

# Alexander Farm Solar

## *Species Survey Guidelines (1 Species)*

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# Species Document Availability

## Species with survey guidelines

Eastern Prairie Fringed Orchid *Platanthera leucophaea*

## Species without survey guidelines available

Monarch Butterfly *Danaus plexippus*

Northern Long-eared Bat *Myotis septentrionalis*

Whooping Crane *Grus americana*

# Species Survey Guidelines - Whooping Crane and 3 more species

Published by Chicago Ecological Service Field Office - Publication Date: September 10, 2019 for the following species included in your project

Whooping Crane *Grus americana*

Monarch Butterfly *Danaus plexippus*

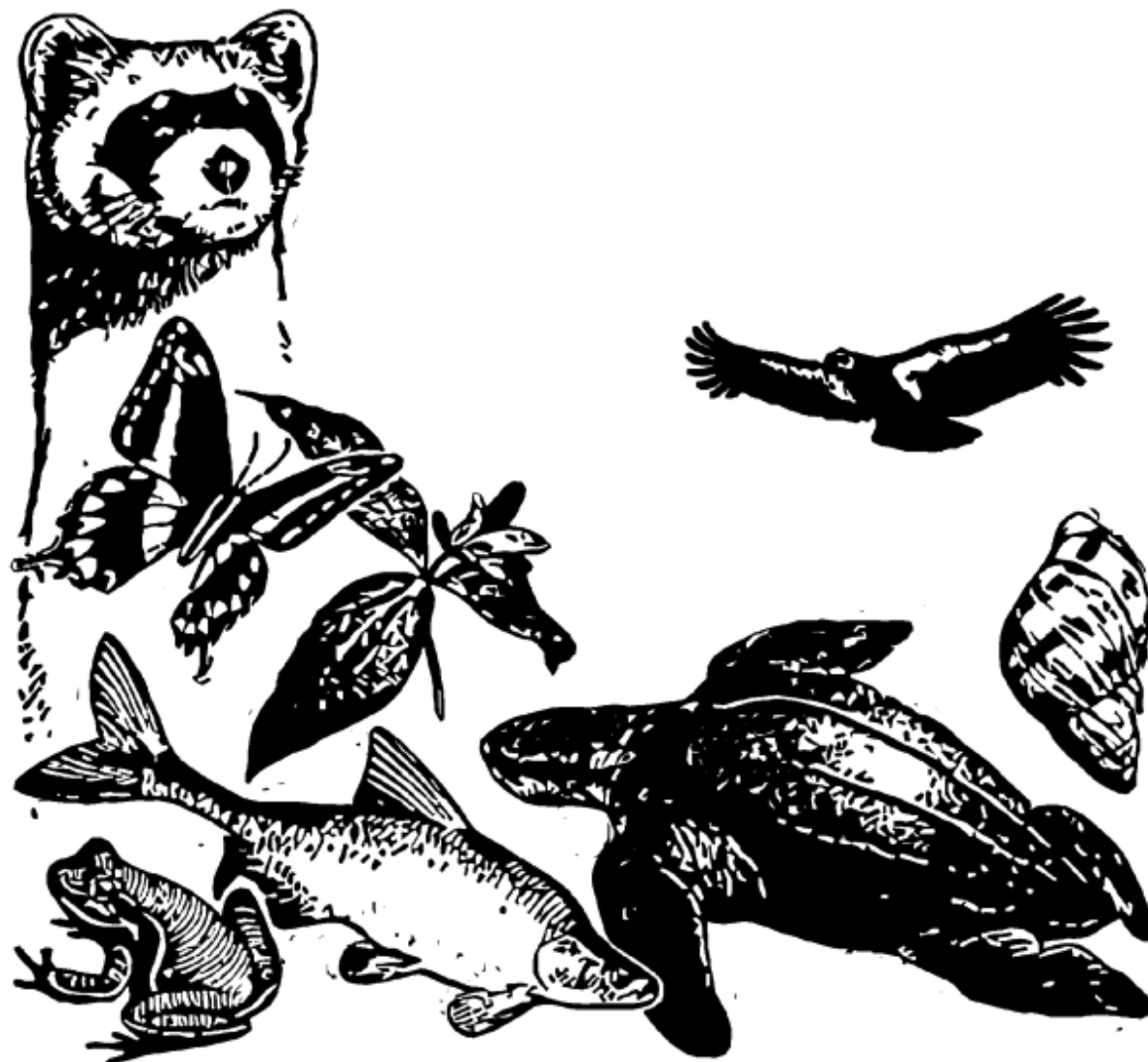
Eastern Prairie Fringed Orchid *Platanthera leucophaea*

Northern Long-eared Bat *Myotis septentrionalis*

U.S. Fish & Wildlife Service

# Species Survey Guidelines (1 Species)

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IPaC - Information for Planning and Consultation (<https://ecos.fws.gov/ipac/>): A project planning tool to help streamline the U.S. Fish and Wildlife Service environmental review process.

