



Understanding Bulletins Live! Two

Original Webinar 2019: Steve Lennartz, BLT System Administrator

This 2023 Webinar is an update of the 2019 webinar

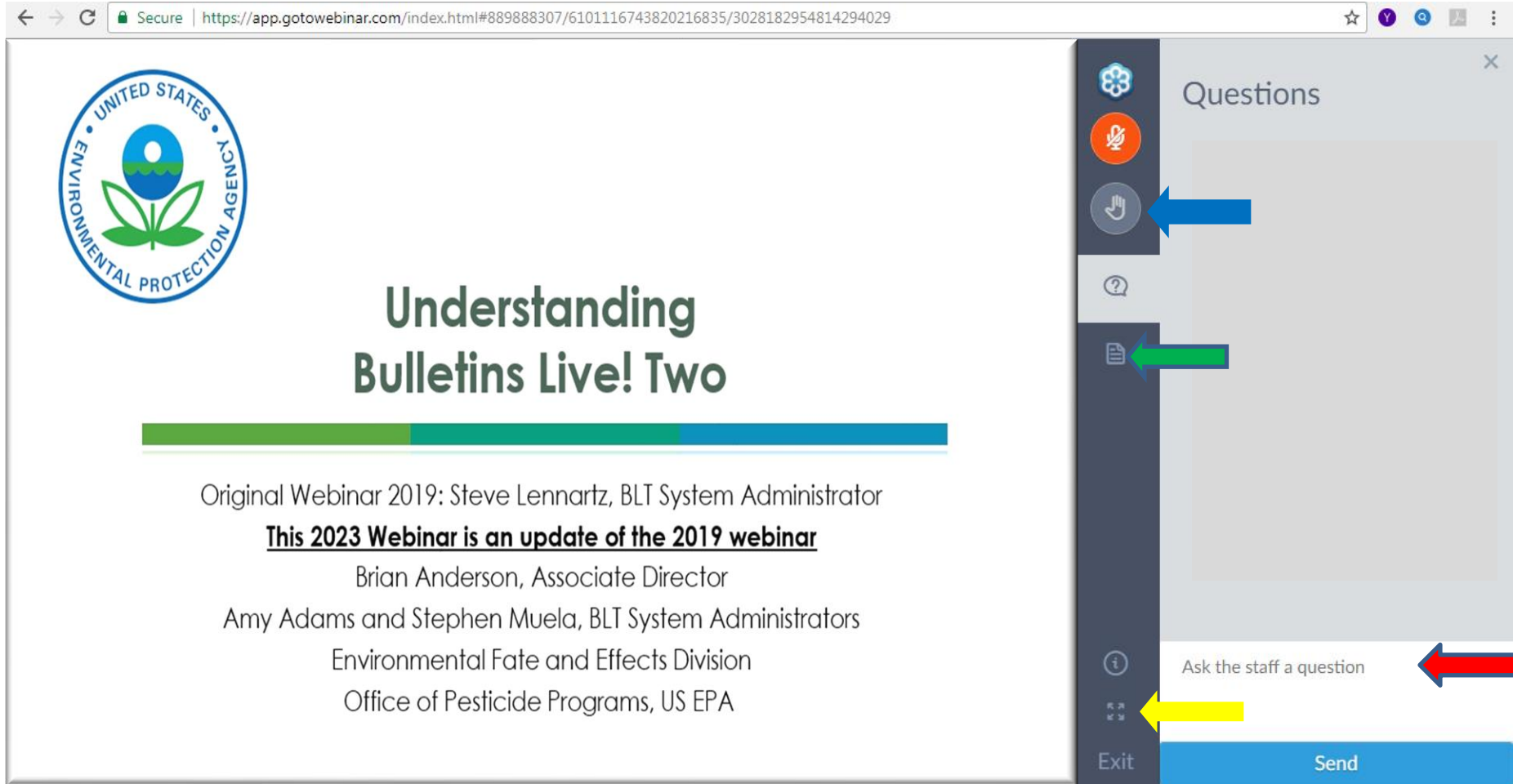
Brian Anderson, Associate Director

Amy Adams and Stephen Muela, BLT System Administrators


Environmental Fate and Effects Division

Office of Pesticide Programs, US EPA

EPA Tips for Participants



The screenshot shows a web browser window displaying a webinar slide and a sidebar. The slide content is as follows:


**Understanding
Bulletins Live! Two**

Original Webinar 2019: Steve Lennartz, BLT System Administrator
This 2023 Webinar is an update of the 2019 webinar
Brian Anderson, Associate Director
Amy Adams and Stephen Muela, BLT System Administrators
Environmental Fate and Effects Division
Office of Pesticide Programs, US EPA

The sidebar on the right is titled "Questions" and contains several icons: a gear, a hand, a question mark, a document, and an information icon. Below the icons is a text input field with the placeholder "Ask the staff a question" and a "Send" button. A yellow arrow points to the "Exit" button at the bottom of the sidebar.

Color-coded arrows in the image point to the following elements:

- Blue arrow: Hand icon in the sidebar.
- Green arrow: Document icon in the sidebar.
- Red arrow: "Ask the staff a question" text field.
- Yellow arrow: "Exit" button at the bottom of the sidebar.

2023 update focused on how Bulletins Live! Two (BLT) works

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

67%



An official website of the United States government [Here's how you know](#)



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Laws & Regulations

Report a Violation

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CONTACT US

Endangered Species

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 for a specific pesticide product using the EPA registration number and selecting from the search results. If you need assistance finding this registration number, consult the

Unpin

Location Search:

Find Place



Application Month:

November 2023




EPA Registration Number:




EPA Today's Topics

- **Webinar Purpose:** to provide an overview of the Bulletins Live! Two system, what pesticide applicators need to know about complying with Bulletins, and how and when to access the system and locate applicable bulletins.
- Introduction
 - Overview of Bulletins Live! Two
 - Connection of Bulletins with pesticide labeling
- Demonstration of Bulletins Live! Two
- Frequently Asked Questions
- Contacts

Endangered Species Protection Bulletin

 **Application Month:** November 2023
Product: MALATHION 8E INSECTICIDE (34704-452) ; "CLEAN CROP MALATHION 8E INSECTICIDE"

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.



2 Look below at the Pesticide Use Limitation Summary Table. This table lists the user selected Active Ingredient(s) (AIs) 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.

This document contains legal requirements for the use of certain pesticides. Do not modify any text, graphics or coloration or otherwise alter this document. ESPP Contact: ESPP@epa.gov Phone: 1-844-447-3813



■ Endangered Species Act (ESA)

- Intended to protect and promote the recovery of plants and animals in danger of becoming extinct.
- Section 7(a)(2) of the ESA requires federal (“action”) agencies to insure that any action they authorize, fund or carry out is not likely to jeopardize the continued existence of a federally-listed species or result in destruction or adverse modification of designated critical habitat.
- FIFRA “actions” subject to the consultation provisions of the ESA may include registering pesticides.

EPA Introduction (cont.)

■ Endangered Species Protection Program (ESPP)

- Helps promote the recovery of listed species
- Designed to help meet ESA obligations
- If limitations on pesticide use are necessary to protect listed species in that area, the information is relayed through Endangered Species Protection Bulletins
- Goal of the pesticide use limitations: to carry out responsibilities under FIFRA in compliance with ESA, without placing undue burden on agriculture and other pesticide users





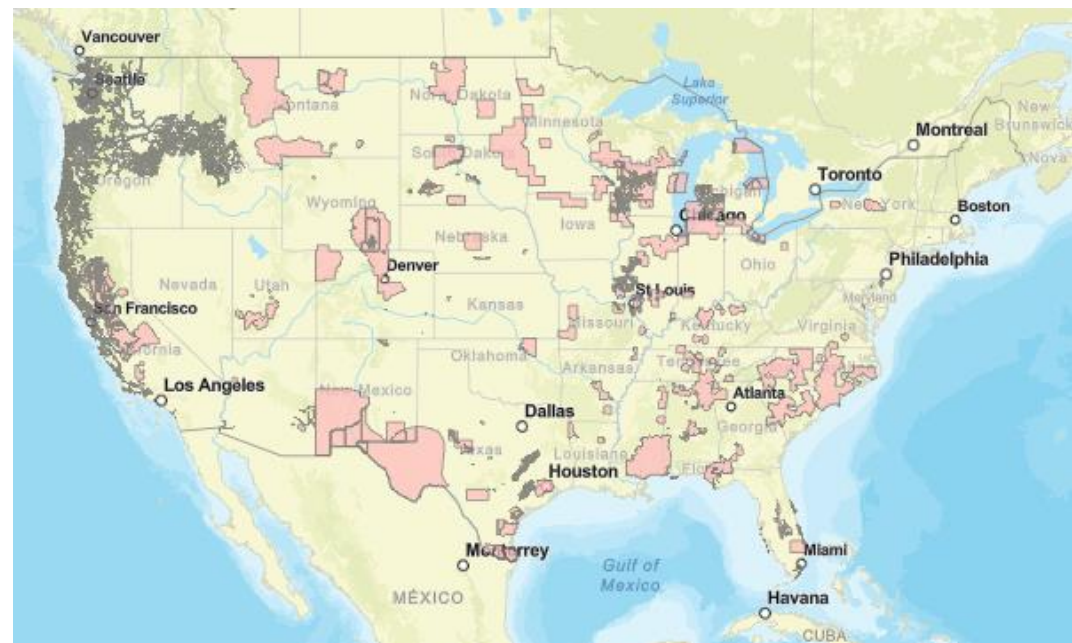
Why Web-based Mapping for Endangered Species Protections is Used

- Accessibility to a variety of Bulletins Live! Two Users
 - State Lead Agencies
 - Pesticide Applicators
 - Others



- When directed by a product label, pesticide applicators are required to visit the BLT website and follow any mitigations specified for the intended application area and product.

- Allows for location-specific protections
- Information provided by Bulletins includes
 - Location of use limitations
 - Products with limitations
 - Terms of the limitation
 - Does not include identification of species





When Does EPA Create Bulletins?

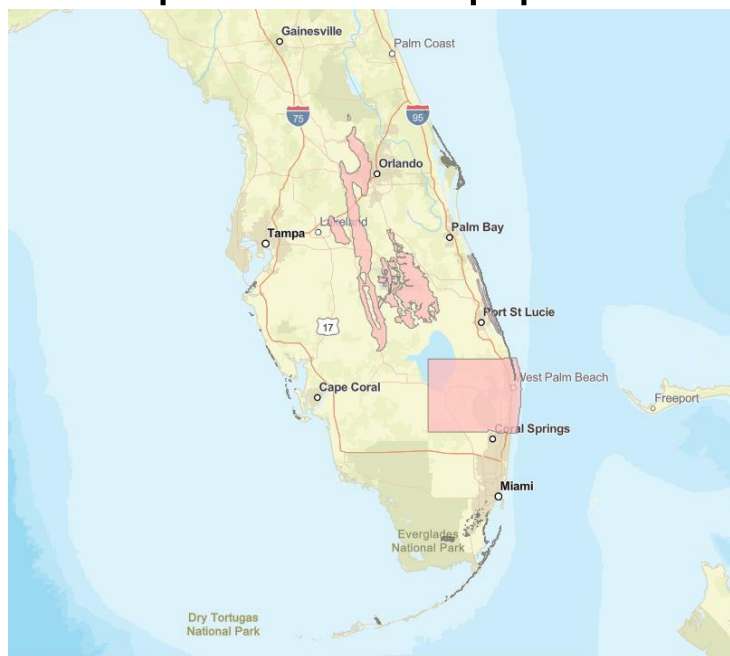


- If geographically explicit label instructions are needed, then EPA may create Bulletins as part of its regulatory actions
- Goal of Bulletins is to protect listed species and/or their critical habitat in specific locations and, in some cases, during certain times of the year
- EPA plans to create additional Bulletins as it completes registration actions and ESA consultations



Pesticide Use Limitation Area (PULA) Versus a Bulletin

- Pesticide Use Limitation Area (PULA)- Geographic area where a pesticide limitation(s) specific to listed species applies



Endangered Species Protection Bulletin

Application Month: November 2023
Product: MALATHION BE INSECTICIDE (34704-452)
Alternate: CLEAN CROP MALATHION BE INSECTICIDE

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.

2 Look below at the Pesticide Use Limitation Summary Table. This table lists the user selected Active Ingredient(s) (AI) 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.

Endangered Species Protection Bulletin

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
MALATHION BE INSECTICIDE (34704-452) Alternate: CLEAN CROP MALATHION BE INSECTICIDE	Malathion (NO INERT USE)	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	MA18
MALATHION BE INSECTICIDE (34704-452) Alternate: CLEAN CROP MALATHION BE INSECTICIDE	Malathion (NO INERT USE)	All Agricultural Uses	Ground spray	Emulsifiable Concentrate	MA18
MALATHION BE INSECTICIDE (34704-452) Alternate: CLEAN CROP MALATHION BE INSECTICIDE	Malathion (NO INERT USE)	Mosquito Adulticide	Aerial spray	Emulsifiable Concentrate	MM1
MALATHION BE INSECTICIDE (34704-452) Alternate: CLEAN CROP MALATHION BE INSECTICIDE	Malathion (NO INERT USE)	Mosquito Adulticide	Ground spray	Emulsifiable Concentrate	MM1

Codes and Limitations Table

Code	Limitation
MA18	Follow one of these measures: 1. Apply malathion only when wind is blowing away from pine rockland habitat OR 2. Use a 50-foot ground buffer from pine rockland habitat, and an aerial buffer from pine rockland habitat according to application rate (1) 50 feet for <0.5 lbs ai/A; (2) 75 feet for 0.5 - <1 lb ai/A; (3) 150 feet for 1-2.5 lbs ai/A; (4) 200 feet for >2.5 lbs ai/A. Buffer sizes may be reduced by 25 feet for application rates (1) and (2) if a full swath displacement upwind is used during aerial application. Buffer sizes may be reduced by 50 feet for application rates (3) and (4) if a full swath displacement upwind is used during aerial application. Habitat: Pine rockland is an open habitat only found in South Florida, and consists of widely-spaced slash pine trees towering over savanna-like growth on sand and exposed sandstone rocks. The vegetation in this low-growing savanna is composed of a large variety of shrubs and small plants, including saw palmettos, small palms, grasses, and flowering plants.
MM1	Where feasible, avoid application. If avoidance is not feasible or impairs the ability of the mosquito control district or agency to protect the public's health and welfare, coordinate with the local FWS Ecological Services field offices to determine appropriate measures to ensure the proposed application is likely to have no more than minor effects on the species (PWS points of contact are available through the Information, Planning, and Consultation (IPAC) website https://ecos.fws.gov/ipac/). The applicator must retain documentation of the technical assistance and the agreed upon species-specific measures that were implemented.

Endangered Species Protection Bulletin

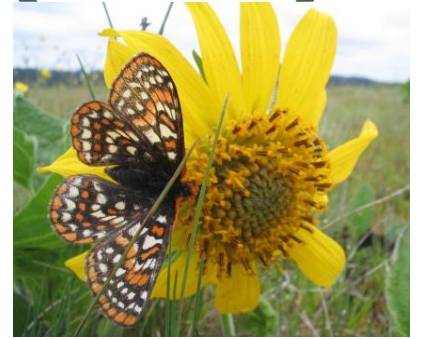
MA18 Follow one of these measures: 1. Apply malathion only when wind is blowing away from pine rockland habitat OR 2. Use a 50-foot ground buffer from pine rockland habitat, and an aerial buffer from pine rockland habitat according to application rate (1) 50 feet for <0.5 lbs ai/A; (2) 75 feet for 0.5 - <1 lb ai/A; (3) 150 feet for 1-2.5 lbs ai/A; (4) 200 feet for >2.5 lbs ai/A. Buffer sizes may be reduced by 25 feet for application rates (1) and (2) if a full swath displacement upwind is used during aerial application. Buffer sizes may be reduced by 50 feet for application rates (3) and (4) if a full swath displacement upwind is used during aerial application. Habitat: Pine rockland is an open habitat only found in South Florida, and consists of widely-spaced slash pine trees towering over savanna-like growth on sand and exposed sandstone rocks. The vegetation in this low-growing savanna is composed of a large variety of shrubs and small plants, including saw palmettos, small palms, grasses, and flowering plants.

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- Bulletin – The PDF from the Bulletins Live! Two application that provides the limitation information for your application site and month
 - If you would like to save the Bulletin for your own records, you can



Pesticide Use Limitation Area (PULA) Versus Species Range



- PULAs should not be confused with species ranges
- Species range maps show where listed species live, are suspected to live, and areas that impact the species' survival in some way
- PULAs are intended to apply only to areas where pesticide use limitations are needed and may be any of the following:
 - a small area within a species range;
 - applicable only to certain habitats within a species' range; or
 - applicable anywhere a use site is located within a species' range

Using and Understanding Bulletins Live! Two

- Topics Covered During the Demonstration
 - How to get started by reading the label
 - Using the map application tools
 - Identifying the intended pesticide application area
 - Selecting the application month
 - Refining your search
 - Selecting a PULA
 - Saving/Printing a PDF of a Bulletin, if you would like to save one for your own records.
 - Understanding the components of the Bulletin





Fyfanon ULV Mosquito
EPA Reg No 279-3539

MALATHION GROUP 1B INSECTICIDE

Fyfanon® ULV Mosquito

ULTRA LOW VOLUME CONCENTRATE INSECTICIDE

FOR USE ONLY BY FEDERAL, STATE, TRIBAL, OR LOCAL GOVERNMENT OFFICIALS RESPONSIBLE FOR PUBLIC HEALTH OR VECTOR CONTROL, OR BY PERSONS CERTIFIED IN THE APPROPRIATE CATEGORY OR OTHERWISE AUTHORIZED BY THE STATE OR TRIBAL LEAD PESTICIDE REGULATORY AGENCY TO PERFORM ADULT MOSQUITO CONTROL APPLICATIONS, OR BY PERSONS UNDER THEIR DIRECT SUPERVISION.

