

Developing Issues with Pesticide Registration in Regard to Endangered Species Act

Don Parker

VP Technical Services,
National Cotton Council

2023

Endocrine Disruptor Screening: New Approach Methodologies

- Published Jan. 19
- Open for comments for 60 days

Endocrine Disruptor Risk Assessment

- possible adverse effects in humans and wildlife from exposure to chemicals that can interfere with the [endocrine system](#).
These effects can include:
 - developmental malformations,
 - interference with reproduction,
 - increased cancer risk; and
 - disturbances in the immune and nervous system function.

EPA Finalized WOTUS Rule at the end of 2022

- Under the Clean Water Act, how is “waters of the United States” defined? At what point does federal agencies have authority to enforce protection under the clean water act?
- Final WOTUS rule will go into effect 60 day (end of comment period) into 2023.

EPA Fact Sheet

Types of Waters	Features	Examples of Waters Likely to Be Jurisdictional Under the Final Rule	Regulatory Text Paragraph
Traditional Navigable Waters	Large rivers and lakes that could be used in interstate or foreign commerce, as well as waterbodies affected by tides.	Mississippi River, Erie Canal, Great Lakes	(a)(1)
Territorial Seas	Territorial seas that extend three miles out to sea from the coast.	Atlantic Ocean, Pacific Ocean	(a)(1)
Interstate Waters	Includes waters like streams, lakes, or wetlands that cross or form part of state boundaries.	Lake Tahoe, portions of the Columbia River, portions of Savannah River	(a)(1)
Impoundments	Impounded bodies of water created in or from “waters of the United States,” like reservoirs and beaver ponds.	Bear Gulch Reservoir in California	(a)(2)
Tributaries	Branches of creeks, streams, rivers, lakes, ponds, ditches, and impoundments that ultimately flow into traditional navigable waters, the territorial seas, interstate waters, or impoundments of jurisdictional waters. Tributaries are jurisdictional if they meet either the relatively permanent standard or significant nexus standard.	Wolftrap Run in Virginia, Puppy Creek in Arkansas	(a)(3)

WOTUS

- Clear as mud!
- Lawsuit already filed.



Pesticide Registration Concerns

- EPA Registration Decision (FIFRA)
- FWS and NMFS (Services) Biological Opinion (ESA)
- Anti-pesticide NGO Groups File Lawsuits
- Court Decides Legal Compliance of Decision
- Court may remand without vacatur
- Court may remand with vacatur
- 9th Circuit Court Heavily Favored by NGO's

Endangered Species Act vs. FIFRA

ESA

- Mandates any Federal Action that may affect endangered species requires consultation with NMFS/FWS
- NMFS/FWS say they lack staff – slow process
- Develop Biological Opinion – less data driven
- No Risk/Benefits or Economic Consideration
- Lawsuits

FIFRA

- Mandates timely review of pesticide safety – deadline dates
- FQPA Drinking Water, Dietary, and combined; Human Health Risk Assessment; Ecological Risk Assessment based on data; Terrestrial, Aquatic, Pollinators
- Risk/Benefits mandate
- Consultation failure with the Services –deadline dates for review
- Lawsuits

REMEMBER

- The question is “did you keep your product on the target site?”
- Has EPA sufficiently protected Endangered Species?
- Can the product be used in a safe manner that does not jeopardize humans or endangered species?
- “One bad apple can spoil the bunch.”
- Please comply with all label restrictions, which includes Bulletins Live Two.

Pesticides undergoing registration review (15 yr. cycle) will generally follow this process.



After publication EPA generally holds a 60-day public comment period. Currently there are 182 chemicals in Registration Review.

ESA Workplan Update

- Failure to comply with ESA
- Dual Agency Process
- New Procedure geared toward implementing Species Protection
- Individual Species Triggers May Affect
- Population Triggers Jeopardy
- Focus
 - Water Runoff
 - Sediment Runoff
 - Drift

Surface Water Runoff and Erosion Mitigation

- Vegetative filter strip (minimum width 30 ft for surface water runoff, 20 ft for soil erosion)
- Field border
- Field terracing/ contour buffer strips
- Contour farming
- Cover cropping
- No/reduce tillage
- Grassed waterways
- Riparian buffer zone/ riparian herbaceous zone
- Vegetative/grassed ditch banks
- Runoff retention pond/ water and sediment control basin/ sediment catchment basin/ constructed wetland
- Strip cropping
- Vegetative barriers
- Mulching with natural materials
- Alley cropping

