

# Endangered Species Act in Tennessee

Kim Brown

University of Tennessee

# Tennessee Outreach on ESA





University of Tennessee  
**N TILL Field Day**  
**2024**  
 July 25  
*SPARE THE PLOW. SAVE THE SOIL.*  
**UT MILAN**

**33<sup>RD</sup> MILAN NO-TILL  
 CROP PRODUCTION  
 FIELD DAY**

Thursday, July 25, 2024  
 8 a.m. – 1 p.m.

North Tract of the AgResearch  
 and Education Center  
 at Milan, Tennessee

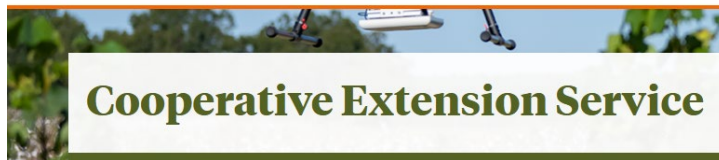
731-686-7362  
 MILAN.TENNESSEE.EDU

**UTIA** INSTITUTE OF  
 AGRICULTURE  
 THE UNIVERSITY OF TENNESSEE

UT AGRESEARCH AND UT EXTENSION



CLEMSON



**LAVMA**



# Challenges

- Reaching target audience
- Getting the target audience to understand the immediate importance
- Limited examples - Unknowns
- Records

# TN ESA Workgroup

- Setting up the group
- First Meeting Summer 2024
- Goals of the Group

# TN ESA Workgroup

- University of TN
- TN Farm Bureau
- Tennessee Department of Agriculture
- USDA-NRCS
- US FWS
- TWRA
- National Cotton Council
- TN Soybean
- TAPA – Industry
- TAPA – Retail
- TN Producers
- University of Memphis



## TENNESSEE PRIVATE PESTICIDE APPLICATOR RECORDKEEPING MANUAL

Growing Season: \_\_\_\_\_

Farm Name: \_\_\_\_\_



Real. Life. Solutions.™

**UFEXTENSION**  
INSTITUTE OF AGRICULTURE  
THE UNIVERSITY OF TENNESSEE

### Explanation of Recordkeeping Page

WPS/USDA	Field ID / Location of Treated Area			The information in bold is required as part of the Worker Protection Standard (WPS) and/or USDA requirements for recordkeeping. The information required by the WPS must be posted within 24 hours of the pesticide application or before entry occurs and remain posted for 30 days.
WPS/USDA	Application Date (m/d/y)			
WPS	Time of Application (start and end time)	Start: _____	End: _____	
USDA	Name of Certified Applicator			
USDA	Certification Number			
WPS/USDA	Product Name			
WPS/USDA	EPA Registration Number			
WPS	Active Ingredient			
WPS	Restricted Entry Interval (REI)			
USDA	Total Amount of Product Applied			
WPS/USDA	Crop/Site Treated			Information below the WPS and USDA requirements is information that could be required by some specific products. This information is also encouraged in addition to the required information above.
USDA	Size of Treatment Area			
Label requirements or information that is encouraged for recordkeeping purposes.		Pre-Plant	Post-Emergence: _____ days	
Buffer Requirements <i>List downwind required buffers and all sides for Endangered Species counties</i>				
Sensitive Crop Awareness (name of crop and distance from closest point to application site) <i>*Do not apply if wind is blowing to sensitive crops/site</i>		North: _____	South: _____	
		East: _____	West: _____	
Name and Date Sensitive Crop Registry Consulted				
Check to Confirm Equipment Cleanout		Prior to Application <input type="checkbox"/>	After Application <input type="checkbox"/>	
All Tank-Mixed Products and Amounts <i>Include EPA Registration Numbers and Any Required Tank Mix Buffering (VRA) Adjuvants</i>				
Nozzle Type				
Operating Pressure				
Air Temperature <i>At Boom Height</i>		Start: _____	End: _____	
Wind Speed and Direction <i>At Boom Height</i>		Start: _____	End: _____	
Total Tank Mix Solution Use Rate (GPA)				
Additional Notes				

Field ID / Location of Treated Area				
Application Date (m/d/y)				
Time of Application (start and end time)	Start: _____ End: _____		Start: _____ End: _____	
Name of Certified Applicator				
Certification Number				
Product Name				
EPA Registration Number				
Active Ingredient				
Restricted Entry Interval (REI)				
Total Amount of Product Applied				
Crop/Site Treated				
Size of Treatment Area				
Application Timing (Circle one) If post, enter days after planting	Pre-Plant Post-Emergence: _____ days		Pre-Plant Post-Emergence: _____ days	
Buffer Requirements List downwind required buffers and all sides for Endangered Species counties				
Sensitive Crop Awareness (name of crop and distance from closest point to application site) <i>*Do not apply if wind is blowing to sensitive crops/site</i>	North: East:	South: West:	North: East:	South: West:
Name and Date Sensitive Crop Registry Consulted				
Check to Confirm Equipment Cleanout	Prior to Application <input type="checkbox"/> After Application <input type="checkbox"/>		Prior to Application <input type="checkbox"/> After Application <input type="checkbox"/>	
All Tank-Mixed Products and amounts Include EPA Registration Numbers and Any Required Tank Mix Buffering (VRA) Adjuvants				
Nozzle Type				
Operating Pressure				
Air Temperature At Boom Height	Start: _____ End: _____		Start: _____ End: _____	
Wind Speed and Direction At Boom Height	Start: _____ End: _____		Start: _____ End: _____	
Total tank mix solution use rate (GPA)				
Additional Notes				



