BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA

IN THE MATTER OF THE APPLICATION OF WILD SPRINGS SOLAR, LLC FOR AN ENERGY FACILITY PERMIT FOR THE WILD SPRINGS SOLAR PROJECT

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DIRECT TESTIMONY OF TODD MATTSON
ON BEHALF OF WILD SPRINGS SOLAR, LLC

May 15, 2020

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name, employer, and business address.

A. My name is Todd Mattson. I am employed at Western EcoSystems Technology, Inc. ("WEST"), 7575 Golden Valley Road, Suite 300, Golden Valley, MN 55427.

Q. Briefly describe your educational and professional background and duties.

A. I have a Bachelor of Arts degree in Biology and a Master of Science degree in Zoology and Physiology (Wildlife Ecology). I began my career with the U.S. Fish and Wildlife Service ("USFWS") in 1991 and since that time have worked for environmental consulting firms and a renewable energy development company, ultimately joining WEST in 2013. Among other things, I have conducted and managed wildlife studies, prepared wildlife conservation and mitigation plans, and managed environmental permitting and compliance efforts. I am currently a director and senior ecologist at WEST. A copy of my resume is attached as Exhibit A6-1.

Q. What is your role with respect to the Wild Springs Solar Project (the "Project")?

A. WEST was engaged by Wild Springs Solar, LLC ("Wild Springs") to conduct certain environmental surveys and studies for the Project, as well as to prepare a Natural Resources Strategy ("NRS").

Q. In the event you are not available to testify, is there another individual qualified to discuss the information in your testimony?

A. Yes. Wally Erickson. Wally is a senior statistician/scientist at WEST with particular expertise in wildlife interactions at solar facilities. Wally holds a Bachelor of Science in Mathematics and Statistics from Winona State University and a Master in Statistics from the University of Wyoming. During his 29+ year career with WEST, he has been a project manager and/or statistician/scientist for over 300 studies/projects in more than 35 states and 6 Canadian provinces. Wally is an

author/co-author for over 40 professional journal articles, book chapters, and other peer-reviewed papers and is a co-author of the book “Resource Selection by Animals (Second Edition)”.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your Direct Testimony?

A. The purpose of my Direct Testimony is to provide an overview of the wildlife studies conducted for the Project, discuss coordination with the USFWS and the South Dakota Game, Fish and Parks (“SDGFP”), and describe the Project’s Natural Resource Strategy.

Q. What sections of the Project’s Energy Facility Permit Application (“Application”) are you sponsoring?

A. I am sponsoring the following sections of the Application:

- Section 9.3.3: Wildlife
- Section 11.2.1.2: U.S. Fish & Wildlife Service
- Section 11.2.2.3: South Dakota Game, Fish & Parks
- Section 11.2.2.4: South Dakota Game, Fish & Parks—Natural Heritage Program
- Appendix A: Agency Correspondence
- Appendix G: Natural Resource Strategy
- Appendix H: Wildlife Studies

III. WILDLIFE

Q. Please describe the Project-specific wildlife surveys that have been conducted for the Project.

A. As discussed in Section 9.3.3.1 of the Application, the following wildlife studies have been conducted for the Project:

- Sharp-tailed Grouse and Greater Prairie Chicken Lek Surveys: Surveys for sharp-tailed grouse and greater prairie-chicken leks were conducted

throughout the 2017 Land Control Area on April 10-14, 2017. No leks were documented within the 2017 Land Control Area. Wild Springs conducted a second lek survey of the current Land Control Area in April 2020; no leks were documented in the current Land Control Area.

- Ground-based Raptor Nest Surveys: Ground-based surveys for raptor nests were conducted in October and November 2019. Within the 2019 Land Control Area, surveyors documented only the remnants of one potential raptor nest in the western part of the Land Control Area; in its condition at that time, the nest was no longer functional. Wild Springs conducted additional ground-based surveys for raptor nests in April 2020; no raptor nests were recorded in the Land Control Area.