Surface Water Runoff and Erosion Mitigation

- Feedback requested on mitigation practices?
 - Are they feasible?
 - Timing of implementing options?
 - Are there other options?
 - Impact on leased land?
 - Are the definitions of the practices accurate? (pp. 29-37)

Proposed Label Language: Reducing Risk from Spray Drift

- EPA expects to continue commonly used restrictions, e.g., droplet size, release height restrictions, windspeed restrictions, etc.
- Spray drift buffers from aquatic habitats
 - For example, lakes, reservoirs, rivers, permanent streams, wetlands or natural ponds, estuaries, and commercial fish farm ponds
- Spray drift buffers from conservation areas
 - For example, public lands and parks, Wilderness Areas, National Wildlife Refuges, reserves, and conservation easements

Proposed Label Language: Reducing Risk from Spray Drift (cont.)

- Limited exemptions for 10-foot windbreak, for conservation purposes, by conservation area personnel; for applicators who have completed an ESA consultation
- Seeking specific feedback
 - Should EPA switch to wind-directional buffers? Are they more helpful in some cases than others?
 - Role of drift reducing agents/adjuvants?
 - What specific conservation areas should be covered?
 - Review specific label restrictions
- Workplan Update, pp. 39-46

Proposed Label Language: Pesticide-treated Seed

- EPA is considering language to reduce potential exposure to terrestrial vertebrates and invertebrates by:
 - Reducing pesticide dust-off
 - Should dust-reducing techniques be required; how to measure efficacy?
 - Seed coatings? Fluency agents?
 - Burying spilled pesticide-treated seed
 - Is 2 ft. minimum practical?
 - Other common practices?
 - Disposing of excess seed after planting
 - Contact registrant?
- Workplan Update pp. 46-50

Proposed Label Language: Proposed Advisory Language for Insect Pollinators

- Information around voluntarily reducing risk to insect pollinators; raise awareness; promote best practices
- Advisory language will not be used to refine risk assessments
- EPA may consider mandatory mitigation to address on-field insect pollinator risk under FIFRA or ESA
- See Workplan Update, pp. 49-50

Endangered Species Protection Bulletins and Bulletins Live Two!

- Basics of Bulletins

- If limitations on pesticide use are necessary to protect listed species in an area, that information is relayed through a Pesticide Use Limitation Area

- A Bulletin consists of:

- Spatial location of pesticide use limitations
- Product/application/formulation information
- Limitation/mitigation language

- Bulletins are an extension of the label

- Allows for location-specific protections
- Bulletins can be converted into a 'printable' pdf

Let's Own ESA Compliance

- It is not going away.
- We define it, or others define it to us.
- Agriculture can grow species.
- Engage with your local/regional groups to enhance Endangered Species.

2023 Draft List of Pesticide Registration Review Case with FY2023 Actions and Cotton Use

ACETAMIPRID (Several trade names)

CLOTHIANIDIN (Belay, Valent USA)

DICHLOROPROPENE (InLine, Telone II soil fumigant)

DICROTOPHOS (Bidrin, Dicromax)

DIMETHOATE (Several trade names)

DINOTEFURAN (Venom, Valent)

DIURON (Several trade names)

IMIDACLOPRID (Several trade names)

OXYFLUORFEN (Several trade names)

PHORATE (Thimet)

PROPARGITE (Comite, Decimite, Mitimax, Victimite)

THIAMETHOXAM (Avicta, Centric, Cruiser, Endigo)

TRIBUFOS (DFT 6 EC, Folex, Quiver)

Acetamiprid

Anarchy 30 SG	34704-1096	Loveland Products, Inc.	Acetamiprid
Anarchy 70 WP	34704-1098	Loveland Products, Inc.	Acetamiprid
Argyle™ OD	70506-346	UPL NA Inc.	Acetamiprid, Bifenthrin
ArVida® 30 SG	91234-14	Atticus Ag	Acetamiprid
ArVida™ 70 WP	91234-15	Atticus Ag	Acetamiprid
Assail® 30 SG Insecticide	8033-36-70506	UPL NA Inc.	Acetamiprid
Assail® 70WP Insecticide	8033-23-70506	UPL NA Inc.	Acetamiprid

