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## TECHNICAL MEMORANDUM

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**TO:** Jason Smith, Project Manager, Aggregate Resource Development, Teichert Materials

**FROM:** Michael Bumgardner, Bumgardner Biological Consulting

**SUBJECT:** 2021 Schwarzgruber Mine Reclamation Plan Minor Modification Evaluation  
Special-Status Species Survey

**DATE:** 2/16/2021

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### Background

In 2011, Bumgardner Biological Consulting (BBC) prepared the “Schwarzgruber Property Study Area Biological Resources Evaluation, Yolo County, California” and “Impacts and Mitigation Supplement to the Schwarzgruber Property Study Area Biological Resources Evaluation, Yolo County, California.” The purpose of these reports was to “qualitatively identify and describe potential waters of the U.S., including wetlands, and to assess the potential for occurrence of special-status plant and wildlife species, or their habitats, within the study area” and “to address existing regulations that apply to and impacts that may occur because of implementing the Schwarzgruber Mining and Reclamation Project.”

As part of the evaluation that was prepared for the above reports, several special-status species were identified as having some potential to occur within the 2011 study area (i.e., mine and reclamation site). These species include Sanford’s arrowhead (*Sagittaria sanfordii*), western pond turtle (*Actinemys marmorata*), and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). In addition, the 2011 study area was found to provide potential nesting habitat for several special-status birds including white-tailed kite (*Elanus leucurus*), Swainson’s hawk (*Buteo swainsoni*), burrowing owl (*Athene cunicularia*), loggerhead shrike (*Lanius ludovicianus*), and yellow-billed magpie (*Pica nuttalli*). Lastly, the 2011 study area was found to support potential hunting habitat for wintering merlin (*Falco columbarius*).

Focused surveys for nesting birds, burrowing owl, and western pond turtle were subsequently conducted by me in 2017 and the results of the surveys were documented in the following technical memoranda “2017 Schwarzgruber Mine and Reclamation Project Nesting Bird Surveys,” “2017 Schwarzgruber Mine and Reclamation Project Burrowing Owl Habitat

Assessment and Survey,” and “2017 Schwarzgruber Mine and Reclamation Project Western Pond Turtle Surveys.”

Given the time elapsed since the last survey for special-status wildlife within the mine and reclamation site (i.e., four years), the Yolo County Department of Community Services has requested a current survey for special-status species before authorizing Teichert Materials to modify (i.e., enhance) 7.5 acres of the reclaimed land within the mine’s 700-foot reclamation setback. Note that the proposed modification of 7.5 acres of grassland to riparian enhancement is addressed in the “2021 Schwarzgruber Mine Reclamation Plan Minor Modification Evaluation” (Bumgardner Biological Consulting 2021) and herein incorporated by reference.

### **Survey Methods and Results**

I conducted random meander transects of those portions of the mine and reclamation site between the active mine pit and 700-foot reclamation setback on February 12, 2021. The transects were conducted as visual surveys with Nikon Monarch 7 binoculars to ensure thorough coverage of all land within, as well as immediately adjacent to, the 700-foot setback.

The survey resulted in no evidence of special-status species at the mine and reclamation site. However, there is habitat that could be utilized by nesting birds, including at least one special-status species, once the local avian nesting season begins. The default start of this season for local birds is generally considered February 15 by the California Department of Fish and Wildlife (CDFW) but practicably, based on data for most local species, starts around mid-March. The only special-status avian species that is considered to have some potential to occur within the mine and reclamation site is loggerhead shrike. This species can nest within dense riparian scrub and similar habitats with the core of the nesting season (i.e., egg-laying) occurring in March to May. Other special-status avian species, including Swainson’s hawk, white-tailed kite, and yellow-billed magpie have no potential to nest within the mine and reclamation site given the lack of suitable habitat but may nest in large trees outside the 700-foot setback.

