



# Endangered Species Update

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AAPCO Update  
March 10, 2015

# Background and Drivers

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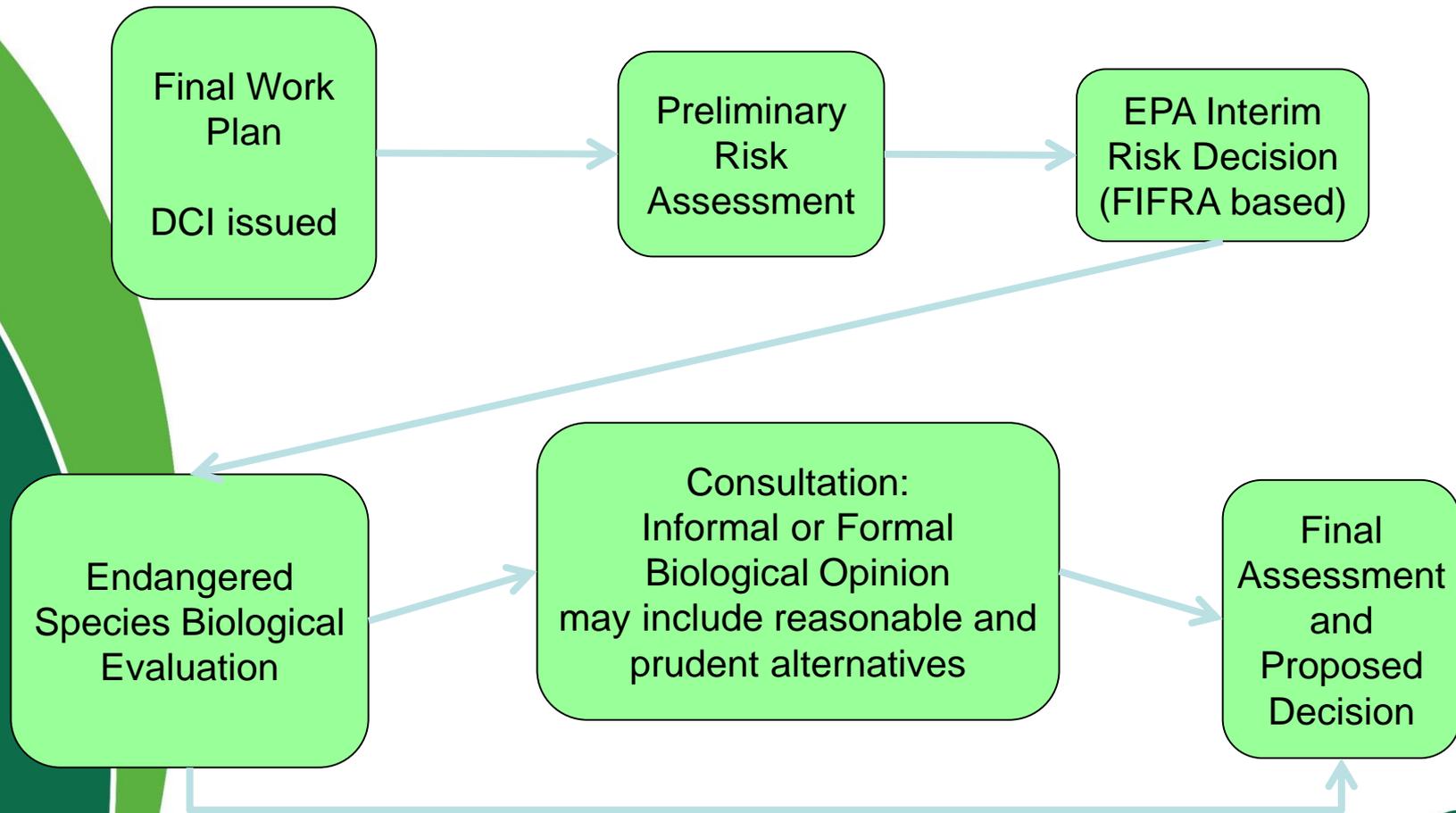
- National Academy of Sciences (NAS) report issued in April 2013 on Endangered Species assessments and consultations.
- EPA and Services announce interim process November 2013
  - Using pilot projects in Registration Review to develop process
    - ❖ National scale assessment – all listed species
    - ❖ dates for completed BiOps: OPs, 12/17 and carbamates, 12/18
  - “day-forward and iterative approach”
  - Publicizing progress in workshops, professional societies, EMPPM