Azomar™	91234-14-92488	AgBiome Innovations, Inc.	Acetamiprid
Cormoran™	66222-264	ADAMA	Acetamiprid, Novaluron
Enkounter™ Insecticide	70506-337	UPL NA Inc.	Acetamiprid, Methoxyfenozide
Intruder® Max 70WP	8033-23-70506	UPL NA Inc.	Acetamiprid
Strafer® Max	8033-24-70506	UPL NA Inc.	Acetamiprid

Dimethoate

Dimate 4E	9779-273	WinField United	Dimethoate
Dimethoate 2.67	19713-232	Drexel Chemical Company	Dimethoate
Dimethoate 2.67 EC	34704-489	Loveland Products, Inc.	Dimethoate
Dimethoate 4 E	34704-207-67760	FMC Corporation	Dimethoate
Dimethoate 400	34704-207	Loveland Products, Inc.	Dimethoate
Dimethoate 400 EC	34704-207-279	FMC Corporation	Dimethoate
Dimethoate 4EC	19713-231	Drexel Chemical Company	Dimethoate
Dimethoate LV-4	19713-665	Drexel Chemical Company	Dimethoate

Diuron

Adios® Cotton Defoliant	66330-344	UPL NA Inc.	Diuron, Thidiazuron	Diuron 80 DF	81927-12	Alligare, LLC	Diuron
CutOut® Cotton Defoliant	228-678	Nufarm Americas, Inc.	Diuron, Thidiazuron	Diuron 80 WDG Weed Killer	34704-648	Loveland Products, Inc.	Diuron
Direx® 4L	66222-54	ADAMA	Diuron	Ginstar® EC	264-634	Bayer CropScience	Diuron, Thidiazuron
Diuron 4L	66222-54	ADAMA	Diuron	Karmex® DF	66222-51	ADAMA	Diuron
Diuron 4L	19713-36	Drexel Chemical Company	Diuron	Redi-Pik® 1.5EC Cotton Defoliant	66222-137	ADAMA	Diuron, Thidiazuron
Diuron 4L	9779-329	WinField United	Diuron				
Diuron 4L	81927-44	Alligare, LLC	Diuron				
Diuron 4L	34704-854	Loveland Products, Inc.	Diuron				
Diuron 80	19713-274	Drexel Chemical Company	Diuron				

Imidacloprid

- Acceleron® INT-710
- Acceleron® IX-409
- Acceleron® IX-409 Insecticide Seed Treatment
- Admire® Pro
- Advise® 2FL
- Advise® Four
- Advise® Four
- Aeris® Seed-Applied Insecticide/Nematicide
- Alias® 2F
- Alias® 4F
- Attendant® 480 FS
- Attendant® 600 FS
- Avenger™ Bold S3™
- Avenger™ S3™
- Axxess™ Insecticide Seed Treatment
- Brigadier® Insecticide
- Dyna-Shield® Imidacloprid 5
- Gaucho® 600 Flowable
- IMAX Plus
- Imidacloprid 4F
- Kilter®
- Leverage® 360
- Macho® 2.0 FL
- Macho® 4.0 Flowable
- Malice® 2F
- Malice® 75 WSP
- Midash 2SC Ag Insecticide
- Midash Forte Insecticide
- Montana® 2F
- Montana® 4F
- Nitro Shield®
- Nitro Shield® IV
- Nuprid® 2SC Soil/Foliar Insecticide
- Nuprid® 4.6F Pro
- Nuprid® 4F Max Insecticide
- Pasada® 1.6F
- Prey® 1.6
- Provoke™
- Resonate™ 480 ST
- Resonate™ 600 ST
- Revize® Imida ST
- Senator® 600 FS
- Sharda Imidacloprid 5SC
- Sherpa® Insecticide
- Skyraider™
- STartUP™ IMIDA Seed Treatment
- Swagger®
- Triple Crown™ Insecticide
- Velum® Total
- Viloprid™ FC 1.7
- Widow® Insecticide
- Willowood Imidacloprid 2SC
- Willowood Imidacloprid 4SC
- Willowood Imidacloprid 4ST
- Wrangler® Insecticide

Oxyfluorfen

- Collide™ Herbicide
- Galigan® 2E
- Galigan® H2O Herbicide
- Goal® 2XL Herbicide
- Goal® 2XL Herbicide
- GoalTender® Herbicide
- GoalTender® Herbicide
- OxyStar® 2E
- Oxystar® 4L
- Willowood OxyFlo 2EC
- Willowood OxyFlo 4SC

