



EPA compliance with the Endangered Species Act

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<https://youtu.be/0jYX96LFJcs?si=2ukLX09dfN0RHHBL>

Endangered Species Protection: The Challenges Pesticide Users Face in 2024 and Beyond

Andrew Thostenson

Bridgette Readel

NDSU | EXTENSION



0:22 / 23:08 EXTENSION PESTICIDE PROGRAM

EXTENDING KNOWLEDGE CHANGING LIVES

Andrew Thostenson and Bridgette Readel, Endangered Species Protection -- Wild World of Weeds 2024

Unlisted



NDSUExtension
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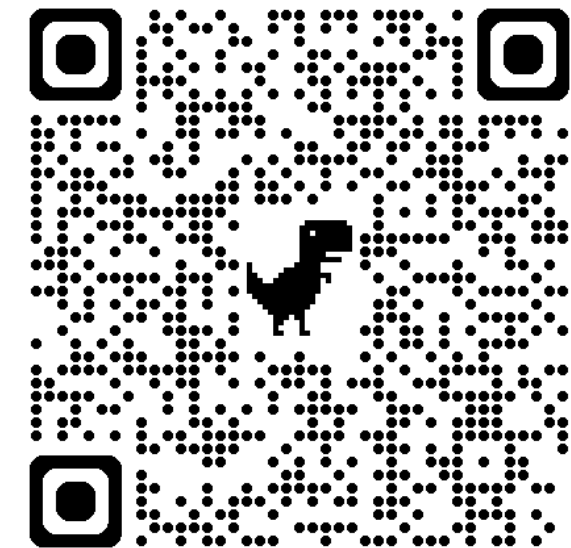
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Outline