Burrowing owl is also considered to have no potential to nest within the mine and reclamation site due to lack of suitable habitat and underground refugia. Only two burrows created by California ground squirrel (*Otospermophilus beecheyi*), the species that creates most burrows utilized by burrowing owl, were found during the February 12, 2021 survey and neither was large enough for use by burrowing owl (i.e., at least 4 inches in diameter as far into the burrow as could be seen).

The only other special-status species with potential to occur within the mine and reclamation site is western pond turtle. This species was found, during the 2017 survey for the species, within the eastern-most pond within the 700-foot setback. No individuals were observed during the February 12, 2021 survey but the eastern-most pond was dry and western pond turtles have been found to move away from dry ponds during the winter and overwinter on dry

land whereas ponds with permanent water typically have turtles that overwinter in the pond (usually in the mud at the bottom of the pond). Overwintering is highly variable in terms of time elapsed and when individuals emerge and are again active. Nonetheless, the species is seen at many sites in northern California starting in March. The western-most pond within the 700-foot setback was inundated but no evidence of western pond turtle was observed during the February 12, 2021 survey. Again, this is not unexpected given the time of year and all individuals could be expected to still be overwintering.

All wildlife species that were observed or recorded from sign during the February 12, 2021 are reflected in Table 1. The table includes species seen at the mine pit (e.g., waterfowl) as well as all species recorded within the 700-foot setback.

<p style="text-align: center;"><b>Table 1</b> <b>Wildlife Species Recorded</b> <b>at Schwarzgruber Mine and Reclamation Site</b> <b>on February 12, 2021</b></p>		
Common Name	Scientific Name	Notes
<b>Amphibians</b>		
Sierran treefrog	<i>Pseudacris sierra</i>	individual heard calling
<b>Reptiles</b>		
western fence lizard	<i>Sceloporus occidentalis</i>	overwintering under plywood
<b>Birds</b>		
American white pelican	<i>Pelecanus erythrorhynchos</i>	on mine pit pond
mallard	<i>Anas platyrhynchos</i>	on mine pit pond
canvasback	<i>Aythya valisineria</i>	on mine pit pond
ruddy duck	<i>Oxyura jamaicensis</i>	on mine pit pond
Canada goose	<i>Branta canadensis</i>	on mine pit pond
great blue heron	<i>Ardea herodias</i>	adjacent to mine pit pond
turkey vulture	<i>Cathartes aura</i>	flyover
mourning dove	<i>Zenaida macroura</i>	
red-tailed hawk	<i>Buteo jamaicensis</i>	flyover and in trees outside 700-foot setback
tree swallow	<i>Tachycineta bicolor</i>	flyover
California scrub jay	<i>Aphelocoma californica</i>	
savannah sparrow	<i>Passerculus sandwichensis</i>	
<b>Mammals</b>		
black-tailed jackrabbit	<i>Lepus californicus</i>	
raccoon	<i>Procyon lotor</i>	footprints
mule deer	<i>Odocoileus hemionus</i>	footprints

## **Conclusions**

The survey conducted by me on February 12, 2021 found no evidence that special-status species currently occupy the Schwarzgruber mine and reclamation site. There is some potential for the mine and reclamation site to be occupied by loggerhead shrike at some point in the future as the land within the 700-foot setback is reclaimed, but that potential should be considered low until riparian enhancement and grassland establishment have proceeded to a point where there is greater vegetative cover. Other non-special-status avian species could occupy the mine and reclamation site sooner (even as early as this year) but are not expected until mid-March or later. Lastly, western pond turtle may occupy the mine and reclamation site (particularly at the two small ponds within the 700-foot setback). However, the survey conducted on February 12, 2021 would not be expected to find individuals given the season in which the survey was conducted (i.e., individuals are expected to be overwintering at this time of year). Furthermore, if western pond turtle does occupy the mine and reclamation site, most activity should be confined to the aquatic habitat associated with the ponds. The only activity that would occur away from the ponds would be egg-laying which would occur during May to July and would likely occur relatively close to the ponds.