Q. Will additional avian surveys be conducted?

A. Yes. A breeding bird survey will be conducted prior to Project construction in May-June 2020. After the Project goes into operation, two breeding bird surveys will be completed within the Project site and adjacent reference areas for comparison (two years and four years after construction). These pre- and post-construction surveys will be designed to allow for an assessment of the wildlife habitat value and function within an operating solar facility.

Q. Are there Birds of Conservation Concern ("BCC") in the vicinity of the Project?

A. Golden eagles have been sighted within one mile of the Project as recent as 2013, but sightings are infrequent and primarily occur west of the Project near the Black Hills National Forest. Lark buntings have also been sighted within one mile of the Project as recent as 2014, but the majority of sightings occur south and west of the Project in the Black Hills National Forest, Buffalo Gap National Grasslands, and Badlands National Park. Neither of these species were reported incidentally during field visits in 2017, 2019, and 2020. One burrowing owl observation was recorded in 2013 just to the west of the Project along Boxelder Creek; however, the majority of sightings occur south of the Project in the Buffalo Gap National Grasslands and Badlands National Park. Burrowing owls were incidentally observed during wetland delineations in Spring 2017 at a prairie dog colony within the Land Control Area.

Q. Are there bats in the vicinity of the Project?

A. As discussed in Section 9.3.3.2, six bat species occur in eastern South Dakota. These include big brown bat, eastern red bat, hoary bat, little brown bat, northern long-eared bat ("NLEB"), and silver-haired bat. These species could potentially occur in the Project vicinity during all seasons except winter, when they are hibernating or have migrated to warmer places. Trees and shrubs were identified within the Land Control Area based on desktop data, and WEST conducted an additional desktop analysis of the Land Control Area and identified scattered patches of shrubs and trees that would likely not be considered suitable habitat for these bat species. As such, it is unlikely that bat species will exhibit high use of the Project. Additional information regarding NLEB, specifically, is also included in Section 9.3.4 of the Application.

Q. What other wildlife species may exist in the Land Control Area?

A. As discussed in Section 9.3.3.2 of the Application, bats, prairie dogs, and other wildlife may occur in the Land Control Area. Other groups of wildlife that may occur in the Land Control Area include mammals, reptiles, and insects. In addition to bats, other mammals that may be present include white-tailed deer, mule deer, striped skunk, red fox, raccoon, badger, Virginia opossum, and coyote. Reptiles that may occur in the Land Control Area are plains garter snake, gopher snake, and prairie (eastern fence) lizard. Some pollinator insects may be present in the Land Control Area, including native bees, butterflies, and moths.

Q. Please describe the Project's potential impacts on wildlife species.

A. As discussed in Section 9.3.3.3 of the Application, construction of the Project is expected to have minimal impacts on wildlife species individuals, and no impact on populations of these species. Although solar facility construction activities do involve short-term disturbances, responsibly developed solar power plants can provide shelter, protection, and stable use of land to support ongoing use by wildlife and support a biologically diverse community. With respect to Project

operations, although there is the potential for direct avian mortality at solar facilities due to collision with solar panels, solar facilities appear to pose a minimal risk for avian mortality relative to other sources of bird mortality. Further, wildlife studies at other solar facilities in grassland and agricultural settings suggest that the development of a solar farm can create habitat that may be used by small to medium sized wildlife species (larger wildlife will be excluded).

Q. What measures will Wild Springs take to avoid, minimize, and/or mitigate impacts to wildlife?

A. Wild Springs proposes a number of measures that will avoid, minimize, and/or mitigate impacts to prairie dog colonies, wetlands/waterbodies, and drainages. Wild Springs also proposes the following mitigative measures for wildlife:

- Wild Springs will implement USFWS and SDGFP recommendations on fencing or vegetation management to minimize the potential for prairie dog colony expansion into the Preliminary Development Area. This may mean maintaining vegetation near the prairie dog colonies at a height taller than outside the arrays to deter prairie dogs from encroaching. Additionally, if construction commences in the Fall of 2021, isolated burrows that could be used by burrowing owls for nesting outside the 2019 mapped colonies' extent and within the fenceline will be collapsed after the breeding season (May 15 to August 15). Larger burrows that could be used by larger mammals (e.g., badger or Swift fox) will be left intact and monitored for activity during the natal denning season (April 15 to July 1) and collapsed if not active. Alternatively, if construction does not commence until the Spring of 2022, any existing burrows that could be used by burrowing owls for nesting or larger burrows that could be used by a badger or Swift fox will be collapsed outside of the nesting and denning season in the early Winter of 2021. Collapsing burrows prior to construction should minimize the potential for sensitive species like burrowing owls and Swift fox to use the Project area and potentially be disturbed by construction activities.

