Office of Indiana State Chemist



The Endangered Species Act

Aaron Kreider

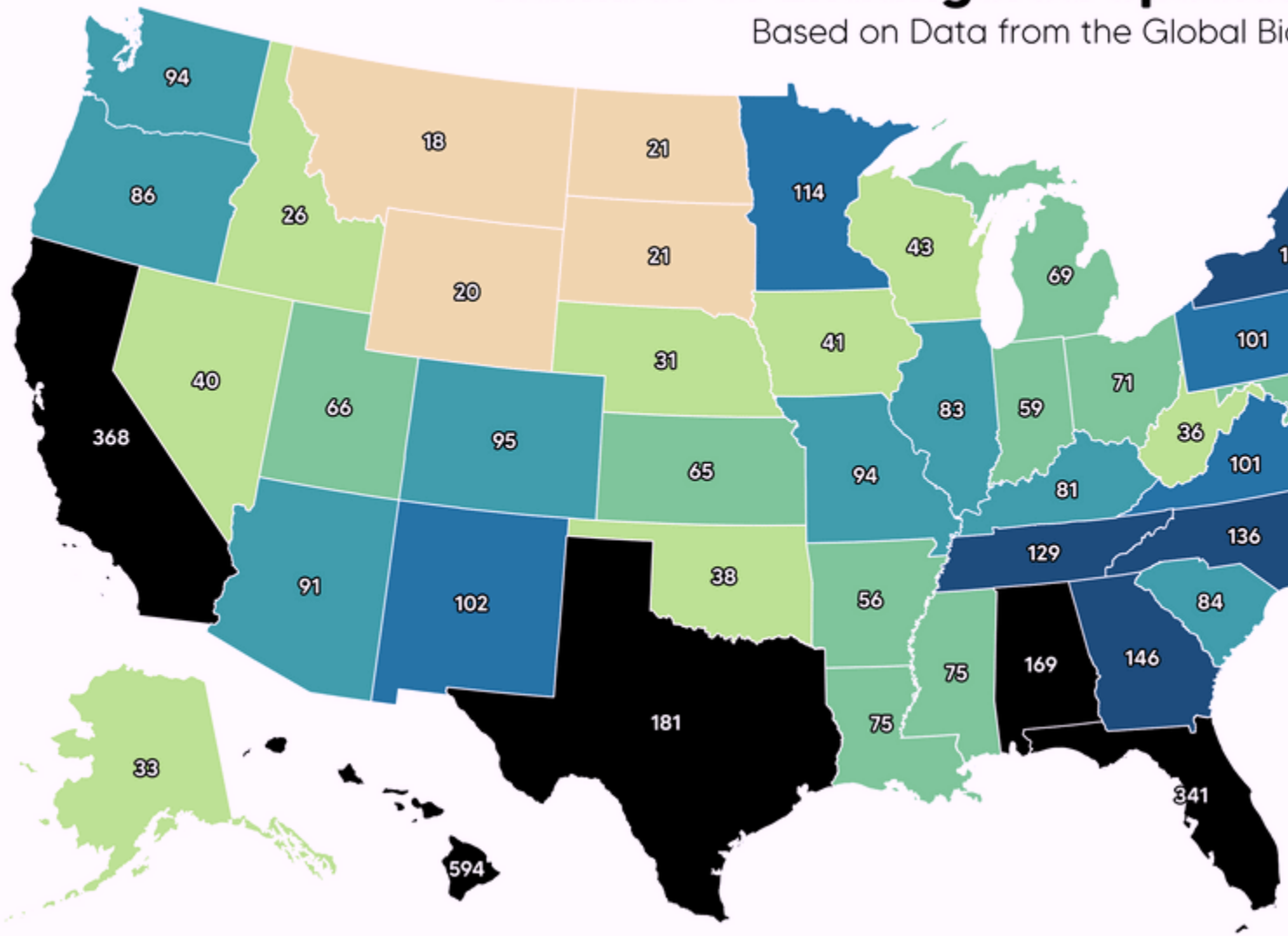
Pesticide Investigator

Implementing ESA

- Endangered Species Act enacted in 1973
- Designed to protect threatened and endangered species from extinction
- U.S. Fish and Wildlife Services manages land and freshwater species
- National Marine Fisheries Services (Part of NOAA) manages marine & anadromous species (move from saltwater to freshwater to spawn)