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# Species Document Availability

## Species with survey guidelines

Eastern Prairie Fringed Orchid *Platanthera leucophaea*

## Species without survey guidelines available

Eastern Massasauga (=rattlesnake) *Sistrurus catenatus*

Hine's Emerald Dragonfly *Somatochlora hineana*

Indiana Bat *Myotis sodalis*

Lakeside Daisy *Hymenoxys herbacea*

Leafy Prairie-clover *Dalea foliosa*

Mead's Milkweed *Asclepias meadii*

Northern Long-eared Bat *Myotis septentrionalis*

Piping Plover *Charadrius melodus*

Prairie Bush-clover *Lespedeza leptostachya*

Rattlesnake-master Borer Moth *Papaipema eryngii*

Red Knot *Calidris canutus rufa*

Rusty Patched Bumble Bee *Bombus affinis*

Sheepnose Mussel *Plethobasus cyphus*

## Eastern Prairie Fringed Orchid Habitat Characteristics

**Habitat:** The eastern prairie fringed orchid (orchid) occurs in a wide variety of habitats, from wet to mesic prairie or wetland communities, including, but not limited to sedge meadow, fen, marsh, or marsh edge. It can occupy a very wide moisture gradient of prairie and wetland vegetation. It requires full sun for optimal growth and flowering, which ideally would restrict it to grass and sedge dominated plant communities. However, in some plant communities where there are encroaching species such as cattail and/or dogwood, the orchid may be interspersed or within the edge zones of these communities and thus can sometimes occur in partially shaded areas. The substrate of the sites where this orchid occurs include glacial soils, lake plain deposits, muck, or peat which could range from more or less neutral to mildly calcareous. In some cases, the species may also occur along ditches or roadways where this type of habitat is present.

Processes that maintain habitats in early or mid-successional phases may be important in providing the sunny, open conditions required by the orchid. Sedge meadow and marsh habitats that support this orchid are usually early- or mid- successional because of past grazing, drainage, or soil disturbance. Patch disturbances that expose the soil to this orchid's seeds, and reduce competition from established plants, may be needed for seedling establishment.

Hawkmoths are the pollinators of this orchid species. In Illinois the hawkmoth, *Sphinx eremitus* is a confirmed pollinator although there may be others. *Eumorpha pandorus* and *Eumorpha achemon* have been confirmed as pollinators in other states. Host plants for the caterpillars of *Sphinx eremitus* include various species of beebalm (*Monarda spp.*), mints (*Mentha spp.*), bugleweed (*Lycopus spp.*) and sage (*Salvia spp.*).

### How to Determine Whether the Eastern Prairie Fringed Orchid may be Present in the Action Area of your Proposed Project.

#### Guidance

Follow the steps below to determine whether the eastern prairie fringed orchid may be present in the action area of your proposed project. This guidance is specific to Cook, Lake, McHenry, DuPage, Kane, and Will counties in northeastern Illinois.

- 1) Define the action area – all areas to be affected directly or indirectly by the Federal action and not just in the immediate area involved in the action. (For example: downstream areas, adjacent off-site wetlands, etc.)
- 2) Does the action area support any wet to mesic prairie or wetland communities including, but not limited to sedge meadow, fen, or marsh edges?

If the answer is yes, go to number 3 (below). If the answer is no, conclude that “the eastern prairie fringed orchid is not present,” document your finding for your records or provide this information to the federal action agency. No further consultation is required.



3) Conduct a floristic quality assessment (guidance below) for the proposed project site during the growing season or use a previous assessment that is not more than three years old and was conducted during the growing season.

4) If any wetland in the action area is determined to be high quality, (a Native Floristic Quality Index of 20 or greater or a Native Mean C of 3.5 or greater) proceed to number 5 (below) or contact the Chicago Field Office for further consultation.

For wetlands that are not high quality, conclude that the "eastern prairie fringed orchid is not present," document your finding in your records or provide this information to the federal action agency.

5) Compare the plant species list generated for each high quality wetland with the "Associate Plant Species List for the Eastern Prairie Fringed Orchid" (below). If four or more associates are listed, then proceed to number 6. If not, high quality wetlands that support three or less eastern prairie fringed orchid associate plant species are unlikely to support eastern prairie fringed orchids. Conclude that "the eastern prairie fringed orchid is not present" and document your finding for your records or provide this information to the federal action agency. No further consultation is necessary for those wetlands.