- If an active burrowing owl nest or Swift fox natal den are discovered in the Project area, Wild Springs will avoid construction within a quarter mile of the nest or den until after the nesting and/or natal denning season.

- To minimize impacts on big game species, Wild Springs will fence the perimeter of the Land Control Area to prevent big game species from entering and will ensure that no big game species are within the fence during construction.

- Wild Springs will need to remove up to five small, isolated trees in the Land Control Area that are not considered bat habitat and has sited the Project to

minimize construction activities in wetlands to minimize impacts on bats, which addresses a SDGFP recommendation to avoid bat habitat—in particular, forested areas and wetlands and other areas of potential high bat activity.

- Wild Springs proposes to conduct pre- and post-construction breeding bird surveys to assess if and how avian use of the Project might change.

These and other mitigation measures are discussed in Section 9.3.3.4 of the Application.

IV. COORDINATION WITH USFWS AND SDGFP

Q. Discuss Wild Springs' coordination with USFWS and SDGFP regarding the studies and analyses conducted with respect to wildlife and habitat in and around the Project Area.

A. Wild Springs initiated consultation with USFWS and SDGFP in June 2017 to introduce the Project and request information on habitats and species of concern. Since that time, Wild Springs has incorporated feedback from USFWS and SDGFP into the surveys, including survey protocols, it has conducted for the Project. Wild Springs will continue to coordinate with USFWS and SDGFP. Further information is provided in Sections 11.2.1.2, 11.2.2.3, and 11.2.2.4 of the Application.

V. NATURAL RESOURCE STRATEGY

Q. What is the purpose of the Project's NRS?

A. The purpose of the NRS is to provide a written record of the natural resources at the site, as well as Wild Springs' commitment to environmental management and sustainable development. As described in the NRS, Wild Springs is committed to responsibly developing, constructing, and operating the Project in a manner that balances the need for clean, renewable energy with consideration for on-site natural resource protection. The NRS was developed to document that commitment, the specific steps taken to assess natural resource conditions, and a plan for appropriate and sustainable site development and ongoing management.

Q. What information is included in the NRS?

A. The NRS: summarizes agency coordination regarding the Project; describes the Project's site assessments and surveys (including a description of existing resources in the vicinity of the Project); discusses potential Project natural resource impacts; identifies avoidance, minimization, and mitigation measures; and discusses adaptive management with respect to the Project.

Q. What agency coordination is reflected in the NRS?

A. Wild Springs has coordinated with USFWS, SDGFP, and the South Dakota Natural Heritage Program throughout the Project development process, and the NRS reflects the comments and recommendations made during that agency coordination. As additional recommendations and comments are received from those agencies, the NRS may be updated accordingly.

Q. What avoidance, minimization, and mitigation measures are included in the NRS?

A. The NRS includes avoidance, minimization, and mitigation measures related to each phase of the Project – siting and design, construction, and operations. In particular, those measures described in Section 4.3 of the NRS could contribute to the long-term positive impact that the Project could have on local wildlife and natural resources generally. In addition to maximizing restoration efforts through the use of vegetation that is local to the area throughout the Project, Wild Springs' emphasis on restoring and maintaining native vegetation in the areas of the Project outside of the arrays but within the fence will provide habitat for certain wildlife species (*e.g.*, small birds, small mammals, amphibians, reptiles, etc.). Several studies have shown that wildlife can use these areas; as such, the habitat within the Project may be altered but will not necessarily be lost for ongoing wildlife use. These and other measures are described in more detail in Section 4 of the NRS.

VI. CONCLUSION

Q. Does this conclude your Direct Testimony?

A. Yes.

Dated this 15th day of May, 2020.

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Todd Mattson

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