Draft Risk Assessments

- Human Health Risk Assessment
 - Hazard identification (potential to cause harm to humans and/or ecological systems)
 - Dose-Response Assessment (exposure and effect)
 - Exposure Assessment (frequency, timing, level of contact)
 - Water Risk Assessment (calculation predicting surface and drinking water concentration of the contaminant)
 - Risk Characterization (nature and extent of risk)
 - Food, Drinking Water, Dietary, Occupational Exposure, By-Stander

Draft Risk Assessments

- Ecological Risk Assessment
 - harmful effects on the plants and animals of concern.
 - Terrestrial Plants, animals, invertebrates, etc.
 - Aquatic Plants, animals, invertebrates, etc.
 - Pollinator Risk Assessment
 - Water Risk Assessment (calculation predicting surface and drinking water concentration of the contaminant)

Endangered Species Risk Assessment (work in progress)

- It is an evolving process. AG needs to be at the TABLE!

Malathion 2021

- EPA's Biological Evaluation (BE) for malathion addressed 1,778 listed, proposed and candidate species, and 784 proposed and designated critical habitats that they determined were likely to be adversely affected. EPA also requested informal consultation on 41 species and 10 critical habitats they determined were not likely to be adversely affected. EPA determined there would be no effect from the proposed action to 16 species.

FWS

- Determined Jeopardy to 78 species and 23 Critical Habitats.
- Reasonable and Prudent Measures will be identified.
- [Bulletins Live! Two -- View the Bulletins | US EPA](#)

- [Bulletins Live! Two -- View the Bulletins | US EPA](#)



Endangered Species Concern (on the label)

- Will identify need for Endangered Species “Bulletins Live:Two”
- Where and When are you applying the product.
- Quickstart method will show on right side.
- Application month and EPA product registration number located on the label.

Bulletins Live! Two

- Bulletins is an extension of the Label.
- Effects Determination is used to determine if Bulletin is needed.
- Informs mitigation options where Risk can not be precluded by information on the label.
- PULA – Pest Use Limitation Area
- Species location information overlap with potential use sites; where the limitation applies (Bulletin is potential mitigation)

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 for a specific pesticide product using the EPA registration number and

Unpin

Location Search:

Find Place



Application Month:

January 2023

EPA Registration Number:



Esri, Garmin, FAO, NOAA, USGS, EPA

Powered

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 for a specific pesticide product using the EPA registration number and