DISCLAIMER:
This example is only for demonstrating where to find an EPA Reg. No. on a label, it is not intended as a product endorsement

ACTIVE INGREDIENT:
Malathion* 96.5%
OTHER INGREDIENTS: 3.5%
TOTAL: 100.0%

* O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.
Contains 9.9 lbs. malathion per gallon

KEEP OUT OF REACH OF CHILDREN
CAUTION

SEE [OTHER PANELS] [INSIDE] [BOOKLET] [BACK PANEL] FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND USE DIRECTIONS

EPA Reg. No. 279-3539
NET Contents: _____

EPA Est. No: XXXX-XXX-XXX

FMC
FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

Product of Denmark
© Fyfanon is a registered trademark of FMC Corporation or an affiliate

ACCEPTED

08/23/2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 279-3539



Fyfanon ULV Mosquito
EPA Reg No 279-3539

MALATHION GROUP 1B INSECTICIDE

Fyfanon® ULV Mosquito

ULTRA LOW VOLUME CONCENTRATE INSECTICIDE

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ACCEPTED

08/23/2023

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Using and Understanding Bulletins Live!

Two (cont.): *Old* label instructions

Endangered Species Requirements – Use of this product in a manner inconsistent with its labeling may pose a hazard to endangered or threatened species. When using this product, you must follow the measures contained in the Endangered Species Bulletin for the area in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult:

<https://www.epa.gov/endangered-species/endangered-species-protection-bulletins> or call 1-844- 447-3813. You must use the Bulletin valid for the month in which you will apply the product.



Using and Understanding Bulletins Live! Two (cont.): *New label instructions*

Endangered Species Requirements – Before using this product, you must obtain any applicable Endangered Species Protection Bulletins (Bulletins) within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at <https://www.epa.gov/pesticides/bulletins>. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov

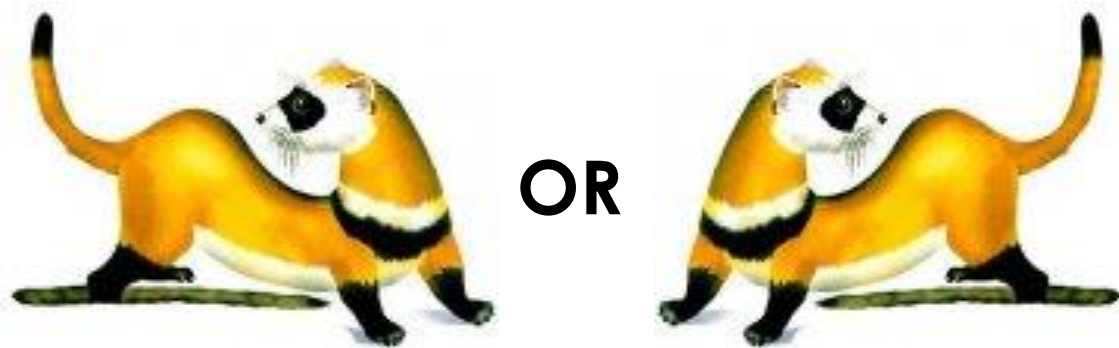




Using and Understanding Bulletins Live! Two (cont.)

Note there are two links, both direct to the same place:

<https://www.epa.gov/pesticides/bulletins>



<https://www.epa.gov/endangered-species/endangered-species-protection-bulletins>



Search EPA.gov

- Environmental Topics
- Laws & Regulations
- Report a Violation
- About EPA

Endangered Species

CONTACT US

Endangered Species Home

About the Endangered Species Protection Program

Assessing Pesticides Under the Endangered Species Act

Endangered Species: Information For Pesticides Users

Litigation on Endangered Species and Pesticides

Bulletins Live!

For Kids

Endangered Species Protection Bulletins

Endangered Species Protection Bulletins are a part of EPA's Endangered Species Protection Program. Bulletins set forth geographically specific pesticide use limitations for the protection of threatened and endangered (listed) species and their designated critical habitat.

- [Obtain Bulletins using EPA's Bulletins Live! Two application.](#)
- [Read the tutorial Bulletins Live! Two.](#)
- [Go to the quick start guide.](#)
- [View the April 2019 webinar for Bulletins Live! Two.](#)
- [Learn How to locate the EPA Registration number to search for product in Bulletins Live! Two.](#)

If your pesticide label directs you to this website, you are required to follow the pesticide use limitation(s) found on your label and in the Bulletins Live! Two system for your intended application area, pesticide product, and application month. You may not see any geographically specific use limitations for the product you are applying even if your label directed you to this website because either:

1. EPA has not yet completed the process of identifying whether additional geographically specific use limitations are needed; or
2. there are no additional geographically specific use limitations required for the time period and location you plan to apply the pesticide product.

EPA continues to complete Endangered Species Act consultations and update the Bulletins Live! Two system with additional geographically specific use limitations that may be applicable to your pesticide product in the future. Therefore, before you apply a pesticide, check to see if new or additional directions for the product have been added to Bulletins Live! Two. It's important to note, you have a six-month window to obtain a bulletin before you apply a pesticide (e.g., you

EPA Summary



- Follow the labeling instructions
- If directed by the product label, visit the [Bulletins Live! Two website](#) to check for any Bulletins for your application site and month
- If you would like to save a copy of the Bulletin for your own records, you can
- If your application location changes or the application timing is to occur later than the intended application month that you originally checked, check BLT again
- Contact the ESPP help desk to resolve any questions you may have

EPA Frequently Asked Questions- General

- The ESPP help desk inbox (espp@epa.gov) and hotline (1-844-447-3813) receives inquiries a few times per month on average.
 - If a human doesn't answer when you call by phone, please leave a message and a human will get back to you.
 - Sometimes we can respond to email more quickly. If your inquiry is especially urgent, write URGENT in the email subject line.
- More inquiries are received when a new Bulletin is released
- Some local pesticide regulators or trade groups will bundle questions and send them directly to the point of contact for a specific chemical.
- Following are some common questions that have been submitted

EPA Frequently Asked Questions (cont.)

- *Are Bulletins enforceable?*
 - Yes. When directed by a product label, pesticide applicators are required to visit the BLT website and follow any additional mitigations in the intended application area. When users are directed to check Bulletins Live! Two on a pesticide label, Bulletins are enforceable mitigations under FIFRA.
 - Not following the limitation on your Bulletin is a misuse of the pesticide and enforceable under FIFRA
 - If this misuse results in “take” of listed species, the action is also enforceable under the Endangered Species Act by the US Fish and Wildlife Service and National Marines Fisheries Service

EPA Frequently Asked Questions (cont.)

- *Why can't we see what species the mitigations are for?*
 - At the request of the USFWS and NMFS, species identifications were removed to discourage possible collection or disturbance of listed species by the public.



EPA Frequently Asked Questions (cont.)

- *My state has several listed species, but the limitations on Bulletins don't seem to match, why?*
 - Bulletins may rely on range data from USFWS and NMFS or are identified through the consultation process with these federal services, which may differ from state agencies by comparison
 - Bulletins are for federally-listed (not state-listed) species.
 - Not all species may be at risk and need Bulletins

EPA Frequently Asked Questions (cont.)

What browsers are compatible with Bulletins?

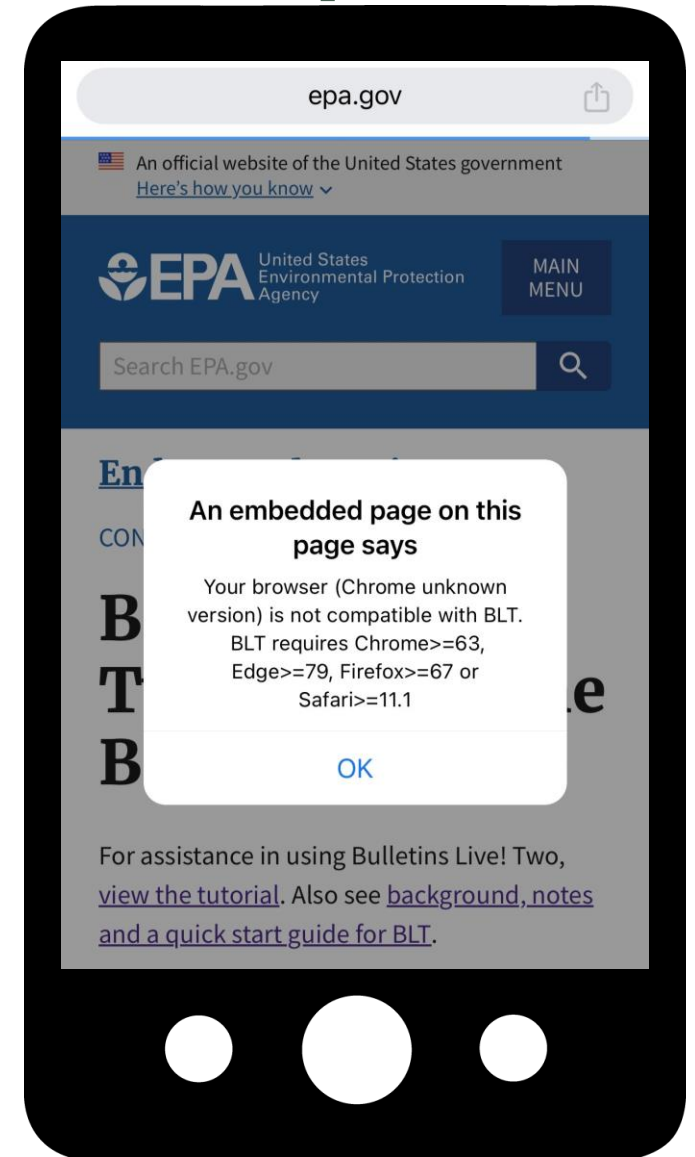
- Google Chrome;
- Microsoft Edge;
- Mozilla Firefox; or
- Safari.
- Looking into improving BLT compatibility with mobile devices (Tablets, Phones, etc.) - see following slides about phone use
- BLT works on most web formats. Not all have been tested. Please share feedback specific to your device and version to the ESPP help desk.

EPA Notes about using BLT on the phone

- *Does the BLT website work on my cell phone web browser?*
 - Yes, it should be functional on the phone.
 - There was a period of time earlier in 2023 where it was not working on phones, this has been addressed.
 - Contact us and provide the cell phone make/model and web browser if you discover BLT is not working.
 - BLT does not currently exist as an app, you must use your cell phone's web browser to access it.

EPA Notes about using BLT on the phone

- It is possible you may get a warning message when accessing BLT on the phone.
 - Select “OK” and you should be able to continue using BLT.
 - If you have difficulty reading table text in the website, try holding the phone horizontally.
 - If you *still* have difficulty reading text in any website tables, download the pdf to your phone & read from that.
 - Text may sometimes wrap oddly in the phone browser, depending on the phone screen size.





Frequently Asked Questions (cont.)

- *Why doesn't the search engine on the Bulletins web application include names for products?*
 - Search using EPA registration numbers. Registration numbers remain consistent.
 - EPA relies on the trade names as supplied by the registrant at the time the Bulletin is created. This name will fill in as you enter the EPA registration number in the search bar.

EPA Frequently Asked Questions (cont.)

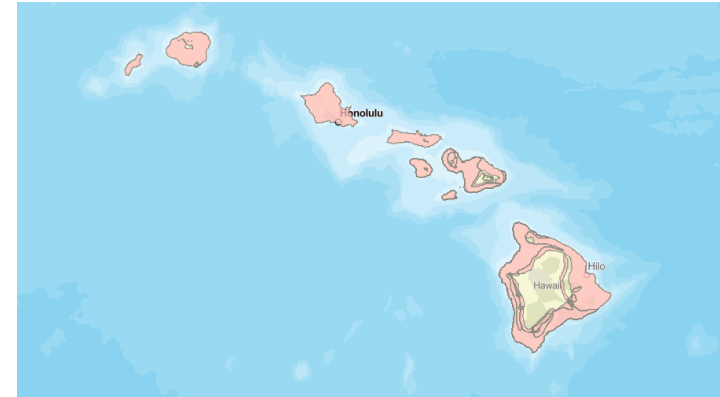
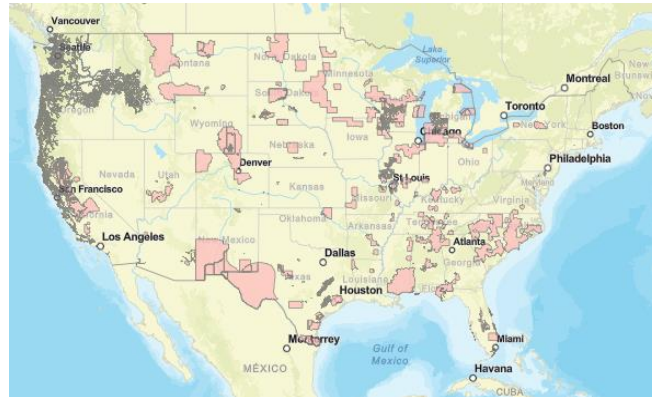
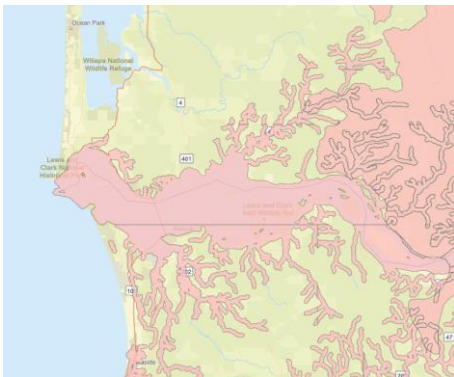
- *What is the difference between an EPA registration number and other numbers found on the product label?*
- **EPA registration number:** An EPA registration number can be found on the product label. Look for “EPA Reg. No.” followed by two or three sets of numbers.
 - If your product's registration number has two parts (ex. 1234-12), it has a primary registration number. This is the number that should be entered into the product search in Bulletins Live! Two.
- **Supplemental Distributor Product Number:** If your product's registration number has three parts (ex. 1234-12-123), you have a supplemental distributor product. These products have the same chemical composition and efficacy as primary products, but often have different brand or product names. Enter the first two parts of this registration number (ex. 1234-12-123) into the EPA registration search in Bulletins Live! Two.
- Continues on next slide

EPA Frequently Asked Questions (cont.)

- **Special Local Needs Number:** If your label has “EPA SLN No.” followed by the two-letter state designation, then a 6-digit number (ex. EPA SLN No. NC950034). This is a Special Local Need registration number (SLN number) also known as a FIFRA Section 24(c) Registration Number. These Registrations are issued by the states to meet special local needs.
 - Searching with an SLN number will yield no results within the Bulletins Live! Two EPA registration number search. A label that has an SLN should also have a primary registration number that can be entered in BLT.
 - You need to be aware of and follow pesticide use limitations in your area according to both the state AND federal requirements.
- **Establishment Number:** The EPA Establishment Number “EPA Est. No.” should be printed near the EPA Reg. No. Letters normally appear in the middle of the EPA Est. No., setting it apart from the EPA Reg. No. (ex. EPA Est. No. 12345-XY-123). The EPA Est. No. is also typically longer than the EPA Reg. No. It identifies the facility that produced the pesticide and is not used in BLT.

EPA Frequently Asked Questions (cont.)

- *How often are bulletins updated? For example, what if the spatial area was built using particular information about a species or its habitat that then changes?*
 - Generally, PULA boundaries and/or Bulletins mitigations will not change until the next registration action occurs.
 - However, EPA is exploring options for the broader ESA strategies to allow for changes to PULAs and mitigation options as data evolves



EPA Frequently Asked Questions (cont.)

- *Understanding the 6-month window between obtaining a Bulletin and application of the pesticide, and if there are changes/additions to a PULA after the Bulletin is printed and before the pesticide is applied.*
- EPA continues to complete Endangered Species Act consultations and update the Bulletins Live! Two system with additional geographically specific use limitations that may be applicable to your pesticide product in the future. Therefore, before you apply a pesticide, check to see if new or additional directions for the product have been added to Bulletins Live! Two. It's important to note, you have a six-month window to obtain a bulletin before you apply a pesticide (e.g., you can obtain a bulletin January 1-July 1 if you plan to apply the pesticide on July 1). If the application month needs to be later, then you need to check the system again during the six month window before the new date (e.g. You can obtain a bulletin February 1-August 1 if you intend to apply August 1 instead of July 1).

EPA Where to direct questions?


- Endangered Species Protection Program
 - Help desk inbox
 - espp@epa.gov
 - Hotline
 - 1-844-447-3813
 - Your label may have several phone numbers on it. Review it carefully to ensure you are calling the BLT number.

EPA Resources

- Bulletins Live! Two
 - <https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins>
- Tutorial
 - <https://www.epa.gov/endangered-species/bulletins-live-two-bl-tutorial>
- Quick Start Guide
 - <https://www.epa.gov/endangered-species/endangered-species-protection-bulletins#quick>
- How to locate the EPA registration number to search BLT
 - <https://www.epa.gov/endangered-species/endangered-species-protection-bulletins#how-to>

Submit Your Related Questions

Secure | <https://app.gotowebinar.com/index.html#889888307/6101116743820216835/3028182954814294029>



Understanding Bulletins Live! Two

Original Webinar 2019: Steve Lennartz, BLT System Administrator

This 2023 Webinar is an update of the 2019 webinar





Brian Anderson, Associate Director

Amy Adams and Stephen Muela, BLT System Administrators

Environmental Fate and Effects Division

Office of Pesticide Programs, US EPA

Questions



Ask the staff a question

Exit

Send



Questions?