History



Drift mitigation: Liberty Ultra example



Runoff mitigation: Atrazine example

The Endangered Species Act



By Jason Sturner, commons.wikimedia.org

Enacted in the 1973

Protects listed species and
their habitats

~1,800 listed species & 900
habitats

Determined by FWS and
National Marine Fisheries
Service

~Half plants

40 % in Hawaii



ESA compliance requires cooperation from several entities



**Agrichemical
Companies**

Seek registration



EPA, USDA

*Evaluate risk;
Approve
registration*



FWS, NOAA

*Ensure no
jeopardy from
action*



End Users

*Judicious
applications*

ESA compliance cooperation



**Agrichemical
Companies**

Seek registration

EPA

*Evaluate
Approve
registration*

FA

*no
delay from
action*



End Users

*Judicious
applications*

The Dilemma

**Court
removal of
tools**



**Additional
regulations**

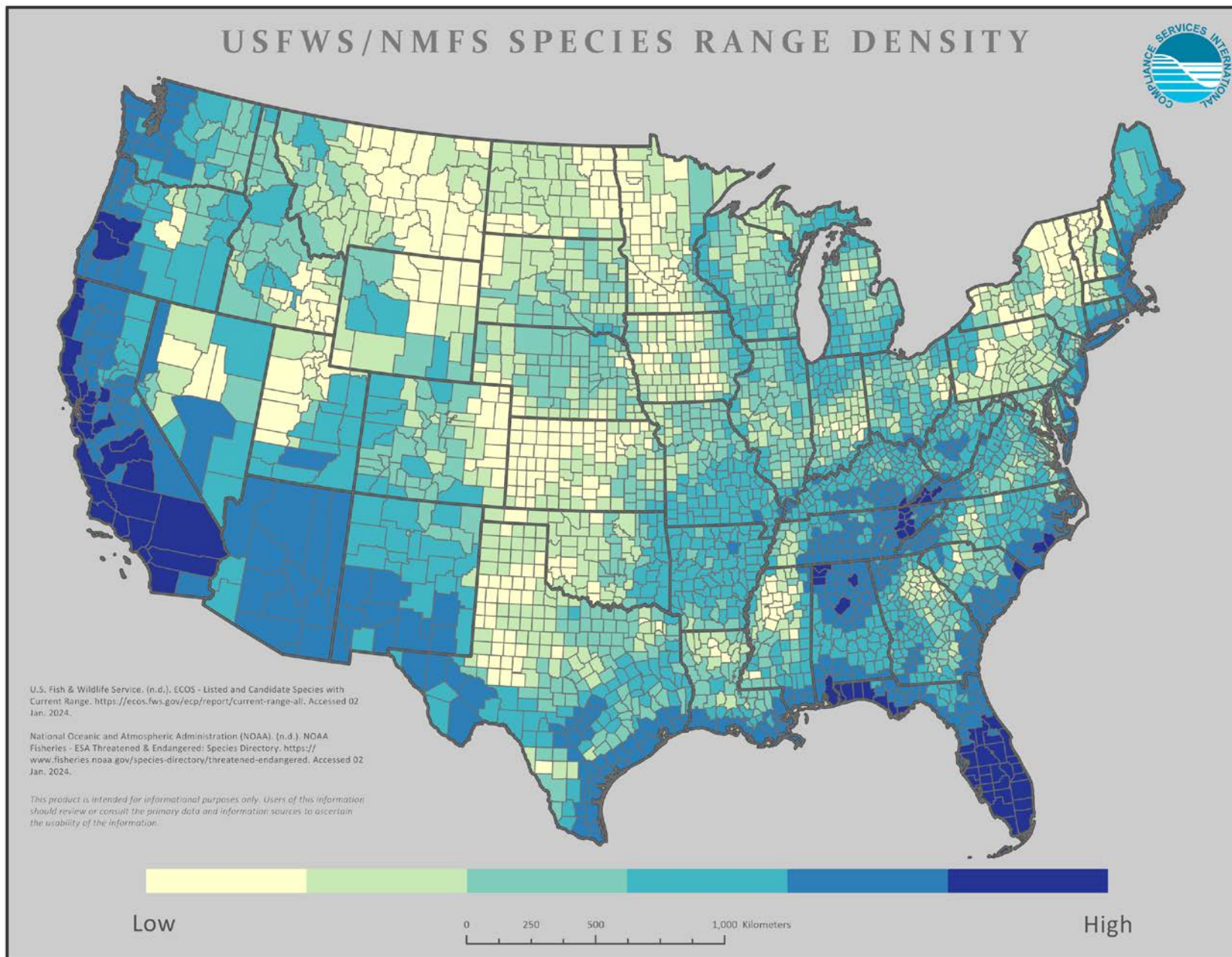


Image courtesy L. Duzy. Used with permission



Listed species in Kansas

Mead's milkweed

Western prairie fringed orchid

Black-footed ferret

Gray bat

Northern long-eared bat

Whooping crane

Piping plover

Red knot

Eastern black rail

Lesser prairie chicken

American burying beetle

Ozark cavefish

Neosho madtom

Pallid sturgeon

Topeka shiner

Peppered chub

Rabbitsfoot

Neosho mucket

Spectaclecase mussel

Monarch butterfly



Listed species in North Dakota

Plants

Western prairie fringed orchid

Fish

Pallid sturgeon

Mammals

Black-footed ferret

Gray wolf

Northern long-eared bat

Birds

Whooping crane

Piping plover

Red knot

Insects

Dakota skipper

Poweshiek skipperling

Rusty patched bumble

bee

Monarch butterfly



Monarch Butterfly Status

FWS proposed to list as threatened 12/12/24

Protections balance the conservation needs with economic impacts

Exceptions: Non-lethal collection, takes associated with conservation efforts, and “Activities that may maintain, enhance, remove or establish milkweed and nectar plants within the breeding and migratory range that do not result in conversion of native or naturalized grassland, shrubland or forested habitat”

Public comment is critical - ends 3/12/25

Potential impacts to pesticide labels will likely be seen starting in 2026

The Herbicide Strategy

Finalized August 2024

Only affects agricultural uses of conventional herbicides

Intended to increase the efficiency of consultations with FWS required for EPA 'actions'

Not self-implementing

Two big areas:

Drift mitigation and Runoff mitigation



Drift reduction requirements

Minimum droplet size

Maximum windspeed

Maximum release height requirements

Downwind spray drift buffers

- Aerial 0 to 320 feet

- Ground boom 0 to 230 feet

Buffer area can include: agricultural fields, roads, field borders

Drift mitigation

Percentage reduction in buffer distance

Combine reductions from multiple measures

- Coarser droplet size

- Drift reducing adjuvant

- Hooded sprayers

- Downwind windbreaks

- Treating a reduced proportion of the field

- Reducing the application rate

- Relative humidity greater than 60% at time of application

Liberty Ultra

Wind speed and direction must be measured on location

Sustained wind speed must be between 3 and 15 MPH, measured at the release height or higher, in an area free from obstructions

Mandatory 10 ft downwind spray buffer for ground application

Reduced to 0 ft if:

- using a drift reducing adjuvant
- using a hooded sprayer
- a windbreak or shelterbelt is present

3 runoff mitigation points required

Liberty Ultra Label

- First Herbicide registered using the EPA's Herbicide Strategy
- Section 9.0: MANDATORY SPRAY DRIFT MANAGEMENT
 - Downwind buffer distance
 - Aerial: 50 ft
 - Ground: 10 ft
 - Buffer can include: fields, roads, mowed grassy areas, bare ground, CRP, others
 - Can reduce buffer distance:
 - Ground: oil emulsion DRA, hooded-sprayed, windbreak/shelterbelt – 0 ft

Runoff reduction requirements

May require 0 to 9 points on label

Mitigation Menu Website:

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

Not required IF:

- Permanent berms

- Irrigation tailwater return

- Subsurface or tile drains with a water control structure and controlled outlet

- Areas with 1,000 ft down-gradient are entirely 'managed'