Unpin

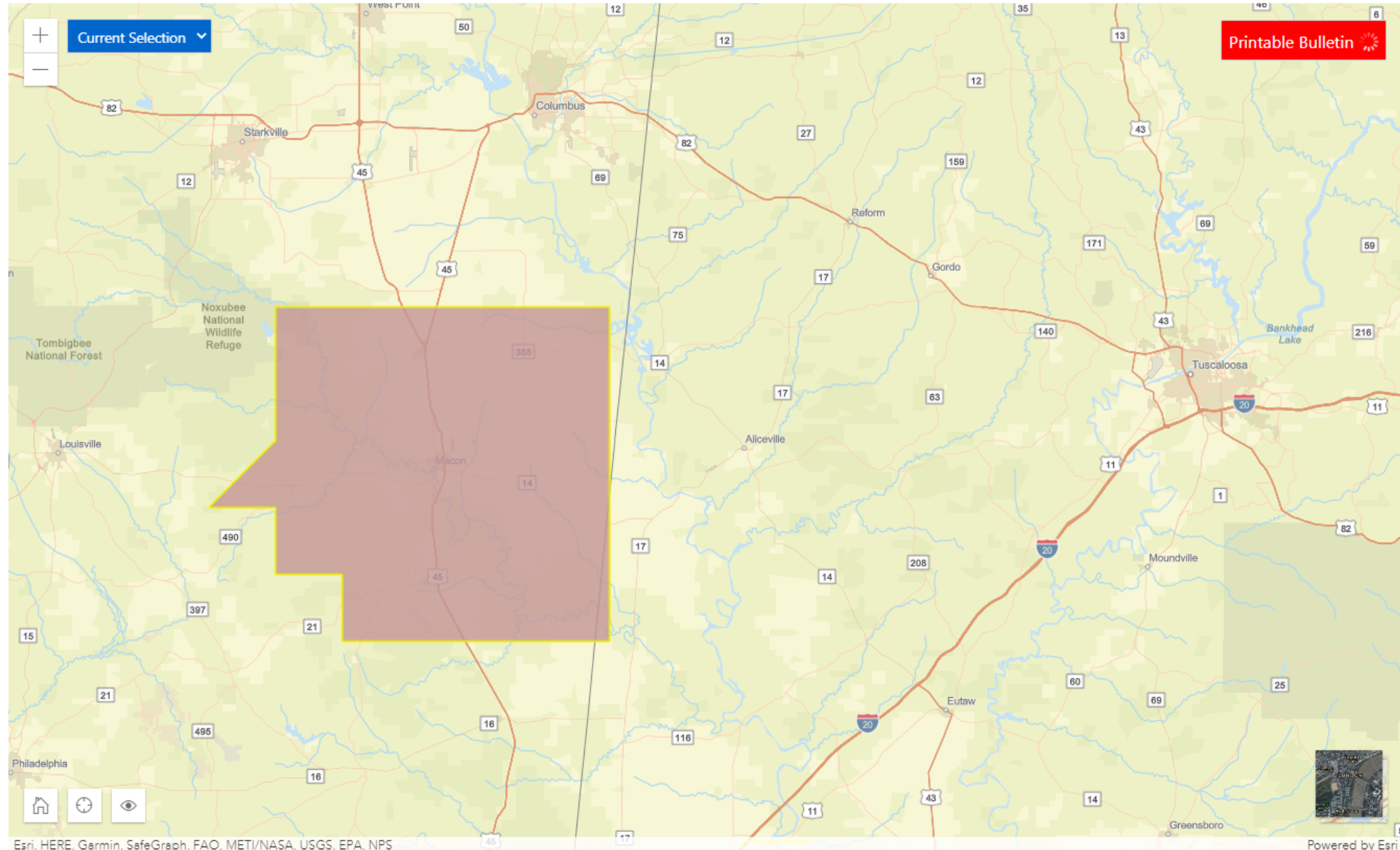
Limitations for Selected Area

Pula ID: 52

Event Name: Dicamba - 2020

Application Month: May 2023

Product	Count
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) <i>Alternate Names:</i> TAVIUM PLUS VAPORGRIP TECHNOLOGY	1
ENGENIA HERBICIDE (7969-472)	1
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	1



Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Powered by Esri

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 for a specific pesticide product using the EPA registration number and