EPA – Endangered Species Workplan Development and Implementation

EPA and the Endangered Species Act (ESA)

Federal Endangered Species Act - 16 U.S.C. §1531 et seq. (enacted in 1973)

- As a Federal Agency - EPA must:
 - Ensure that actions it authorizes, funds, or carries out –
 - do not jeopardize the continued existence of any listed species
 - result in the destruction or adverse modification of designated critical habitat of such species.
- ESA prohibits any action that causes a "taking" of any listed species of endangered fish or wildlife.
- EPA must consult with the U.S. Fish and Wildlife Service (FWS) and/or the NOAA Fisheries Service (NMFS) on actions that could affect listed species

- Registration of a pesticide is an “agency action”
- Subject to the provisions of ESA
- Therefore – registration cannot result in “jeopardy” or “adverse habitat modification” - JAM

- Practice was to consult with USFWS and NMFS on each pesticide active ingredient and each listed species
- Resulted in a Biological Opinion from the Services
- Resulted in geographically specific restrictions for certain practices for certain species
- Implemented through County Bulletins – now Bulletins Live Two (BLT)

- Process was time consuming – 4 to 15 years to complete
- Impacts on pesticide users limited to specific areas for specific species
- EPA has completed <5% of consultations needed
- Over 20 lawsuits for failure to complete process
- EPA was ordered by courts to implement ESA provisions
- Courts could order restrictions on pesticide use
- Resulted in uncertainty for pesticide users and crop producers

- New strategy adopted in 2022:
 - Meet ESA obligations when registering new conventional pesticides
 - Incorporate mitigation measures before consultations have been completed or even begun
 - Evaluate types of pesticides as a group (e.g. herbicides, insecticides, rodenticides) relative to JAM considerations
 - Apply protections over broader areas and crop types as a preventive measure
 - Apply mitigation measures to types of pesticides, not just specific active ingredients

EPA is committed to this approach and making rapid progress

Selected Milestones

- **April 2022** – Balancing Wildlife Protection and Responsible Pesticide Use – How EPA’s Pesticide Program will meet its ESA Obligations (Workplan)
 - **November 2022** – ESA Workplan Update
 - **June 2023** – Draft Technical Document for support of Interim Ecological Measures
 - **June 2023** – Vulnerable Species Pilot Project
 - **July 2023** – Herbicide Strategy
- Still to come:
Insecticide Strategy -Rodenticide Strategy

Comment Opportunities

- Public comment periods of 45-60 days
- Only one comment period extensions so far
- These proposal are detailed and extensively documented
- EPA is meeting with industry and SLA groups outside of public comment period to get input
- Still open to suggestions and ideas

<https://www.epa.gov/endangered-species/epas-workplan-and-progress-toward-better-protections-endangered-species>

Selected Milestones

- **April 2022 – Balancing Wildlife Protection and Responsible Pesticide Use – How EPA’s Pesticide Program will meet its ESA Obligations**
- Describes EPA’s approach – the “Workplan”

- **November 2022 – ESA Workplan Update**
- Describes efforts to reduce pesticide exposure to non-target organisms as part of FIFRA registration actions
- Includes menu of “Interim Ecological Mitigations” that can be included as directions for use on pesticide labels

November 2022 – ESA Workplan Update

- Includes FIFRA Interim Ecological Mitigation (IEM) measures intended to reduce risk to non-target organism
- Will be included in registration decisions, even before re-registration is completed (Interim Decisions)
- Intended for Agricultural crops uses
- Implemented on labels (not in Bulletins)

Represents a major change in the way ecological risks are managed

Will require certain land use practices in order to use a labeled pesticide

Soil and water conservation practices that were voluntary
will be required to meet conditions of use on label.

Example IEMs:

In order to mitigate exposure from surface water run-off or soil erosion:

- Pesticide use directions will require one or more of the following in order to comply with label directions for use:
 - 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

Including these conditions raises many questions:

- Definition of the terms (example: grassed waterways)
- Education and training of applicators
- Enforcement of directions for use
- Documentation of compliance with label instructions
- Applicability of data showing reduced risk from certain products or certain use rates
- Involvement of CCAs, NRCS, SCDs – some agreements are currently confidential

Labels will also reference Bulletins Live Two (BLT)

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

Example Label Language:

*When using this product, you must follow the measures, including any timing restrictions, contained in the Endangered Species Protection Bulletin for the area where you are applying the product. Before using this product, you must obtain a Bulletin at any time **within six months of the day of application**. To obtain Bulletins, consult <http://www.epa.gov/espp>. For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.*

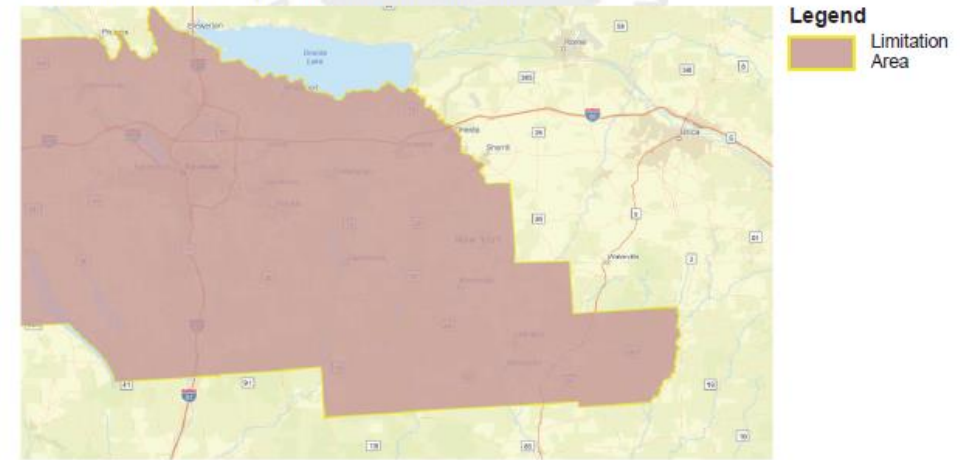
Endangered Species Protection Bulletin



Application Month: October 2023

Product: All products with limitations in selected area

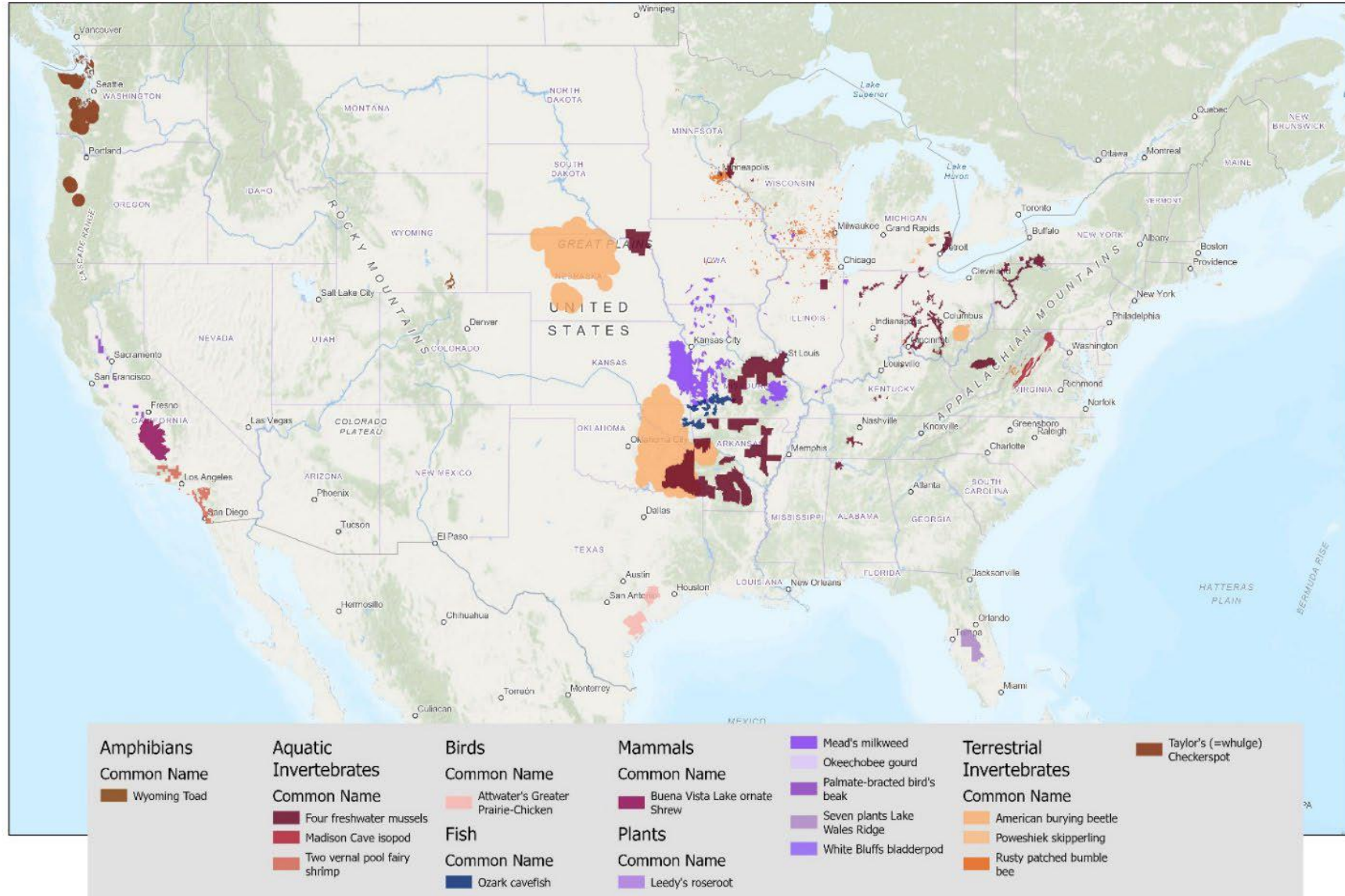
- 1 Areas where pesticide use must be limited are identified on the map. A legend is located beside the map to help pinpoint these locations.



- 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.

Geographic Range of Species in VSPP



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June 2023 – Vulnerable Species Pilot Project

- Proposes pesticide mitigation measures designed to reduce the pilot species' exposures to conventional pesticides from non-residential outdoor uses of those pesticides which includes
 - agricultural
 - non-agricultural use sites
 - rights of way,
 - nursery/ornamentals,
 - forestry,
 - industrial,
 - pasture/rangeland,
 - golf courses,
 - athletic fields,
 - aquatic applications,
 - mosquito adulticide and larvicide applications.

Pesticide Use Limitation Areas (PULAs) will be established on a geographic basis.

Pesticide mitigation measures are required in a PULA.

Mitigations focused on avoidance and minimization

**Restrictions on applications are identified in Bulletins Live Two (BLT)
Label language will require that applicators consult BLT before application
and comply with directions on that site.**

- **Avoidance**

- No application in geographic area identified as critical habitat.
- Exception allowed if approved by FWS at least three months prior to application

- **Minimization**

- intended to reduce the likelihood of future jeopardy/adverse modification determinations and to minimize potential take
 - Application using one or more mitigation measures identified by EPA
 - Mitigation applies in a protective zone around avoidance area

Example of Avoidance and Minimization Areas

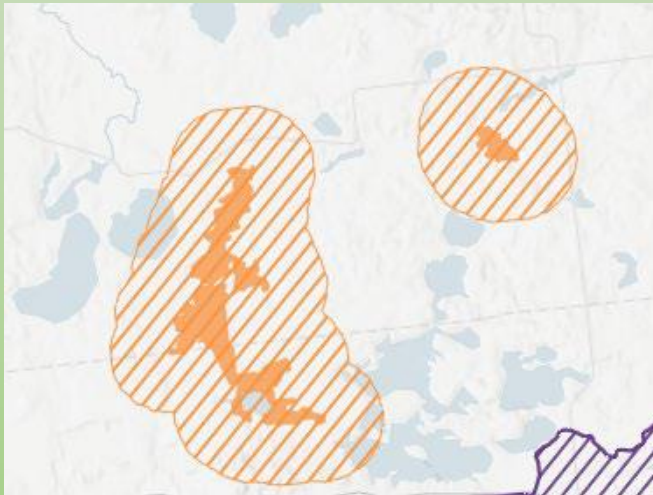


Table 2. Descriptions of Pesticide Use Limitation Areas (PULAs) for Pilot Species.

Species (Common Name)	State(s) Where PULAs are Located	Avoidance PULA Extent	Minimization PULA Extent	Minimization Mitigations	Max PULA Extent (Acres)
Mitigation Area: Delineated location, geographically explicit					
Leedy's roseroot	MN, NY	Part of range (excluding area in South Dakota)	2600 ft extension area around avoidance PULA	Drift, Run-off, Species specific ¹	Less than 50,000
Okeechobee gourd	FL	Range	2600 ft extension area around avoidance PULA	Drift, Run-off, Species specific ¹	Less than 200,000
Poweshiek skipperling	MI, WI, MN	Designated critical habitat	2600 ft extension area around the avoidance PULA	Drift, Run-off	Less than 50,000
Rusty patched bumble bee	IL, IN, IA, ME, MA, MN, OH, VI, WV, WI	Range	2600 ft extension area around the avoidance PULA	Drift, Run-off, Species specific ¹	Greater than 1,000,000
Taylor's checkerspot	OR, WI	Range, which includes designated critical habitat	2600 ft extension area around the avoidance PULA	Drift, Run-off	Greater than 1,000,000
White Bluffs bladderpod	WA	Range, which includes designated critical habitat	2600 ft extension area around the avoidance PULA	Drift, Species specific ¹	Less than 10,000
Mitigation Area: Known habitat, not delineated (see Table 3 for habitat description)					
American burying beetle	AR, KS, MA, NE, OH, OK, RI, SD, TX	Range	Same as avoidance PULA	Drift, Species specific ¹	Greater than 1,000,000
Attwater's prairie chicken	TX	PULA from Malathion BiOp	Same as avoidance PULA	Drift, Run-off	Greater than 1,000,000
Buena Vista Lake ornate shrew	CA	Range, which is inclusive of designated critical habitat	Same as avoidance PULA	Drift, Run-off	Greater than 1,000,000

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Minimization measures to be included in PULAs

Table 4. Draft options for runoff/erosion measures for selected pesticide use site¹.

Runoff/Erosion Mitigation Practice	Use Site				
	1: Field Crops ²	2: Orchards	3: Specialty Crops ³	4: Non-Ag ⁴	5: Rice ⁵
Applications					
Avoid Using Pesticide of a Highly Toxic Hazard Class to invertebrates	✓	✓	✓	✓	✓
40% rate reduction ⁶	✓	✓	✓	✓	✓
In Field					
Contour Farming	✓	✓	✓	--	--
Cover Crop	✓	✓	✓	✓	--
In-field Vegetative Filter Strip ⁷	✓	✓	✓	✓	--
Mulching	✓	✓	✓	✓	
Residue and Tillage management	✓	--	✓	--	--
Terrace Farming	✓	✓	✓	--	--
Grassed Waterways	✓	✓	✓	✓	--
Field Characteristics					
Field with <2% slope	✓	✓	✓	--	✓
Adjacent to the Field or In-between field and Protection Area					
Vegetative Filter Strips ⁷	✓	✓	✓	✓	--
Riparian Area (>10m width from average high-water mark to use site)	✓	✓	✓	✓	--
Controlled Drainage					
Constructed wetlands or Water and Sediment Control Basins	✓	✓	✓	✓	✓

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Label Language for Avoidance Areas:

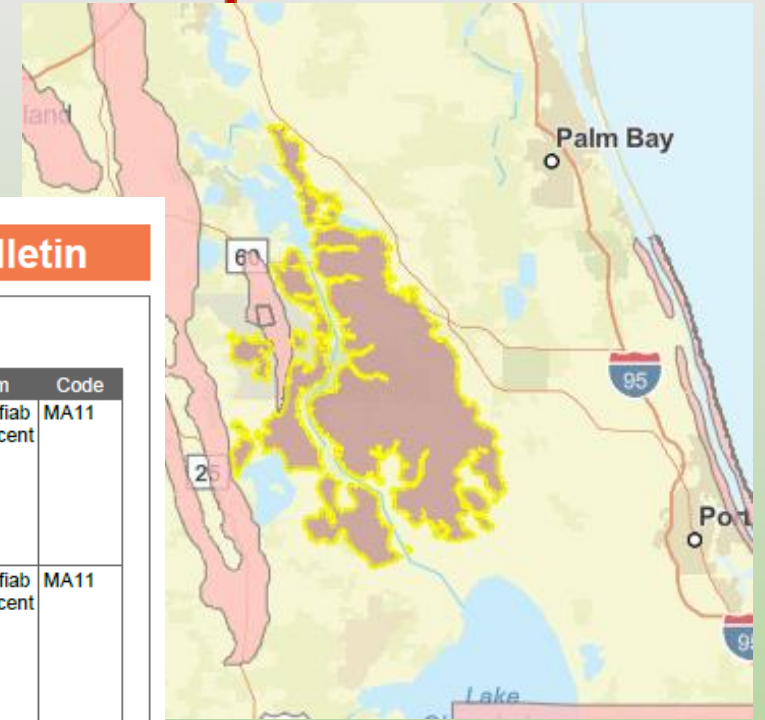
*Pesticide applications are prohibited within this area unless the applicator coordinates with the local FWS Ecological Services field offices to determine appropriate measures to ensure the proposed application is likely to have no more than minor effects on the species. **The applicator must coordinate with FWS at least 3 months prior to the application.** FWS points of contact are available through the Information, Planning, and Consultation (IPaC) website (<https://ecos.fws.gov/ipac/>). If a permit has been granted by FWS13, no additional coordination with FWS is needed if a pesticide application is made in accordance with an existing FWS permit.*

Label Language for Minimization Areas

- 1. Do not apply when soil in the area to be treated is saturated (if there is standing water on the field or if water can be squeezed from soil).*
- 2. Do not irrigate to the point of runoff. Follow label directions if pesticide needs to be watered into the soil for efficacy.*
- 3. Do not apply if NOAA/National Weather Service predicts 50% chance or greater of 1 or more inches of rainfall to occur within 48 hours following application.*
- 4. Four of the measures in **Table 4** are required to reduce potential transport of pesticides off treated fields from runoff water and soil erosion into the pilot species' habitats. Formal participation in a State or Federal soil and runoff conservation plan satisfies this requirement.*
- 5. The following exemptions to #1-4 apply: a. If the field has subsurface drainage installed, the mitigation measures are not applicable. The subsurface tile drains must release the effluent (water) into water-controlled drainage structures or saturation buffer zones.*
*b. **If the lands are managed with a site-specific runoff and/or erosion plan implemented according to the recommendations of a recognized conservation program,** then no additional runoff/erosion mitigations are needed. Recognized conservation programs include but are not limited to those run by federal and state agencies, a state university extension programs, National Alliance of Independent Crop Consultants, or certified agricultural conservation specialists.*

Implementation – Vulnerable Species Pilot Project

- Will be implemented over the next 18 months
- BLT reference language added pesticide product labeling as part of normal registration and registration review actions
- Registrants can add through non-notification
- EPA will develop Bulletins for the initial set of 27 pilot species



Endangered Species Protection Bulletin

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
FYAFANON MALATHION INSECTICIDE (5905-196) Inactive: FYAFANON THE PREMIUM GRADE MALATHION	Malathion (NO INERT USE)	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	MA11
FYAFANON MALATHION INSECTICIDE (5905-196) Inactive: FYAFANON THE PREMIUM GRADE MALATHION	Malathion (NO INERT USE)	All Agricultural Uses	Ground spray	Emulsifiable Concentrate	MA11

Codes and Limitations Table

Code	Limitation
MA11	Follow one of these measures: 1. Apply malathion only before dawn or after dusk OR 2. Apply malathion only when wind is blowing away from Florida scrub and sandhill habitats OR 3. Use a 50-foot ground buffer from Florida scrub and sandhill habitats, and an aerial buffer from Florida scrub and sandhill habitats according to application rate: (1) 50 feet for <0.5 lbs ai/A; (2) 75 feet for 0.5 - <1 lb ai/A; (3) 150 feet for 1-2.5 lbs ai/A; (4) 200 feet for >2.5 lbs ai/A. Buffer sizes may be reduced by 25 feet for application rates (1) and (2) if a full swath displacement upwind is used during aerial application. Buffer sizes may be reduced by 50 feet for application rates (3) and (4) if a full swath displacement upwind is used during aerial application. Habitat: Scrub and sandhill habitats are generally open habitats with sandy soil seen in patches between the trees, shrubs, and other plants that live in the habitat. Scrub may or may not have trees. If there are trees, they tend to be widely spaced in the case of pine trees, or clustered together in clumps in the case of the shrub-like oak trees found in these habitats. Between the trees (if present) you will see a variety of shrubs, flowering plants, grasses, and lichens.

