

Endangered Species Act Mitigations for Pesticide Applications

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Why Are Mitigations Necessary?

The Endangered Species Act (ESA) of 1973 requires government agencies to ensure any actions they take will not jeopardize any species that have been federally listed as endangered or threatened or their designated critical habitats.

As the governmental agency which regulates pesticide labeling and use, The Environmental Protection Agency (EPA) is responsible for assessing any potential adverse effects posed by pesticides to endangered and threatened species or their critical habitats.

In 2023 a class action law suit was settled in favor of environmental groups against EPA requiring EPA to better meet its ESA obligations.

As a result, EPA will now rigorously review each pesticide when registered and when up for registration renewal, factoring in any potential risk for adverse effects. If EPA in consultation with the U.S. Fish and Wildlife service and NOAA Fisheries determine there is a risk, they will add required mitigations to pesticide labels.

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How will I know that I need to meet ESA mitigation points for application?

All pesticides have a printed label on the packaging. Mitigation requirements may appear on the printed label. However, EPA has developed two websites that deal with ESA mitigations and the printed label may direct you to either, or both of these websites. Its important to remember that any directions on these webpages are also classed as part of the label and so must be followed.

The Bulletins Live! Two Website

<https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins> houses the Endangered Species Protection Bulletins and an interactive map which indicates any Pesticide Use Limitation Areas (PULAs). Here applicators enter the location of the application site, the month in which they intend to apply and the EPA product number. The interactive map will highlight any PULAs in pink/red and these areas can be clicked on to be taken to the endangered species bulletin which contains further information and possible restrictions in the codes and limitations tables. This website can be checked up to 6 months ahead of the application date.

The Mitigation Menu Website

<https://www.epa.gov/pesticides/mitigation-menu> is where applicators can determine which applications require mitigations, subtract points for existing mitigations and determine if any extra mitigations are required.

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 EIT.

Directions
This tool displays Pesticide Use Limitation Areas (PULAs) for products with active Endangered Species Protection Bulletins. To generate a printable bulletin, please follow these steps:
1. Navigate to your intended pesticide application area by using the "Location Search" tool or panning and zooming on the map itself.
2. Select your Application Month from the Application Date dropdown.
3. Search specific pesticide product(s) by entering the EPA product registration number(s). If you need assistance finding the

Location Search:
Application Month: June 2026
EPA Registration Number:
Product: STRYAX HERBICIDE (054-1241)

4 PULAs Filtered

Map controls: Zoom In, Zoom Out, Print Bulletin, Print

Open Street Maps, Esri, Terracon, Garmin, DeLorme, FGC, NICTD/USGS, USGS, EPA, NPS, USFWS

Powered by Esri

Figure 1: Screenshot from Bulletins Live! Two website showing an active PULA (pink areas) for Richland and Ransom Counties, ND for Stryax Herbicide applied in June 2026.

Mitigations are designed to limit or prevent the following methods for pesticides to impact endangered species:

- Spray Drift (see Fig. 2)
- Runoff/Erosion (see Fig. 3)
- Impacts to specific geographic areas where listed species or their critical habitat are found (Pesticide Use Limitation Area, PULA)

Calculating Points

- Plan Ahead- prior to the start of the season identify which crops and pesticides you plan to use throughout the year. You can check Bulletins Live! Two up to 6 months ahead of the application.
- Check labels of the pesticides you plan to use- do they require any run-off and erosion mitigation points to be met prior to application?
- Go to the mitigation menu website at <https://www.epa.gov/pesticides/mitigation-menu> to determine which fields will need to have points including subtracting points for mitigations that are already in place
- Determine which additional mitigations you can employ if you have not met the required number of points to apply with existing mitigations.
- Now check that any restrictions described on the product labels/endangered species protection bulletins at <https://www.epa.gov/endangered-species/bulletins-live-two-view-bulletins> that are more restrictive than the runoff/erosion measures listed on this website. For example these might include use prohibitions, timing restrictions, application method prohibitions, and sandy soil application restrictions. Ensure these are also followed.
- EPA intends to update the mitigation menu website with any revisions every fall.

9.2 Spray Drift Buffer Reductions

9.2 Spray Drift Buffer Reduction Options*	Qualifying Practice	Reduction in Buffer Distance**
Small field size (<10 acre) /Reduce treatment area	Treatment area of 1/10 acre to 1 acre	75%
	Treatment area of >1 acre to 4 acres	35%
	Treatment area of >4 acres to 10 acres	15%
Downwind Drift Barrier	Basic windbreak/hedgerow/artificial screen	50%
	Advanced windbreak/hedgerow/artificial screen	75%
Use of directed sprayer equipment	Over-the-top Hooded Sprayer	50%
	Row-middle Hooded Sprayer	75%
	Sprays below crop canopy using drop nozzles or layby applications (difference between the crop height and release height is ≥ 1 ft, and that there are more than 4 consecutive rows of crop on the field that meet this parameter)	50%

* Descriptions of spray drift buffer reduction measures are available on EPA's website at: <https://www.epa.gov/pesticides/mitigation-menu-measure-descriptions>

**Buffer reduction measures are additive in nature. For example, a 50% reduction in buffer distance for one measure plus a 15% reduction in buffer for another measure, when used in combination, results in an overall 65% reduction in an identified buffer.

Figure 2: Excerpt from the 2026 Stryax Herbicide label outlining spray drift buffer mitigations and practices that qualify for reducing buffer distances.

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).

Figure 3: Excerpt from the 2025 Liberty Ultra Herbicide label including examples of run-off and erosion mitigations.

Resources

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>

Weed Science Society of America

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 Management

<https://pesticidestewardship.org/>