Unpin

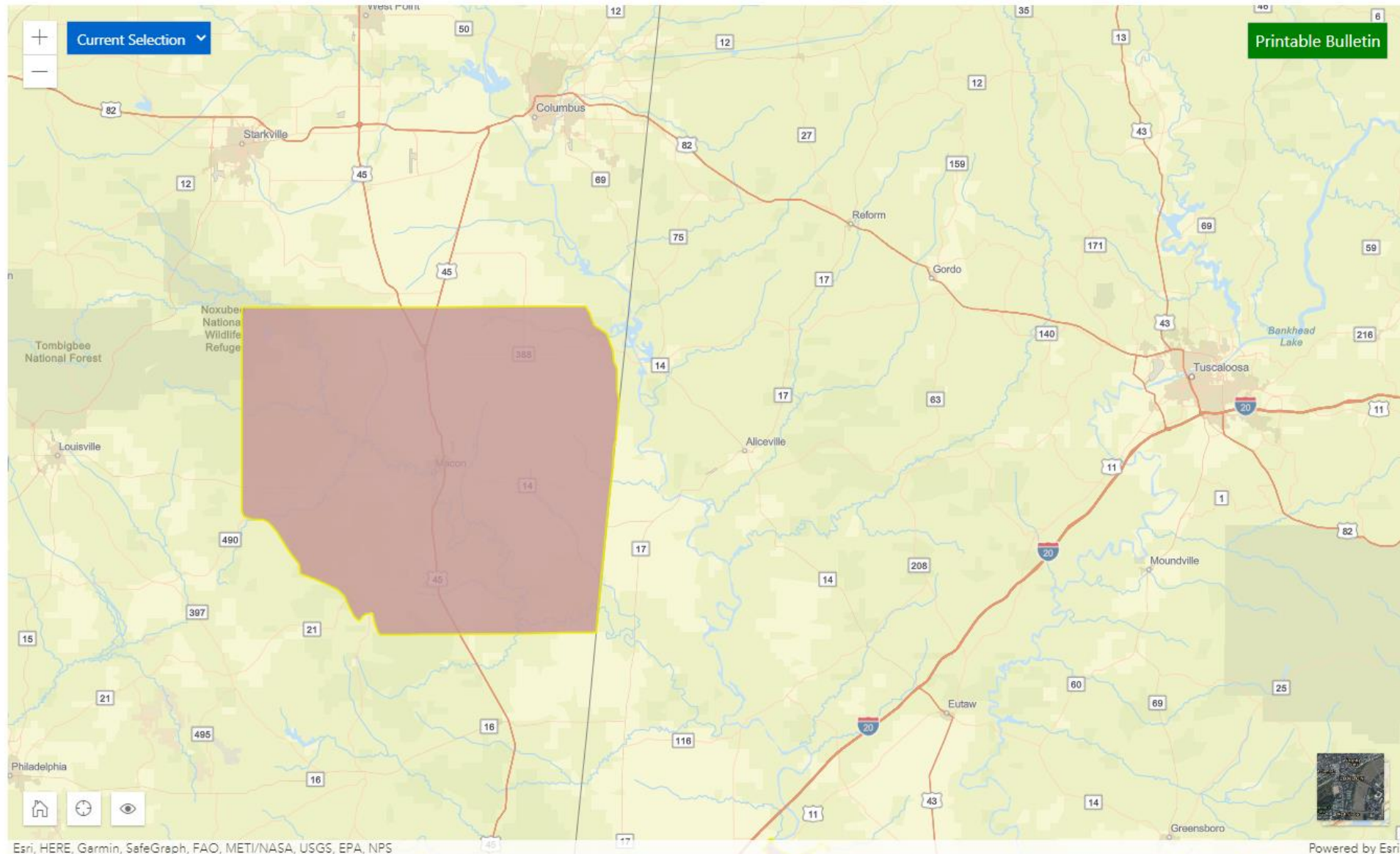
Limitations for Selected Area

Pula ID: 52

Event Name: Dicamba - 2020

Application Month: May 2023

Product	Count
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) <i>Alternate Names:</i> TAVIUM PLUS VAPORGRIP TECHNOLOGY	1
ENGENIA HERBICIDE (7969-472)	1
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	1



Esri, HERE, Garmin, SafeGraph, FAO, METI/NASA, USGS, EPA, NPS

Powered by Esri

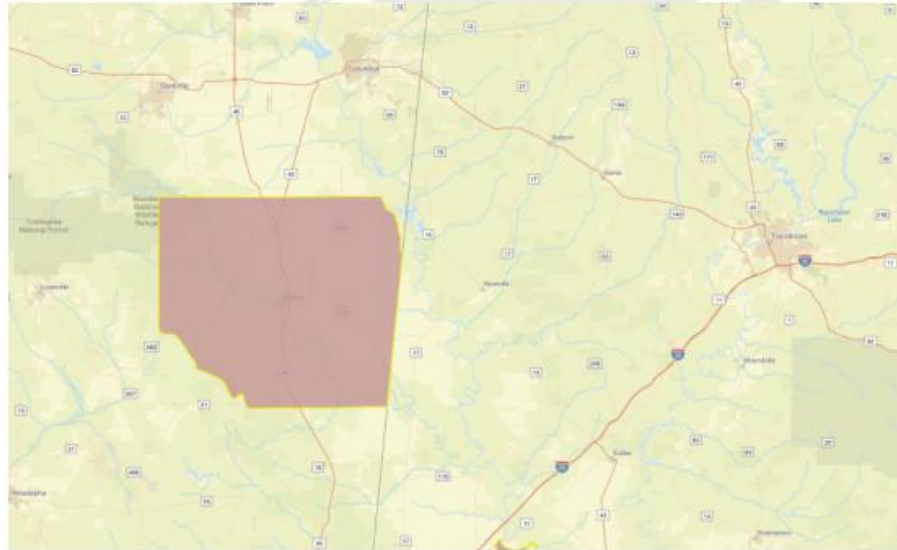
Endangered Species Protection Bulletin



Application Month: May 2023

Product: All products with limitations in selected area

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



Legend

 Limitation Area

- 2 Look below at the Pesticide Use Limitation Summary Table. This table lists the user selected Active Ingredient(s) (ALs) or Product(s) with pesticide use limitations on the printed map. Locate the Active Ingredient (AI) or Product you intend to apply in this table and identify the code in the last column. This code indicates the specific limitation associated with that AI or Product. A limitation description for each code can be found below in the Codes and Limitations Table. If multiple Pesticide Use Limitation Areas (PULAs) are visible on the map, these tables provide information for the highlighted PULA.