# Groups Working on ESA

- ESA Collaboration Workgroup
- AAPCO ESA Workgroup
- ESA Regional Effort Discussion
- AAPSE/EPA ESA Outreach
- CropLife America ESA Outreach
- Others

# Introduction to Pesticide Registration and the Endangered Species Act



Speaker's Name

NOTE THAT THIS INFORMATION IS CURRENT AS OF **12/19/2024**, BUT THIS TOPIC IS RAPIDLY EVOLVING,  
SO IT IS YOUR RESPONSIBILITY TO ENSURE THIS INFORMATION IS CURRENT

## FAQs: Introduction to Pesticide Registration and the Endangered Species Act (ESA) Presentation

This presentation is the result of a collaborative effort between the following individuals and organizations:

- Arnold, Elyssa – U.S. Department of Agriculture (USDA) Office of Pest Management Policy (OPMP)
- Brown, Kim – University of Tennessee Extension & the American Association of Pesticide Safety Educators (AAPSE)
- Chism, Bill - Weed Science Society of America (WSSA) Endangered Species Act (ESA) Committee Chair
- Douglass, Cameron – U.S. Department of Agriculture (USDA) Office of Pest Management Policy (OPMP)
- Krishnan, Niranjana – University of Maryland Department of Entomology & the American Association of Pesticide Safety Educators (AAPSE)

Additional advice and support was provided by staff from the U.S. Environmental Protection Agency's (USEPA) Office of Pesticide Programs (OPP). Note that any mention of trade names, manufacturers or specific products does not imply an endorsement by the U.S. Government or its employees.

When giving this presentation, please keep in mind that there are three key messages for the audience to remember:

1. Pesticide labels are changing to protect federally listed endangered and threatened species.
2. Additional label mitigation strategies may be required for pesticide spray drift and runoff/soil erosion in areas with listed and other non-target species and their critical habitat(s).
3. Comprehensive changes could take 15 + years as more pesticide labels are updated to address ESA risks.

**Background** – The Endangered Species Act (ESA) was signed into law in 1973 by President Nixon and requires that every federal action (including the registration of pesticides) involves consultation between the “action agency” (i.e., USEPA for pesticide registrations) and the U.S. Fish and Wildlife Service (USFWS) or the National Marine Fisheries Service (NMFS). The USFWS is the authority for federally listed terrestrial and freshwater species, and the NMFS is the authority for saltwater species.

The focus of USEPA's current ESA Strategies is on conventional pesticides (i.e., fungicides, herbicides, insecticides, and rodenticides) used on agricultural crops. The USEPA is increasingly assessing whether additional spray drift and runoff/soil erosion label mitigations are necessary for pesticides in order to

**Purpose** - This presentation is an initial step to provide pesticide safety and extension educators a uniform message on a complicated and rapidly evolving issue. As USEPA rolls out the ESA strategies on more and more pesticides, implementation on labels will likely evolve and be continuously refined. This document has been developed to help the presenter think through possible questions that might be asked during the presentation. Answers to some of these questions will depend on the state or region of the country you are located in.

### FAQs:

1. Regulatory requirements in states
  - a. There is a lot of uncertainty right now at the state level on how they will implement and enforce elements of USEPA's ESA strategies. Rather than assuming anything on behalf of your state's regulatory agency, it's probably best to be prepared to provide some contact information for state regulators.
  - b. Recordkeeping best practices or requirements to track compliance will likely be a common topic of questioning. Again, there is a lot of uncertainty at the state level, and a lot of variability between states on existing reporting requirements. As a speaker you might tell the audience that your state is still working on this topic and provide contact information for state regulators. Also continue to encourage diligent records to showcase use of best management practices and steps taken to protect non-target species and habitat.
2. Where might ESA information be found on pesticide labels
  - a. For the few pesticides that have some ESA-related mitigations on their labels already (e.g., Enlist products, glufosinate-P, cyantraniliprole) these have been listed broadly under “Directions for Use”, including in specific sections titled “Endangered Species Requirement” or “Endangered Species Protection Requirement”.
  - b. In addition to specific mitigation requirements on the labels, labels may direct the applicator to see a mitigation website or the Bulletins Live! Two webpage with additional site-specific information on other mitigations; mitigation websites will generally be hosted by USEPA, though in a few cases they are hosted by pesticide registrants.
3. How do growers get enough points (for runoff/soil erosion mitigations) or percentage reductions (for spray drift buffers)?
  - a. Suggest that applicators use USEPA's runoff/soil erosion points calculator tool, and when released the spray drift buffer calculator.
  - b. Remind the audience that they should work cooperatively with (in no particular order): conservation specialists, crop consultants, extension, pesticide safety educators, state lead agencies and/or registrants.
4. Where can more information be found?
  - a. As mentioned on Slide #22, resources on USEPA's ESA strategies can be found at:

# Collaborative Effort – December 2024

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

# ESA Resources

Rusty patch bumblebee



## EPA Endangered Species Main Page

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

## Pesticides and Endangered Species Educational Resources Toolbox

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

## EPA Bulletin Live! Two (BLT)

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

## EPA Mitigation Menu

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

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

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

## Mitigation Strategy Tool from by CropLife America and Compliance Services International

- <https://mitigationstrategytool.org/>

## Pesticide Environmental Stewardship Website from the Center for Integrated Pest Mgt

- <https://pesticidestewardship.org/>

## Protecting Endangered Species from Pesticides



### About

- [About the endangered species program](#)
- [Assessing pesticides under the ESA](#)
- [Litigation and associated pesticide limitations](#)
- [Implementing NAS Report Recommendations on Ecological Risk Assessment for Endangered and Threatened Species](#)
- [Conventional Pesticide Registration](#)

### Endangered Species Act Workplan

- [EPA's workplan and progress toward better protections for endangered species](#)
- [Implementing EPA's Workplan to Protect Endangered and Threatened Species from Pesticides: Pilot Projects](#)
- [Assessing effects of new pesticides on listed species](#)

### Biological Evaluations (BEs)

- Final BE Chapters for [Chlorpyrifos](#), [Malathion](#), [Diazinon](#), [Carbaryl](#), [Methomyl](#), [Atrazine](#), [Simazine](#), [Glyphosate](#), [Clothianidin](#) (updated), [Imidacloprid](#) (updated), [Thiamethoxam](#) (updated), [Sulfoxalor](#) ☑, [Enlist](#) ☑, [Inpyrfluxam](#) ☑, [Cyantamilliprole](#) ☑, [Fluazaindolizine](#) ☑, [Pyraclonil](#) ☑, [Dinotefuran](#) ☑, [Acetamirid](#) ☑, [Rodenticide BE and Mitigation Strategy](#) ☑
- Draft BE Chapters for [Propazine](#), [Bicyclopyrone](#) ☑, [Benzoyindiflupyr](#) ☑
- [Provisional Models and Tools Used in EPA's Pesticide Endangered Species Biological Evaluations](#)
- [Models and Tools for National Level Listed Species Biological Evaluations of Neonicotinoid Insecticides](#)

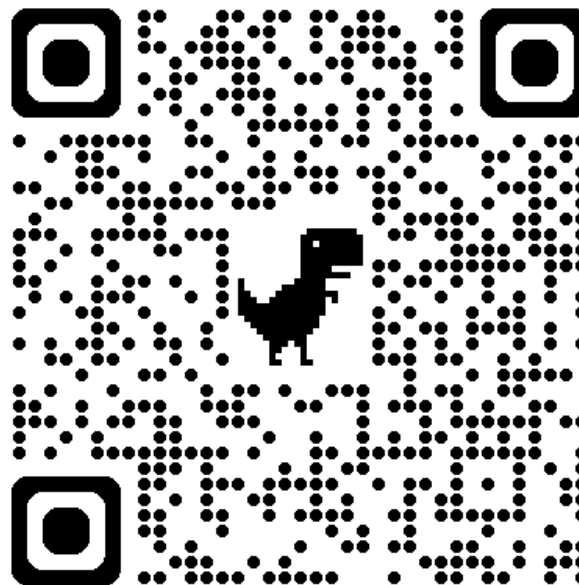
### Protections for Endangered Species

- [Effects determinations](#)
- [Pesticide restrictions](#)
- [Bulletins Level Two](#)
- [Information for pesticide users](#)
- [Publicly available geospatial data](#)

### Recent Highlights

- [Proposed Guidance to registrants on Endangered Species Act considerations for antimicrobial pesticides](#)
- [Pesticides and Endangered Species Educational Resources Toolbox](#)
- [Draft methomyl biological opinion from FWS available for public comment](#)
- [Memorandum of Understanding Between EPA and USDA to Help Protect Endangered Species and Support Sustainable Agriculture](#)
- [Final guidance to registrants for new outdoor uses that require Endangered Species Act reviews](#)
- [Final guidance to registrants for new active ingredients and registration review](#) ☑
- [EPA's workplan and progress toward better protections for endangered species](#)
- [Reports to Congress on Improving Consultation Process Under Endangered Species Act Section 7 for Pesticide Registration & Registration Review](#)
- [EPA's Vulnerable Species Pilot Project](#)
- [Vulnerable Species Pilot Webinar](#) ☑
- [EPA's Final Herbicide Strategy](#)

# EPA Endangered Species Main Page





# Conclusion

- Work collaboratively
- The ESA assessment process is very new and still evolving
- Growers will have to look at drift, runoff/erosion, and PULAs on a field-by-field basis
- ESA changes will happen gradually over several years

Lakeside daisy



# How to Replicate

- Identify parties in your area that have a stake
- Don't over meet
- Keep people engaged
- Develop relationships
- Be realistic in expectations



# More Upcoming