Pesticide Use Limitation Areas (PULAs):

PULAs are being published without notice to SLAs!

Example – Malathion for Mosquito Control in Florida

Florida Department of Agriculture and Consumer Services (FDACS) became aware of this new PULA after it was implemented through a Pesticide Interim Decision (PID) in August 2023

July 2023 – Herbicide Strategy

EPA approach to:

- determine the need for
- the level of
- and geographic extent of

early mitigations for listed species from agricultural uses of conventional herbicides

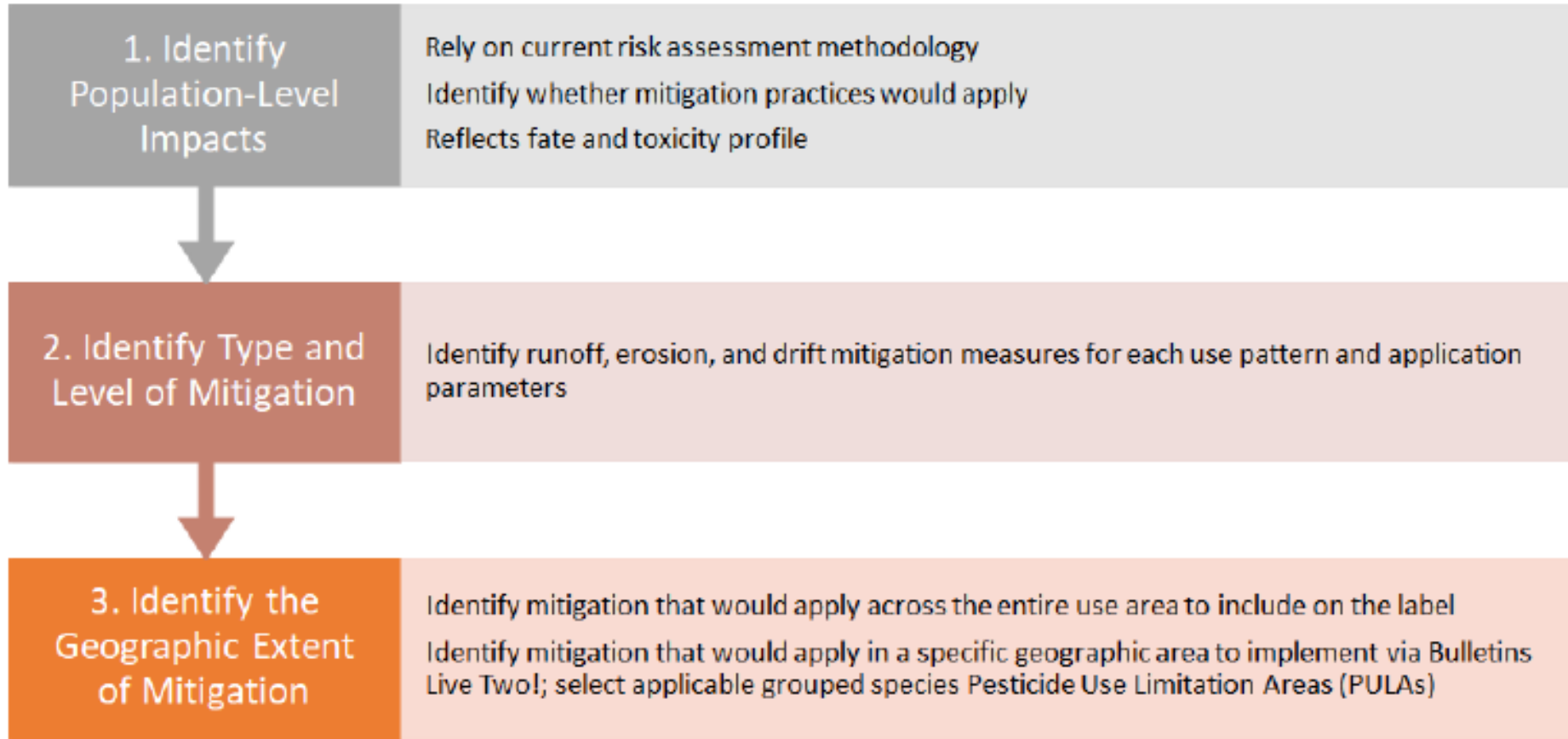


Figure 4-1. Overview of the Draft Herbicide Strategy Process

Impact of Herbicide Strategy

- change in Directions for Use
- required drift buffers depending on product and use area
- required mitigation measures depending on product and use area
- options chosen must equal required “points”
- additional restrictions in PULAs

Adds significant new decision-making steps to pest control product selection

Geographic coverage for mitigations Herbicide Strategy

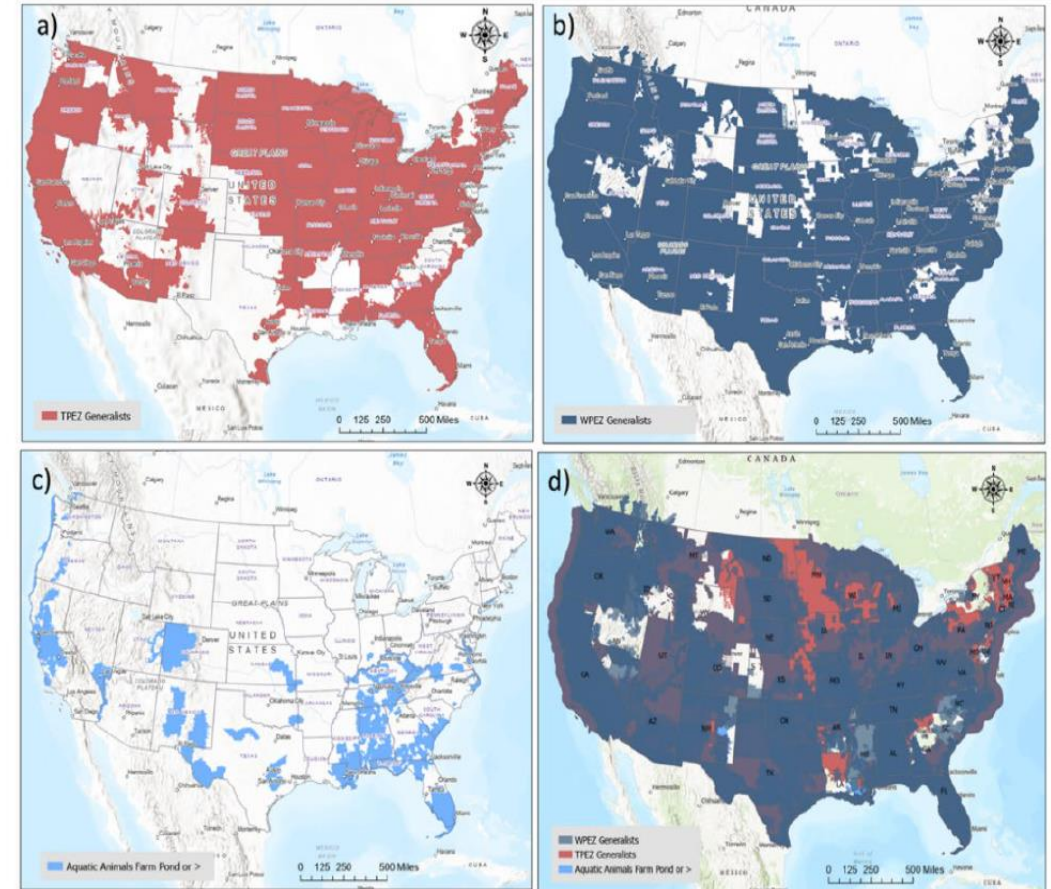
For the Strategy, mitigation would likely apply throughout the conterminous US when there are concerns for population-level impacts for plants that could impact the diet and/or habitat of listed animal generalists in all of these environments. EPA proposes that implementation would include mitigations for animals on the general labels because they are distributed throughout the majority of the conterminous US. Spatially limited mitigations would not apply.

Figure 7-1. a) Terrestrial Generalists: Listed animals that generally rely on terrestrial plants (plus their CHs) and have $\geq 5\%$ overlap with the Cultivated Use Data Layer (UDL) plus 300 m. This list does not include fully aquatic species that are captured in the wetland generalists and/or aquatic animals lists.

b) Wetland Generalists: Listed animals that generally rely on wetland plants (plus their CHs) and have $\geq 5\%$ overlap with the Cultivated UDL plus 300 m. This list includes aquatic animals found in waterbodies smaller than the EPA farm pond.

c) Aquatic Generalists: Listed animals that rely on aquatic plants (plus their CHs), are found in waterbodies that are equivalent in size to the EPA farm pond or larger, and have $\geq 5\%$ overlap with the Cultivated UDL plus 300 m.

d) All Listed Animal Generalists



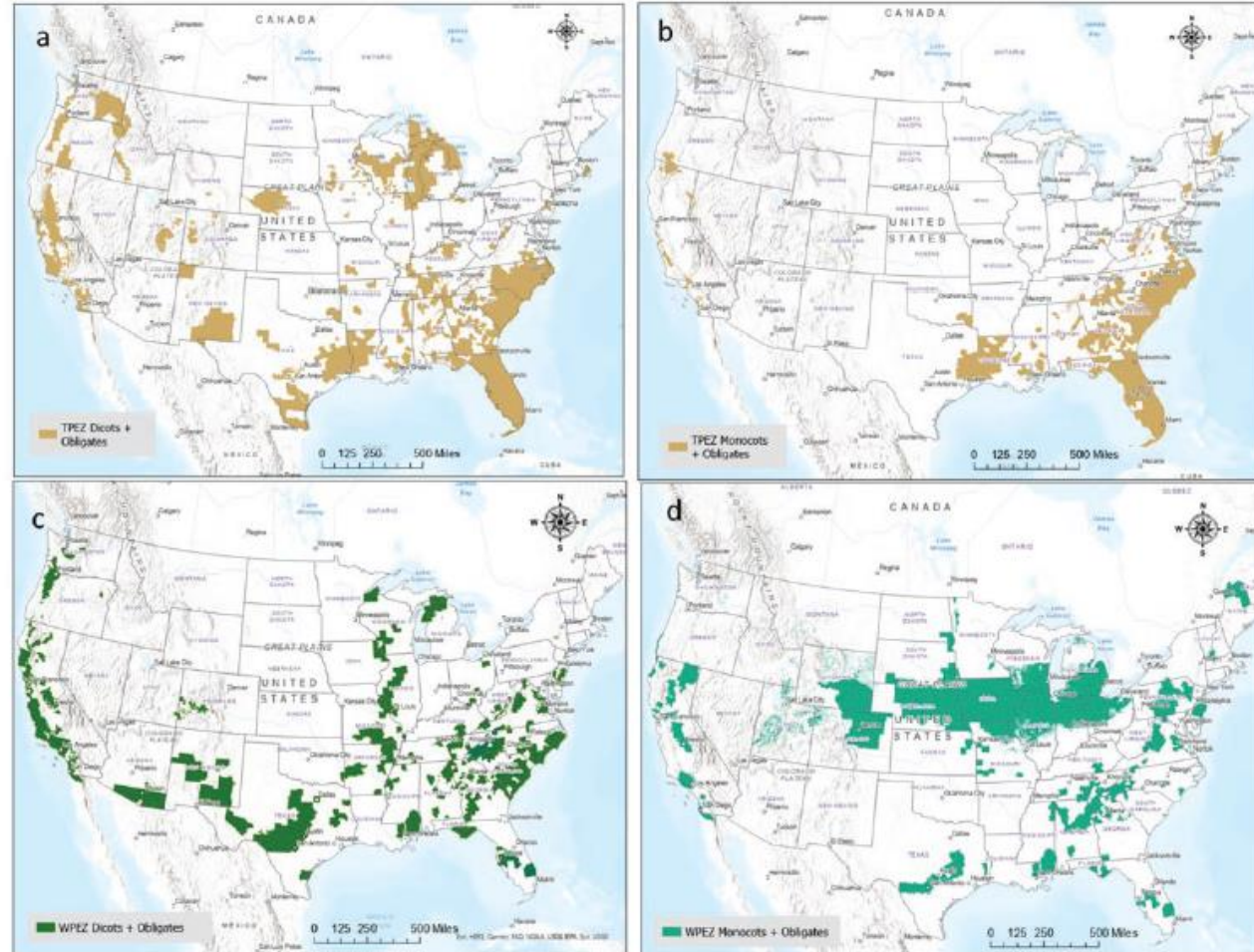
PULAS for Herbicide Strategy

Figure 7-2. a) PULA 1: Listed dicots, non-flowering plants, and animals with an obligate relationship to these plants located in terrestrial habitats. All species and CHs have $\geq 5\%$ overlap at 300 m using the Cultivated Use Data Layer (UDL);

b) PULA 2: Listed monocots, non-flowering plants, and animals with an obligate relationship to these plants located in terrestrial habitats. All species and CHs have $\geq 5\%$ overlap at 300 m using the Cultivated UDL;

c) PULA 3: Listed dicots, non-flowering plants, lichens, and animals with an obligate relationship to these plants located in wetland and aquatic habitats. All species and CHs have with $\geq 5\%$ overlap at 300 m using the Cultivated UDL; and

d) PULA 4: Listed monocots, non-flowering plants, lichens, and animals with an obligate relationship to these plants located in wetland and aquatic habitats. All species and CHs have with $\geq 5\%$ overlap at 300 m using the Cultivated UDL.



Example: oxyfluorfen

Drift buffers required on label

Table 12-14. Spray Drift Mitigation Measures Identified for Listed Animal Generalists as Related to Single Maximum Application Rate, Application Method and Droplet Size.¹

Single Maximum Application Rate (lb ai/A) ²	Identified Downwind Spray Drift Buffer Distances (ft)						
	Aerial Application			Ground Application			
	Fine-Medium	Medium-Coarse	Coarse-Very Coarse	Very Fine-Fine, High Boom	Very Fine-Fine, Low Boom	Fine-Medium/Coarse, High Boom	Fine-Medium/Coarse, Low Boom
2.0	Not permitted on labels			200 ^{e,g,h}	100 ^{e,g,h}	100 ^{e,g,h}	75 ^{f,g,h}
1.5				200 ^{e,g,h}	100 ^{e,g,h}	100 ^{e,g,h}	50 ^{g,h}
0.75				150 ^{e,g,h}	75 ^{g,h}	50 ^{g,h}	20 ⁱ
0.50	300 ^{a,b,c}	225 ^{a,b}	150 ^{b,d}	125 ^{e,g,h}	50 ^{g,h}	25 ⁱ	20 ⁱ
0.25	200 ^{a,b}	125 ^{b,d}	75 ^{b,d}	50 ^{g,h}	20 ⁱ	10 ⁱ	None ³
Mitigation Measures the Pesticide Applicator can Elect to Reduce Buffer Distances ⁴	^a Buffers ≥175 ft can be reduced by 25 ft if crop height at application is ≥1 ft. ^b Windbreak (release height below top of windbreak) reduces buffer distance by half ^c Buffers ≥250 ft could be reduced by 25 ft if relative humidity at application is >70% ^d Buffers 75-175 ft could be reduced by 25 ft if windspeed at application is 3-7 miles per hour			^e Buffers ≥100 ft could be reduced by 25 ft if relative humidity at application is >60% ^f Fine-Medium/Coarse-Low Boom buffers ≥75 ft could be reduced by 25 ft with coarse or coarser droplets ^g Windbreak/Hedgerow (release height below top of windbreak) reduces buffer distance by half ^h Hooded Sprayers reduce buffer distance by half ⁱ The applicator would achieve sufficient mitigation with a windbreak or hedgerow (release height below the top of the windbreak/hedgerow) or hooded sprayers alone without a buffer.			

Example: oxyfluorfen

Mitigation points needed for soil application

Table 12-22. Summary of Use-Based Runoff/Erosion Mitigation Points Identified for the General Label Based on Different Types of Habitats and 4 Pesticide Use Limitation Areas (PULAs).