If you are applying a pesticide that contains more than one Active Ingredient, or multiple Products, then multiple codes may apply. Follow the limitations for all codes when using this pesticide.

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120
FEXAPAN PLUS VAPORGRIP TECHNOLOGY (352-938)	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
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120
A21472 PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray	Liquid	D120

TAVIUM PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120
TAVIUM PLUS VAPORGRIP TECHNOLOGY (100-1623) Alternate: TAVIUM PLUS VAPORGRIP TECHNOLOGY	Dicamba, diglycolamine salt	Dicamba-Tolerant Soybean	Ground spray	Liquid	D120
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Soybean	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.

Bulletin pdf

- Save pdf
 - Pesticide use limitation summary table
 - Code and Limitation table
-
- Note: if no limitations are identified, still need to save the pdf; necessary for your record of compliance.

BLT Compliance Process?

- Who is responsible for BLT?
- How do we make the process efficient and workable?



FWS Ecos



U.S. Fish & Wildlife Service



ECOS Environmental Conservation Online System

Conserving the Nature of America

[ECOS](#) / Home

Public Applications

[Conservation Plans](#)

[Wildlife & Environmental
Contaminants Mapper](#)

[Information for Planning and
Consultation \(IPaC\)](#)

[Species Reports](#)

[Web Services](#)

Secure Applications

[Secure Login](#)

Related Sites

[FWS Endangered Species
Program](#)

Threatened & Endangered Species

ECOS serves a variety of reports related to FWS Threatened and Endangered Species. A selection of our most popular reports is listed below. See the [Species Reports](#) for the complete list.

- [All Threatened and Endangered Animals](#)
- [All Threatened and Endangered Plants](#)
- [Critical Habitat Report](#)
- [Section 7 Consultation Issued Biological Opinions](#)
- [Delisted Species](#)
- [Listed Species Summary \(Boxscore\)](#)
- [Reclassified Species](#)

OBTAINING AN OFFICIAL SPECIES LIST:

Use [IPaC](#) to identify your project location and receive an official species list (pursuant to 50 CFR 402.12) of T&E species that should be considered when evaluating the potential impacts of a project.

ADDITIONAL SEARCH TOOLS:

Search for a Listed species by name:

Search for a Listed species by County name:

Tift, Georgia

Scientific Name	Common Name	ESA Listing Status	Group
<i>Macrochelys suwanniensis</i>	Suwannee alligator snapping turtle	Proposed Threatened	Reptiles
<i>Perimyotis subflavus</i>	Tricolored bat	Proposed Endangered	Mammals
<i>Danaus plexippus</i>	Monarch butterfly	Candidate	Insects
<i>Myotis lucifugus</i>	Little brown bat	Under Review	Mammals
<i>Notophthalmus perstriatus</i>	Striped newt	Resolved Taxon	Amphibians
<i>Gopherus polyphemus</i>	Gopher tortoise	Resolved Taxon	Reptiles
<i>Drymarchon couperi</i>	Eastern indigo snake	Threatened	Reptiles
<i>Drymarchon couperi</i>	Eastern indigo snake	Threatened	Reptiles
<i>Crotalus adamanteus</i>	Eastern diamondback rattlesnake	Under Review	Reptiles
<i>Balduina atropurpurea</i>	Purpledisk honeycombhead	Resolved Taxon	Flowering Plants
<i>Schwalbea americana</i>	American chaffseed	Endangered	Flowering Plants
<i>Schwalbea americana</i>	American chaffseed	Endangered	Flowering Plants
<i>Sporobolus teretifolius</i>	Wireleaf dropseed	Under Review	Flowering Plants
<i>Macbridea caroliniana</i>	Carolina birds-in-a-nest	Not Listed	Flowering Plants

Diuron

- EPA's model (preferred above monitoring data) suggest drinking water concentrations of concern for potential carcinogenicity. EPA proposed to cancel all ag uses of diuron except cotton defoliation (very low use rate).

Floumeturon

- EPA's water model (preferred above monitoring data) estimates ground water concentrations of concern for potential carcinogenicity. EPA proposed to eliminate use on soils in Hydrologic Group A & B (seems to reflect soils with less than 20% clay). Alternate language being considered includes sand, sandy loam, loamy sand. The soil types represent a large portion of cotton production soil types.

