Alberta Environment and Protected Areas - Fish and Wildlife Stewardship Renewable Energy Referral Report

The Dolcy Solar Energy Project (the Project) proposed by Dolcy Solar Inc. (the Proponent) was reviewed by the Alberta Environment and Protected areas – Fish and Wildlife Stewardship (EPA-FWS) regional wildlife contact for renewable energy projects. EPA-FWS has reviewed the proposed location, mitigation strategies, including associated infrastructure and construction plans, and post-construction monitoring and mitigation program. Project information was presented by the Proponent in a submission dated December 23, 2022 and accepted by EPA-FWS on January 9, 2023.

The EPA-FWS review of the Dolcy Solar Project was guided by the EPA-FWS policy document, *Wildlife Directive for Alberta Solar Projects* (October 2017; hereafter called the *Directive*) and the *Post-Construction Survey Protocols for Wind and Solar Energy Projects (*January 2020; hereafter called the *PCMP Protocol*). The Proponent must follow the *Directive* and *PCMP Protocol* for requirements on siting, pre-construction surveys, construction, operation, and post-construction monitoring and mitigation plans.

This referral report summarizes the review undertaken by EPA-FWS that was restricted to reviewing information provided in the submitted documents, completed by Western EcoSystems Technology on behalf of the Proponent, and applying the wildlife standards and best management practices for the siting, construction, and operation of the solar facility. This office undertook no independent on-site assessment. This Renewable Energy Referral Report is not intended to relieve any party from any liability if there are detrimental effects to wildlife or wildlife habitat during construction or operation that were not identified and mitigated for in the documents submitted. It is the responsibility of the Proponent to ensure compliance under all other policy and legislation, including but not limited to the *Alberta Wetland Policy*, *Water Act, Code of Practice for Watercourse Crossings, Environmental Protection and Enhancement Act, Alberta Wildlife Act, Migratory Bird Convention Act,* and *Species at Risk Act*. Federal requirements may differ from EPA-FWS policy, therefore additional consultation may be necessary. EPA-FWS review does not eliminate the need for review by other branches of the Environment and Parks Department, Government of Canada or other governing bodies. This referral report summarizes the potential risks to wildlife and wildlife habitat based on the information provided to EPA-FWS.

Signature:_____ Date:____May 17, 2023_____
Printed Name and Position: Daniel Knop, Wildlife Biologist, South Region, Lethbridge, Alberta

Signature:_____ Date:____May 17, 2023_____
Printed Name and Position: Jason Unruh, Wildlife Biologist, South Region, Red Deer, Alberta

Referral Report Summary

Please see the body of this report along with supporting information found in the project application and the EPA *Wildlife Directive for Alberta Solar Energy Projects* for details on specific topics within this summary.

EPA-FWS has determined that the risk to wildlife habitat, breeding and key features for species at risk is low, based on the Project's overall location on tame grassland and cultivation, implementation of setbacks and siting to avoid most areas of higher quality habitat.

EPA-FWS has determined the risk to wetlands is high based on 44 wetland setback impacts due to the siting of project infrastructure. Mitigation measures are proposed for working within areas of high quality wetland habitat, but the high number of wetland impacts in the project area still creates a high risk to wetland habitat.

EPA-FWS has determined the risk to birds is moderate because of the project's siting within 525 m of two migratory stopover sites, one being a named lake (David's Lake). Although a large majority of birds observed during surveys were waterfowl, which have a low fatality risk from solar facilities, the location of the project creates concern for loss of nesting habitat for upland nesting birds.

The Project has been sited to avoid a merlin nest that was found in the project area. There were no other wildlife features found during surveys, so the risk to wildlife features has been assessed as low.

EPA-FWS has determined the Dolcy Solar Project proposed by Dolcy Solar Inc., poses a low risk to wildlife and wildlife habitat, based on Project siting, the species of wildlife using the area, and commitments made by the Proponent to mitigate and monitor wildlife impacts. This EPA-FWS Renewable Referral Report expires on May 17, 2028.

Project Information	*Project Details*
Project Name	Dolcy Solar Project
Municipality/County	Wainwright
Project MW	200 MWac
Proponent Name	Dolcy Solar Inc.
Consultant Name	Western EcoSystems Technology
Project Documents Submitted[1]	• Dolcy - AEP Solar Report - FINAL - 20221223
Date of Referral Report Expiry	May 17, 2028
Overall Risk Ranking	Low

[1] *Note: various clarifications and edits of the original documents are discussed in the subsequent files and these changes are to supersede the original documents.*

PROJECT SITING

Native and Critical Habitats

Risk Ranking: ☑ Not Applicable ☐ Low ☐ Moderate ☐ High ☐ High Unmitigated

Infrastructure sited within suitable habitat or applicable setbacks: ☐ Yes ☑ No

Comments/Mitigation: The project is sited entirely on cultivated lands and tame grassland, which aligns with the *Directive.* There is no native or high value habitat adjacent to the project area, therefore there is no risk to native and critical habitats.

Lakes/Large Waterbodies

Risk Ranking: ☐ Not Applicable ☐ Low ☐ Moderate ☑ High ☐ High Unmitigated

Infrastructure sited within suitable habitat or applicable setbacks: ☑ Yes ☐ No

Comments/Mitigation: The project fence is located approximately 525 m from David's Lake, with PV tables, access roads, inverters, and AC collector cables all within the 1000 m setback from the lake. There are no specific mitigations proposed, but the proponent has stated that if avian fatalities are an issue following post-construction monitoring, they will discuss and implement possible mitigation measures. EPA-FWS has assessed the risk as high based on the project location and lack of mitigation measures proposed.