Use	Mitigations Points on the General Label		Geographically Specific Mitigation Points	
			PULAs 1,2, 3 and 4 (Terrestrial Habitats) ¹	PULAs 3 and 4 (Aquatic and Wetland Habitats) ¹
	Terrestrial Habitats	Aquatic and Wetland Habitats		
Artichoke	7	7	7	7
Beans	5	7	7	7
Berry	7	7	7	7
Broccoli	5	5	5	5
Cabbage	5	5	5	5
Citrus	5	7	7	7
Corn	7	7	7	7
Cotton	5	7	7	7
Fruiting Vegetables	5	5	5	5
Garlic	5	5	5	5
Grape	7	7	7	7
Onion	5	5	5	7
Pome Fruit	5	7	7	7
Soybean	5	5	5	7
Stone Fruit	5	7	7	7

**To explore the Vermont Agency of Agriculture, Food and Markets, please visit: www.agriculture.vermont.gov

Example: Washington Apples

Mitigation points available for normal practices

Practice	Points
Sandy loam soil	1
Western agriculture	1
Irrigation management	1
Adjacent to field vegetative filter strip	2
Contour farming with strips	3
Multiple categories	1
Total points	9

Conclusions:

- The effect of the strategies being proposed is the addition of a significant level of complexity to the decision-making process for agricultural producers when designing their weed management program.
- Absent sufficient understanding by the end user and an effective compliance assurance process, this level of complexity will result in a general failure to achieve the intended protections designed into the HS.
- Existing certification and training programs will not be adequate to incorporate the level of training and information needed to understand and implement these measures.
- Information on what the measures mean in practice, how to implement them, and how to determine if a pesticide application complies will have to be developed and shared among all stakeholders.
- Success of the mitigation measures in preventing jeopardy and adverse modification will be determined by the level of compliance with the requirements.

Vulnerable Species Pilot

- Mitigation measures (applied broadly across different types of pesticides) for species with limited ranges & where pesticides have already been identified as a stressor for the species. ~27 species identified

Rodenticide Strategy

- Address effects to mammals & birds that consume rodenticide bait (1° consumers), & to birds, mammals & reptiles that consume 1° consumers

Rodenticide Biological Evaluation
Brodifacoum, Bromadiolone, Warfarin & Zinc Phosphide

Herbicide Strategy

- Focus on ESA-listed plants & those species that rely on plants
- Address spray drift & runoff transport from treated fields to minimize exposure

Insecticide Strategy

Fungicide Strategy

- Strategy to address vulnerable species that may be affected by fungicides

Organophosphate Biological Evaluation

- BE's: Acephate, Bensulide, Dimethoate, Ethoprop, Naled, Phorate, Phosmet & S,S,S-tributyl phosphorotrithioate
- Nationwide Scale Effects Determination: Dichlorvos (DDVP)
- Other AI's may be added if practicable

Compensatory Mitigation

Public Outreach (Draft White paper & Story Maps) conducted by 6/30/2023

45-day Comment Period for white paper

After outreach, determine if mitigations should be revised or more added by 12/30/2023

Determine how to expand the approach to other vulnerable species by 9/30/2024

Mitigation measures developed for 3 representative species (1 mammal 1° consumer; 1 bird 1° consumer & a 2° consumer), 1 designated habitat & plan to consider expanding mitigations to apply to ~90 other ESA-listed species.

Mitigation measures for the representative species incorporated into Rodenticide PID's. Issued in 11/2022

Draft Rodenticide BE in 11/2023. Will consider the mitigations identified in Rodenticide PID's

Final Rodenticide BE no later than 11/12/2024

Draft BE By 11/12/2023

60-day comment period (With option to extend BE's up to 60 days for good cause)

Final BE By 11/12/2024 (or adjusted accordingly due to possible comment extension)

Draft Strategy 7/24/2023

60-day comment period

Final Strategy + Response to Comments Document By 5/30/2024

After 3/30/24 - Strategy mitigation measures incorporated into PID's issued under EPA registration review program.

Group PID's, instead of chemical-specific, will be issued as appropriate.

60-day comment period for PID's

Draft Strategy By 7/30/2024

60-day comment period

Final Strategy + Response to Comments Document By 1/17/25 – 3/31/25

After 3/31/25, Strategy mitigation measures incorporated into PID's issued under EPA registration review program.

Group PID's, instead of chemical-specific, will be issued as appropriate.

60-day comment period for PID's

Attempt to agree on Completion date no later than 8/31/2024

Track 1 - all 8 AI's

Draft BE By 3/31/2027

Final BE By 9/30/2027

Track 2

Group 1 - 4 of 8 AI's

Group 2 - 4 of 8 AI's

Draft BE

Group 1 By 3/31/2026

Group 2 By 3/31/2027

60-day comment period

Final BE

Group 1 By 9/30/2026

Group 2 By 9/30/2027

Intervenors to organize & fund workshop to explore how offsets may be used to address effects of pesticide registrations. Anticipated to occur within 12 months of agreement date; but no more than 24 months of effective agreement date

Improving communication on this issue:

- EPA Region/SLA committee
- New SFIREG standing Committee
- NRCS/USDA OPMP Involvement
- Regional FWS contacts

Bulletins Live! Two (BLT) Tutorial

Bulletins Live! Two (BLT) is the Web-based application to access Endangered Species Protection Bulletins (Bulletins). These Bulletins contain enforceable pesticide use limitations that are necessary to ensure a pesticide's use will not harm a species listed as threatened or endangered (listed) under the Endangered Species Act or their designated critical habitat.

This application runs most successfully using the following Internet browsers:

- Google Chrome
- Mozilla Firefox
- Safari
- Microsoft Edge

Please ensure that you are accessing BLT using one of the indicated browsers.

This tutorial explains the steps to use the BLT application, including a section with additional information.

The tutorial includes the following eight sections:

1. [Using the map application tools](#)
2. [Navigating to the intended pesticide application location](#) (Step 1 on **Instructions Tab**)
3. [Selecting the application month](#) (Step 2 on **Instructions Tab**)
4. [Selecting the EPA Registration Number](#) (Step 3 on **Instructions Tab**)
5. [Selecting a Pesticide Use Limitation Area \(PULA\)](#) (Step 4 on **Instructions Tab**)
6. [Printing a Bulletin](#) (Step 5 on **Instructions Tab**)
7. [Understanding the components of the PDF Bulletin](#)
8. [Additional information](#)

1. Using the map application tools

Match the following letters for the tools with the letters on the image.

A. Zoom Tool: Zoom in using the “+” button and zoom out using the “-” button.

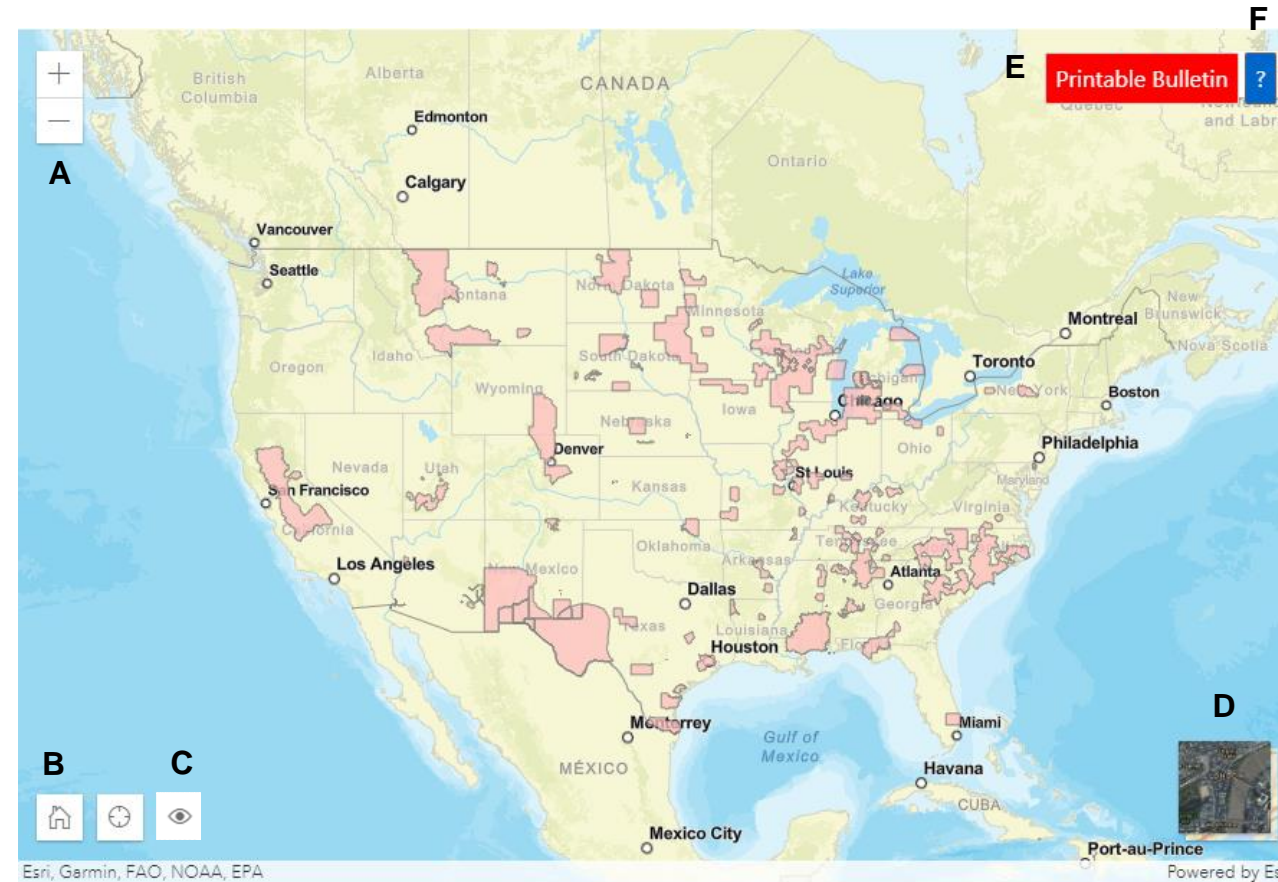
B. Default Map View Tool: Click the house in the lower left-hand corner to zoom to the full extent of the Pesticide Use Limitation Areas (PULAs) on the map. The geographic areas on the map where pesticide use limitations are present are referred to as PULAs. A PULA is indicated on the map by a pink shape. These are the geographic areas where pesticide use limitations exist to protect listed species and their designated critical habitat.

C. Opacity Slider: Use the opacity slider to increase or decrease the shading intensity of the PULA(s).

D. Basemap Tool: Click the box in the lower right-hand corner to change the background. It will say “Toggle Basemap” when your cursor hovers over it.

E. Printable Bulletin: This red button in the upper right-hand corner will generate a pdf of the PULA.

F. Help Button: This blue button marked with a “?” displays directions for using the application.



2. Navigating to the intended pesticide application location (Step 1 on *Instructions Tab*)


There are three ways to zoom to your intended pesticide application area:

A. Use the “Location Search” tool at the top of the blue search window left of the map. Search options include but are not limited to:

- city (e.g., New York, NY)
- county (e.g., New York County, NY)
- landmark (e.g., Statue of Liberty, NY)
- zip code (e.g., 10004)
- full address (e.g., Statue of Liberty National Monument, Liberty Island, New York, NY 10004) or
- coordinates (latitude and longitude: type longitude first, then latitude) in decimal degrees (e.g., -74.0444, 40.6892).

Names of cities, counties or other landmarks may occur in more than one location across the country; therefore, adding unique identifiers such as the state will help the application find the correct location.

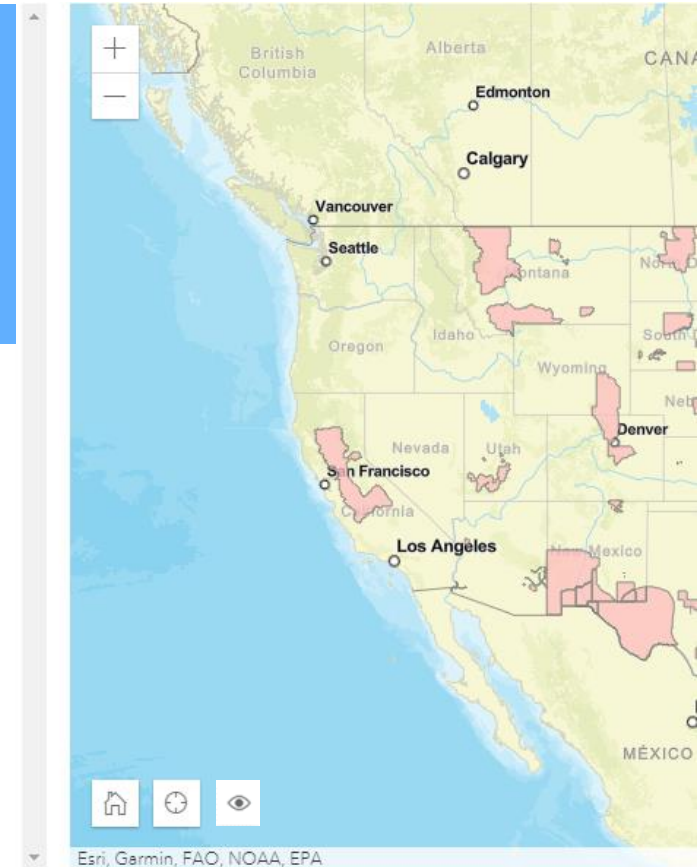
A



Location Search:
Find Place

Application Month:
February 2022

EPA Registration Number:

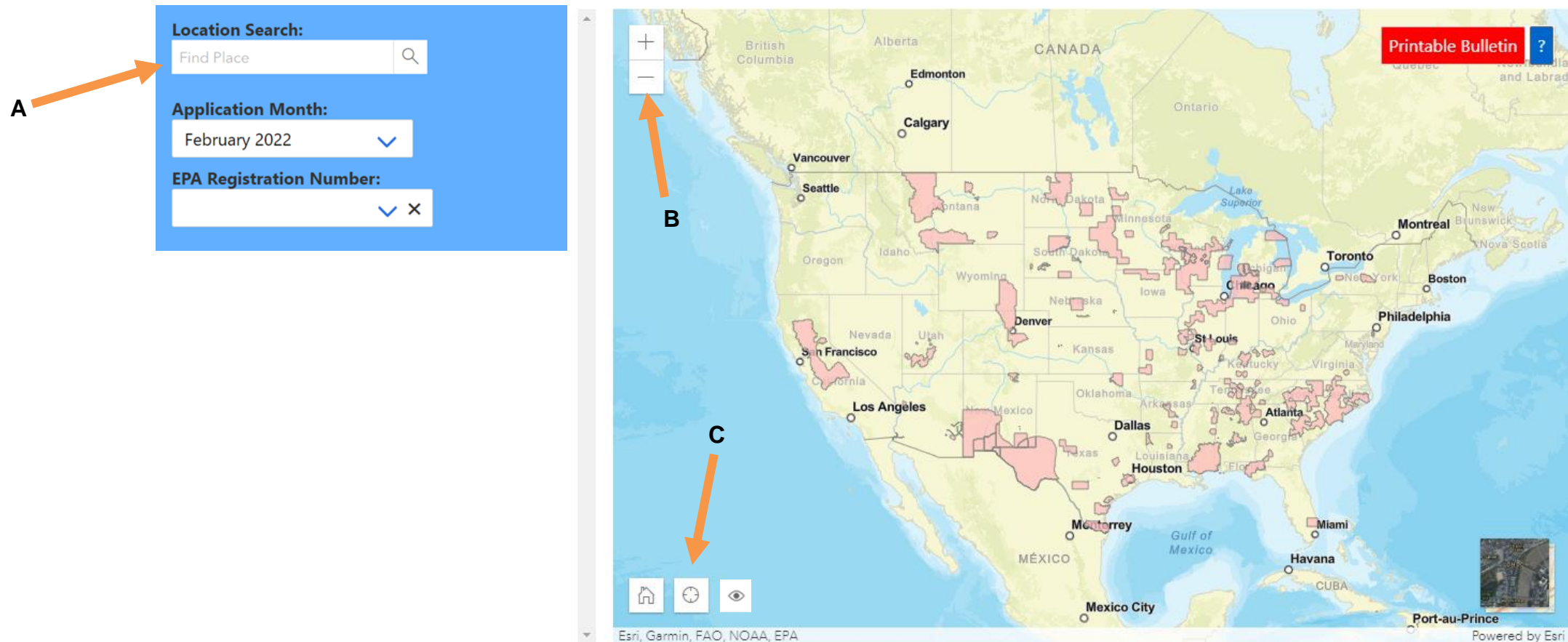


2. Navigating to the intended pesticide application location (Step 1 on *Instructions Tab*)

There are three ways to zoom to your intended pesticide application area:

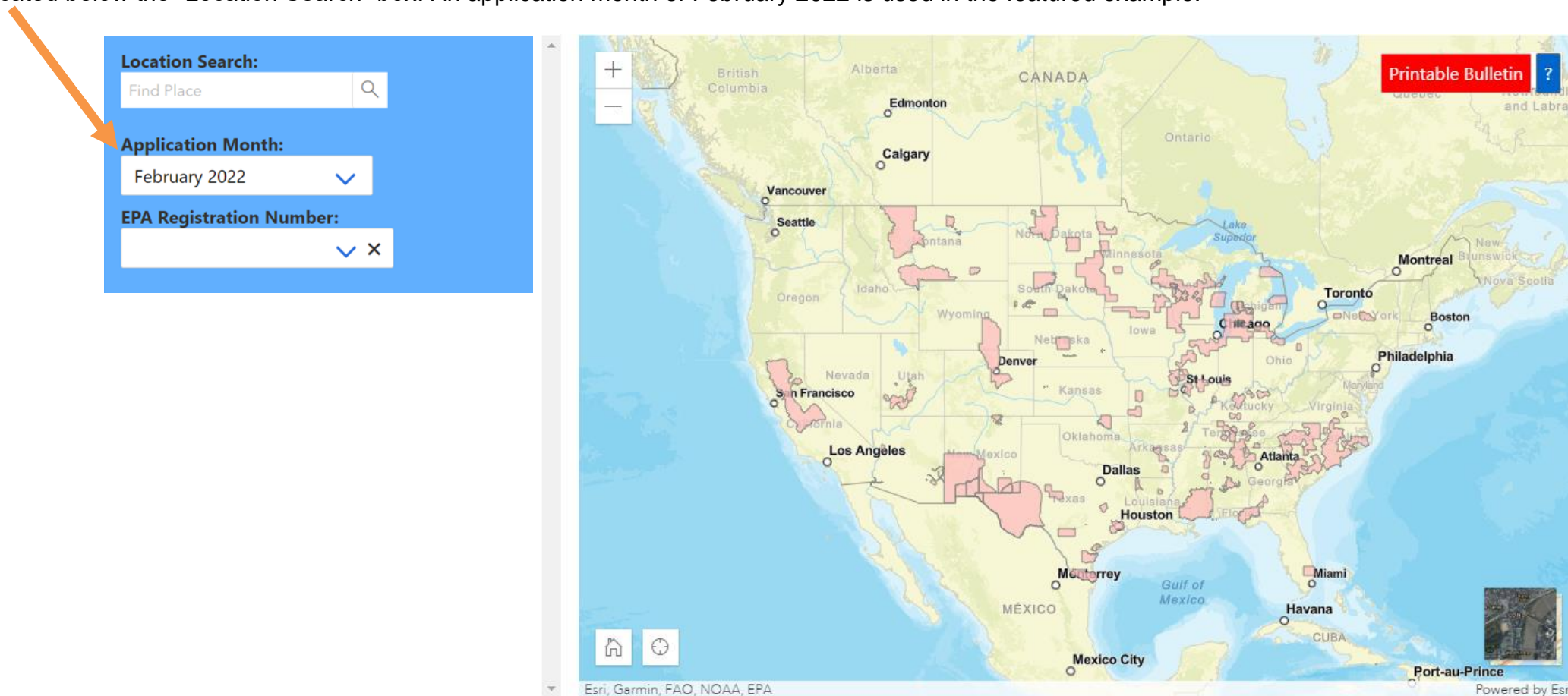
B. Manually zoom to a location by dragging the map to your location and using the “+” and “-” buttons in the upper left-hand corner to zoom in and out.