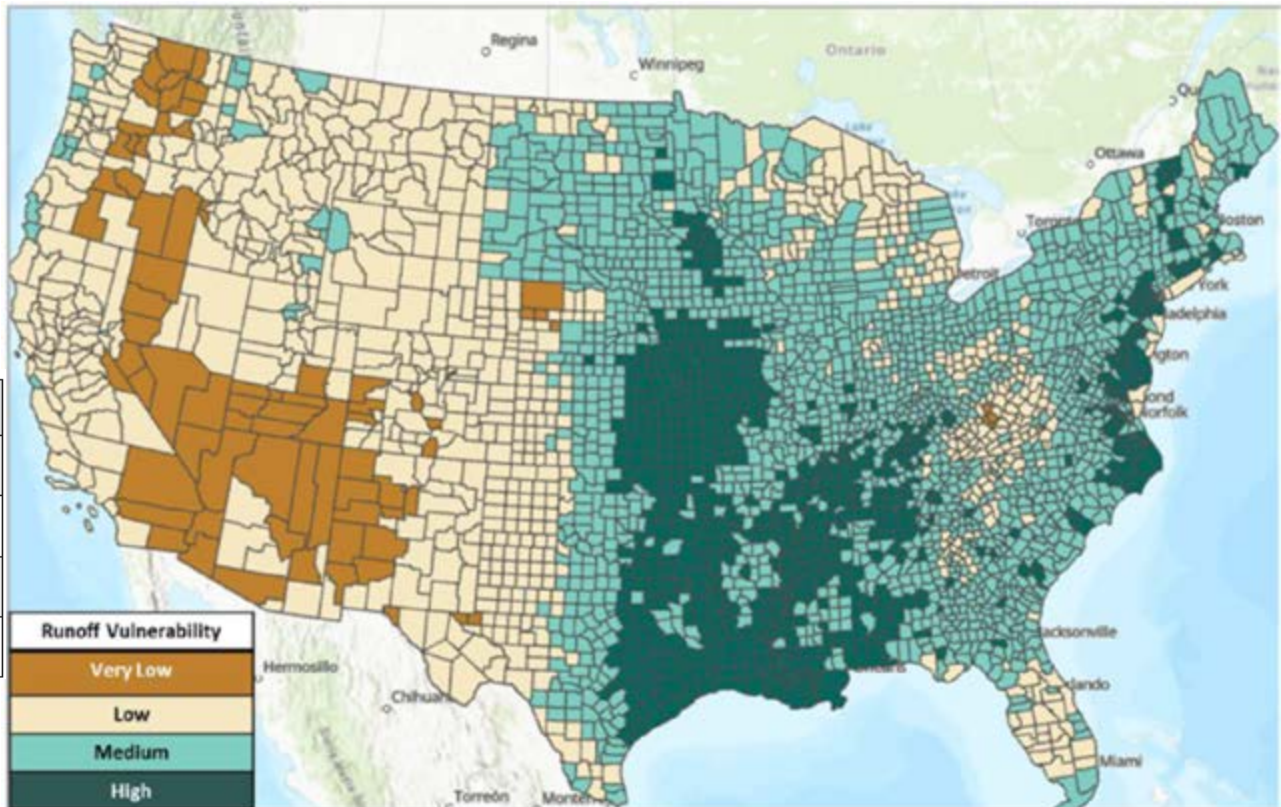
Liberty Ultra Label

- Section 11.0: MANADATORY RUNOFF MITIGATION
 - Must achieve a minimum of 3 points from mitigation menu
 - www.epa.gov/pesticides/mitigation-menu

Vulnerability category	Mitigation Relief Points
Very low (brown counties)	6
Low (yellow counties)	3
Medium (light blue counties)	2
High (dark green counties)	0

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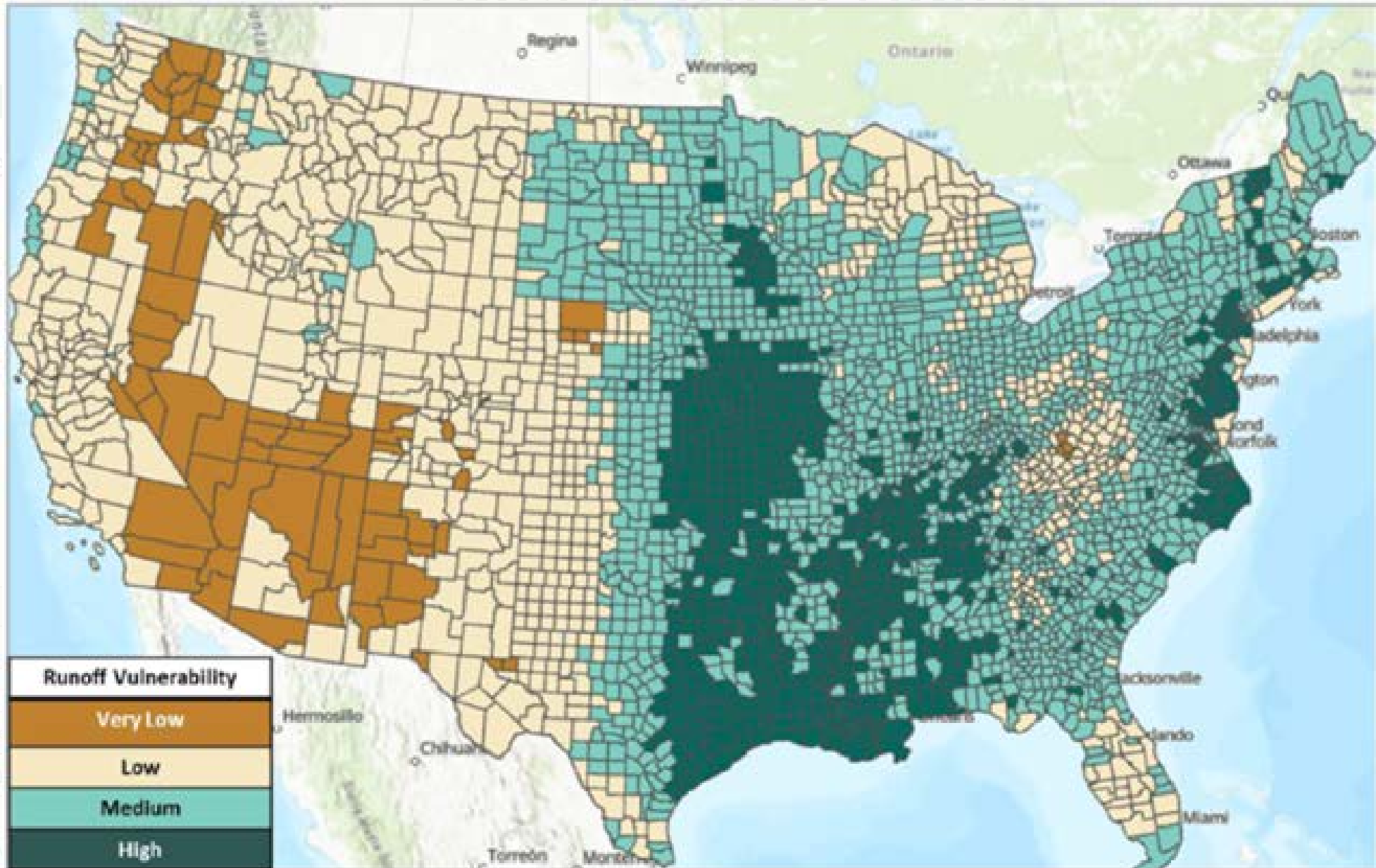