Wetlands

Risk Ranking: ☐ Not Applicable ☐ Low ☐ Moderate ☑ High ☐ High Unmitigated

Infrastructure sited within suitable habitat or applicable setbacks: ☑ Yes ☐ No

Comments/Mitigation: There are 44 wetlands with setback infringements in the project area, four of which have direct impacts to the wetland itself. Sixteen of these 44 wetlands have been cultivated through in the past. Mitigation measures proposed for working within wetland setbacks include conducting construction and wetland crossings during dry or frozen ground conditions or using rig matting if these conditions are not met, delaying construction during sensitive periods for amphibians and erecting silt fencing around all wetlands with a setback encroachment, to avoid amphibians moving into the construction area. Although mitigations measures are proposed, EPA-FWS has assessed the risk to wetlands as high based on the high number of setback infringements and the amount of wetland habitat that will be lost or impacted.

WILDLIFE FEATURES

Raptor Nests (Sensitive and Non-Sensitive)

Risk Ranking: ☑ Low ☐ Moderate ☐ High ☐ High Unmitigated

Is the project sited within the wildlife range/zone? ☐ Yes ☑ No ☐ Not Applicable

Was the survey completed according to the Standards? ☑ Yes ☐ No ☐ Not Applicable

Is the project sited within the setbacks? ☐ Yes ☑ No

Comments/Mitigation: The project is not sited within any sensitive raptor ranges, and one merlin nest was found during raptor nest surveys. There is no infrastructure sited within the setback for this nest, therefore EPA-FWS has assessed the risk to raptor nests as low.

Sharp-tailed Grouse

Risk Ranking: ☑ Low ☐ Moderate ☐ High ☐ High Unmitigated

Is the project sited within the wildlife range/zone? ☑ Yes ☐ No ☐ Not Applicable

Was the survey completed according to the Standards? ☑ Yes ☐ No ☐ Not Applicable

Is the project sited within the setbacks? ☐ Yes ☑ No

Comments/Mitigation: The project is sited within sharp-tailed grouse range, but no leks or birds were found during surveys. EPA-FWS has assessed the risk to sharp-tailed grouse as low.

BIRD RISK

Breeding Birds

Risk Ranking: ☑ Low ☐ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: During breeding bird surveys, there were no species at risk found and the observed activity rate was 2.85 birds per minute. Out of the 285 total observations, 121 were Canada goose, ducks, and red winged black birds accounting for 42% of total observations. Although overall activity was high, a large portion of the observations were not grassland breeding bird species or species of management concern. The project siting on cultivation and tame grassland does not create a high level of concern for breeding bird habitat. The species observed do not create a high fatality risk, but the project's location creates some risk for disturbance to nesting habitat. Due to project siting and the species found during breeding bird surveys, EPA-FWS has assessed the risk to breeding birds as low.

Bird Risk

Risk Ranking: ☐ Low ☑ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: The most abundant species group observed during both spring (87%) and fall (92%) were waterfowl, which are not at a high risk for fatality from solar facilities. Although the fatality risk is low, the project is sited approximately 525 m from David's Lake and approximately 460 m from another smaller unnamed water body, which both act as stopover sites for migratory birds. There is risk of potential loss of nesting habitat for ground nesting waterfowl due to the project's proximity to these two stopover sites. The project siting creates a risk for waterfowl using the area as nesting and foraging habitat, therefore EPA-FWS has assessed the risk to birds as moderate.

Other Wildlife Risks

Guy Wires

Risk Ranking: ☑ Not Applicable ☐ Low ☐ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: There are no guy wires expected for this project.

Collection Lines

Risk Ranking: ☑ Low ☐ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: All collector lines will be sited in cultivation, using a plough-in technique, to minimize impacts to wildlife and associated habitat. Therefore, the risk is assessed as low.

Fencing

Risk Ranking: ☐ Low ☑ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: The proposed fencing is a 1.8 m tall chain link fence with three strands of barbed wire which will not be marked and driven posts. The fence will be raised 10 cm off the ground to allow for passage of small wildlife, such as upland nesting waterfowl. The fence design does not create increased collision or entrapment risk, but the unmarked barbed wire creates a collision risk for birds, therefor EPA-FWS has assessed the fencing risk as moderate.

Ground Disturbance and Vegetation Management

Risk Ranking: ☐ Low ☑ Moderate ☐ High ☐ High Unmitigated

Comments/Mitigation: The project has been sited on mostly flat terrain, so minimal site grading is expected other than for the inverter, substation laydowns and yards. Approved seed mixes for revegetation will be used with species that require minimal maintenance or weed control. If vegetation removal is required during the avian breeding period, nest sweep swill be completed prior to mowing. Nest sweeps have not proven to be an effective mitigation measure for ground nesting birds, therefore EPA-FWS has assessed the risk to wildlife from ground disturbance and vegetation management as moderate.

Post Construction Monitoring Plan

Risk Ranking: ☑ Low ☐ High ☐ High Unmitigated

Has the Proponent committed to post-construction monitoring that follows requirements outlined in the *PCMP Protocol*? (Post-construction monitoring reports must be submitted to EPA-FWS and the AUC annually by the end of January following the mortality monitoring period). ☑ Yes ☐ No

Post Construction Mitigation Plan

Risk Ranking: ☑ Low ☐ Moderate ☐ High ☐ High Unmitigated

Has the Proponent identified appropriate post-construction mitigation to address risk to wildlife or wildlife habitat as per the intent of the Directives? ☑ Yes ☐ No