C. Use the lower left hand “Find my location” button if you are within the pesticide application area and your device’s privacy settings allow your location to be broadcasted.



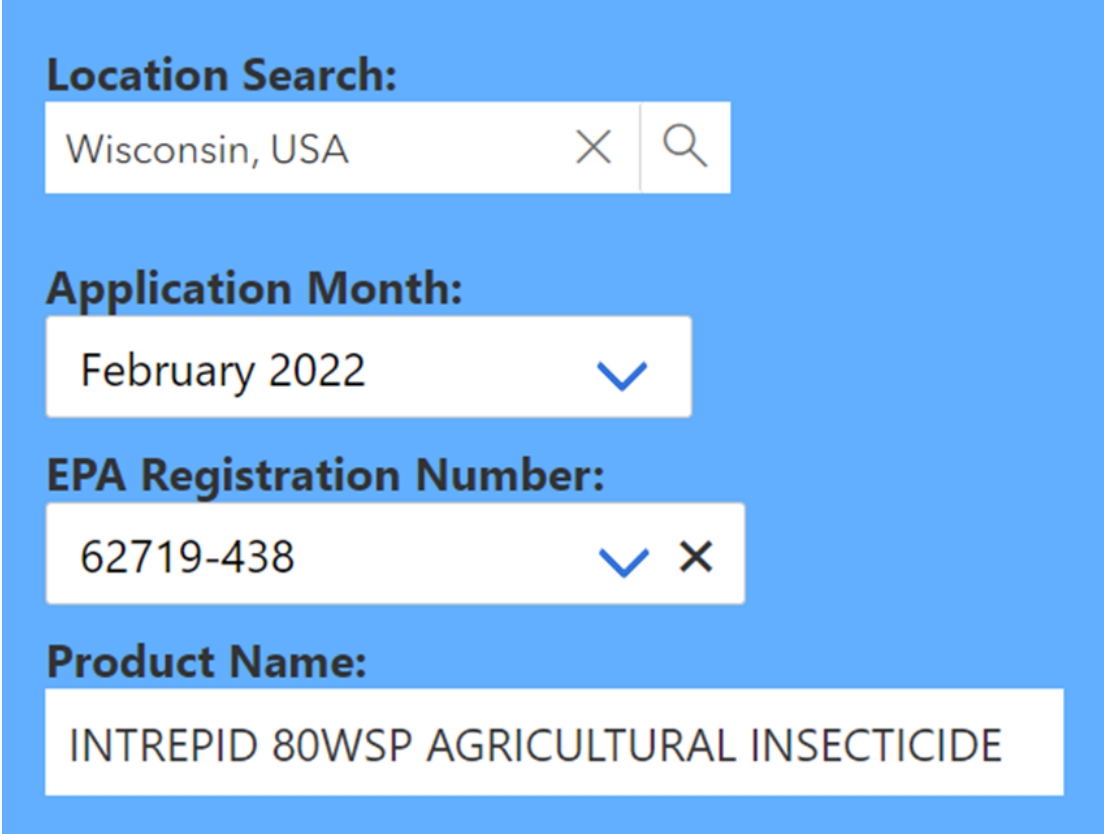
3. Selecting the application month (Step 2 on *Instructions Tab*)

After zooming to your intended application area, you must select the month when you intend to make your pesticide application. Bulletins are available for the current month (default option) as well as the next six months. Select a month from the second box in the blue search window left of the map. The “Application Month” box is located below the “Location Search” box. An application month of February 2022 is used in the featured example.



4. Selecting the EPA Registration Number (Step 3 on *InstructionsTab*)

EPA registration number searches: See next page for instructions about how to locate the EPA registration number on a pesticide label. A search box for entering the EPA registration number is located below the “Application Month” box. After typing the EPA registration number, only the PULAs for that specific pesticide will appear on the map, and the product name(s) will appear in a box directly beneath the EPA registration number search box. It is not possible to search solely using the product name(s); the EPA registration number **MUST** be typed first to ensure the correct product is searched. The purpose of the product name(s) box is for a user to verify that the search using the EPA registration number was executed properly. If this does not appear, then the search was not successful.



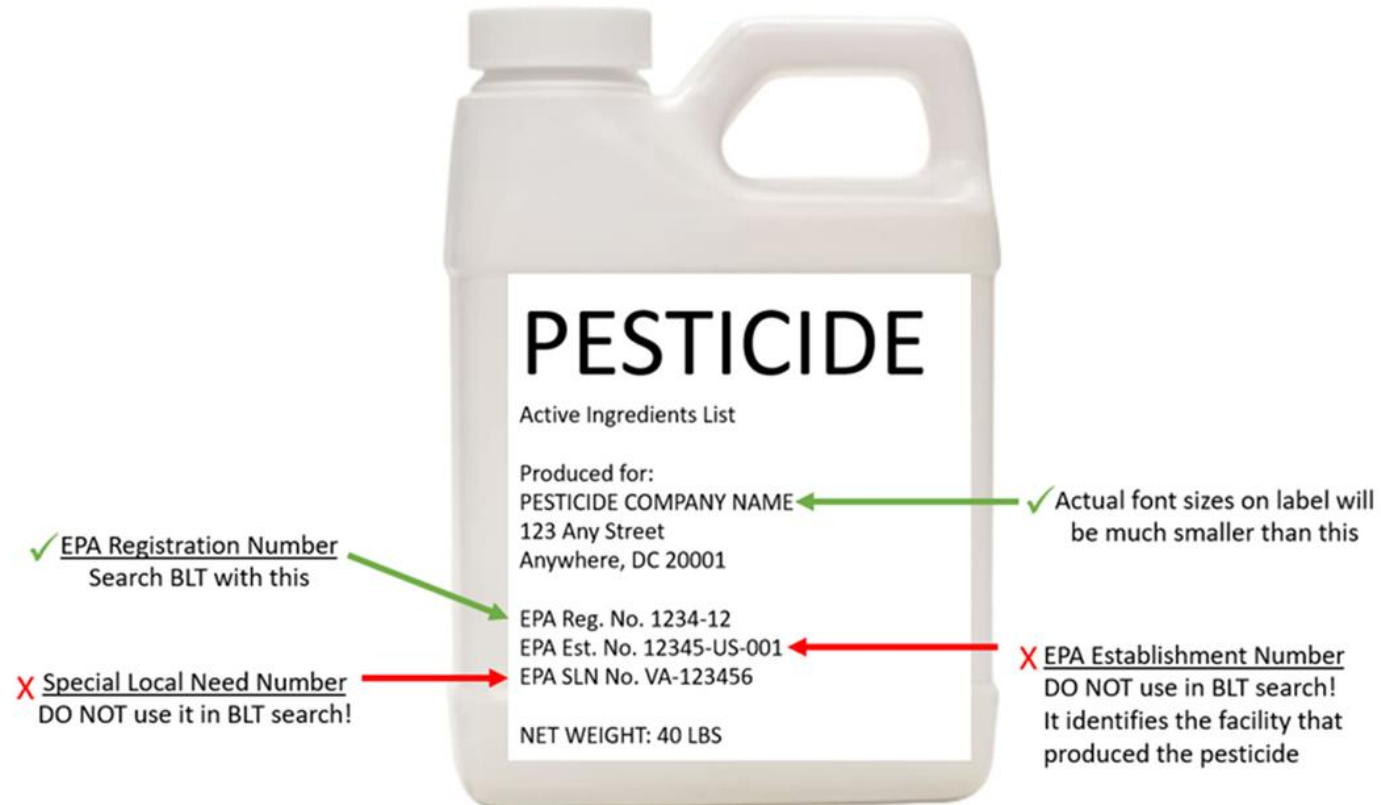
The screenshot shows a search interface with a blue background. It contains four main sections:

- Location Search:** A text input field containing "Wisconsin, USA" with a clear (X) button and a search (magnifying glass) button.
- Application Month:** A dropdown menu showing "February 2022" with a downward arrow.
- EPA Registration Number:** A text input field containing "62719-438" with a clear (X) button and a dropdown arrow.
- Product Name:** A text box displaying the result "INTREPID 80WSP AGRICULTURAL INSECTICIDE".

4. Selecting the EPA Registration Number (Step 3 on *InstructionsTab*)

Locating the EPA registration number on a product label:

- Look for “EPA Reg. No.” followed by two or three sets of numbers.
- If your product's registration number has **two** parts (ex. 1234-12), it has a **primary registration number**. This is the number that should be entered into the product search in BLT.
- If your product's registration number has **three** parts (ex. 1234-12-123), you have a **supplemental distributor product**. These products have the same chemical composition and efficacy as primary products, but often have different brand or product names. Enter the **first two parts** of this registration number (ex. **1234-12-123**) into the EPA registration search in Bulletins Live! Two.



4. Selecting the EPA Registration Number (Step 3 on *InstructionsTab*)

- The EPA Establishment Number (EPA Est. No.) should be printed near the EPA Reg. No. It identifies the facility that produced the pesticide and is not used in BLT. Searching will yield no results.
- If your label has “EPA SLN No.” followed by the two-letter state designation, then a 6-digit number (ex. EPA SLN No. NC950034). This is a Special Local Need registration number (SLN number) also known as a FIFRA Section 24(c) Registration Number. These Registrations are issued by the states to meet special local needs.
- These SLN numbers will not work within the Bulletins Live! Two EPA registration number search. A label that has an SLN should also have a primary registration number that can be entered in BLT. Please note that bulletins are not intended to replace or override any restrictions that your state may impose. You need to be aware of and follow pesticide use limitations in your area according to both the state AND federal requirements.

5. Selecting a PULA (Step 4 on Instructions Tab)

If a PULA occurs within your intended pesticide application area:

If a PULA occurs within your intended pesticide application area, select the PULA by clicking on it. This will outline the selected PULA in yellow and activate the **“Limitations for Selected Area”** results window.

Clicking on the blue button at the bottom of the results window that says **“Full Details”** will display a product summary table of codes, active ingredients, uses, methods, forms, and limitations for the selected PULA.

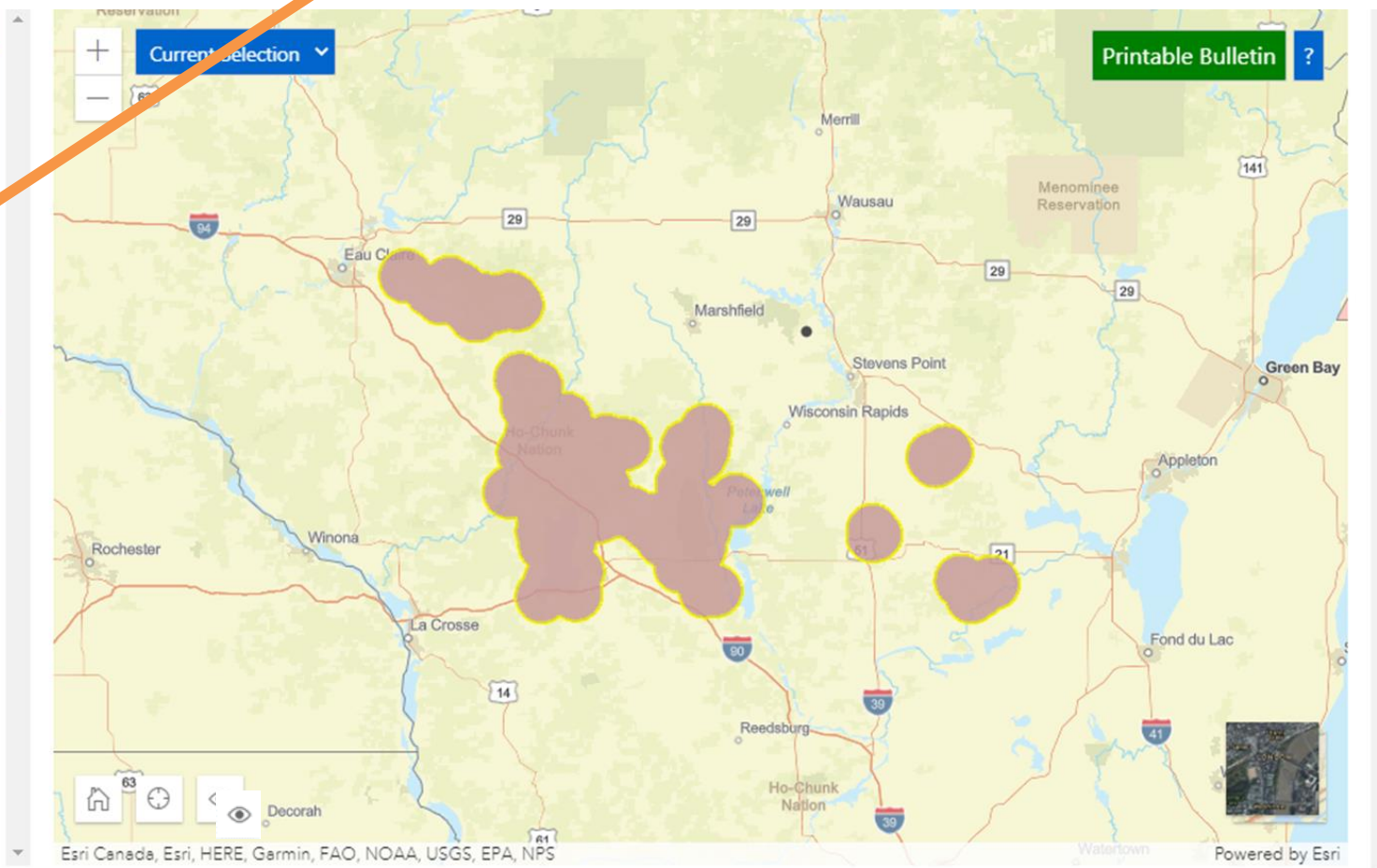
Limitations for Selected Area

Pula ID: 57
Event Name: Methoxyfenozide
Application Month: February 2022

Product	Count
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	2

[Full Details](#)

[Clear Selected](#) [Zoom To Selected](#)



6. Printing a Bulletin (Step 5 on *Instructions Tab*)

Print or save a pdf version of the Bulletin for your records, even if no PULAs appear in your intended pesticide application area.

If you see no PULA(s) in your intended application area after entering the location and EPA Reg. No., click on the map's green "Printable Bulletin" button. This creates a pdf that declares no limitations are present.

To print or save a PDF version of the bulletin when there is a PULA present, click the green "Printable Bulletin" button below the product summary table.

The button can also be selected in the map when the table is not displayed.

The screenshot displays a web application interface. On the left, a sidebar shows 'Limitations for Selected Area' with details for Pula ID: 57, Event Name: Methoxyfenozide, and Application Month: February 2022. The main area features a table with three rows of pesticide application limitations. Below the table is a green 'Printable Bulletin' button. To the right, a map shows a geographical area with a red-shaded region. A green 'Printable Bulletin' button is also visible on the map. An orange arrow points from the button in the table to the button on the map.

Code	Product	Active Ingredient	Crop/Use	Application Method	Formulation	Limitation
1a	INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	Cranberries	Ground spray	Any form	Primary application category (including agricultural lands, activities, or uses in Wisconsin), pesticide application within the pesticide use limitation area is limited to ground application methods or chemigation. Ground applications must be made using a drift retardant and nozzles that produce an American Society of Agricultural Engineers (ASAE) coarse droplet size distribution (median droplet size of 450-500 microns), and when the wind speed is between 2-10 mph. Chemigation must be conducted consistent with the instructions on the current chemigation label AND must be made using a solid-set sprinkler system producing a minimum median droplet size of 500 microns (median droplet size of 450-550 microns) or larger, and when the wind speed is between 2-10 mph.
1	INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Ground spray	Any form	Do not apply this product in the specified areas.
1	INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Aerial spray	Any form	Do not apply this product in the specified areas.


7. Understanding the components of the PDF Bulletin

[If a PULA occurs within your intended pesticide application area:](#)


The month for which the Bulletin is valid is located at the top of the page. Note: Bulletins are valid for the current month (default option) as well as the next six months.

If you intend to apply a pesticide within the PULA, outlined in yellow, follow the steps found in the Bulletin and the limitations in the [Pesticide Use Limitation Summary Table](#) and the [Codes and Limitations Table](#)

Endangered Species Protection Bulletin

 **Application Month:** February 2022
Product: INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)

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.



2 Look below at the Pesticide Use Limitation Summary Table. This table lists the user selected Active Ingredient(s) (AIs) 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.