Number of Endangered Species in Each US State

Based on Data from the Global Biodiversity Information Facility



Map Created By

Malcolm Tunnell

Number of Endangered Species

- Less than 25
- 25 - 50
- 50 - 75
- 75 - 100
- 100 - 125
- 125 - 150
- 150+

The data in this map are based on the International Union for Conservation of Nature's Red List of Threatened Species which classifies organisms by their risk of global extinction. The species used to create this list are categorized as either Endangered or Critically Endangered. The data were pulled from the Global Biodiversity Information Facility which houses publicly available species occurrence data from citizen science projects such as iNaturalist and eBird as well as institutional and governmental surveys. This map includes animal, fungi, and plant species found in both terrestrial and aquatic ecosystems.

Sources: International Union for Conservation of Nature's (IUCN)
The Global Biodiversity Information Facility (GBIF)
GBIF.org (28 December 2022) GBIF Occurrence Download
https://doi.org/10.15468/dl.s9b3es

Data Current as of December 28, 2022

What Do We Think Of When We Hear Endangered Species?

Most of the time we think of bald eagles

ESA also consist of:

- Plants (Mead's Milkweed)
- Insects (Rusty Patched Bumble Bee)
- Reptiles (Eastern Massasauga-Rattlesnake)
- Clams (Fat Pocketbook)

So… Why Are We Addressing ESA Now?

- Less than 5% of FIFRA registration actions have been ESA compliant (ex. new products/re-registrations).

- Resulting in over 20 lawsuits against EPA, covering over 1000 products

- EPA's ESA priorities now driven by:
  - Litigation settlements
  - Court imposed deadlines
  - Risk of courts vacating registrations & loss of products
    - *(Dicamba in 2019 and Enlist in 2020)*

Where Are We Headed?

- Currently, ESA label restrictions are addressed in 2 ways:
  - Drift Mitigation
  - Runoff Mitigation

Here's What To Expect

- You must check Bulletins Live! Two
- No earlier than 6 months
- If this is not on the label, it does not apply
- Will eventually be on all labels
- Think of it as a fluid extension of the label