Liberty Ultra Label

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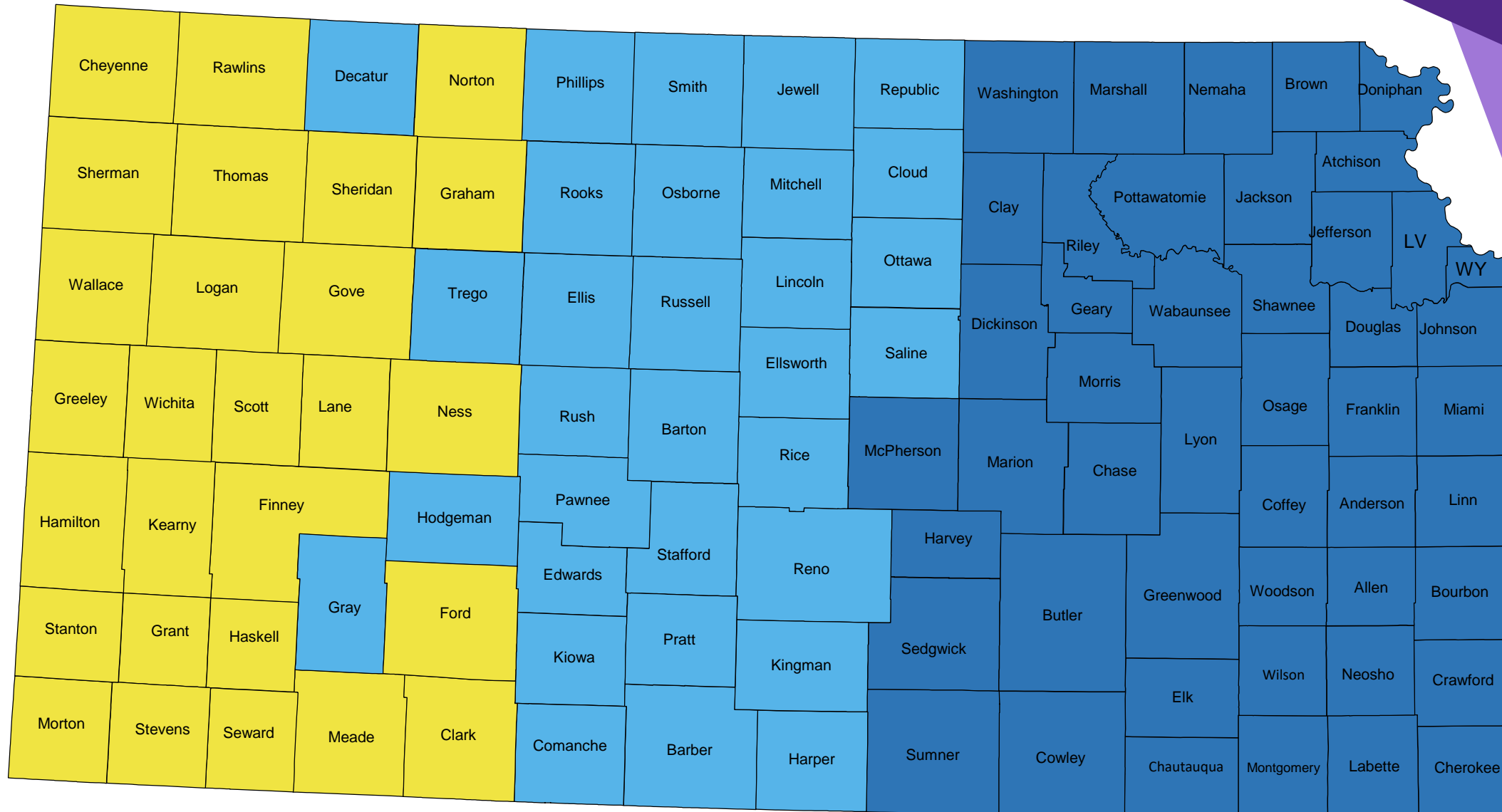
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Vulnerability category
Very low (brown counties)