7. Understanding the components of the PDF Bulletin


The [Pesticide Use Limitation Summary Table](#) identifies the Code(s) associated with the highlighted PULA. It also provides the:

Product and AI: These columns include the name of the active ingredient(s) and/or product(s) with pesticide use limitations.

-When using the default search settings, both the active ingredient(s) and product name(s) will be visible in the [Pesticide Use Limitation Summary Table](#), as seen in the example above.

Endangered Species Protection Bulletin					
Pesticide Use Limitation Summary Table					
Product	AI	Use	Method	Form	Code
INTREPID 80WSP AGRICULTURAL INSECTICIDE (82719-438)	Methoxyfenozide	Cranberries	Aerial spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (82719-438)	Methoxyfenozide	Cranberries	Ground spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (82719-438)	Methoxyfenozide	All Other Uses	Ground spray	Any form	1
INTREPID 80WSP AGRICULTURAL INSECTICIDE (82719-438)	Methoxyfenozide	All Other Uses	Aerial spray	Any form	1

Codes and Limitations Table	
Code	Limitation
1	Do not apply this product in the specified areas.



7. Understanding the components of the PDF Bulletin

The [Pesticide Use Limitation Summary Table](#) identifies the Code(s) associated with the highlighted PULA. It also provides the:

Use: This column specifies the labeled use pattern or use(s) to which the limitation applies. The use may be specific (e.g., 'cranberries') or general, if referring to all use patterns registered for a particular product (e.g., 'Any Use').

Method: This column specifies the application method (e.g., aerial spray, ground spray, seed treatment, bait, broadcast, etc.) associated with the limitation.

Form: This column specifies the chemical formulation (e.g., bait, dust, ear tag, liquid, granular, etc.) associated with the limitation.

Code: This column specifies the code associated with the limitation. This code can be used to identify the active ingredient(s) and/or product(s) associated with limitation in the Pesticide Use and Limitation Summary Table.

Limitation: This column matches the code with a full description of the pesticide use limitation.

When applying a pesticide product with multiple active ingredients, follow all of the codes and corresponding limitations.

Endangered Species Protection Bulletin					
Pesticide Use Limitation Summary Table					
Product	AI	Use	Method	Form	Code
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	Cranberries	Aerial spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	Cranberries	Ground spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Ground spray	Any form	1
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Aerial spray	Any form	1

Codes and Limitations Table	
Code	Limitation
1	Do not apply this product in the specified areas.

7. Understanding the components of the PDF Bulletin

The [Pesticide Use Limitation Summary Table](#) identifies the Code(s) associated with the highlighted PULA. It also provides the:


Code: This column specifies the code associated with the limitation. This code can be used to identify the active ingredient(s) and/or product(s) associated with limitation in the Pesticide Use and Limitation Summary Table.

Limitation: This column matches the code with a full description of the pesticide use limitation.

When applying a pesticide product with multiple active ingredients, follow all of the codes and corresponding limitations.

Endangered Species Protection Bulletin					
Pesticide Use Limitation Summary Table					
Product	AI	Use	Method	Form	Code
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	Cranberries	Aerial spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	Cranberries	Ground spray	Any form	1a
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Ground spray	Any form	1
INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)	Methoxyfenozide	All Other Uses	Aerial spray	Any form	1

Codes and Limitations Table	
Code	Limitation
1	Do not apply this product in the specified areas.



7. Understanding the components of the PDF Bulletin


If no PULAs occur within your intended pesticide application area:

The month for which the Bulletin is valid is located at the top of the page.


If there are no PULAs within the intended application area, no pink-shaded use limitation areas will appear on the map.

If this occurs, there are currently no pesticide use limitations in place to protect listed species at this location for the month indicated at the top of the Bulletin.

Endangered Species Protection Bulletin

 **Application Month:** February 2022
Product: INTREPID 80WSP AGRICULTURAL INSECTICIDE (62719-438)

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.



Currently, no pesticide use limitations exist within the printed map view for the month/year and product you selected, beyond the instructions specified on the pesticide label. Follow the use instructions on your label.

Ensure that your pesticide application area is within the printed map view. If it is not, follow the directions on the Instructions Tab to ensure that your pesticide application area is captured within the printed map view.

Please check back if you plan to apply your pesticide in an area outside the map view or in a month and year other than the one for which this Bulletin is valid.

8. Additional Information:

The geographic area where a pesticide use limitation is present to protect listed species and their designated critical habitat is referred to as a Pesticide Use Limitation Area (PULA).

Each PULA is relevant for the pesticide active ingredient(s) and product(s) specified for that area. The search tools in the BLT application can be used to view specific active ingredients and/or products associated with a given PULA for the intended application area specified in the user-defined search.

Limitation information can be found in the ***Limitations for Selected Area Table*** within the application, and in the PDF version of the Bulletin.



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EPA Approves New Labels for Cyantraniliprole to Better Protect Endangered Species

Released on September 28, 2023

The U.S. Environmental Protection Agency (EPA) has approved new labels for the insecticide cyantraniliprole that include new mitigations to protect federally threatened or endangered (listed) species. This action reflects EPA's efforts to meet its obligations under the Endangered Species Act (ESA) by identifying potential effects to listed species, implementing necessary mitigations, and initiating the ESA consultation process with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (referred to as "the Services").

Background

EPA first registered products containing cyantraniliprole in 2014. Cyantraniliprole is an insecticide that can be used on a variety of fruit, vegetable, and nut crops and as a seed treatment on some crops to control the Asian citrus psyllid as well as lepidopteran insects, dipteran leafminers, fruit flies, beetles, whiteflies, thrips, aphids, leafhoppers, psyllids, and weevils. It is also registered for non-agricultural uses on turf and ornamental plants.

In some instances, cyantraniliprole is the only non-neonicotinoid active ingredient available for growers. Growers and applicators can use cyantraniliprole in rotation with neonicotinoids (or other insecticides) to reduce the potential spread of insecticide resistance. Cyantraniliprole is also a useful addition to Integrated Pest Management (IPM) programs because it is less disruptive to some non-target insects than some insecticide alternatives. These non-target insects are beneficial because they can eat target pests—providing a natural control mechanism.

Following registration, the Center for Biological Diversity and the Center for Food Safety filed a petition for review in the D.C. Circuit, alleging that EPA had not met its ESA consultation obligations before registering products containing cyantraniliprole. In 2017, the D.C. Circuit agreed and remanded the registrations without vacating them for EPA to complete its ESA effects determinations and any necessary consultation with the Services. In November 2022, the court ordered, among other things, that EPA complete cyantraniliprole's ESA effects determination by September 2023.

EPA's Biological Evaluation

EPA published cyantraniliprole's draft biological evaluation (BE) and supporting documents for public comment in January 2023. The draft BE included a draft effects determination that evaluated the effects of the registration on listed species and designated critical habitats. The draft BE also predicted whether the registered uses of cyantraniliprole presented a potential likelihood of jeopardy to listed species or adverse modification to critical habitats.

Now, EPA is publishing its final BE. Accounting for new mitigation measures registrants agreed to, EPA revised some of its effects determinations and predictions of the likelihood of jeopardy and adverse modification for cyantraniliprole's final BE. EPA evaluated the effects of cyantraniliprole on over 1,700 listed species and over 800 critical habitats in the United States and its territories and determined that cyantraniliprole, with the revised mitigation measures:

- Will have no effect on 33 percent of species and 47 percent of critical habitats (as compared to 25 percent and 33 percent, respectively, from the draft BE);
- May affect but is not likely to adversely affect 31 percent of species and 38 percent of critical habitats (as compared to 34 percent and 54 percent, respectively, from the draft BE); and

- Is likely to adversely affect (LAA) 36 percent of listed species and 16 percent of critical habitats (as compared to 41 percent and 13 percent, respectively, from the draft BE).

An LAA determination means that EPA reasonably expects that at least one individual animal or plant, among a variety of listed species, may be exposed to cyantraniliprole at a sufficient level to have an adverse effect. This is the case even if a listed species is almost recovered to a point where it may no longer need to be listed. Adverse effects to even one individual of a listed species is enough to trigger such a determination. As a result, there are often a high number of LAA determinations. An LAA determination, however, does not necessarily mean that a pesticide is putting a species in jeopardy.

EPA further refined its analysis for the species and critical habitats where it made LAA determinations to predict the potential likelihood that cyantraniliprole use could result in jeopardy or adverse modification. These predictions examine effects of cyantraniliprole at the species scale (as opposed to one individual of a species). Of those species and habitats with an LAA determination, EPA's final BE predicted the uses of cyantraniliprole will not present a potential likelihood of jeopardy to any listed species or adverse modification for their critical habitats with the additional mitigation measures, as compared to 4 percent and 1 percent, respectively, from the draft BE.

For more information, see the final biological evaluation [\[link\]](#)

<https://www.regulations.gov/document/epa-hq-opp-2011-0668-0118>.

Additional Label Requirements to Protect Listed Species

To mitigate effects to listed species and critical habitats, the cyantraniliprole registrants agreed to amend their registrations to add additional mitigation measures. Among other requirements, the revised labels require pesticide applicators to take several measures when using cyantraniliprole, including:

- requiring the use of spray nozzles that result in medium to coarser droplets (these droplets have more mass and are less likely to drift with the wind);
- requiring that applicators maintain a 25- to 50-foot distance from waterbodies during ground and aerial applications, respectively, to protect aquatic species and habitats;

- requiring that applicators maintain a 25-foot buffer around a crop when using an “airblast” sprayer (a sprayer that uses high-speed air to deliver pesticides) to dormant and non-bearing vegetation, or to bearing vegetation that are not at full canopy (such as a pear tree that is not fully leafed);
- requiring the use of swath displacement (a method that accounts for the wind and proactively applies less pesticide to certain areas of a field where spray drift is likely to occur) to reduce off-target spray drift caused by wind during aerial applications; and
- requiring the implementation of additional aerial buffers to protect 18 listed species and two critical habitats listed on EPA’s Bulletins Live Two! Website
<<https://epa.gov/endangered-species/bulletins-live-two-view-bulletins>>.

For a complete list of the required mitigations, see the revised product labels [↗](#).

Next Steps

Since EPA determined that cyantraniliprole is likely to adversely affect listed species and critical habitats, the Agency has initiated formal consultation with the Services.

During formal consultation, the Services use EPA’s final BE to inform their biological opinions, which will include their final determinations of whether the use of cyantraniliprole jeopardizes any listed species or adversely modifies any critical habitat. EPA will continue to work with the Services during the consultation process.

The final BE, revised labels, and other supporting documents are available in docket EPA-HQ-OPP-2011-0668 [↗](https://www.regulations.gov/docket/epa-hq-opp-2011-0668) on www.regulations.gov [↗](https://www.regulations.gov).

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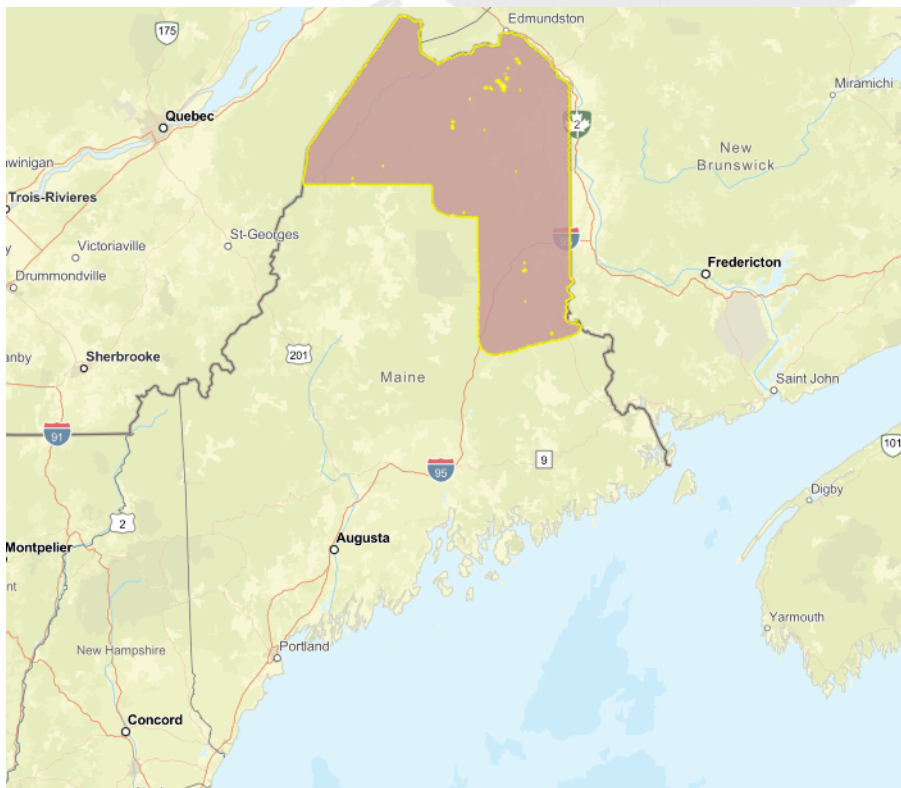
Endangered Species Protection Bulletin



Application Month: November 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) (AIs) 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.

Endangered Species Protection Bulletin

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
BENEVIA insect control (279-9614) Inactive: DUPONT BENEVIA insect control	Cyantraniliprole	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	CYN23
EXIREL INSECT CONTROL (279-9615) Inactive: DUPONT EXIREL insect control	Cyantraniliprole	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	CYN23
Mainspring Flora (100-1585)	Cyantraniliprole	All Agricultural Uses	Aerial spray	Granular	CYN23
MAINSRING GNL (100-1543) Alternate: MAINSPRING GH & N Inactive: HGW86 GH & N INSECT CONTROL	Cyantraniliprole	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	CYN23
MAINSRING GNL (100-1543) Alternate: MAINSPRING GH & N Inactive: HGW86 GH & N INSECT CONTROL	Cyantraniliprole	All non-agricultural uses	Aerial spray	Emulsifiable Concentrate	CYN23
MAINSRING GNL (100-1543) Alternate: MAINSPRING GH & N Inactive: HGW86 GH & N INSECT CONTROL	Cyantraniliprole	Christmas Tree Plantations	Aerial spray	Emulsifiable Concentrate	CYN23
MINECTO DUO INSECTICIDE (100-1421) Inactive: MINECTO DUO INSECTICIDE, A16901B CP	Cyantraniliprole	All Agricultural Uses	Aerial spray	Granular	CYN23
Minecto Pro (100-1592)	Cyantraniliprole	All Agricultural Uses	Aerial spray	Emulsifiable Concentrate	CYN23

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ESPP Contact: ESPP@epa.gov Phone: 1-844-447-3813

Endangered Species Protection Bulletin

Codes and Limitations Table

Code	Limitation
CYN23	<p>For aerial applications using medium to coarse droplet sizes, a 75 foot in-field, wind-directional buffer for windspeeds ≤ 10 mph or a 100 foot in-field, wind-directional buffer for windspeeds 11-15 mph are required. For aerial applications using coarse to very coarse droplet sizes, a 40 foot in-field, wind-directional buffer for windspeeds ≤ 10 mph or a 50 foot in-field, wind-directional buffer for windspeeds 11-15 mph are required. The applicator must maintain the appropriate in-field, wind-directional buffer as described above from treatment sites to any area except the following: 1) Roads, paved or gravel surfaces, 2) planted agricultural fields, 3) agricultural fields that that have been prepared for planting, or 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. In-field, wind directional buffers can be maintained at half the distance required above when windbreaks (e.g., trees or riparian hedgerows) between the application site and all areas except those listed above are present. The windbreak would need to have a row of broad-leaved trees the full length of the treated crop with leaves visible over the entire length, with no significant gaps. The height of the trees or windbreak would need to be at a height greater than the crop to be sprayed.</p>

BENEVIA®

INSECT CONTROL

WITH THE ACTIVE INGREDIENT **CYAZYPYR®**

ACCEPTED

09/27/2023

Under the Federal Insecticide, Fungicide
and Rodenticide Act as amended, for the
pesticide registered under
EPA Reg. No. 279-9614

GROUP 28 INSECTICIDE

For foliar applications to bulb, legume and tuberous and corm vegetables; cotton; oil seed crops; peanuts; soybeans; tobacco and tree nuts for pest management of sucking and chewing insects that can vector certain plant diseases, aiding in optimization of the crop's potential.

Active Ingredient

By Weight

Cyantraniliprole

3-bromo-1-(3-chloro-2-pyridinyl)-N-[4-cyano-2-methyl-6-
[(methylamino)carbonyl]phenyl]-1H-pyrazole-5-carboxamide

10.26%

Other Ingredients

89.74%

TOTAL

100.00%

BENEVIA® is an oil dispersion. SHAKE WELL BEFORE USING.

Contains 0.83 lb. active ingredient per gallon.

EPA Reg. No. 279-9614

EPA Est. No. _____

Nonrefillable Container

Refillable Container

Net: _____

OR

Net: _____

Not for sale, sale into, distribution and/or use in Nassau and Suffolk counties of New York State.

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

For questions regarding emergency medical treatment, you may contact 1-800-331-3148 for information.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Causes moderate eye irritation. Avoid contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

After the product has been diluted in accordance with label directions for use, shirt, pants, socks, and shoes are sufficient Personal Protective Equipment. Follow manufacturer's instructions for cleaning/maintaining personal protective equipment (PPE). If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

Sold By



FMC Corporation
2929 Walnut Street
Philadelphia, PA 19104

USER SAFETY RECOMMENDATIONS

USERS SHOULD: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

PHYSICAL OR CHEMICAL HAZARDS

Do not place product near or allow product to come into contact with strong oxidizing substances (such as potassium permanganate) since a hazardous chemical reaction may occur.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to aquatic invertebrates and oysters. Do not apply directly to water. Drift and runoff may be hazardous to aquatic organisms in water adjacent to use sites. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

Surface Water Advisory-

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of cyantraniliprole from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

Ground Water Advisory-

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

PROTECTION OF POLLINATORS



APPLICATION RESTRICTIONS EXIST FOR THIS PRODUCT BECAUSE OF RISK TO BEES AND OTHER INSECT POLLINATORS. FOLLOW APPLICATION RESTRICTIONS FOUND IN THE DIRECTIONS FOR USE TO PROTECT POLLINATORS.



