# Insecticide Strategy Overview and Listed Species Core Maps

# Insecticide Strategy Overview

# Insecticide Strategy

- **Goal**
  - Develop approach to reduce potential population-level impacts for over 850 Fish and Wildlife Service (FWS) listed species from conventional insecticides applied for pest control in agricultural fields in the contiguous United States (CONUS)

- **Scope**
  - Insecticides
  - Listed terrestrial and aquatic invertebrates
  - Listed species that depend invertebrates (as part of their diet or for pollination)
  - Considers exposure to on-field species and off-field spray drift and runoff/erosion exposure routes

# Comparisons between Insecticide and Herbicide Strategies

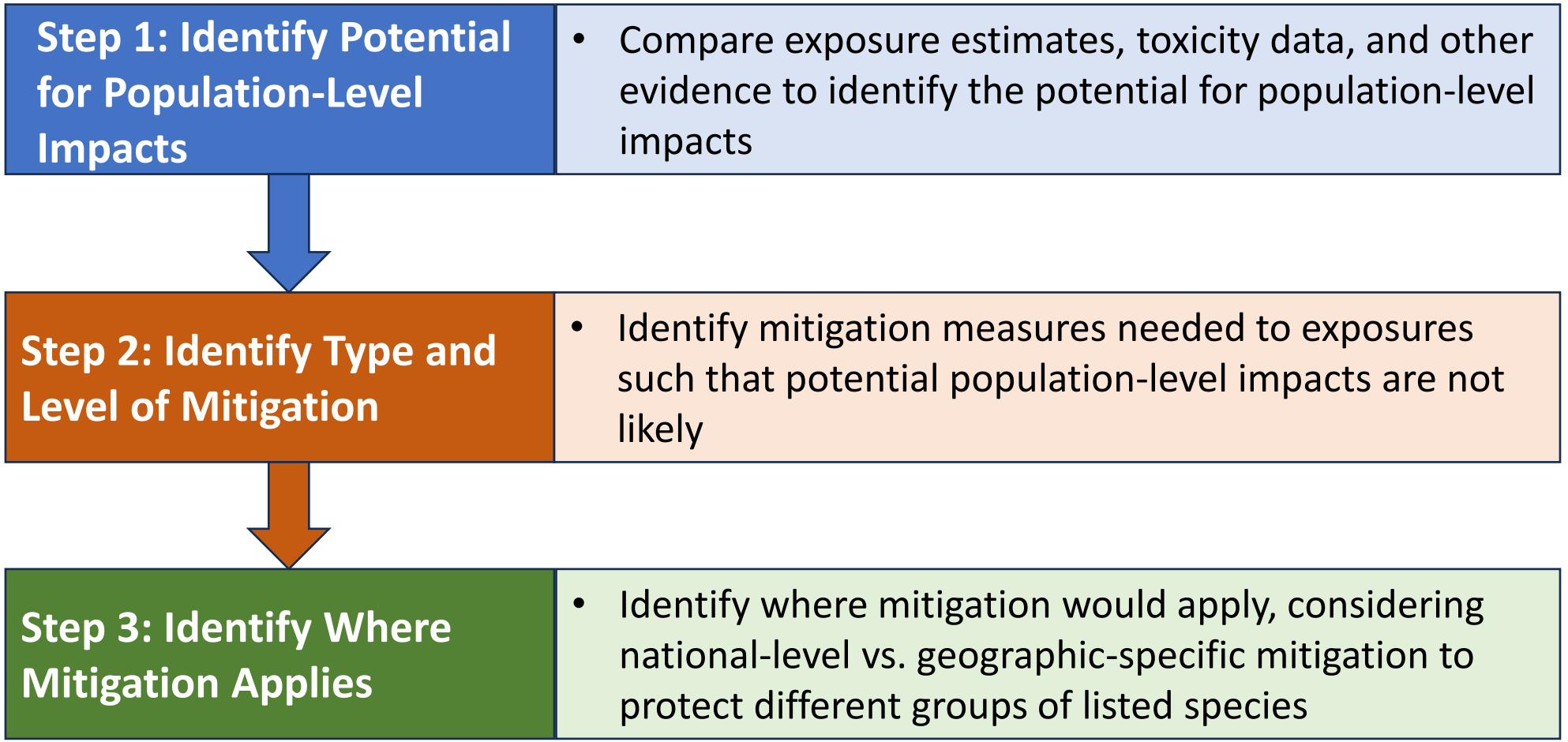
Similarities:

- Focus on sensitive listed taxa based on class MoA
- Focus on CONUS species under FWS purview
- Consider foliar and soil applications
- Consider runoff/erosion and spray drift routes of exposure
- Modeled/considered habitats include terrestrial, wetland and flowing aquatic

- Differences
  - Availability of toxicity data across taxa*
  - Considers seed treatments for runoff/erosion exposure*
  - Considers listed species on the field*
  - Modeled habitat includes small vernal pool (small # of species)
  - Impact of usage data*

*Received comments from grower groups

# Insecticide Strategy Framework

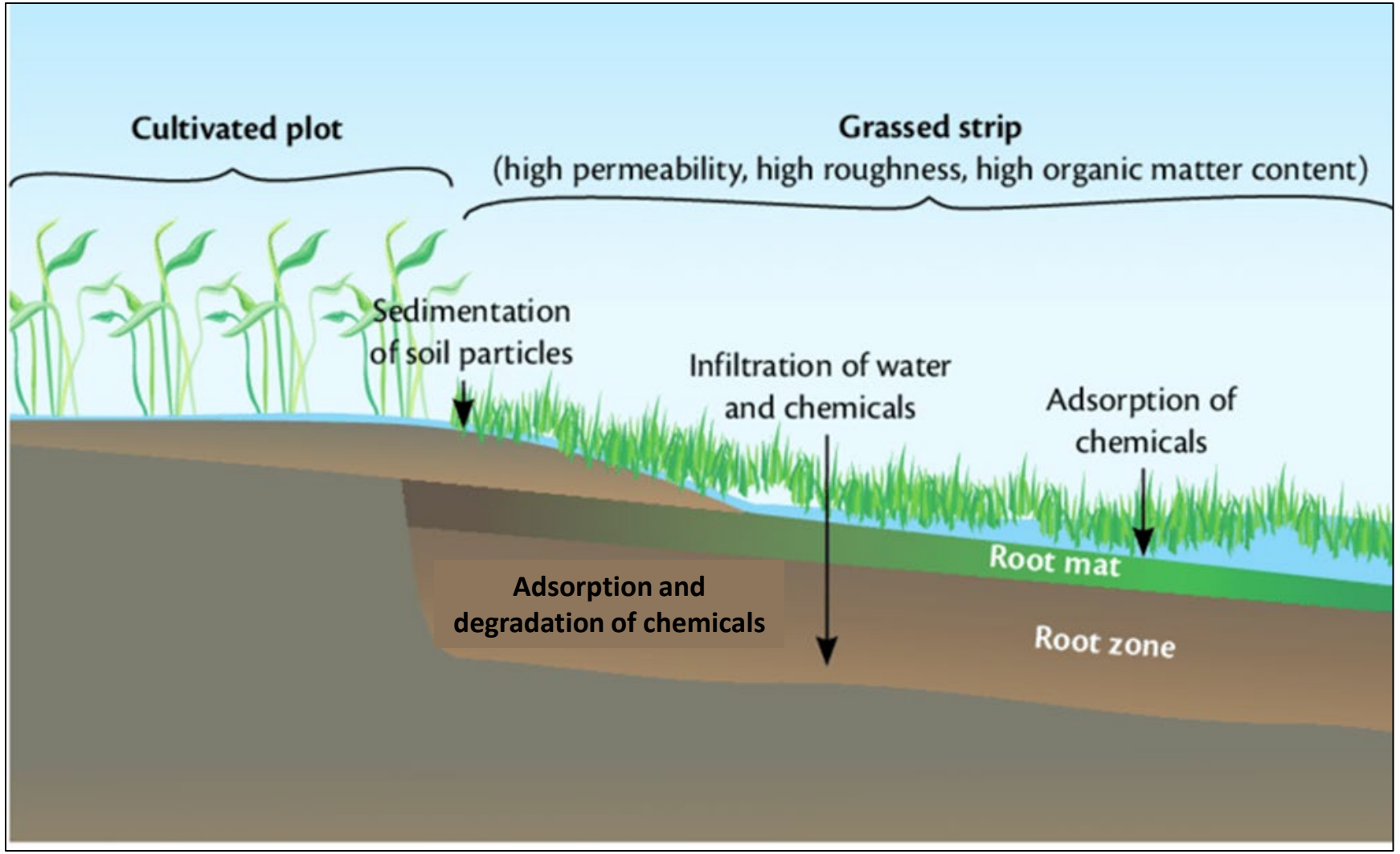


# Identifying Potential for Population-Level Impacts

| Magnitude of Difference (MoD) | Potential for Population-Level Impacts | Level of Mitigation Identified |