# EPA/Services Report to Congress – 12/14

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- Endangered Species assessments and consultations using the interim process will be developed via Registration Review.
- For new active ingredient registrations, EPA will provide a comparison of the new a.i. to the registered alternatives.
- For herbicide tolerant crop systems (GMO), EPA OPP will conduct Endangered Species assessments based on the 2004 Overview document.

# Registration Review Process



# Communicating Mitigation Requirements

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- Websites with mapping applications
  - <http://www2.epa.gov/endangered-species/salmon-mapper>
- Bulletins Live! Two
  - <http://www.epa.gov/oppfead1/endanger/bulletins.htm>
  - Pesticide use labels direct users to the site
  - Use limitations in the bulletin are enforceable under FIFRA
  - Bulletins for 14 listed species in 113 counties in 10 states

# EPA and Services Resource requirements for Consultations –Summit Report

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- Increased cost to the Services of complying with the FIFRA Registration Review deadlines would total around \$474 million between fiscal years 2013 and 2023
- Requires a 13-fold and 25-fold increase in the current budget for consultations conducted by the National Marine Fisheries Service and Fish and Wildlife Service FWS, respectively.

**Analysis of Cost Estimates and Additional Resources Required for Timely FIFRA/ESA Pesticide Registration Review** , Summit Consulting, LLC, October 2013. Sponsored by CropLife America.

# CLA and Industry Actions

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- Interact with EPA and Services in on-going workshops/discussions
- Propose improvements in interim process
- Seek agreement on source of species data
- Provide feedback on Registration Review program and actions/assessments
- Develop dialogue with conservation groups
- Raise industry awareness of current situation and issues