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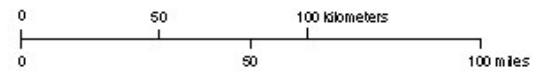
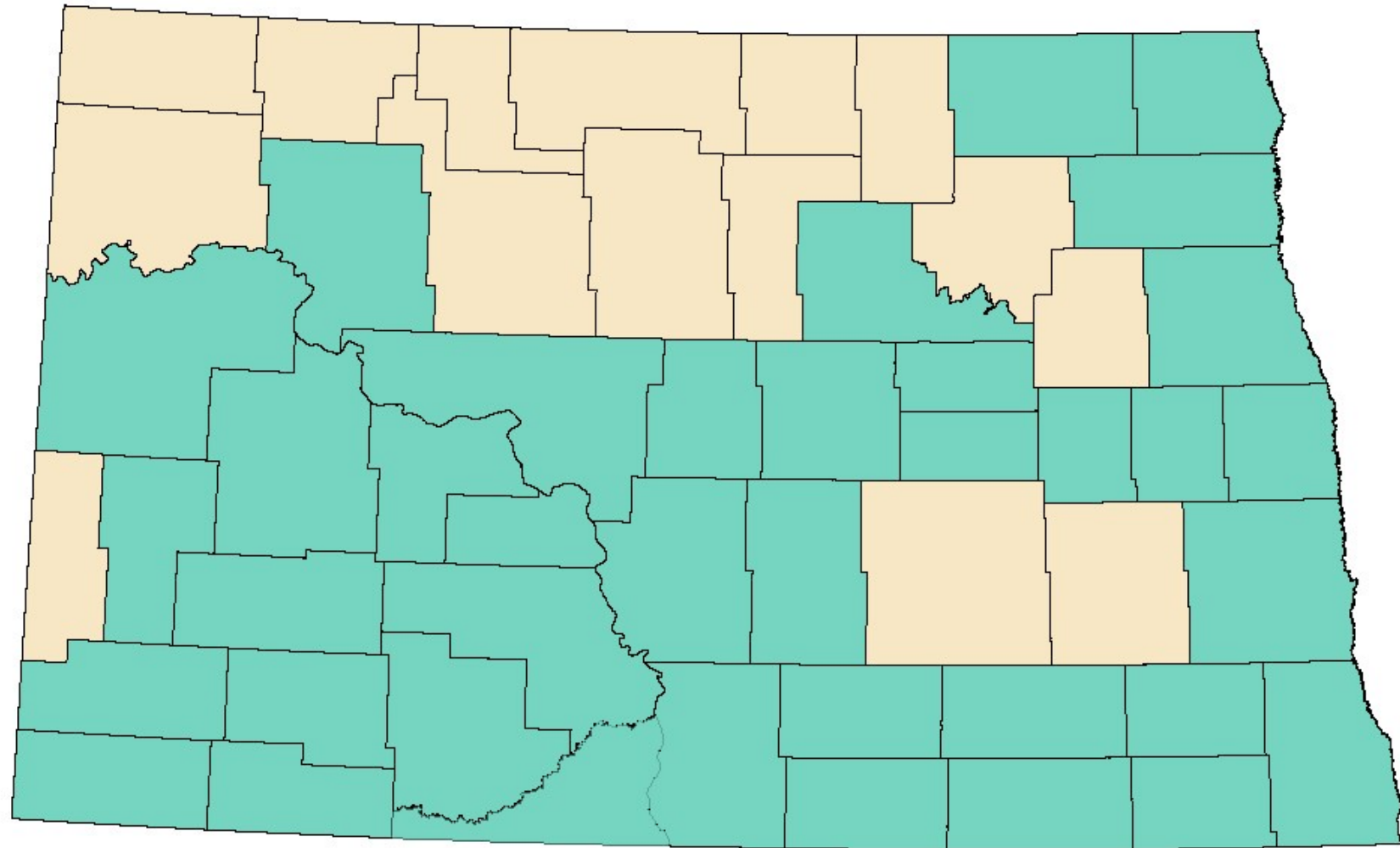


Runoff mitigation relief

● Low vulnerability: 3 points ● Medium vulnerability: 2 points ● High vulnerability: 0 points