|---|---|---|
| <1 | Not Likely | None |
| 1 to <10 | Low | Low |
| 10 to <100 | Medium | Medium |
| ≥100 | High | High |

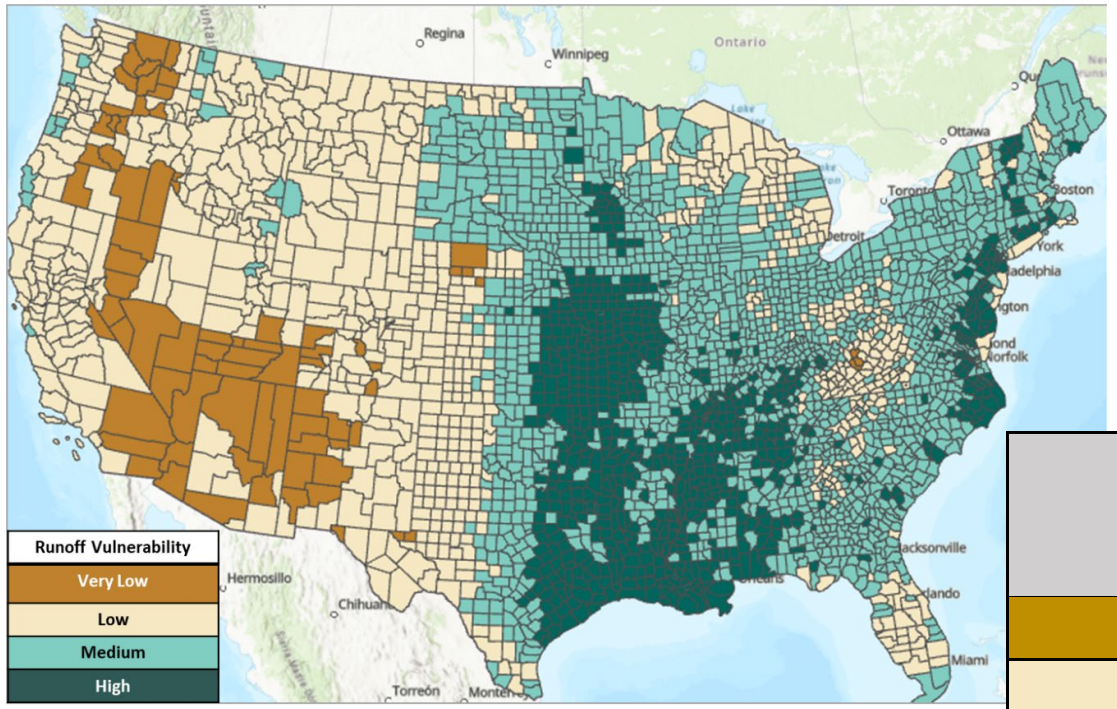
* MoD categories subject to exposure modifiers (e.g. large/flowing waters) and other considerations of uncertainty

# Level of Mitigation and Options: Run-off/Erosion




- Mitigation Menu available at:
  - https://www.epa.gov/pesticides/mitigation-menu

# Runoff Vulnerability and Relief Points




| Order of Magnitude | Pesticide Runoff Vulnerability | |
|---|---|---|
| | Classification | Relief Points |
| ~2 | Very low | 6 |
| ~1 | Low | 3 |
| Half | Medium | 2 |
| Maximum | High | N/A |

