

U.S. Fish and Wildlife Service's Perspectives on ESA and FIFRA



Irvin Huang U.S. Fish and Wildlife Service
Ecological Services, Headquarters



Outline

1. ESA and FIFRA
2. Overview of the consultation process
3. Approach to analyzing effects of pesticide registration
4. Ongoing challenges
5. Update on upcoming pesticide activities



Endangered Species Act, Section 7

ESA Section 7 – directs all federal agencies to participate in conserving threatened and endangered species

- Interagency cooperation

Section 7(a)(1)

- Charge for all federal agencies to aid in the conservation of listed species
 - 7(a)(1) conservation plan

Section 7(a)(2)

- requires agencies to ensure their activities are not likely to jeopardize the continued existence of listed species
 - Consultation



ESA and FIFRA

EPA's registration/registration review of a pesticide is a federal action

Therefore, EPA must consult with Fish and Wildlife Service to ensure that the registration of pesticides are ESA compliant



Consultation Process



1. EPA must make affect determinations for each listed species

- No effect
- May affect
 - not likely to adversely affect
 - likely to adversely affect

2. Formal consultation

- FWS analyzes effects of the action to listed species
- Results in a Biological Opinion
 - Either a Jeopardy or No Jeopardy opinion
 - Usually requires additional conservation/mitigation measures

Approach to Analyses

Three factor approach

1. Vulnerability
2. Extent of Exposure
3. Magnitude of Effect



Approach to Analyses

Three factor approach

1. Vulnerability

- Listing status, population trends, number of populations, pesticides as a known threat, environmental baseline, etc.

2. Extent of Exposure

3. Magnitude of Effect



Approach to Analyses

Three factor approach

1. Vulnerability

2. Extent of Exposure

- **Overlap between species' ranges and the action area**
 - Action area = use sites + areas of off-site transport
 - USDA Crop Data Layers, USGS National Land Cover Dataset, NOAA Coastal Change Analysis Program Regional Land Cover data
 - Represents the maximum possible exposure across a species' range

3. Magnitude of Effect



Approach to Analyses

Three factor approach

1. Vulnerability

2. Extent of Exposure

- Overlap between species' ranges and the action area
- Past usage data
 - Census of Agriculture, California Department of Pesticide Regulation, proprietary survey data, market and sales data
 - Estimate of the area likely to be treated with pesticide annually

3. Magnitude of Effect

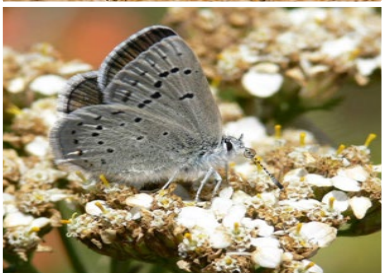


Approach to Analyses

Three factor approach

1. Vulnerability
2. Extent of Exposure
3. Magnitude of Effect

- Available toxicity data
 - open literature, registrant submitted studies
 - Estimated environmental concentrations – aquatic, dietary, drift
- Estimate levels of adverse effects to individuals
- Estimate levels of population- or species-level effects



Biological Opinion Conclusions

If any species are likely to be jeopardized or critical habitats destroyed or adversely modified, the FWS comes out with a jeopardy opinion

- FWS will determine reasonable and prudent alternatives

How to avoid jeopardy?

- Develop conservation/mitigation measures
 - Label changes – reduced use, additional restrictions, rate limitations
 - Species-specific protections – Pesticide Use Limitation Areas (PULAs)



Malathion

Organophosphate insecticide

- Non-agricultural uses: Mosquito control, residential, commercial/industrial, municipal, some forestry

Identified 78 species as draft jeopardy

- Reached a final No Jeopardy opinion
 - Label changes – limitations to residential uses
 - Spot treatments only, buffers to aquatic habitats, reduced application rates and frequency
 - PULAs for mosquito control activities



Challenges with analyzing non-agricultural uses of pesticides

- Exposure estimates are difficult to work with
 - Available geospatial data likely not accurately capturing residential/urban pesticide use-sites
- Past usage data is sparse
 - When past usage data is not available, FWS defaults to conservative assumptions
- Lack information on how/where/when are pesticides are used in these settings





Opportunities for stakeholder involvement

State groups have a wealth of information that can inform FWS' analyses

- Is there better data available?
- What additional conservation/mitigation practices are feasible?
- Are there existing protections, conservation activities, BMPs?

Outreach and education

- Communicate with those implementing conservation measures
- How to mitigate, but also why mitigations are needed

Upcoming FWS activities

EPA initiatives

- Collaborating with EPA on a pesticide 7(a)(1) conservation program
 - Expect many benefits to consultation process
- Final herbicide strategy, draft insecticide strategy

Consultations

- Finalize methomyl biological opinion – December 2024
- Draft carbaryl biological opinion





Questions?
Email: irvin_huang@fws.gov