NORTH DAKOTA



Liberty Ultra Label

- Section 11.0: MANADATORY RUNOFF MITIGATION
 - Must achieve a minimum of 3 points from mitigation menu
 - www.epa.gov/pesticides/mitigation-menu
 - Runoff points calculator available: downloadable Xcel
 - Other measures:
 - Mitigation tracking – 1 point
 - Working with a technical specialist (CCA, NRCS) – 1 point
 - Field with slope <3% – 2 points
 - Predominantly sandy soils – 2 points
 - Conservation tillage – 2-3 points
 - Cover crop – 2-3 points
 - Grass waterway or vegetative field border: 1-3 points

Runoff mitigation

Field characteristics	Points
Slope $\leq 3\%$	2
Sandy soils	2
Farm management practices	
Tracking mitigation practices	1
Follow recommendation from a runoff/erosion specialist ¹	1
or	or
Participate in a qualifying conservation program	2
Application parameters	
Use an annual application lower than the maximum (but at least the minimum labeled rate)	1 – 10 to 29% reduction 2 – 30 to 59% reduction 3 – $\geq 60\%$ reduction
Reduce the portion of the field treated	2 – 10 to 29% reduction 3 – 30 to 59% reduction 4 – $\geq 60\%$ reduction
Soil incorporation (if not recommended on the label)	1

¹Includes NRCS staff, Certified TSPs CCAs, CPAg, NAICC members, and Extension agents

Runoff mitigation

Measures applied in-field	Points
Conservation tillage	2 - Reduced till 3 - No till
Contour farming	2
Vegetative strips	2
Terraces	2
Cover crops/ground cover	1 - with tillage 2 - short term, no tillage 3 - long term, no tillage
Erosion barriers	2
Irrigation management	2 to 3
Measures applied adjacent to the field	
Grass waterway	2
Vegetative filter strips	1 to 3
Vegetated ditch	1
Riparian area	1 to 3
Wetlands	3
Habitat improvement area	1 to 3
Filtering devices	1 or 3
Water retention systems	2
Subsurface drainage	1

One point is earned for using measures from more than one of: in-field measures, field-adjacent measures, water retention measures

Endangered Species Protection Bulletin



Application Month: June 2025
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.



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.

Endangered Species Protection Bulletin

Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
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Codes and Limitations Table

Code	Limitation
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Atrazine registration review