# Level of Mitigation and Options: Spray Drift

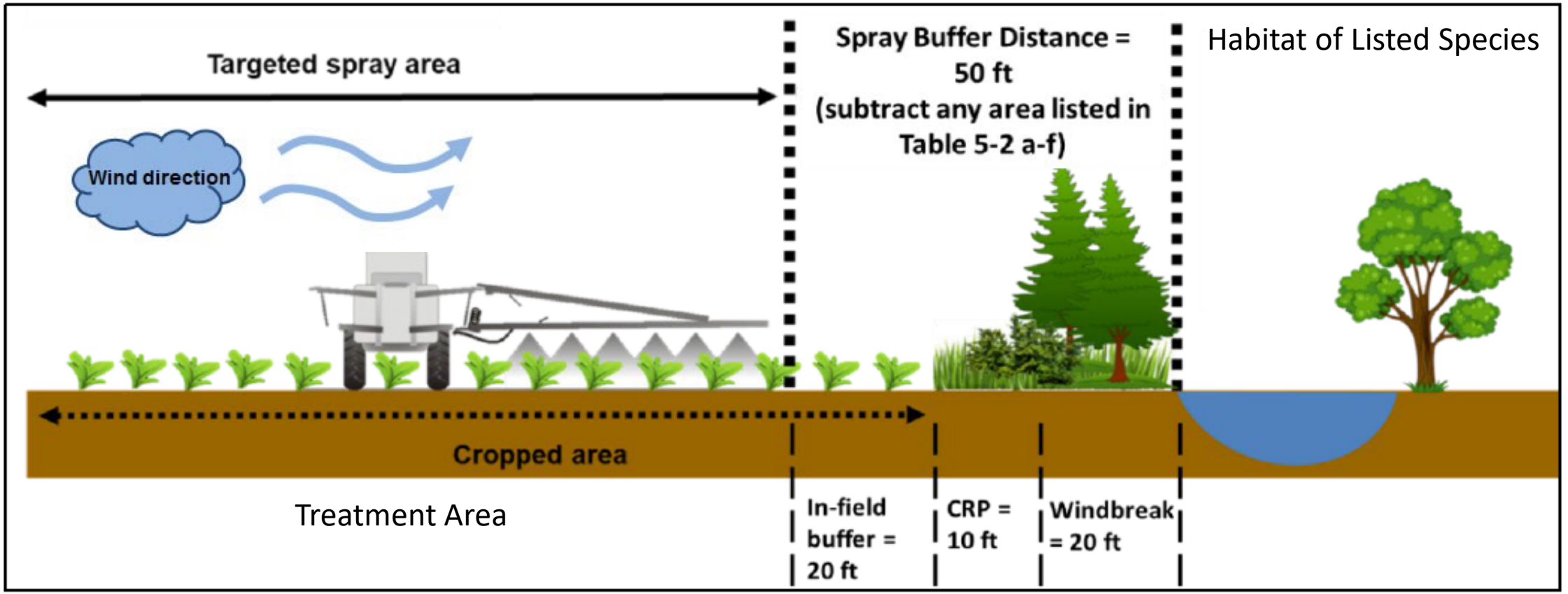



Diagram adapted with permission from the Pest Management Regulatory Agency of Health Canada (2020). Available at: https://www.canada.ca/en/healthcanada/services/consumer-product-safety/pesticides-pest-management/growers-commercial-users/driftmitigation/protecting-habitats-spray-drift.html

# Tools to Help Growers

- Improved maps
- Outreach
- Improved Bulletins Live!Two functionality
- Calculators, worksheets, applications in development

Current points
**10**

Target points
**6**

Required mitigation points met?
**Yes**

This section provides EPA's field slope and soil type mitigation measures. See EPA's mitigation measure website for more details.

**Field with Slope ≤3%** (naturally low slope or flat fields; flat laser leveled fields)
View the description of this measure

(•) Yes
( ) No

**Predominantly Sandy Soils** (fields with 10-20% clay and 50-90% sand [includes loam, silt loam, or silt soil] wit restrictive layer that impedes the movement of water through the soil [also described as Hydrologic Soil Group B]). This option can only be used if the product label does not prohibit application on sandy soils.
View the description of this measure

( ) Yes

# Select Changes from Draft to Final Insecticide Strategy

- **Thank you for your input!**
- Runoff/Erosion
  - Added runoff measures (polyacrylamide, sandy soils) as options
  - Increased mitigation relief points for applications in higher sand soils
- Spray Drift
  - Evaluated spray drift buffer distances and reduced them based on scientific evaluation
  - Added spray drift reduction measures as options for growers and other pesticide applicators to reduce buffers, particularly for airblast applications