# Interim Process for Registration Review

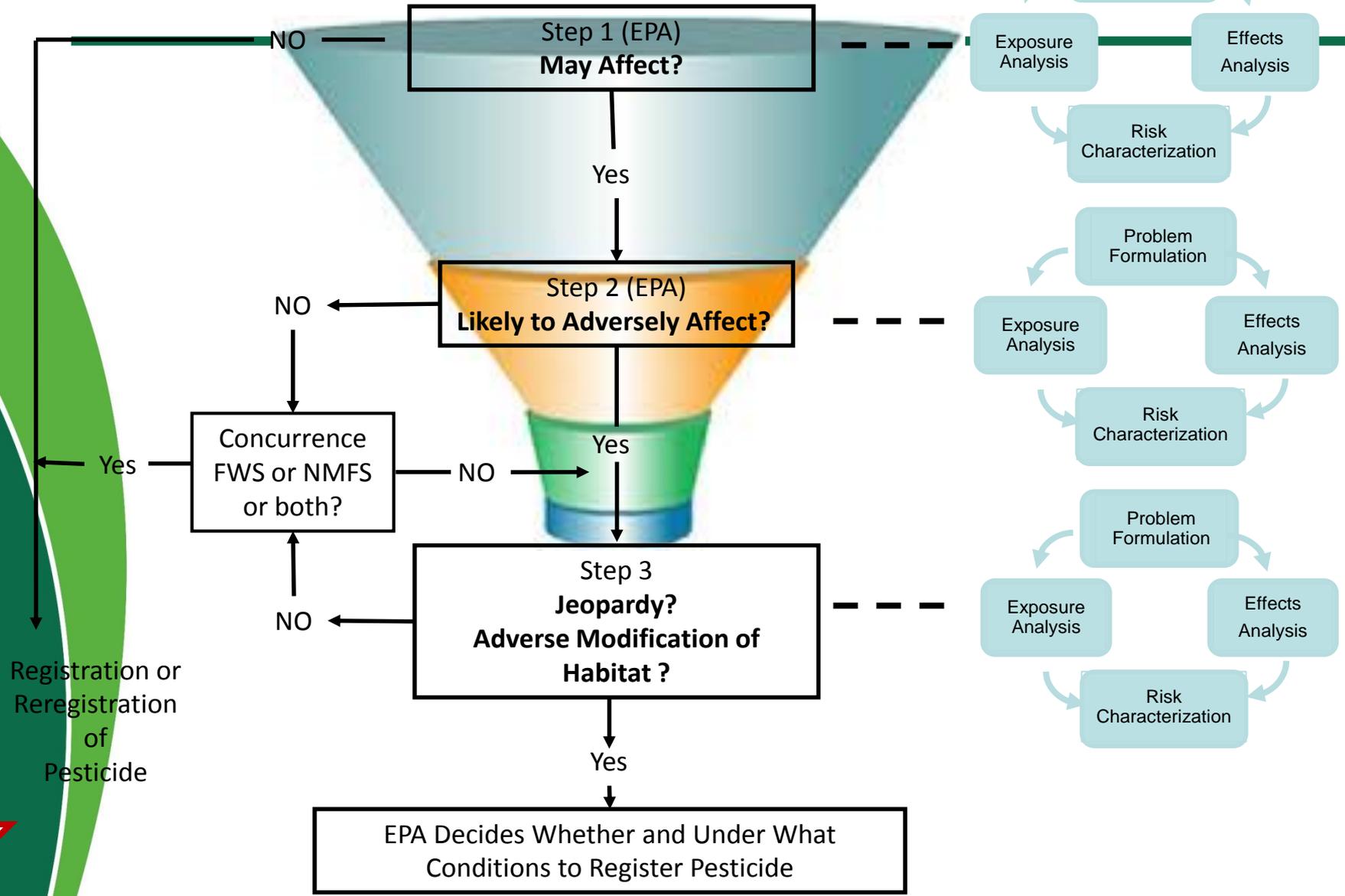
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- Will be applied to National Level Risk Assessments
  - As of Feb 2015 – 1569 Listed Species
    - ❖ 683 Animals
    - ❖ 886 Plants
    - ❖ Plus 25 species on proposed list and 146 on candidate list
- Scale/Scope/Size of the assessment HUGE
- Efficiencies in process are critical

# EPA/Services Interim Risk Assessment Approach

## 3 Step process

Increasing Time and Resources Needed to Complete the Process



# Interim Process for Registration Review – Step 1

- Step 1 – Definition of Action Area and the No Effect/May affect Decision

- Essentially assesses proximity

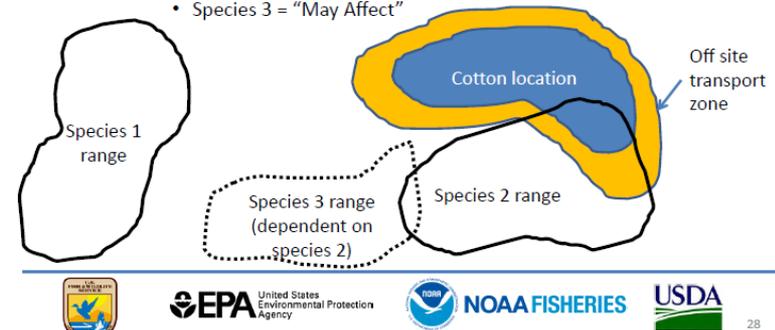
- Key Drivers

- Lowest toxicity values for most sensitive species
  - ❖ Example: For acute direct effects, effect threshold defined for exposures that result in one-in-one million chance of mortality.
- Spatial definition of:
  - ❖ species range and critical habitat
  - ❖ potential use sites (agriculture and non-agriculture)
- Extent of off-site transport (drift, runoff, downstream extent)