6) The eastern prairie fringed orchid may be present in your action area. You may either assume that the eastern prairie fringed orchid is present or conduct a field search during the bloom date of the orchid; June 28 through July 11. Because northeastern Illinois orchid populations bloom sporadically rather than all plants blooming at the same time, searches should be conducted on a minimum of three non-consecutive days within this time period. Please notify the Chicago Field Office before conducting your survey.

Please contact the U.S. Fish and Wildlife Service's Chicago Illinois Field Office if you require additional information or if you have any questions.

**Chicago Illinois Field Office**  
230 S. Dearborn, Suite 2938  
Chicago, Illinois 60604  
Phone: 312-485-9337

## Floristic Quality Assessment

During the growing season, conduct a Floristic Quality Assessment (FQA) as defined by Swink and Wilhelm and published in *Plants of the Chicago Region*, 1994.

Generate a list of observed plant species in the wetland areas. This FQA method assigns to plant species a rating that reflects the fundamental conservatism that the species exhibits for natural habitats. A native species that exhibits specific adaptations to a narrow spectrum of the environment is given a high rating. Conversely, an introduced, ubiquitous species that exhibits adaptation to a broad spectrum of environmental variables is given a low rating. Utilizing this method, a Floristic Quality Index (FQI) and Native Mean C are derived for a given area. The FQI is an indication of native vegetative quality for an area: generally 1-19 indicates low vegetative quality; 20-35 indicates high vegetative quality and above 35 indicates "Natural Area" quality. Wetlands with a FQI of 20 or greater are considered high quality aquatic resources. The Native Mean C is also an indication of native vegetative quality. Wetlands with Native Mean C values over 3.5 are considered high quality aquatic resources. To ensure accuracy using this method, it is important that this list of plant species be generated within the growing season.

### Citations:

Swink, F. and G. Wilhelm. 1994. *Plants of the Chicago Region*, 4th ed. Indiana Academy of Science, Indianapolis. 921pp

Wilhelm, G. and L. Masters. 1999. *Floristic Quality Assessment and Computer Applications Version 1.0*. Conservation Research Institute, Conservation Design Forum. Elmhurst, Illinois. December.

## Associate Plant Species List for the Eastern Prairie Fringed Orchid in Northeastern Illinois

After conducting a Floristic Quality Assessment, if a site has already been determined to be high quality (Native FQI > or = 20, or Native Mean C > or = 3.5) then compare the plant species list from the site to the list below. If 4 or more species from this list are present at the site, then we recommend conducting a search for the eastern prairie fringed orchid (*Platanthera leucophaea*, orchid hereafter) during its bloom period, approximately June 28 to July 11.

We have noticed that in northeastern Illinois orchid populations bloom sporadically rather than all plants blooming at the same time. Because of this pattern, and small population numbers, it is possible to conduct an orchid search and not detect orchids even when they are present. For this reason we recommend conducting the orchid search on at least 3 non-consecutive days during its bloom period. Using this approach, we could be more confident of negative survey results.

*Andropogon gerardii* – big bluestem  
*Apocynum sibiricum* – prairie Indian hemp  
*Aster ericoides* – heath aster  
*Aster (Symphyotrichum) novae-angliae* – New England aster  
*Aster (Symphyotrichum) simplex* – panicked aster  
*Calamagrostis canadensis* – blue joint grass  
*Carex stricta* - tussock sedge  
*Carex sp.*  
*Cassia fasciculata* – partridge pea  
*Eupatorium perfoliatum* – common boneset  
*Galium obtusum* – wild madder  
*Gentiana puberulenta* – prairie gentian  
*Helianthus grosseserratus* – sawtooth sunflower  
*Iris virginica shrevei* – blueflag iris  
*Liatris aspera* – rough blazing star  
*Liatris spicata* – marsh blazing star / gayfeather  
*Lycopus americanus* – common water horehound  
*Mentha arvensis villosa* – wild mint  
*Pycnanthemum virginiana* – common mountain mint  
*Solidago gigantea* – late goldenrod  
*Solidago graminifolia* - common grass-leaved goldenrod or *Solidago graminifolia nuttallii* – hairy grass-leaved goldenrod  
*Sorghastrum nutans* – Indian grass  
*Tradescantia ohiensis* – common spiderwort

### Citations:

Dufrene, M. & P. Legendre. 1997. Species assemblages and indicator species: the need for a flexible asymmetrical approach. *Ecological Monographs* 67:345-366.

Swink, F. and G. Wilhelm. 1994. *Plants of the Chicago Region*, 4th ed. Indiana Academy of Science, Indianapolis. 921pp

USFWS 2009. Unpublished data from MS thesis. Restoration of the Eastern Prairie Fringed Orchid (*Platanthera leucophaea*): Natural Pollinators and the Abundance of Larval Host Plants by Cathy Pollack.