

HINE'S EMERALD DRAGONFLY (HED) CRITICAL HABITAT (CH) GUIDANCE

FOR SECTION 7 CONSULTATIONS

The US Fish and Wildlife Service is providing the following guidance to streamline consultations which include potential effects to HED designated CH.

For all projects near CH, ensure that CH is analyzed separately in your Biological Assessment (most logically, immediately following your analysis for the species), and that a separate effect determination is stated.

Refer to the Recovery Plan whenever possible, and make sure to identify Recovery Units. You can be within the bounds of a Recovery Unit, but not in CH, so please call as questions arise. The *species* analysis should be shaped by the potential effects to *individuals* (make sure to include subpopulation characteristics), and the *CH* analysis should be shaped by the potential effects to the *Physical and Biological Features (PBFs)*.

Steps:

1. Refer to the CH maps available within this document and at:

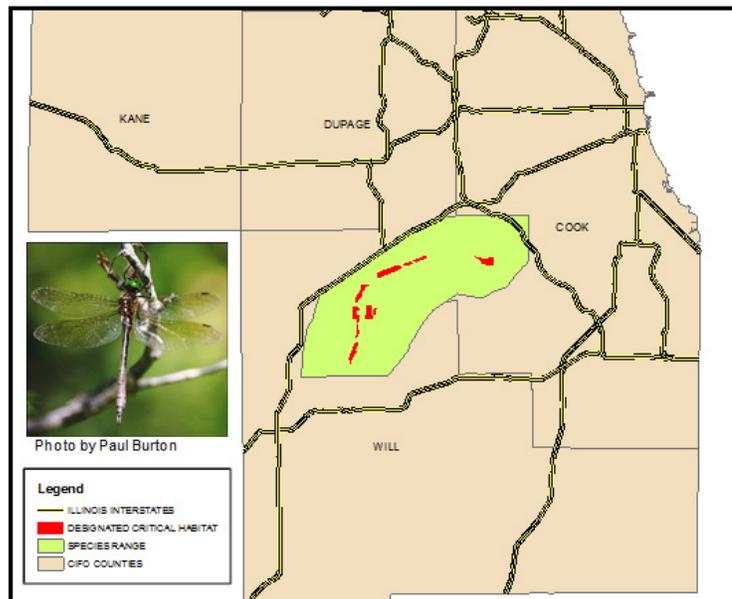
<http://www.fws.gov/midwest/endangered/insects/hed/FRHinesFinalRevisedCH.html>

2. Determine if actions are located within areas designated as CH, or if any actions outside of designated areas may affect CH.

If **no**: **STOP**, document your “no effect” determination and rationale for your records.

If **yes**: determine the extent to which that action affects the PCEs listed below (a Table is provided to assist in this analysis).

3. Call the Service to discuss the extent to which your action needs analysis for CH.



Hines Emerald Dragonfly Physical and Biological Factors (PBFs)

Larval PBFs:

1. Organic soils (histosols, or with organic surface horizon) overlying calcareous substrate (predominantly dolomite and limestone bedrock).
2. Calcareous water from intermittent seeps and springs and associated shallow, small, slow flowing streamlet channels, rivulets, and/or sheet flow within fens.
3. Emergent herbaceous and woody vegetation for emergence facilitation and refugia.
4. Occupied burrows maintained by crayfish for refugia.
5. Prey base of aquatic macroinvertebrates, including mayflies, aquatic isopods, caddisflies, midge larvae, and aquatic worms.

Adult PBFs:

6. Natural plant communities near the breeding/larval habitat which may include fen, marsh, sedge meadow, dolomite prairie, and the fringe (up to 328 ft (100m)) of bordering shrubby and forested areas with open corridors for movement and dispersal.
7. Prey base of small flying insect species (e.g., dipterans).

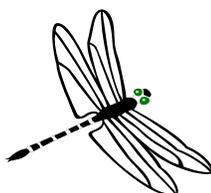
For each PBF, describe **baseline conditions** and analyze **project effects**. You may choose to use the Table (next page) to organize your effects analysis for critical habitat.

Suggestion: list the PBFs, numbered 1-7, followed by a short paragraph describing the baseline conditions; then discuss 1-7 (numbered, again, but not defined this time) in your effects of the action section.