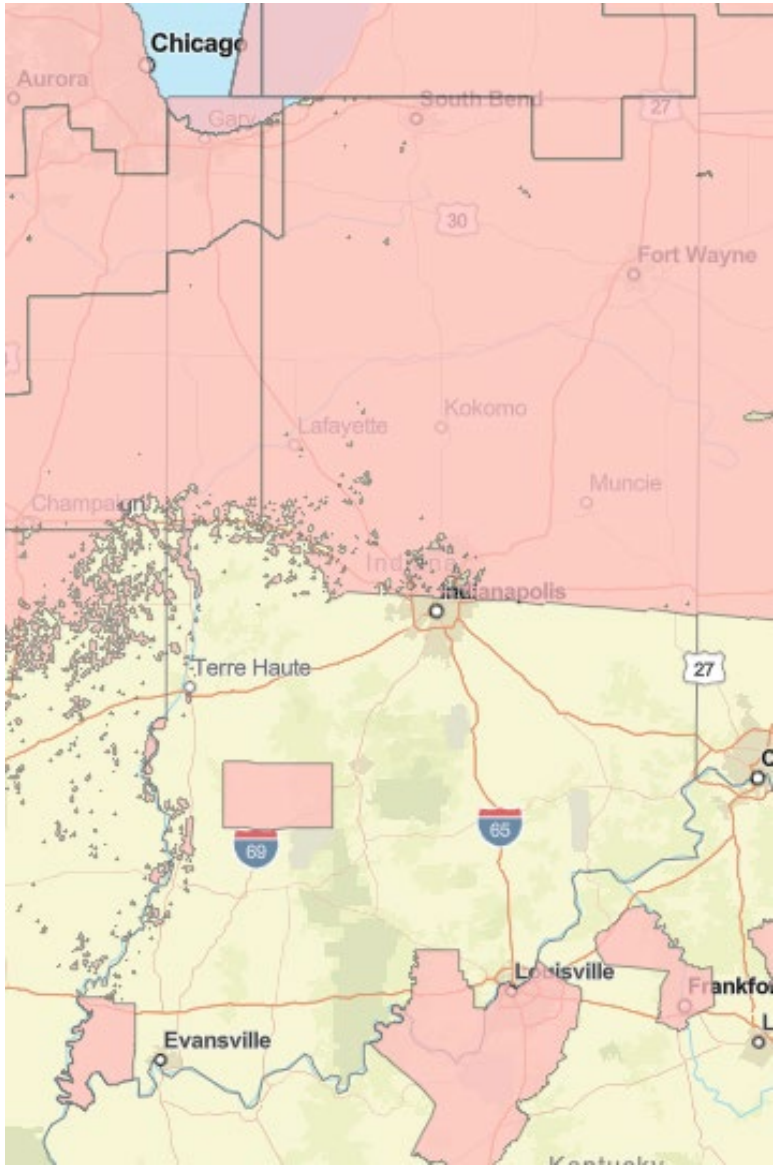
Endangered Species

It is a Federal offense to use any pesticide in a manner that results in an unauthorized "take" (e.g., kill or otherwise harm) of an endangered species and certain threatened species, under the Endangered Species Act section 9. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. You must obtain a Bulletin no earlier than six months before using this product. To obtain Bulletins, consult http://www.epa.gov/espp/, call 1-844-447-3813, or email ESPP@epa.gov. You must use the Bulletin valid for the month in which you will apply the product.

Report ecological incidents: To report ecological incidents, including mortality, injury, or harm to non-target plants and animals, call 1-855-ENLIST-1 (1-855-365-4781).