## Interim Approach: Step 1

Example:

- Action = use of Pesticide x on cotton
- Determinations
  - Species 1 = “No Effect”
  - Species 2 = “May Affect”
  - Species 3 = “May Affect”



# Interim Process for Registration Review – Step 1 Continued

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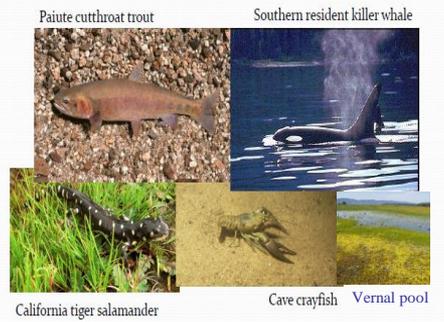
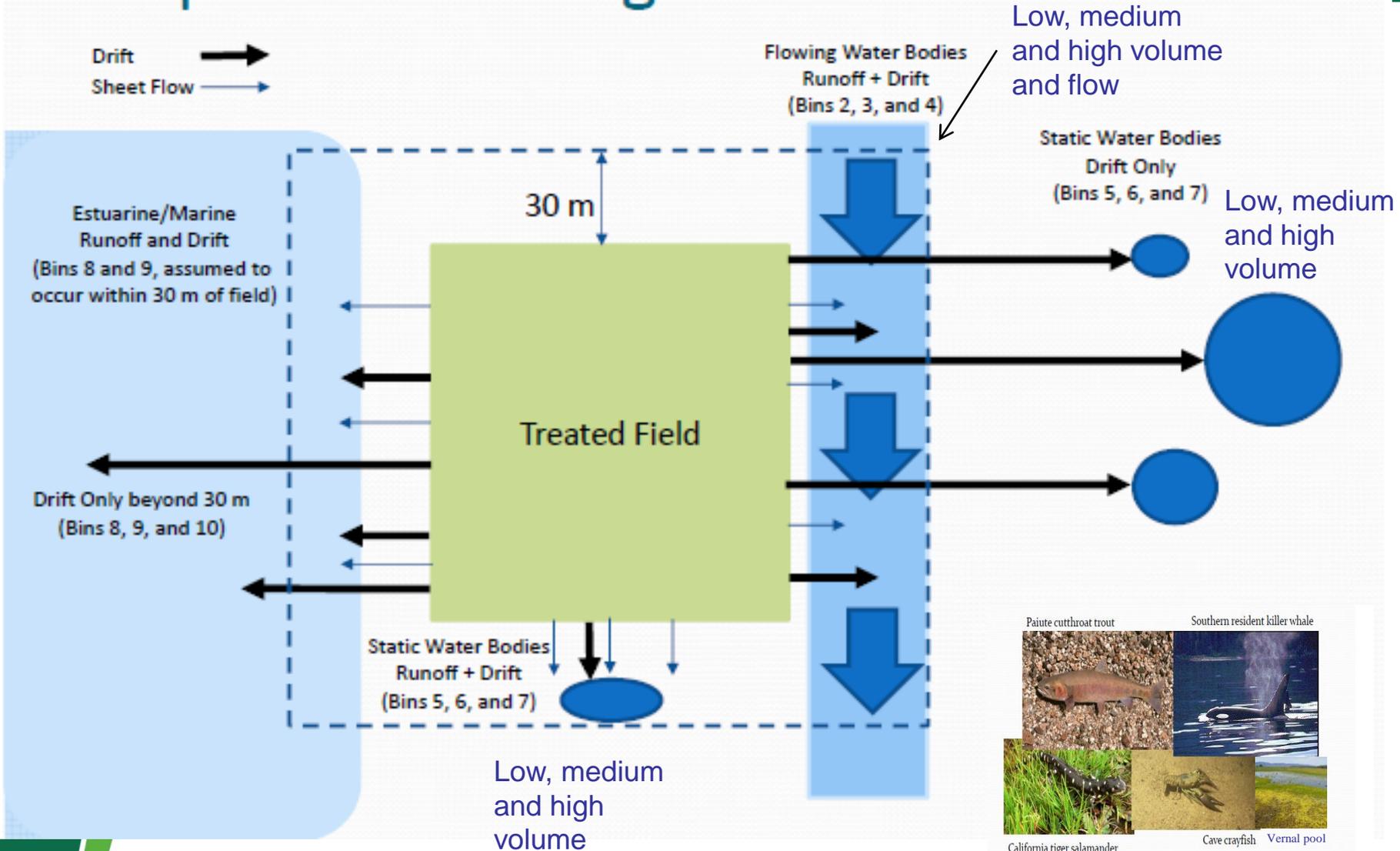
- Ongoing activities
  - Species Range data layers (FWS offices and FESTF)
  - Development of tools, models, exposure scenarios
    - ❖ Federal Family proposes to develop exposure scenarios for use sites by HUC 2 hydrologic units.
    - ❖ Need to ensure the approach appropriately uses and values local information – your input is needed
- Industry position on Step 1: Process should rely on more than just proximity, an efficient and protective process can be developed
- Industry groups and companies are evaluating and providing input for all steps in the process
- See posters