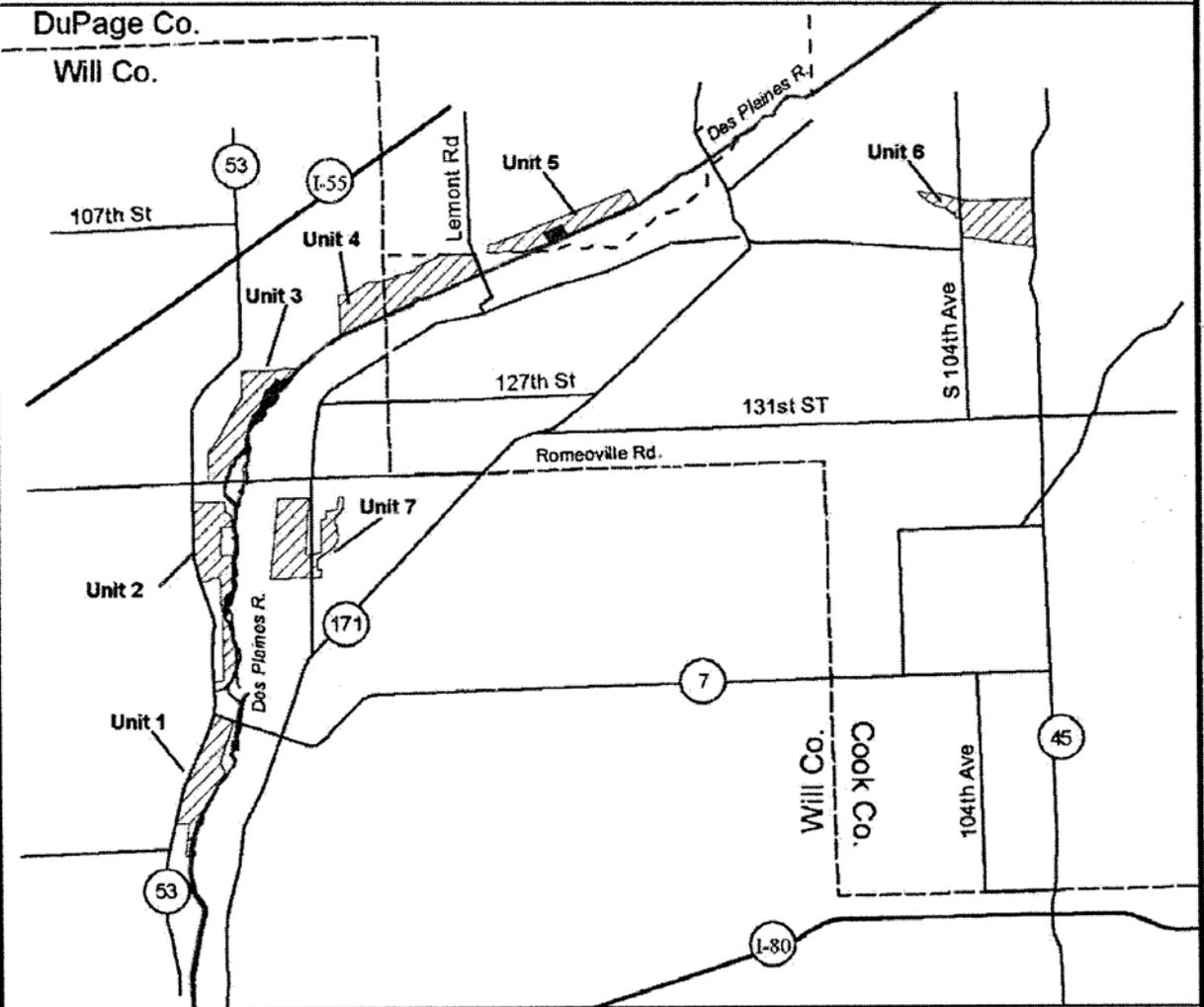
Short-term adverse affects should be stated clearly, as well as long-term benefits.

Hine's Emerald Dragonfly (HED) Critical Habitat Physical and Biological Features (PBFs) and Effects

| Recovery Unit: _____ | Present in the Action Area? | Baseline Condition and Quality | Short-term effect of the action | Long-term effect of the action |
|--|-----------------------------|--------------------------------|---------------------------------|--------------------------------|
| HED Larval PBFs | | | | |
| 1. Organic soils (histosols, or with organic surface horizon) overlying calcareous substrate (predominantly dolomite and limestone bedrock). | Yes / No | | | |
| 2. Calcareous water from intermittent seeps and springs and associated shallow, small, slow flowing streamlet channels, rivulets, and/or sheet flow within fens. | Yes / No | | | |
| 3. Emergent herbaceous and woody vegetation for emergence facilitation and refugia. | Yes / No | | | |
| 4. Occupied burrows maintained by crayfish for refugia. | Yes / No | | | |
| 5. Prey base of aquatic macroinvertebrates, including mayflies, aquatic isopods, caddisflies, midge larvae, and aquatic worms. | Yes / No | | | |
| HED Adult PBFs | | | | |
| 6. Natural plant communities near the breeding/larval habitat which may include fen, marsh, sedge meadow, dolomite prairie, and the fringe (up to 328 ft (100m)) of bordering shrubby and forested areas with open corridors for movement and dispersal. | Yes / No | | | |
| 7. Prey base of small flying insect species (e.g., dipterans). | Yes / No | | | |



Illinois Map 1. Hine's Emerald Dragonfly Critical Habitat Units 1 Through 7



| | |
|---|-----------------------|
|  | Critical Habitat Unit |
|  | Des Plaines River |
|  | Highways |
|  | Local Roads |
|  | County Boundary |