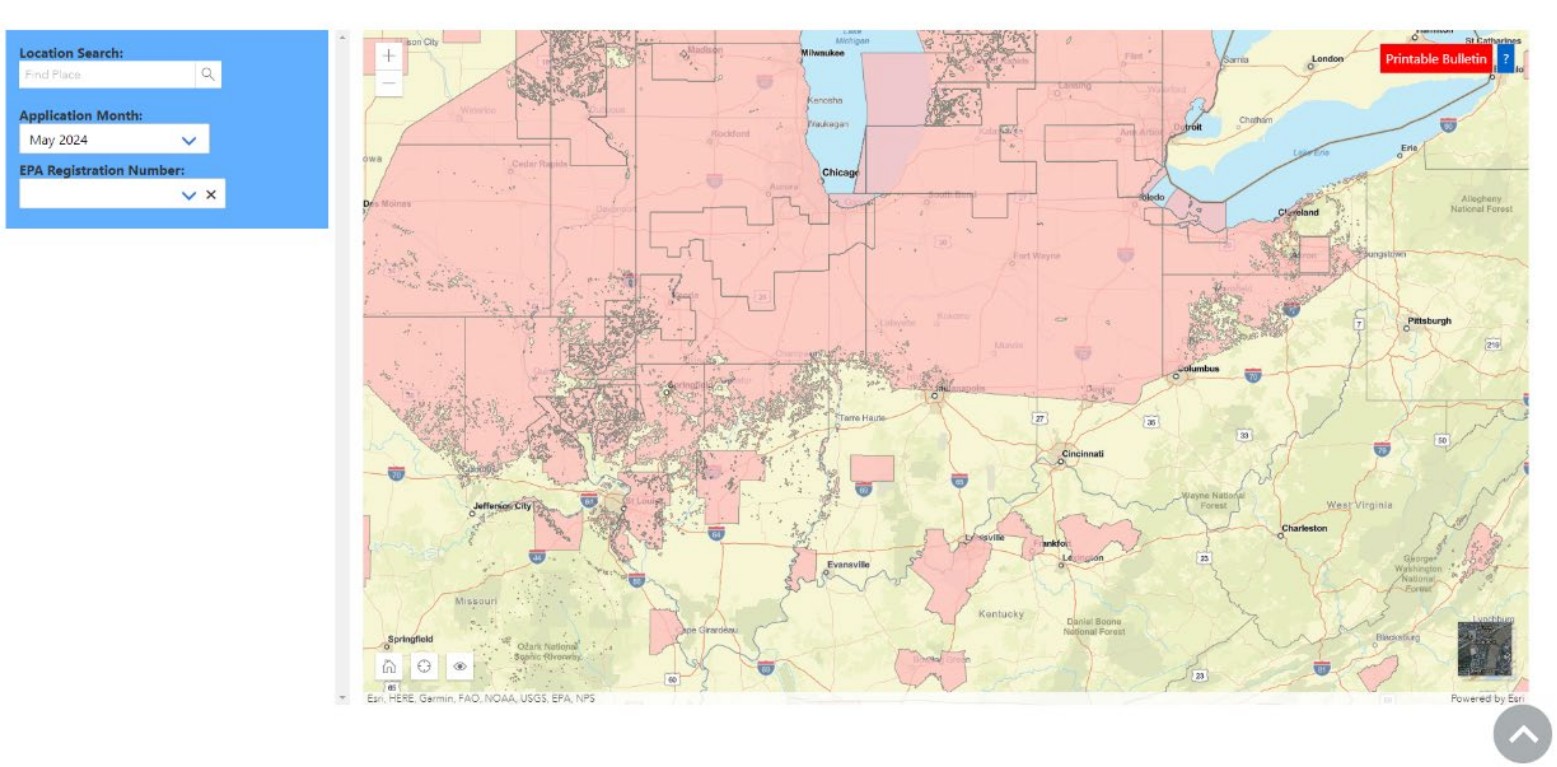
Current IN ESA Map

- Here’s where ESA label statement is relevant
- These areas in red are called Pesticide Use Limitation Areas or PULAs



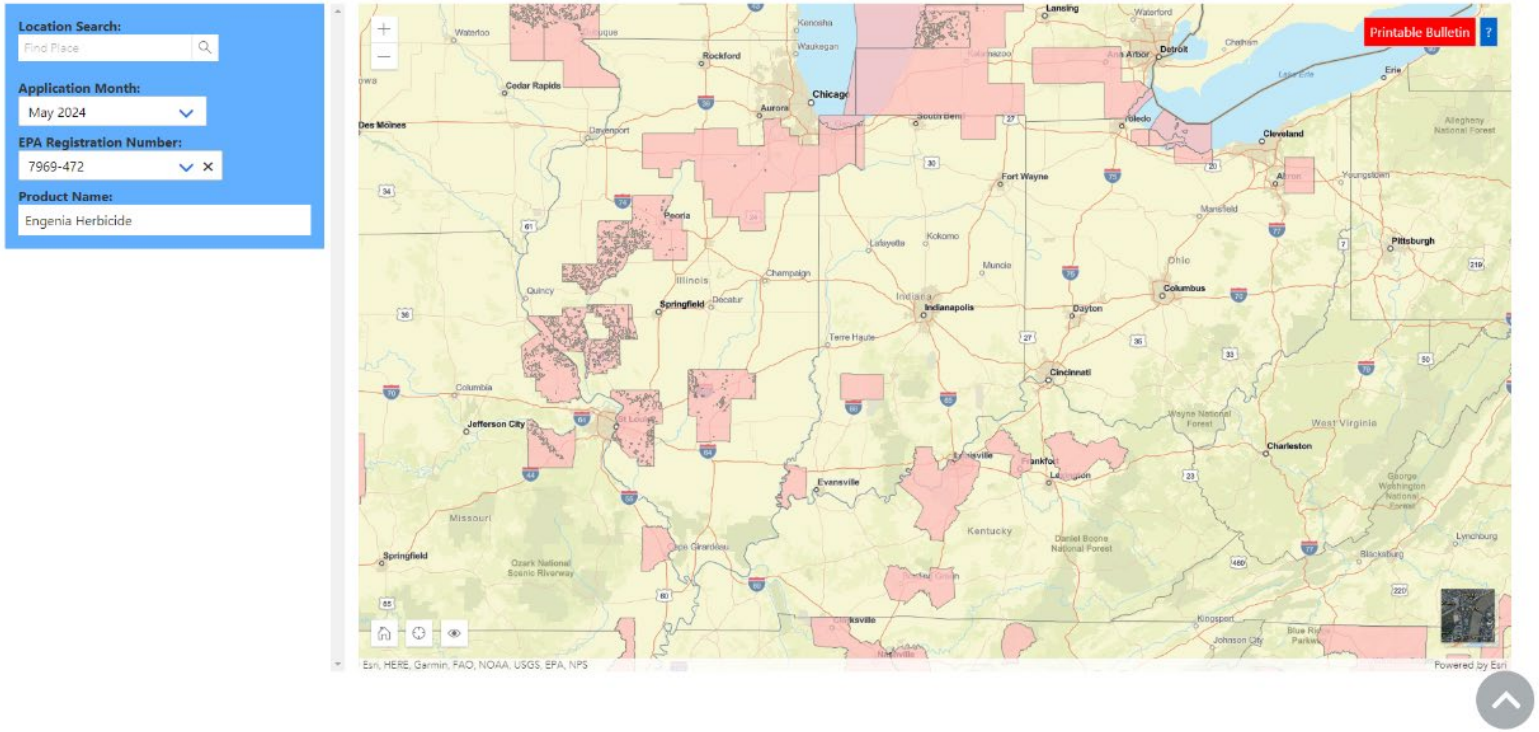
How Does It Work?