Dicamba

- Human Health is “extensive and complete with respect to 870 guideline requirements for characterizing the hazards of dicamba... No additional data are required.”
- Multiple uses (residential, rangeland, fallow fields, turf, soybeans, cotton, corn, grains, and sorghum)
- EPA includes a narration of “thousands of reported incidents allegedly caused by dicamba exposure occurring at or near a wide variety of agricultural and non-agricultural use sites and affecting a wide variety of plant species ranging from grasses to woody shrubs and trees.”

Dicamba

- Over-the-top?
- Hooded sprayer?
- Cut-off dates?
- ESA?



Methomyl

- “early-ESA” mitigation measures also referred to as up-front mitigations
- In the 2021 Final BE for Methomyl, EPA made effects determinations (i.e., No Effect (NE), May Affect (MA) but Not Likely to Adversely Affect (NLAA) or Likely to Adversely Affect (LAA)) for 1,805 listed species (EPA included approximately 200 species that were candidate or proposed species at the time of the Final BE), and Adverse Modification determinations for 791 designated critical habitats. For each species and designated critical habitat, EPA based the effect determinations on the methodology detailed in Chapter 1 of the methomyl Final BE and the Revised Method document. EPA made LAA determinations for 1,098 species and 281 designated critical habitats (approximately 61% of all species and 36% of critical habitats had LAA determinations). EPA made LAA determinations for species based on direct effects (e.g., to listed insects exposed on field or via spray drift) and indirect effects (e.g., potential effects on listed plants due to effects on insect pollinators). For those species and/or habitats identified as LAA, EPA further characterized the evidence supporting the determinations as strong, moderate, or weak.

Methomyl

- (Point system concept)
- Annual Application Rate Limit
 - "Do not apply more than 13 lbs AI/ acre/ year ."
- Runoff Reduction Statements
 - "Do not apply this product when soil is saturated or above field capacity.
 - Do not apply during rain.
 - Do not apply when a storm event 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. Excessive rainfall within 48 hours after application may cause unintended run-off of pesticide application."

Other Bulleting Live! Two Species

- Vernal pool tadpole shrimp
- California tiger salamander



Bulletins Live! Two Limitations: Valley elderberry longhorn beetle

From March 1st through June 15th:

Ground Applications:

Do not apply by ground application methods within 50 feet of riparian habitat if the wind is blowing in the direction of the habitat.

Aerial Applications:

Use coarse or coarser droplet sizes (ASABE S641)

Do not exceed a maximum single application rate of 0.6 lbs AI/A

Do not apply by aerial application methods within the following distances from riparian habitats if the wind is blowing in the direction of the habitat:

- 155-feet for application rates <0.3 lbs AI/A;
- 205-feet for application rates 0.3 – 0.5 lb AI/A;
- 230-feet for application rates 0.5-0.6 lbs AI/A.

January 31, 2023

EPA Releases Draft Biological Evaluation of Cyantraniliprole's Effects on Endangered Species

The U.S. Environmental Protection Agency (EPA) is releasing its [draft biological evaluation \(BE\)](#) that contains EPA's analysis of the potential effects of the insecticide cyantraniliprole on federally listed endangered and threatened (listed) species and designated critical habitats. The draft BE will be available for public comment for 60 days.

Cyantraniliprole 1/31

As part of its assessment, EPA evaluated the effects of cyantraniliprole on over 1,700 listed species and over 800 designated critical habitats in the United States and its territories and determined that cyantraniliprole, without further mitigation:

- Will cause no effect to 25 percent of listed species and 33 percent of critical habitats.
- May affect but is not likely to adversely affect 34 percent of listed species and 54 percent of critical habitats.
- Is likely to adversely affect and EPA predicts the likelihood that use will not cause jeopardy to 37 percent of listed species or adversely modify 12 percent of critical habitats.
- Is likely to adversely affect and EPA predicts the likelihood that use may cause jeopardy to 4 percent of listed species and adversely modify 1 percent of critical habitats.

February 1, 2023

EPA Implements Protections for Endangered Fish Species from Four Pesticides

The U.S. Environmental Protection Agency (EPA) has implemented measures to protect 28 federally endangered and threatened (listed) Pacific salmon and steelhead species and their designated critical habitat from the effects of bromoxynil, prometryn, metolachlor, and 1,3-D (also known as telone). Bromoxynil, prometryn, and metolachlor are herbicides used to control grasses and broadleaf weeds, and 1,3-D is a pesticide used in pre-plant soil fumigation.

A large field of cotton plants with many white bolls ready for harvest. The text is overlaid on the image.

That's enough Don.

Stop!