# Interim Process for Registration Review – Step 2

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- Step 2 – Not Likely to Adverse Affect/Likely to Adversely Affect
  - Goal to evaluate whether and **individual's** fitness is likely compromised and whether habitat attributes are likely adversely affected
  - Toxicity endpoints relevant to the listed species and habitat for acute, chronic direct effects and for indirect effects
  - Species (and exposure models) are grouped by environmental compartment and habitat type
  - Assessment will not just use point estimates but will consider frequency, magnitude, duration and likelihood of exposure – methods under development for probabilistic approaches

# Aquatic Modeling – Bins and Distance



# Interim Process for Registration Review – Step 3

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- Step 3 – Jeopardy/No Jeopardy Decision and Adverse/No Adverse Modification of Critical Habitat
  - Decisions based on weight of evidence and probabilistic risk assessment (but methods not specified or developed)
  - Population Level Analysis that may include population modeling
  - Result is Biological Opinion, which may include reasonable and prudent measures and alternatives
- Overall needs: Develop of process and methods that are scientifically sound, protective, use best available data and efficient

# Contribution of States to the Process

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## Talking Points:

- Impact on States
- Use data – Ag and Non-Ag
- Non-Ag Example – Mosquito Adulticide
- What can you do to contribute?

# Impact on States

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- What is your role in the Interim Process?
- What impact do BiOps have on your economy, your functioning where pesticide use is of concern?
- And what about your own State Endangered species programs and/or State Recovery Programs ?
- Many states have dealt with BiOps, and have their own recovery plans and statutes, many are in various stages

# Product use areas and use rates

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- Use areas are key to the risk assessments
  - Defines action area
  - Required for proximity analyses
- Agricultural uses are standard (usually) lbs product per acre over defined fields and areas
- For many Non-Agricultural uses pounds per acre is not a relevant application measure, or area measure
- Product labels can also be difficult to interpret