- Start by entering the EPA registration number(s) and the month the application will take place.



How Does It Work?

- If application takes place in a PULA, click on the area.
- Then click the red “Printable Bulletin” in upper right corner

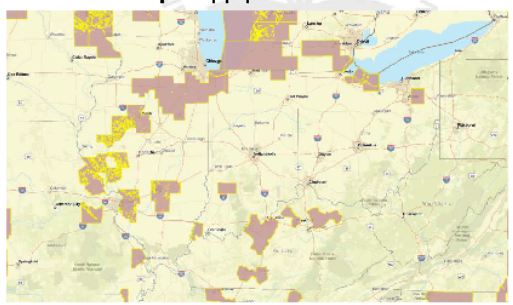


How Does It Work?

Endangered Species Protection Bulletin

Application Month: May 2024
Product: Engenia Herbicide (7969-472)

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.

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 Protection Bulletin

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Cotton	Ground spray	Liquid	D120
ENGENIA HERBICIDE (7969-472)	Dicamba	Dicamba-Tolerant Soybean	Ground spray	Liquid	D120

Codes and Limitations Table

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

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How Does It Work?

Codes and Limitations Table

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Ways To Reduce Buffer Size

Will be different for different types of equipment

- Low boom with coarse droplets = 75% reduction
- Relative humidity higher than 60% = 10% reduction
- Downwind windbreak = 50% - 100% reduction
  - Depends on size; greater than 60’ = 100%
- Adding DRAs with medium droplets = 30% reduction

Runoff Expectations

- Still must check BLT
- Also may be required to check EPA Mitigation Menu website for runoff/erosion mitigation measures
- Will also be required to meet the labels points requirements

11.0 MANDATORY RUNOFF MITIGATION:

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

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

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

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

- Location in a very low, low, or medium runoff vulnerability county
- Field slope
- Soil incorporation
- Conservation tillage
- Vegetative strips
- Cover crop or continuous ground cover
- Irrigation water management
- Mulching
- Grassed waterway
- Vegetated ditch
- Constructed and natural wetlands
- Water retention systems
- Following recommendations from a runoff/erosion specialist or participating in a qualifying conservation program (see the www.epa.gov/pesticides/mitigation-menu for minimum elements).

To achieve mitigation points for the application, the mitigation and mitigation relief measures must be:

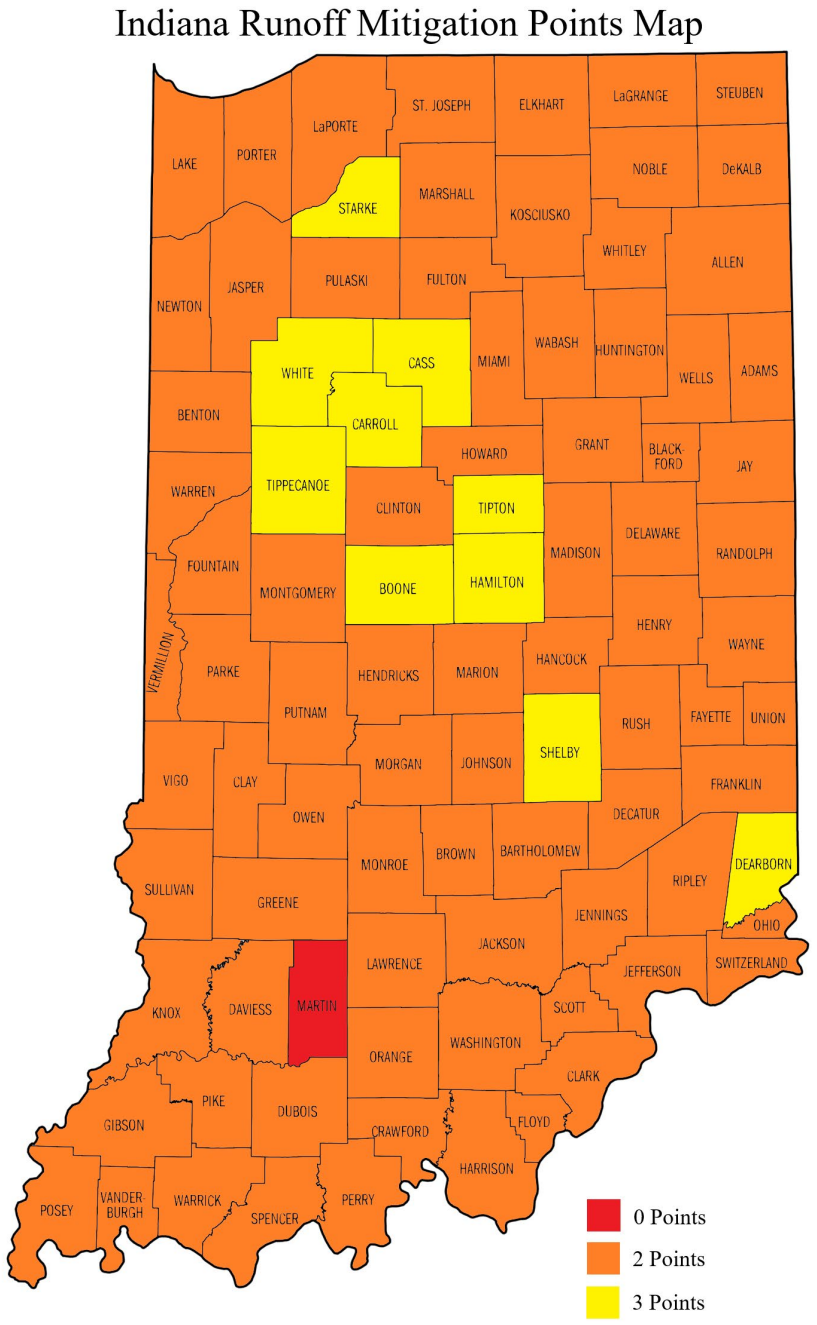
- Employed in accordance with the instructions and descriptions on EPA's Mitigation Menu Website.
- In place during the application unless a different timing (such as before or after application) is specifically provided in the measure's description on EPA's Mitigation Menu Website.
- EPA may periodically update the Mitigation Menu Website, for example, by adding new mitigation measures or updating a mitigation measure description.

Runoff Expectations

- Runoff Mitigation
  - If in a PULA, follow the instructions contained in the bulletin from BLT
  - If not in a PULA, check Mitigation Menu website to see if application site qualifies for an exemption
  - If the previous two options don’t apply, you’ll have to earn points required by the label

Where To Start

- Start with county where application will take place
  - 1 county with 0 points, 81 with 2, 10 with 3



Ways To Earn Points

- Field slope less than 3% = 2 points
- Vegetative strips = 2 points
- Cover crop = 1-3 points
  - Depends on how long cover crop is in place
- No Irrigation = 3 points

Just a few examples of the ~50 different options

Mitigation Tracking

- 1 point is awarded for "*Mitigation Tracking*"
  - This is keeping a record of all mitigation measures required for application/field

- For Example:

  Johnson County = 2 points

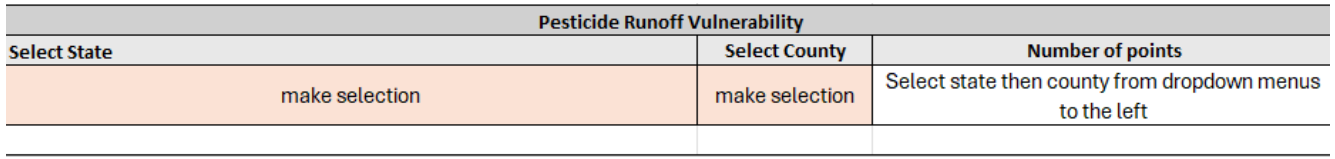
  Mitigation Tracking = 1 point

  Label Requires = 3 points

  2+1=3 (Label required points have been met)

Use The Runoff Mitigation Calculator Tool

- An excel document on the Mitigation Menu website
  - Must download to use
- Make selections from pull down menus
- Tool can help track and calculate total points to compare to label requirement
- Also comes as a downloadable PDF



Pesticide Runoff Vulnerability		
Select State	Select County	Number of points
make selection	make selection	Select state then county from dropdown menus to the left

ESA Summary

- ESA applies if language is on label
- Bulletins Live! Two is an extension of the label and must be included in application preparation
- Not currently on all labels but is moving that direction
- We are working with EPA to help make ESA implementation easier
- We may rely on you in the future to provide input on EPA websites

Contact Me

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Thank You