Proposed label release 12/3/24

Comments due 2/3/25

EPA in consultation with FWS and NMFS

Anticipate new labels in the market 2027

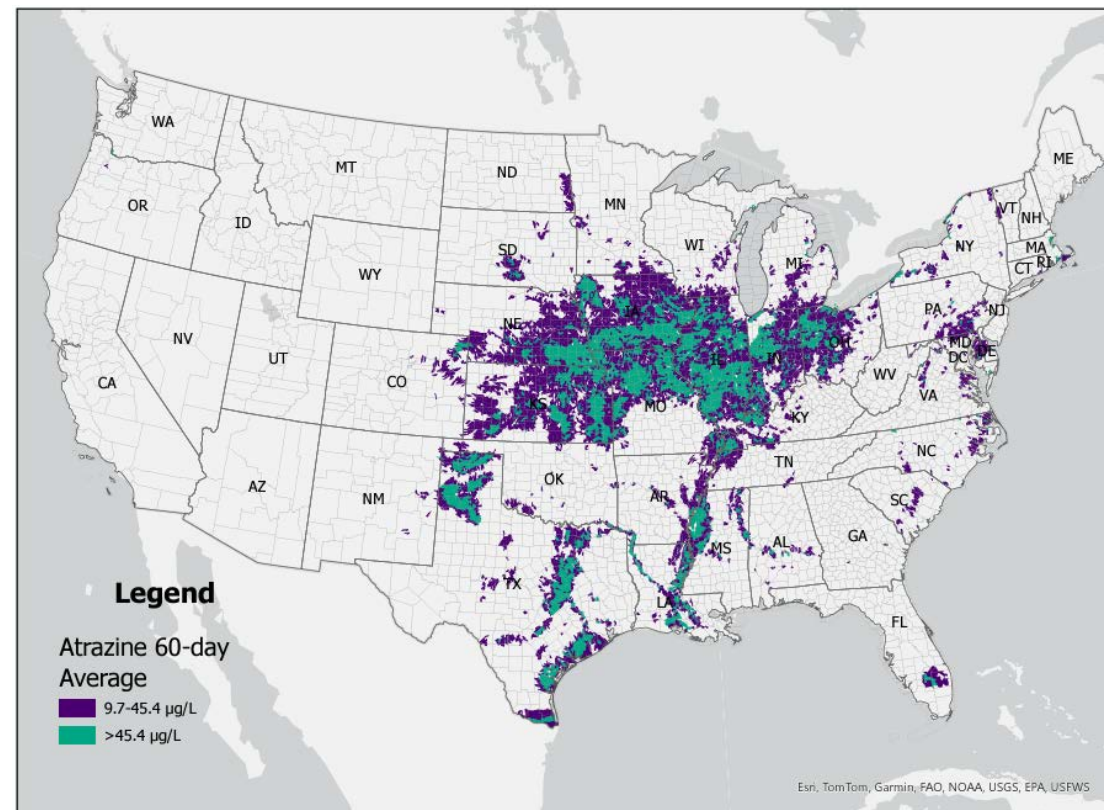
Annual application rate 2 lbs

Mitigation points required

Watersheds with predicted concentration
9.7 ug/L to 45.4 µg/L: 3

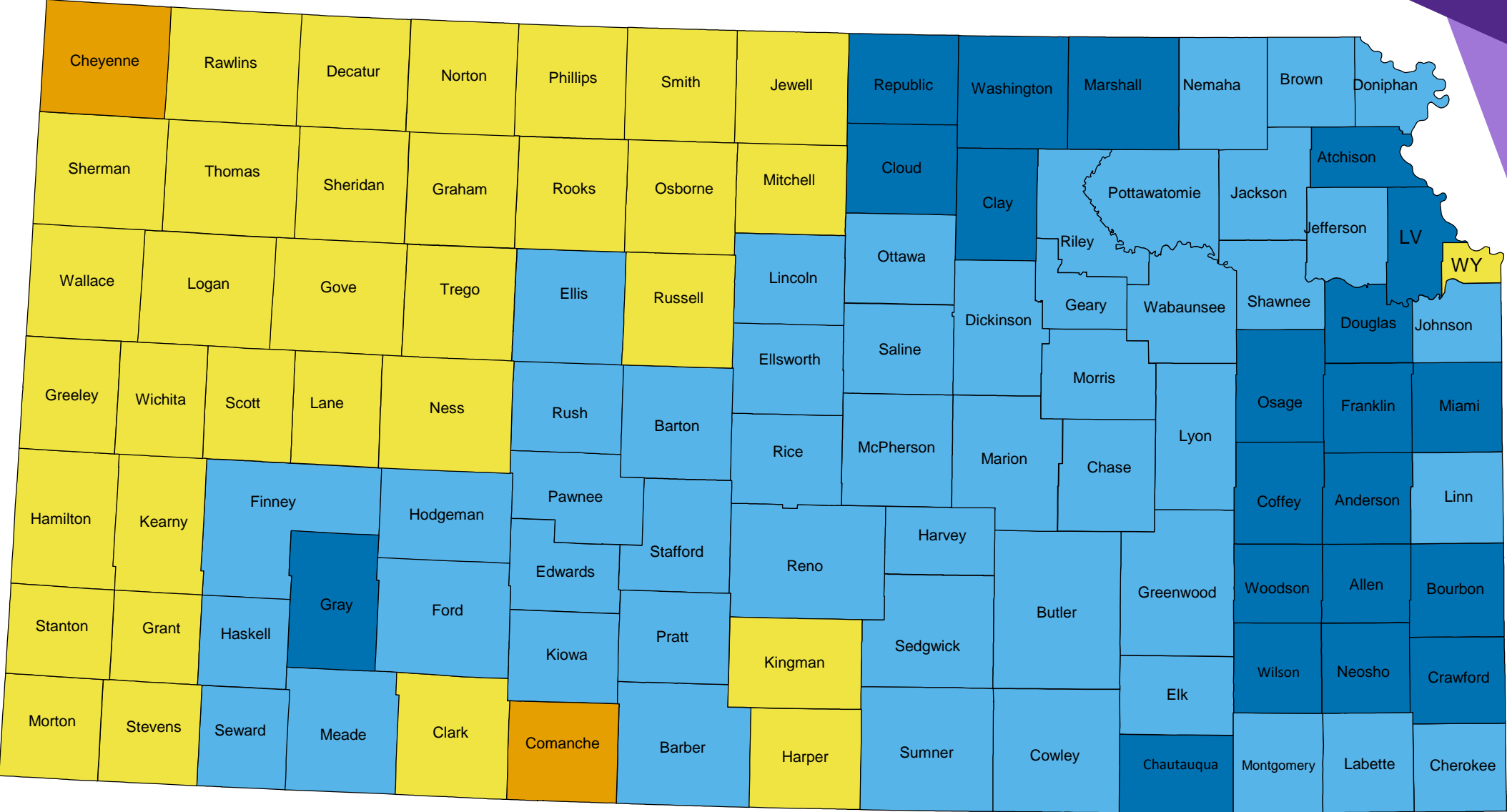
Watersheds with predicted concentration
at or above 45.4 µg/L: 6

Figure 1. Predicted Atrazine Concentrations in All 12-digit HUCs in the Continental U.S.⁶