Look for the bee hazard icon in the Directions for Use for each application site for specific use restrictions and instructions to protect bees and other insect pollinators.

This product can kill bees and other insect pollinators.

Bees and other insect pollinators will forage on plants when they flower, shed pollen, or produce nectar.

Bees and other insect pollinators can be exposed to this pesticide from:

- Direct contact during foliar applications, or contact with residues on plant surfaces after foliar applications
- Ingestion of residues in nectar and pollen resulting from foliar applications.

When Using This Product Take Steps To:

- Minimize exposure of this product to bees and other insect pollinators when they are foraging on pollinator attractive plants in and around the application site.
- Minimize drift of this product onto beehives or to off-site pollinator attractive habitat. Drift of this product onto beehives or off-site to pollinator attractive habitat can result in bee kills.

Information on protecting bees and other insect pollinators may be found at the Pesticide Environmental Stewardship website at: <http://pesticidestewardship.org/PollinatorProtection/Pages/default.aspx>.

Pesticide incidents (for example, bee kills) should immediately be reported to the state/tribal lead agency. For contact information for your state, go to: www.aapco.org/officials.html. Pesticide incidents should also be reported to the National Pesticide Information Center at: www.npic.orst.edu or directly to EPA at: beekill@epa.gov

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation.

ENDANGERED AND THREATENED SPECIES PROTECTION REQUIREMENTS: Before using this product, you must obtain any applicable Endangered Species Protection Bulletins ('Bulletins') within six months prior to or on the day of application. To obtain Bulletins, go to Bulletins Live! Two (BLT) at <https://www.epa.gov/pesticides/bulletins>. When using this product, you must follow all directions and restrictions contained in any applicable Bulletin(s) for the area where you are applying the product, including any restrictions on application timing if applicable. It is a violation of Federal law to use this product in a manner inconsistent with its labeling, including this labeling instruction to follow all directions and restrictions contained in any applicable Bulletin(s). For general questions or technical help, call 1-844-447-3813, or email ESPP@epa.gov.

1. FOR CROPS UNDER CONTRACTED POLLINATION SERVICES



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless the following conditions is met.

- If an application must be made when managed bees are at the treatment site, the beekeeper providing the pollination services must be notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

2. FOR FOOD CROPS AND COMMERCIALY GROWN ORNAMENTALS NOT UNDER CONTRACT FOR POLLINATION SERVICES BUT ARE ATTRACTIVE TO POLLINATORS



Do not apply this product while bees are foraging. Do not apply this product until flowering is complete and all petals have fallen unless one of the following conditions is met:

- The application is made to the target site after sunset
- The application is made to the target site when temperatures are below 55°F
- The application is made in accordance with a government-initiated public health response
- The application is made in accordance with an active state-administered apiary registry program where beekeepers are notified no less than 48-hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying
- The application is made due to an imminent threat of significant crop loss, and a documented determination consistent with an IPM plan or predetermined economic threshold is met. Every effort should be made to notify beekeepers no less than 48- hours prior to the time of the planned application so that the bees can be removed, covered or otherwise protected prior to spraying.

RESTRICTIONS

- Do not make ground applications within 25' or aerial applications within 50' of aquatic habitats (such as, but not limited to, lakes, reservoirs, rivers, permanent streams, wetlands or natural ponds, estuaries, and commercial fish farm ponds). Do not cultivate within 30' of these aquatic areas to allow growth of a vegetative filter strip.
- For foliar uses, do not apply during rain.
- When making air blast applications to orchard crops with sparse canopies a 25 foot buffer is required between the application site and all adjacent areas except for roads (and other paved or gravel surfaces), agricultural areas (fields that have been planted into or prepared for planting), and structural areas (buildings or other man-made structures with walls and/or a roof). A sparse canopy occurs during the period of dormancy starting from first leaf drop at the end of the season until vegetation is fully leafed out in the spring, and on young orchard crops that are not yet bearing.
- Do not treat plants grown for transplanting. Not for use in nurseries, plant propagation houses, or greenhouses by commercial transplant producers on plants being grown for transplanting.
- Do not apply BENEVIA® to the soil or through drip irrigation systems. May be used on crops on this label grown for seed production.
- Do not use in residential areas.
- Do not apply BENEVIA® insect control through any irrigation system unless specified in the crop section of this label.
- Unless otherwise stated for a specific crop, do not apply a total of more than 0.4 lb ai/A of CYAZYPYR® or cyantraniliprole containing products per calendar year. This is the total from all application methods (eg. seed, soil, foliar).

AGRICULTURAL USE REQUIREMENTS

BENEVIA® must be used only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on the label about personal protective equipment, restricted-entry interval, and notification to workers (as applicable).

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

For early entry into treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, wear:

- Coveralls
- Shoes plus socks
- Chemical resistant gloves (made of any waterproof material)

BENEVIA® must be used in accordance with the directions for use on this label, or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

BENEVIA® is an oil dispersion that can be applied as a foliar spray on labeled crops or by overhead chemigation in potatoes and bulb vegetables to control listed insects. BENEVIA® is specially formulated for maximum performance by foliar applications in bulb, legume and tuberous and corm vegetables; cotton; oil seed crops; peanuts; soybeans; tobacco and tree nuts. Do not apply directly to the soil or through drip irrigation as doing so may damage the plant root system. BENEVIA® is mixed with water for application.

BENEVIA® is a member of the anthranilic diamide class of insecticides with a novel mode of action acting on insect ryanodine receptors. Although BENEVIA® has contact activity, it is most effective through ingestion of treated plant material. After exposure to BENEVIA®, affected insects will rapidly stop feeding, become paralyzed, and typically die within 1 - 3 days, reducing both direct damage and the transmission of some insect transmitted diseases. Early season applications of BENEVIA® improve crop establishment and growth vigor by controlling a range of pests that attack seedlings. Time applications to the most susceptible insect pest stage, typically at egg hatch and/or newly hatched larvae or nymphs, before populations reach damaging levels. When pest populations are high, use the highest listed application rate for that pest. For best results when targeting control of sucking pests, begin applications when insect populations first appear. BENEVIA® has preventative activity, but low curative activity for sucking pests.

INTEGRATED PEST MANAGEMENT

FMC supports the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an IPM program, which can include biological, cultural, and genetic practices, aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, rotation of insecticides with different modes-of-action, and treating when target pest populations reach locally determined action thresholds. For best results with sucking pests, apply at specified rates when insects first appear. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop or site systems in your area.

SCOUTING

Monitor insect populations to determine whether or not there is a need for application of BENEVIA® based on locally determined pest management guidelines. More than one treatment of BENEVIA® may be required to control a population of pests.

INSECT RESISTANCE MANAGEMENT

For resistance management, BENEVIA® is a Group 28 Insecticide. Repeated and exclusive use of BENEVIA® (cyantraniliprole) or other Group 28 insecticide belonging to the anthranilic diamide class of chemistry may lead to the buildup of resistant strains of insects in some crops.

Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, this product may be used as part of a resistance management strategy established for the use area. These strategies may include incorporation of cultural and biological control practices, alternation of mode-of-action classes of insecticides on succeeding generations and the most susceptible life stage. Consult your local or state agricultural authorities for details.

Unless directed otherwise in the specific crop/pest sections of this label, the best practices are to follow these instructions to delay the development of insecticide resistance:

- Avoid using the same mode of action (same IRAC group number) on consecutive generations of insect pests.
- Make no more than 2 applications of BENEVIA® (cyantraniliprole) or other Group 28 products per generation to the same insect species on a crop.
- Application to the next generation of target pest(s) must be with an effective product with a different mode of action (non- Group 28 insecticide).
- Make no more than 2 successive applications within a 30-day period to the same insect species on a crop. The following application to the target pest(s) must be with an effective product with a different mode of action.
- Avoid using less than the labeled rates of BENEVIA® when applied alone or in tank mixtures.
- Target the most susceptible insect life stages, whenever possible.
- Monitor insect populations for product effectiveness. If resistance to BENEVIA® develops in your area, BENEVIA® or other products with a similar mode of action, may not provide adequate control.
- If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local FMC company representative or agricultural advisor for the best alternative method of control.

For additional information on insect resistance monitoring, visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://www.irac-online.org>.

APPLICATION

Apply at the specified rates when insect populations reach locally determined action thresholds. For best results with sucking pests, begin applications when insects first appear. Consult the cooperative extension service, professional consultants or other qualified authorities for local pest management guidelines in your area.

Apply follow-up treatments of BENEVIA®, as specified, to keep pest populations under threshold limits. Refer to the Resistance Management section of this label for further guidance on follow-up treatments. See individual crop sections of this label for specific minimum spray intervals. Use sufficient water to obtain thorough, uniform coverage.

BENEVIA® may be applied by: foliar ground (including overhead chemigation in potatoes and bulb vegetables), or aerial application equipment.

BENEVIA® may be applied via overhead sprinkler chemigation systems on potatoes and bulb vegetables. Use of the highest labeled rate for the specified pest may be necessary when making overhead chemigation applications.

For aerial application use the following directions unless otherwise specified in specific crop/pest sections of this label or other supplemental labeling: use a minimum of 5 gallons per acre (gpa) of water for bulb vegetables, cotton, oil seed crops and tuberous and corm vegetables and use 10 gallons per acre (gpa) for tree nuts. Use of the highest labeled rate for a specified pest may be necessary when making aerial applications.

For foliar ground applications use the following directions, unless otherwise specified in specific crop/pest sections of this label or other supplemental labeling: use a minimum of 10 gal per acre (gpa) of water for bulb vegetables, cotton, oilseed crops and tuberous and corm vegetables and use a minimum of 30 gallons per acre (gpa) for tree nuts.

Use of Adjuvants - In some situations where coverage is difficult to achieve such as closed canopy, dense foliage, plants with waxy leaf surfaces, or less than optimum applications equipment, an adjuvant may improve performance. Use a proven and recommended adjuvant that does not affect foliage and/or fruit finish. Tank mixes of BENEVIA® with spreading and penetrating adjuvants can result in adverse crop response. See specific crop instructions in the following crop tables.

SPRAY PREPARATION

Spray equipment must be clean and free of previous pesticide deposits before applying BENEVIA®. Fill spray tank 1/4 to 1/2 full of water. Add BENEVIA® directly to spray tank. Mix thoroughly to fully disperse the insecticide, once dispersed continued agitation is required. Use mechanical or hydraulic means; do not use air agitation. Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

Acidification of Spray Tank - If the pH of the spray tank after all products have been added and mixed is above pH 8, adjust to pH 8 or less using a registered acidifying agent. If the spray tank pH is 8 or less no adjustment of the spray tank pH is necessary. Spray tanks of pH 8 or less can be held for up to 8 hours before spraying. Do not store the spray mixture overnight in the spray tank.

Compatibility - Since formulations may be changed and new ones introduced, premix a small quantity of a desired tank mix and observe for physical incompatibility (settling out, flocculation, etc.). Spray volumes of less than 3 gallons of water and tank mixtures of more than two products can increase the chances of incompatible spray mixtures. A jar test (as described below) should be conducted when label guidance is not given or prior experience with a specific tank mixture is unknown. The jar test should follow the proper sequence of addition at the spray water volume planned to assure that the tank mix is compatible. Constant agitation may be needed during mixing and spraying of mixtures.

This product can be mixed with pesticide products labeled for use on crops on this label in accordance with the most restrictive of label limitations and precautions. Do not exceed labeled dosage rates. This product cannot be mixed with any product containing a label prohibition against such mixing.

Steps to conduct a jar test to determine physical tank mix compatibility of BENEVIA® with other products:

- Add clean water to jar proportional to the planned water volume that will be used in the spray tank (a jar size of 8-16 oz is acceptable).
- Using the most restrictive PPE of the products to be tested, mix proper proportions of BENEVIA® and desired tank mix partner(s) as will be present in the spray tank, add one product at a time following the sequence of addition according to formulation type provided in this label.
- Seal and shake mixture after each product is added.
- Allow to stand for 1 hour.
- View jar to determine if settling, flocculation, crystallization or any other undesirable changes have happened.
- If none of the above is observed or the solution can be easily remixed after shaking, the mixture is compatible with BENEVIA®.
- If the tank mix is not compatible, a higher water volume, reduced rate of the tank mix partner(s), reduced number of tank mix partners or a compatibility agent may be needed.

TANK MIXTURES AND CROP SAFETY- BENEVIA® is an oil in water emulsion. The crop safety of BENEVIA® alone or in tank mix with many common insecticides, fungicides, nutritional and adjuvants has been found to be acceptable. Tank mixes of BENEVIA® with some products formulated as emulsifiable concentrates (EC), strobilurin fungicides (for example Cabrio and Quadris), copper and sulfur based fungicides, chlorothalonil based fungicide formulations (for example, Bravo Weather Stik), and the fungicides Captan, Tanos, Rally and Manzate may result in adverse crop response. Some materials including oils, surfactants, adjuvants, nutritional and pesticide formulations when applied individually, sequentially, or in tank mixtures may solubilize the plant cuticle, facilitate penetration into plant tissue, and increase the potential for crop injury.

The application of strobilurin fungicides in a short time sequence (i.e., seven days apart or less between applications) before or after BENEVIA® may also result in adverse crop response. Applying BENEVIA® with any product that produces adverse crop response in a tank mixture, specifically including, but not limited to, those listed above, may also cause adverse crop response when applied in a short time sequence. Such uses should be tested as described below before broad application is made.

Crop varieties can differ in their responsiveness to tank mixtures, and environmental conditions can have an influence on product performance and crop response. It is not possible to test BENEVIA® alone or with all possible tank mix combinations and sequences on all varieties under all environmental conditions. When considering the use of a tank mixture on a labeled crop without prior experience, or which is not specifically described on BENEVIA® product labeling or in other FMC product use instruction, or when applying any of the aforementioned products in close sequence with BENEVIA®, it is important to check crop safety first. To test for crop safety prepare a small volume of the intended tank mixture or sequence, apply it to an area of the target crop as directed by both this and the tank mix partner product labels, and

observe the treated crop to ensure that a phytotoxic response does not occur.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations, and directions for use, on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements on each product in the tank mixture. Use of BENEVIA® in any tank mixture or sequence of applications that is not specifically described on BENEVIA® product labeling or in other FMC product use instructions, could potentially result in crop injury. To the extent allowed by law, FMC will not be responsible for any crop injury arising from the use of a tank mixture or sequence of applications that is not specifically described on BENEVIA® product labeling or in other FMC product use instruction.

Tank Mixing Sequence -Add different formulation types in the sequence indicated below*. Allow time for complete mixing and dispersion after addition of each product.

1. Water soluble bag (WSB)
2. Water soluble granules (SG)
3. Water dispersible granules (WG, XP, DF)
4. Wettable powders (WP)
5. Water based suspension concentrates (SC)
6. Water soluble concentrates (SL)
7. Suspoemulsions (SE)
8. BENEVIA® and other oil based suspension concentrates (OD)
9. Emulsifiable concentrates (EC)
10. Surfactants, oils adjuvants
11. Soluble fertilizers
12. Drift retardants

* Unless otherwise specified by manufacturer directions for use or by local experience.

CHEMIGATION - Overhead Sprinkler - Potatoes and Bulb Vegetables

The following types of irrigation equipment may be used for chemigation applications to potatoes and bulb vegetables: overhead sprinkler irrigation systems.

Apply BENEVIA® in sufficient water and of sufficient duration to ensure the specified rate is applied evenly to the entire treated area. Inject BENEVIA® downstream from any water filtration system.

Do not connect any irrigation system used for pesticide applications to a public water system unless the pesticide label- prescribed safety devices are in place. Public water system means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals at least 60 days out of the year.

See "Required System Safety Devices For All Chemigation Systems" at the end of the Chemigation section.

APPLICATION INSTRUCTIONS FOR CHEMIGATION USING OVERHEAD SPRINKLER SYSTEMS - POTATOES AND BULB VEGETABLES

Types of Chemigation Systems: BENEVIA® may be applied to potatoes and bulb vegetables through overhead sprinkler irrigation systems, including the following; center pivot, end tow, hand move, lateral move, side roll, solid set and wheel line. The irrigation system used must provide uniform water distribution.

Directions for Chemigation:

Preparation

A pesticide tank is recommended for the application of BENEVIA® in chemigation systems.

Thoroughly clean the injection system and tank of any fertilizer or chemical residues using a standard clean-out procedure. Dispose of any residues in accordance with State and Federal laws. With the mix tank 1/4 to 1/2 full with water and the agitator running, measure the required amount of BENEVIA® and add it to the tank. The highest labeled rate for the specified pest may be necessary when making overhead chemigation applications. Then add additional water to bring your total pesticide mixture up to the desired volume for your application. Note: Always add BENEVIA® to water, never put BENEVIA® into a dry tank or other mixing equipment without first adding water. See "Tank Mixing Sequence" section of the container label for tank mixing sequence. Continue to agitate the mixture throughout the application process. Use mechanical or hydraulic agitation, do not use air agitation.

Injection Into Chemigation Systems

Inject the proper amount of BENEVIA® into the irrigation water flow using a positive displacement injection pump or a Venturi injector.

Injection should occur at a point in the main irrigation water flow to ensure thorough mixing with the irrigation water. For continuously moving systems, inject the solution containing BENEVIA® into the irrigation water line continually and uniformly throughout the irrigation cycle. Apply in no more than 0.2 inches of water per acre. For overhead sprinkler systems that are stationary, add the solution containing BENEVIA® to the irrigation water line and apply no more than 0.2 inches of water per acre.

Uniform Water Distribution

The irrigation system used for application of BENEVIA® must provide for uniform distribution of BENEVIA® treated water. Non-uniform distribution can result in crop injury, lack of effectiveness or illegal pesticide residues in or on the crop being treated. Ensure the irrigation system is calibrated to uniformly distribute the chemigation application to the crop. Contact the equipment manufacturer, the local University Extension agent or other experts if you have questions about achieving uniform distribution of the application.

Equipment Calibration

Calibrate the irrigation system and injector before applying BENEVIA®. Calibrate the injection pump while the system is running using the expected irrigation rate. If you have questions about calibration, you should contact your state extension service specialists, equipment manufacturer or other experts.