# Non-Ag Product Uses

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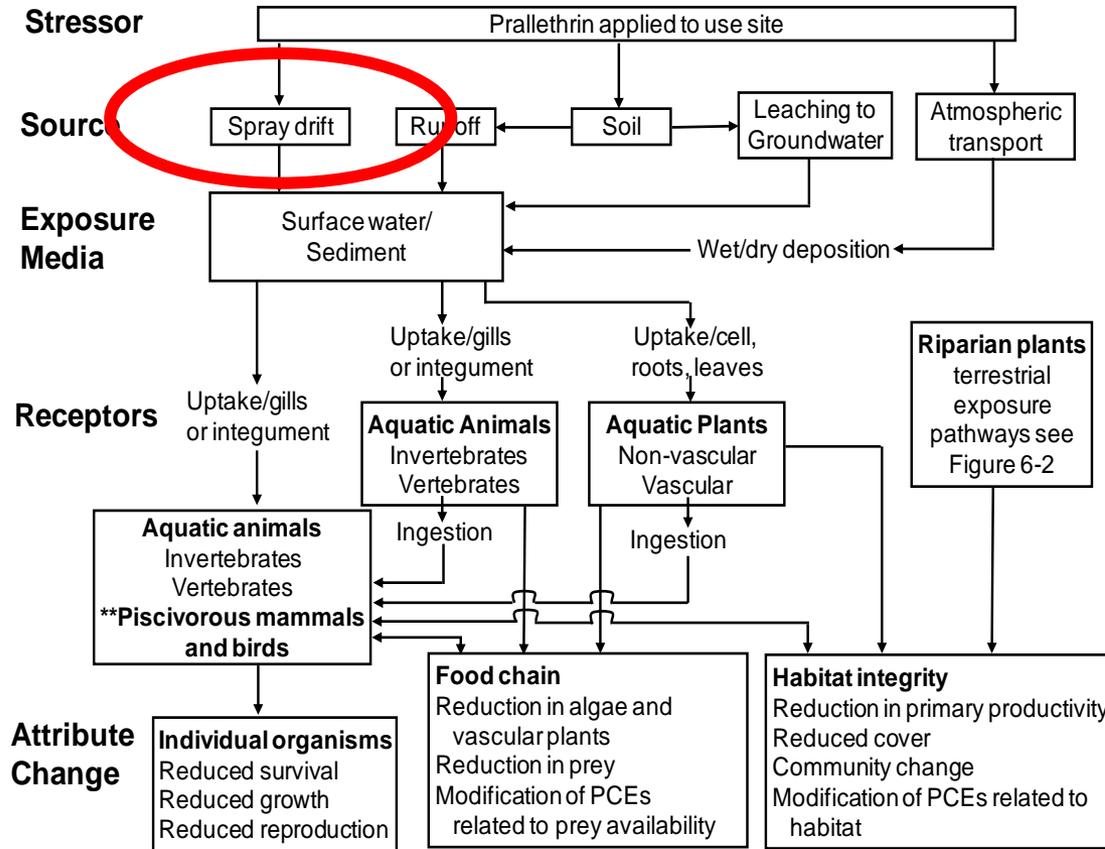
- Examples
  - Mosquito adulticiding
  - Residential lawn and garden, and perimeter
  - Residential Misting systems
  - Residential patio sprays and foggers
- Challenges
  - spatially defining potential use site
  - defining the size of the use area
  - understanding the frequency of use
  - understanding the application technology
  - ensuring appropriate spray drift models are available

