

ESA STAKEHOLDER WORKSHOP (JUNE 29 – 30, 2016)
RECOMMENDED READING MATERIALS

Materials to read prior to the workshop All of the draft biological evaluation documents can be accessed from the following EPA website (Implementing NAS Report Recommendations on Ecological Risk Assessment for Endangered and Threatened Species): <https://www.epa.gov/endangered-species/implementing-nas-report-recommendations-ecological-risk-assessment-endangered-and>.

Breakout Session: Improving Aquatic Modeling: Changes to conceptual and mathematical approaches incorporated into Bins 3 and 4 (flowing waters) and Evaluating watershed model results

Both aquatic modeling breakout groups:

- **Attachment 3-1**, Background document: Aquatic Exposure Estimation for Endangered Species
- The NAS Report (Assessing Risk to Endangered and Threatened Species from Pesticides): **Section 3**
- Capel et al. 2001. The behavior of 39 pesticides in surface waters as a function of scale. Hyrol. Process. (15) 1251-1269 (see attached).

Breakout Session: Refinements to Steps 1 and 2: (Ideas for 'streamlining' and/or improving the analyses used to make effects determinations in future BEs):

Breakout Group: REFINEMENTS 1 (Refinements to Steps 1 and 2: Spatial analysis):

- Draft Chlorpyrifos Problem Formulation for ESA Assessment (**Chapter 1**) – especially section 1.4.1
- **Attachment 1-2** – CDL Crosswalk
- **Attachment 1-3** – Method for Establishing the Use Footprint
- **Attachment 1-6** – Co-Occurrence Analysis
- **Appendix 1-6** – Use Site, General Land Cover Class, and HUC2 Matrix for Chlorpyrifos
- Draft Chlorpyrifos Effects Determinations for ESA Assessment (**Chapter 4**) – especially sections 2, 3, and 4
- **Appendix 4-7** – Refined Risk Analyses for 11 Listed Birds Exposed to Diazinon – especially section 4
- **Appendix 4-7-sup-2** – GAP Land covers assigned as preferred habitats (diazinon)

Breakout Group: REFINEMENTS 2 (Refinements to Steps 1 and 2: Non-spatial analysis):

- Draft Chlorpyrifos Problem Formulation for ESA Assessment (**Chapter 1**) – for question 3b, especially sections 1.4.1 and 1.4.2
- Draft Chlorpyrifos Effects Determinations for ESA Assessment (**Chapter 4**) – especially sections 7-2 and 7-3
- **Attachment 1-4** – Process for Determining Effects Thresholds
- **Attachment 1-5** - Method for Deriving Species Sensitivity Distributions for Use in Pesticide Effects Determinations for Listed Species

- **Attachment 1-7** – Methodology for Estimating Exposures to Terrestrial Animals
- **Attachment 3-1** – Background Document: Aquatic Exposure Estimation for Endangered Species
- **NAS Report (2013; *Assessing Risks to Endangered and Threatened Species from Pesticides*)** – especially Chapter 5
- Draft Chlorpyrifos Effects Characterization for ESA Assessment **Chapter 2**

Breakout Sessions: Weight of Evidence for Listed Animals and Plants

Both Weight of Evidence breakout groups (animals and plants):

- Draft Chlorpyrifos Problem Formulation for ESA Assessment (**Chapter 1**) – especially section 1.4.2
- **Attachment 1-4** – Process for Determining Effects Thresholds
- **Attachment 1-5** – Method for Deriving Species Sensitivity Distributions for Use in Pesticide Effects Determinations for Listed Species
- **Attachment 1-7** – Method for Estimating Exposure to Terrestrial Animals
- **Attachment 1-8** – Review of Open Literature Toxicity Studies for Pilot Chemical Biological Evaluations
- **Attachment 1-9** – Applying a Weight-of-Evidence Approach to Support Step 2 Effect Determinations, i.e., Not Likely to Adversely Affect (NLAA) or Likely to Adversely Affect (LAA)
- **Attachments 1-11 through 1-21** – Biological Information on Listed Species
- **Attachment 3-1** – Background Document: Aquatic Exposure Estimation for Endangered Species
- **NAS Report (2013; *Assessing Risks to Endangered and Threatened Species from Pesticides*)** – especially the Chapter 2 section on Best Data Available (beginning on page 39), Chapter 3, Chapter 4, and Chapter 5
- Draft Chlorpyrifos Effects Characterization for ESA Assessment (**Chapter 2**)
- Draft Chlorpyrifos Exposure Characterization for ESA Assessment (**Chapter 3**)