Oregon
Tina Kotek, Governor

OREGON DEPARTMENT OF ENERGY

550 Capitol St. NE
Salem, OR 97301
Phone: 503-378-4040
Toll Free: 1-800-221-8035
FAX: 503-373-7806
www.oregon.gov/energy

To: Energy Facility Siting Council

From: Kathleen Sloan, Senior Siting Analyst; and Jordan Brown, Lead Conservation Biologist, Native Plan Conservation, Oregon Department of Agriculture

Date: March 10, 2023

Subject: Agenda Item I (Information Item): Wheatridge Renewable Energy Facility II, Threatened and Endangered Plant Mitigation Update for the March 24, 2023 EFSC Meeting

THREATENED AND ENDANGERED SPECIES STANDARD - OVERVIEW

The Energy Facility Siting Council's (EFSC or Council) Threatened and Endangered Species standard requires the Council to find that, after consultation with appropriate state agencies, the design, construction, and operation of the facility is not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA).

For threatened and endangered (T&E) plant species, the Council must also find that the facility is consistent with an adopted protection and conservation program from ODA.

To evaluate compliance with the standard, applicants and certificate holders are required to complete literature and field surveys to determine the potential and actual occurrence of any state-listed T&E species; and, are required to identify measures to avoid or reduce potential impacts.

SITE CERTIFICATE REQUIREMENTS FOR T&E PLANTS

As presented above, the T&E species standard requires an evaluation of the potential and actual occurrence of T&E plant species within potential disturbance areas of a facility site. The standard requires identification of avoidance and minimization measures; and, if avoidance is not possible, a demonstration that any impacts would not significantly impact the survivability or recovery of the affected species.

Generally, site certificates require avoidance of disturbance impacts to any T&E plant species identified during preconstruction surveys. However, the standard is not a zero impact standard – it does not require strict avoidance in every circumstance. Therefore, in more recent site certificates, the Department has consulted with ODA on whether allowing for review of impacts

would be acceptable, in certain circumstances if certain criteria are met. Based on this consultation, the Council has imposed condition changes that first, require avoidance of disturbance impacts; but, also allow for potential disturbance impacts, if determined by Council to be warranted, consistent with the standard and includes adequate mitigation.

WHEATRIDGE RENEWABLE ENERGY FACILITY II

During the permitting phase for the Wheatridge Renewable Energy Facility II (200 megawatt [MW] wind energy facility, herein referred to as "facility"), based on field survey results, a state-listed T&E plant species was identified within the micrositing area (the area where any construction can occur). The state listed T&E plant species is Laurent's milkvetch.

Laurent's milkvetch, (*Astragalus collinus var. laurentii*), is a tap-rooted perennial in the pea (*Fabaceae*) family. It has a narrow distribution, limited to western Umatilla and Morrow and minor populations in Sherman and Gilliam counties in Oregon. Primary threats to Laurent's milkvetch include habitat loss due to agricultural development, grazing, road maintenance activities, competition from exotic weeds, and seed predation by insects. ODA does not have an adopted protection and conservation program for this species.

Based on the results of surveys completed during permitting, the site certificate included a condition requiring completion of pre-construction surveys within suitable habitat for rare plants; and, that if any rare plants were identified, impacts must be avoided. However, the condition allowed for Council review of an exception to strict avoidance, if the certificate holder could demonstrate infeasibility of avoidance. During 2020 facility construction, the certificate holder encountered two populations of Laurent's milkvetch that had not been previously identified, identified that avoidance was infeasible due to topography and limitations on moving turbine locations due to FAA approvals, estimated a total of 428 plants to be lost, and requested Council review of an exception request. In March 2020, the Council reviewed the exception request; and, based on concurrence by ODA, approved the exception.

APPROVED MITIGATION

The exception request included: onsite seed collection and seed banking; and propagation, germination and transplanting studies on the T&E plant, as summarized below:

- Seed Collection – 2,000 seeds for germination trials and 1,500 seeds for seed banking
- Germination Trials
- Large-scale Germination for Cultivation
- Cultivation Trials
- Large-scale Transplant Cultivation
- Soil Salvage Monitoring and Transplant Site Selection
- Transplanting Trials

The goal of the mitigation was to collect seed from the T&E plant populations before disturbance; process and store collected seeds with an established seed bank to allow for research on recoverability of the species; and to evaluate whether Laurent's milkvetch could be

grown in a greenhouse and re-established in the wild. ODA's Native Plant Conservation Program Lead Conservation Biologist, Jordan Brown, was contracted to implement the mitigation; Rae Selling Berry Seed Bank at Portland State University was also contracted to store seed, and make available for research, for a minimum of 15 years.

MITIGATION STATUS UPDATE

Seed Collection & Processing: Two field efforts at seed collection occurred in 2021 and again in 2022 in order to obtain all seeds needed for trials and seed banking. 2,700+ seeds were collected in 2021 and an additional 3,900+ in 2022. The seeds have been processed and delivered to the seed bank by ODA. Some of the seeds collected were for germination trials and processed by ODA for that purpose. The 5,000+ total number of seeds for seed banking represents maternal lines for seed banking include seeds from 19 parent plants and exceeds the goal of 1,500 seeds for seed banking. This task is complete.

Germination Trials: Germination trials were conducted in 2021-2022 using both greenhouse and outdoor trials and included 8 different treatments using both scarified and non-scarified seeds. Scarification (breaking the seed coat) and cold stratification (at 5°C) was found to improve germination. A total of 1,660 seeds were germinated in 3 separate germination trials. Germination trials resulted in 420 plants available for transport and transplanting by fall 2022. This task is complete.

Transplanting: ODA completed the transplanting on site in November 2022. Fifty test plots were sited in 4 locations of suitable habitat in the vicinity of the area impacted. A total of 380 viable plants were transplanted within the 50 test plots along with 500 directly planted scarified seeds. This task is complete.

Key findings to-date:

- Small numbers of plants can reestablish following disturbance.
- Increased presence of weeds following disturbance is a major concern.
- This species can be successfully propagated and reintroduced into the wild.
- The effectiveness of reintroductions (survival) has not yet been determined (monitoring).

Work to be completed:

- Success Monitoring: ODA plans to conduct monitoring of the 50 test plots in May 2023 and again in late summer 2023 (TBD). This monitoring will be conducted in order to evaluate success (survivability) of both the transplanted plants and the direct-seeding efforts within each plot, particularly to assess winter survival, and a second monitoring visit in late summer to assess summer survival rates, and to compare the success of direct seeding with scarified seeds versus greenhouse germinated transplants.
- Reporting: ODA will prepare a final report on the methods, findings and key recommendations once all monitoring work is completed.