drift, runoff/erosion, and PULAs on a field-by-field basis
- ESA changes will happen gradually over several years
- Any other state specific information?
- Is there a state contact person?

Lakeside daisy

ESA Resources

Rusty patch bumblebee

EPA Endangered Species Main Page

- https://www.epa.gov/endangered-species

Pesticides and Endangered Species Educational Resources Toolbox

- https://www.epa.gov/endangered-species/pesticides-and-endangered-species-educational-resources-toolbox

EPA Bulletin Live! Two (BLT)

- https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins

EPA Mitigation Menu

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

Weed Science Society of America webpage – definitions, handouts, and presentations

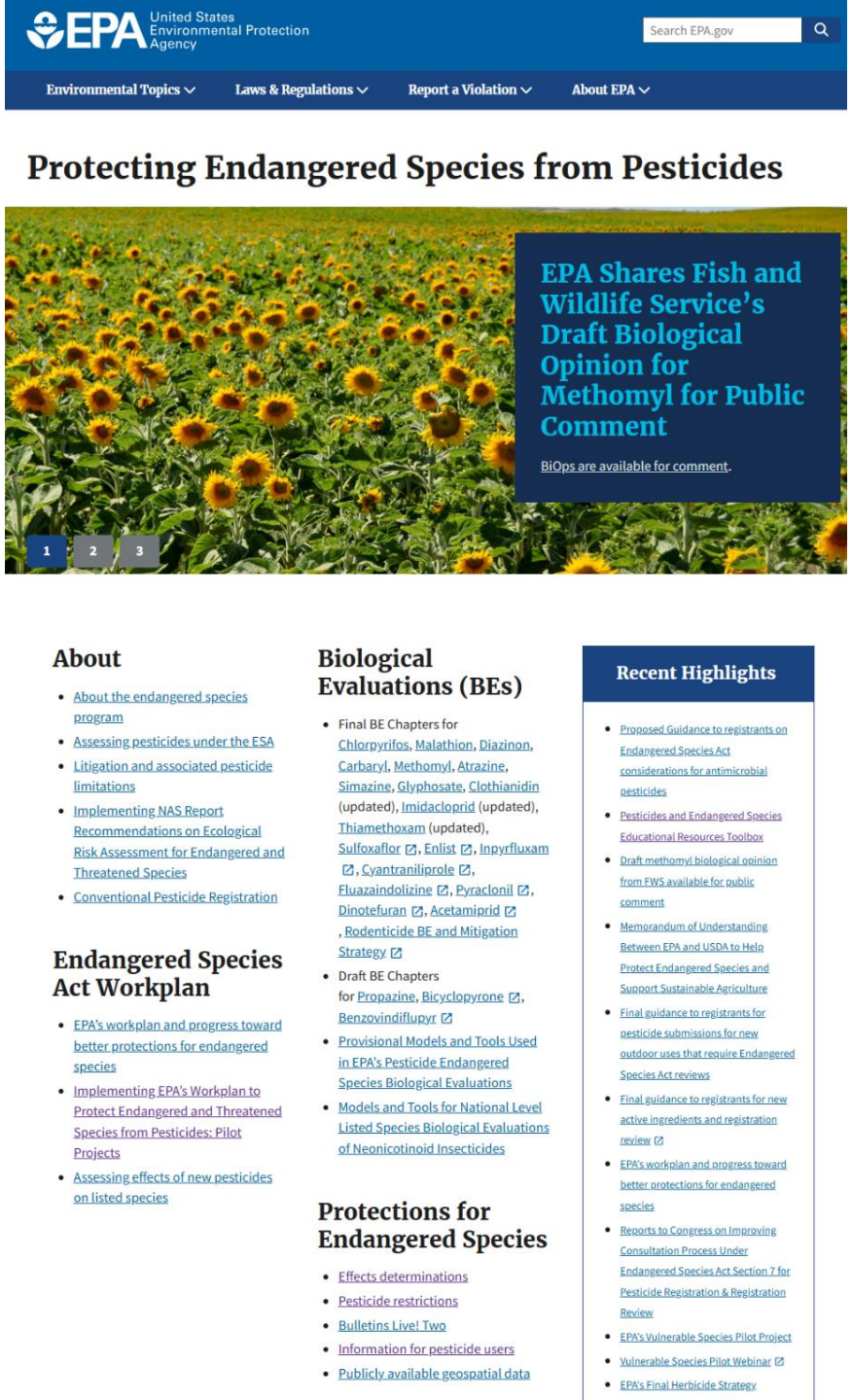
- https://wssa.net/endangered-species/

Compliance Services International

– AMMPS: Avoidance, Minimization, and other Measures for Protecting Species

https://ammpspecies.com/

Center for Integrated Pest Management – Pesticide Environmental Stewardship Website https://pesticidestewardship.org/



EPA Endangered Species Main Page

Collaborative Effort – December 2024

- Weed Science Society of America, Endangered Species Act Committee
  - Bill Chism, Chair
- American Association of Pesticide Safety Educators
  - Niranjana Krishnan, University of Maryland
  - Kim Brown, University of Tennessee
- U.S. Department of Agriculture, Office of Pest Management Policy
  - Cameron Douglass
  - Elyssa Arnold
- Support from U.S. Environmental Protection Agency
  - *Any mention of trade names, manufacturers or products does not imply an endorsement by the US Government of the United States Environmental Protection Agency. EPA and its employees do not endorse any commercial products, services, or enterprises.*

Questions?

Northeastern IPM Center

Some Questions for you

Northeastern IPM Center

Upcoming Webinars

https://www.northeastipm.org/ipm-in-action/the-ipm-toolbox/

Eco-Friendly IPM Approaches for Codling Moth Management

June 3, 2025 – 2:00 p.m. (eastern)

Presenter: Ajay Giri

Find a Colleague

To post a profile about yourself and your work: http://neipmc.org/go/APra

"Find a Colleague" site http://neipmc.org/go/colleagues

USDA United States Department of Agriculture National Institute of Food and Agriculture

Northeastern IPM Center

Recording of IPM Toolbox Webinar Series

Past recordings and today's Webinar will be available to view **on demand** in a few business days.

http://www.neipmc.org/go/ipmtoolbox

You can watch as often as you like.

USDA United States Department of Agriculture National Institute of Food and Agriculture

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