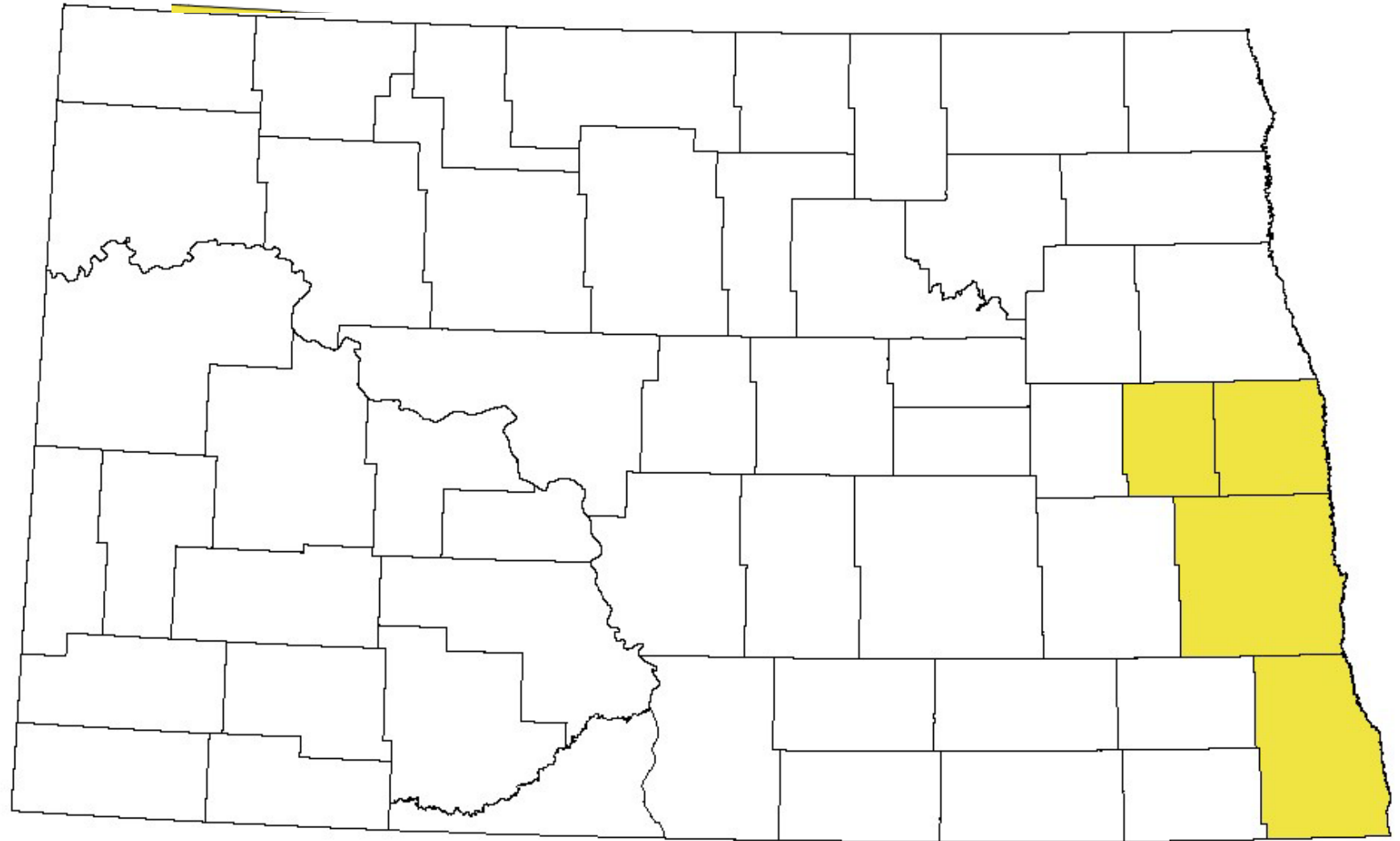
Proposed Runoff mitigation points required for atrazine

0 points 0 or 3 points 0, 3, or 6 points 3 or 6 points



NORTH DAKOTA

○ 0 points ● 0 or 3 points ● 0, 3, or 6 points ● 3 or 6 points



0 50 100 kilometers
0 50 100 miles

Proposed Atrazine Mitigations

- Section 11.0: MANADATORY RUNOFF MITIGATION
 - Must achieve a minimum of 3 points from mitigation menu
 - Cass, Richland, Steele, Traill

Bulletins Live! Two

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

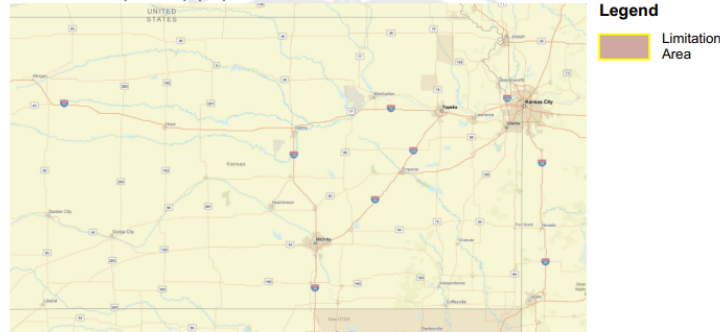
Endangered Species Protection Bulletin



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Location Search:



Application Month:

June 2025



EPA Registration Number:



Product

BASF L-Glufosinate-Ammonium 211
Herbicide (7969-500)



2 Pula(s) Filtered

Endangered Species Protection Bulletin



Application Month: June 2025

Product: BASF L-Glufosinate-A
(7969-500)

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



Pesticide Use Limitation Summary Table

Product	AI	Use	Method	Form	Code
BASF L-Glufosinate-A mmonium 211 Herbicide (7969-500)	L glufosinate ammonium	Any Use	All Applica tion Methods	Liquid	E323

Codes and Limitations Table

Code	Limitation
E323	Do not apply within the use limitation area.

Why compliance is important



Let's Connect!



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@KStateWeedSci



K-State Weed Science



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War Against Weeds podcast



eUpdate.agronomy.ksu.edu