# Opportunities for improvements

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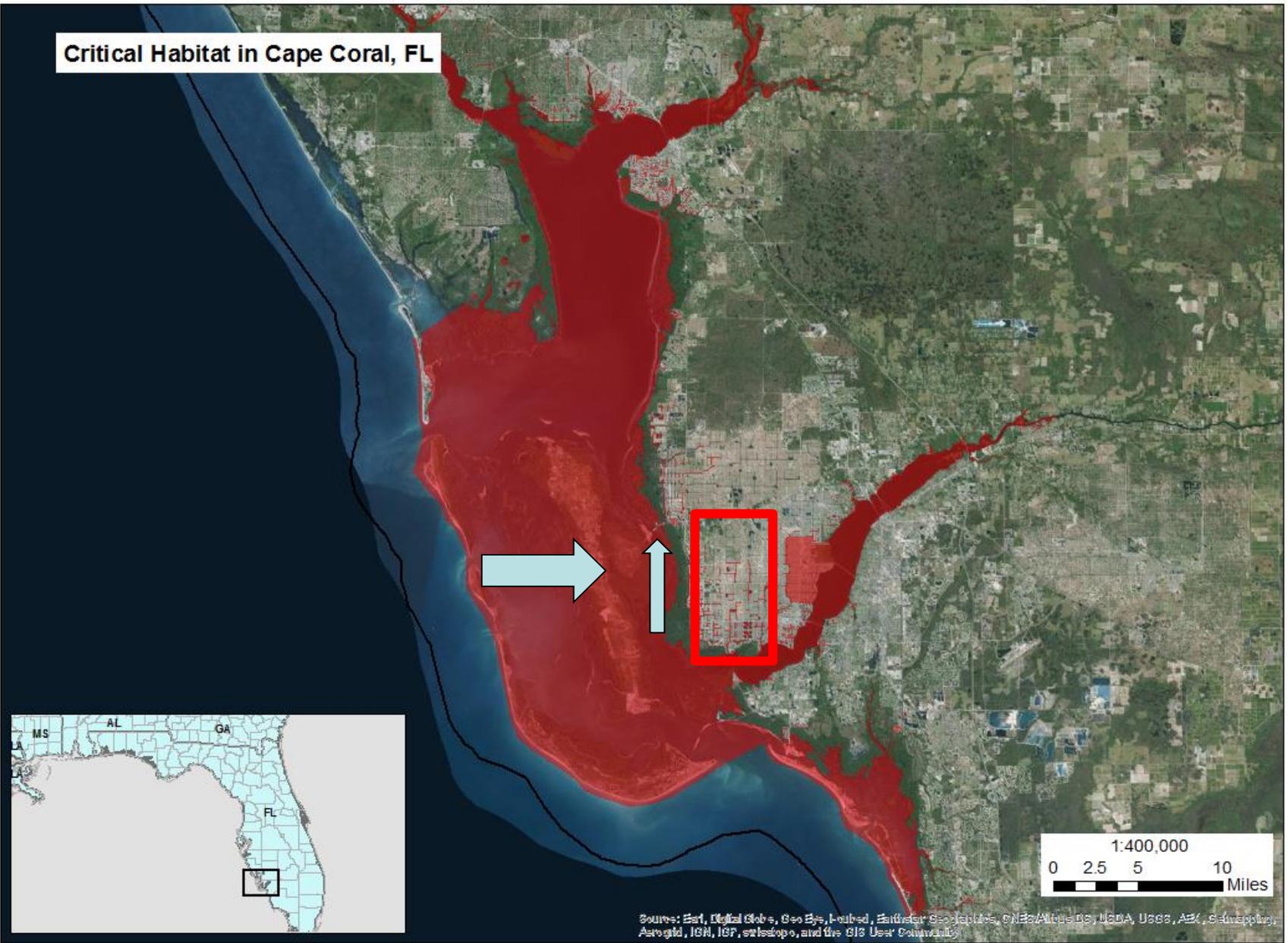
- What are the appropriate exposure models?
  - Drift
  - Runoff and erosion
- How can we describe these use patterns to use in a quantitative risk assessment?
- What is the best available data for product uses?
- Are the assumptions being made in the risk assessment appropriate?
- Are there state specific answers to these questions?

# EPA Problem Formulation for a Mosquito Adulticide



\*\* Route of exposure includes only ingestion of fish and aquatic invertebrates

# Critical Habitat in Cape Coral, FL



Critical Habitat obtained from the USFWS Critical Habitat Portal on July 30, 2014

# Summary

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- Consultation process is complex and evolving within short timelines
  - ESA related processes are still under development
- Federal government resource requirements are significant
- Stakeholder input is invaluable and needed
  - Registrants – product knowledge, technical expertise
  - State and Local endangered species programs
    - ❖ Species location
    - ❖ Existing protections
  - State and local knowledge of use areas
  - State input into mitigation

# What can States do?

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- What can you do?
- What do you do now within your state ES programs?
- What role is possible in developing mitigations?
- What improvements in the consultation process are possible?