

Background Slides – Species Discussion with GCID

July 6, 2021

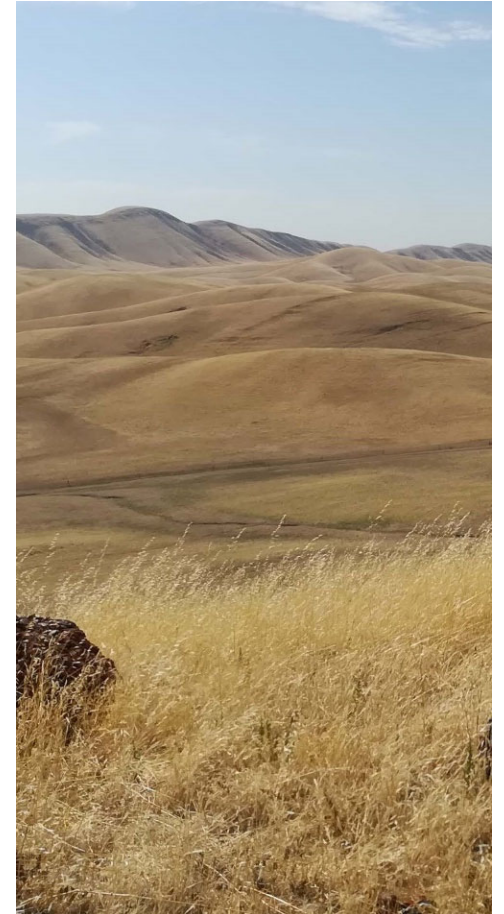


Land Cover Mapping Resources and Methods

- Previous vegetation and wetland mapping of reservoir and some roads and conveyance routes in 1998-2003 and 2011
- Fall/winter 2020-2021 vegetation and aquatic resource remote mapping of all Project component impact areas plus a 300-foot buffer:
 - Aerial photograph interpretation (Google Earth 1998-2020; National Agriculture Imagery Program 2018; Digital Globe 2019)
 - Additional mapping resources include soils maps, USGS topographic maps, NWI maps, existing delineation mapping from 2000 and 2011
- On-going coordination with U.S. Army Corps of Engineers to obtain available delineation data and consensus on mapping methods, aquatic resources delineation verification approach, and permitting strategy

Species Models

- Species habitat models developed in GIS using:
 - Land cover mapping
 - Species range data, CNDDDB records
 - Elevations
 - Soil types
- For listed species, developed in coordination with CDFW and USFWS



Listed Species Considered - Construction

Listed Species	Federally Listed: Minimize and Assure No Jeopardy	State Listed: Minimize and Fully Mitigate
Keck's checker-mallow	Endangered	
Palmate-bracted bird's-beak	Endangered	Endangered
Vernal pool branchiopods	1 Threatened; 2 Endangered	
Valley elderberry longhorn beetle	Threatened	
California red-legged frog	Threatened	
Giant gartersnake	Threatened	Threatened
Tricolored blackbird		Threatened
Swainson's hawk		Threatened
Bald eagle		Endangered
Crotch and western bumble bees*		Candidate (in litigation)

Notes: *Not listed in 2017; Currently in litigation: engaging Sites Legal Team on how to proceed with these two species.

BA/ITP and EIR/S Differences

- EIR/S addresses more species (not just state or federally listed)
- EIR/S states minimum mitigation ratios and notes that ratios may increase through the BA/ITP process with USFWS and CDFW coordination



CEQA Species List

Species Data Resources:

- Non-listed special-status species with potential to occur in study area include 20 wildlife and 12 botanical
- Non-listed special-status species include fully protected and rare wildlife species; animal species of special concern; and California Rare Plant Rank species 1B.1, 1B.2, 1B.3, and 3.2 (no or low potential for other ranked plant species to occur)
- Wildlife surveys of parts of the study area in 1998-2004 and 2010/2011
- Botanical surveys of parts of study area in 1998-1999 and 2000-2003

CA Species of Special Concern - Wildlife (Addressed in EIR/EIS Only)

- Mammals

- **Pallid bat**
- **Townsend's big-eared bat**
- **Western red bat**
- Long-eared myotis
- Silver-haired bat
- Hoary bat
- **American badger**

- Insects

- Antioch Dunes anthicid beetle
- Sacramento anthicid beetle
- **Monarch butterfly***

- Birds

- Golden eagle **
- **Northern harrier**
- White-tailed kite **
- **Burrowing owl**
- **Yellow breasted chat**
- Yellow warbler
- **Song sparrow**
- **Bank swallow**
- Mountain plover

- Amphibians and Reptiles

- Western spadefoot
- **Western pond turtle**

* = Candidate federal

** = Fully Protected Species

California Rare Plant Species (Addressed in EIR/EIS Only)

- Found in previous surveys
 - Bent-flowered fiddleneck – annual grassland
 - Britblescale – alkali seasonal wetlands
 - Red-flowered bird’s-foot trefoil – oak savanna and oak woodland
 - San Joaquin spearscale – alkali seasonal wetland
- Potential habitat for
 - Adobe lily – oak woodland and annual grassland on clay soils
 - Bolander’s horkelia – oak woodland and seasonal wetland
 - California alkali grass – alkali seasonal wetland
 - Colusa layia – annual grassland, oak woodland, and chaparral on sandy or serpentine soils
 - Deep-scarred cryptantha – oak woodland on slopes and streambanks
 - Konocti manzanita – oak woodland and chaparral on volcanic soils
 - Shining navarretia – annual grassland and oak woodland on clay soils
 - Tracy’s eriastrum – annual grassland and oak woodland on clay soils
 - Vernal pool smallscale – alkali seasonal wetlands

Approach to Analysis

- Current impact acreages based on
 - Species models
 - Aerial imagery
 - No current field species surveys or habitat mapping
- Subsequent refinements needed
 - Project design changes
 - Land cover mapping
 - Species surveys



Approach to Analysis: Next Steps

- How to address lack of property access
 - Impact assessment/mitigation measures in permits based on models and assumptions
 - Ground truthing and surveys when property access is granted
 - Amend permits based on refined mapping and species surveys
- The EIR/S, biological assessment and ITP application will outline this process and frontload it into the permits

Mitigation Measure Approach in the EIR/EIS

- All Species / Habitats Considered in the EIR/EIS
 - Survey to understand quality (habitat), extent and location
 - Avoid if possible
 - Minimize/reduce effects if possible
 - Compensate for remaining effects
- Unique to Certain Species or Activities
 - Remove nesting substrates during the non-nesting season; if not possible, conduct surveys before removal
 - Replacement of bat roosting habitat
 - Design/construct overhead power lines to reduce bird collisions
 - Trap and relocation of some species (e.g., burrowing owl)
 - Add and maintain wildlife crossings for new roadways