- Updated approach for growers participating in qualified runoff/erosion programs
- Reduced the list of specific invertebrate species that could occur on agricultural fields with potential population-level impacts
- Separated wetland species from other generalist species

# Next Steps

- Use strategy to inform upcoming new active registrations and applicable registration review activities.
  - Opportunities for public input
- Continue working with stakeholders on support and educational materials
- EPA is developing an app to help farmers interpret labeling and mitigations
- Continue to work on specific areas, including
  - Process for qualifying programs
  - Evaluating specific measures such as drift-reducing adjuvants
  - How best to describe ‘managed areas’ vs habitats to protect
  - Developing refined maps for species

# Input From Growers and Pesticide Users on Experiences with Implementation

- Mitigation options
- Label clarity
- Feasibility and practicality
- Challenges
- What additional tools/functionality of existing tools would help

# Feedback on Species Maps

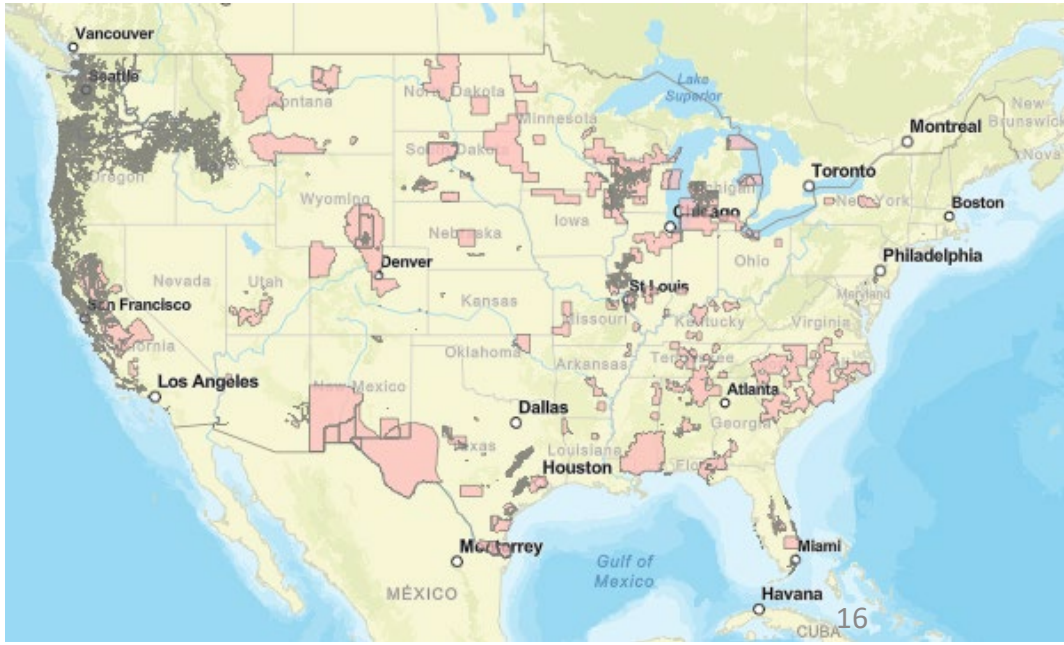
- Public input from grower groups, industry, environmental groups, USDA, and others noted importance of refined maps
  - Vulnerable species
  - Draft herbicide strategy
  - Draft insecticide strategy

# Why Use Mapping?

- In order to include necessary mitigations only where they are needed to protect federally listed species

# Web-based Mapping for Federally Listed Species Protections

- Product labels may direct pesticide applicators to access the Bulletins Live! Two (BLT) website and follow any mitigations specified for the intended application area and product.
- Language that allows for location-specific protections



# Species Mapping Development and Refinements

- Need to develop core maps and associated PULAs for many ESA listed species
- EPA with input from FWS, USDA, and support from University of Georgia developed a draft process for refining species maps.
- Public, transparent process that anyone can use to develop maps
- Maps in Development
  - Industry and consultants, commodity/interest group, environmental non-governmental organizations (E-NGOs), Environmental Protection Agency (EPA), and Others
- Completed maps available at: https://www.epa.gov/endangered-species/process-epa-uses-develop-core-maps-pesticide-use-limitation-areas

# Example Species Core Map: Mead's Milkweed