

Sites Project Terrestrial Resources Group Discussion

March 26, 2021



Agenda

1. Introductions
2. Group Norms
3. Species List
4. Approach to Analysis
 - a. Agency Coordination
 - b. Access and Survey History
 - c. Landcover Mapping
 - d. Species Models
 - e. Next Steps
5. Mitigation Approach
6. Schedule and Future Meeting Topics
7. Action Items and Next Steps

Group Norms

- Encourage everyone to be on video
- Mute yourself when others are speaking
- Respectful, professional dialogue
- Ask questions throughout, lets have a dialogue
 - Let the speaker finish their point
 - Use the raise your hand function in Teams if needed

Species Analyzed and Approach

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

ESA and CESA Terrestrial Species List

Species	Federally Listed	State Listed	Operations	Construction
Keck's checker-mallow	X			X
Palmate-bracted bird's beak	X	X		X
Vernal pool crustaceans	X			X
Valley elderberry longhorn beetle	X			X
California red-legged frog	X			X
Giant garter snake	X	X		X
Tricolored blackbird		X		X
Swainson's hawk		X		X
Western yellow-billed cuckoo	X	X	X*	
Bank swallow		X	X*	

Notes: *Depending on downstream channel effects

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 wildlife species; animal species of special concern; and California Rare Plant Rank species 1B.1, 1B.2, 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

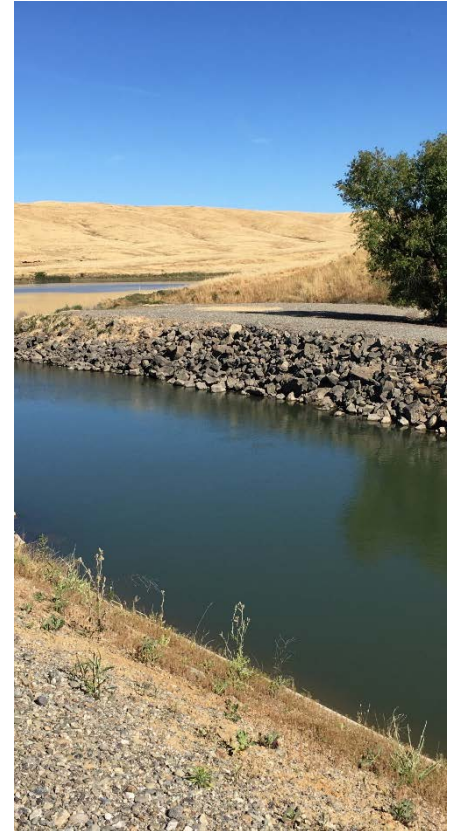
Species Models

- 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



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



Preliminary Impacts on State and Federally Listed Species

Species	Federally Listed	State Listed	Acres Permanent*	Acres Temporary*
Keck's checker-mallow	X		10,094	700
Palmate-bracted bird's beak	X	X	21	8
Vernal pool crustaceans	X		330	37
Valley elderberry longhorn beetle	X		13,535	983
California red-legged frog	X		513 Aquatic/6,826 Upland	22 Aquatic/426 Upland
Giant garter snake	X	X	2 Aquatic/26 Upland	21 Aquatic/19 Upland
Tricolored blackbird		X	13,487 Foraging/42 Nesting	1,043 Foraging/19 Nesting
Swainson's hawk		X	14,170 Foraging/1,083 Nesting	1,035 Foraging/50 Nesting
Western yellow-billed cuckoo	X	X	TBD	TBD
Bank swallow		X	TBD	TBD

Approach to Analysis: Next Steps

Challenge: Lack of Property Access

- 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 Approach

Mitigation Approach

- The mitigation options to be examined will include, but are not limited to, the following:
 - On-site mitigation/restoration opportunities
 - Existing habitat and listed-species mitigation and conservation banks
 - Establishment of turn-key banks
 - Purchasing offsite lands from willing landowners to create, enhance, restore or preserve mitigation habitats
 - Obtaining conservation easement and/or in lieu fees
 - Working with local refuges, preserves, resource agencies or municipalities to fund restoration and/or research projects

Mitigation Approach

- Ecosystem-level mitigation planning that will integrate wetland, riparian and upland communities for targeted species, other associated species & land cover types
 - Develop database of existing preserves, mitigation/conservation banks, federal/state/regional open space areas
 - Overlay CNDDDB occurrences for the region; identify mitigation sites in proximity to existing populations
 - Maximize “patch” size
 - Maximize habitat connectivity benefits (provide migration corridors, promote genetic diversity)
 - Protect/enhance important habitat areas
 - Maintain/improve biodiversity

Schedule and Next Meeting

Schedule

- Summer 2021
 - Draft EIR and Supplemental EIS Released
- December 2021
 - Biological Assessment to Agencies
 - Submit State ITP Applications
- Spring 2022
 - Final EIR/Final EIS
- Spring 2023
 - All permits obtained
- Spring 2024 Construction Begins
- Topics for the next meeting?



Additional Topics from the Group

- Any additional questions or thoughts?
- Topics for the next meeting?



Action Items and Next Steps



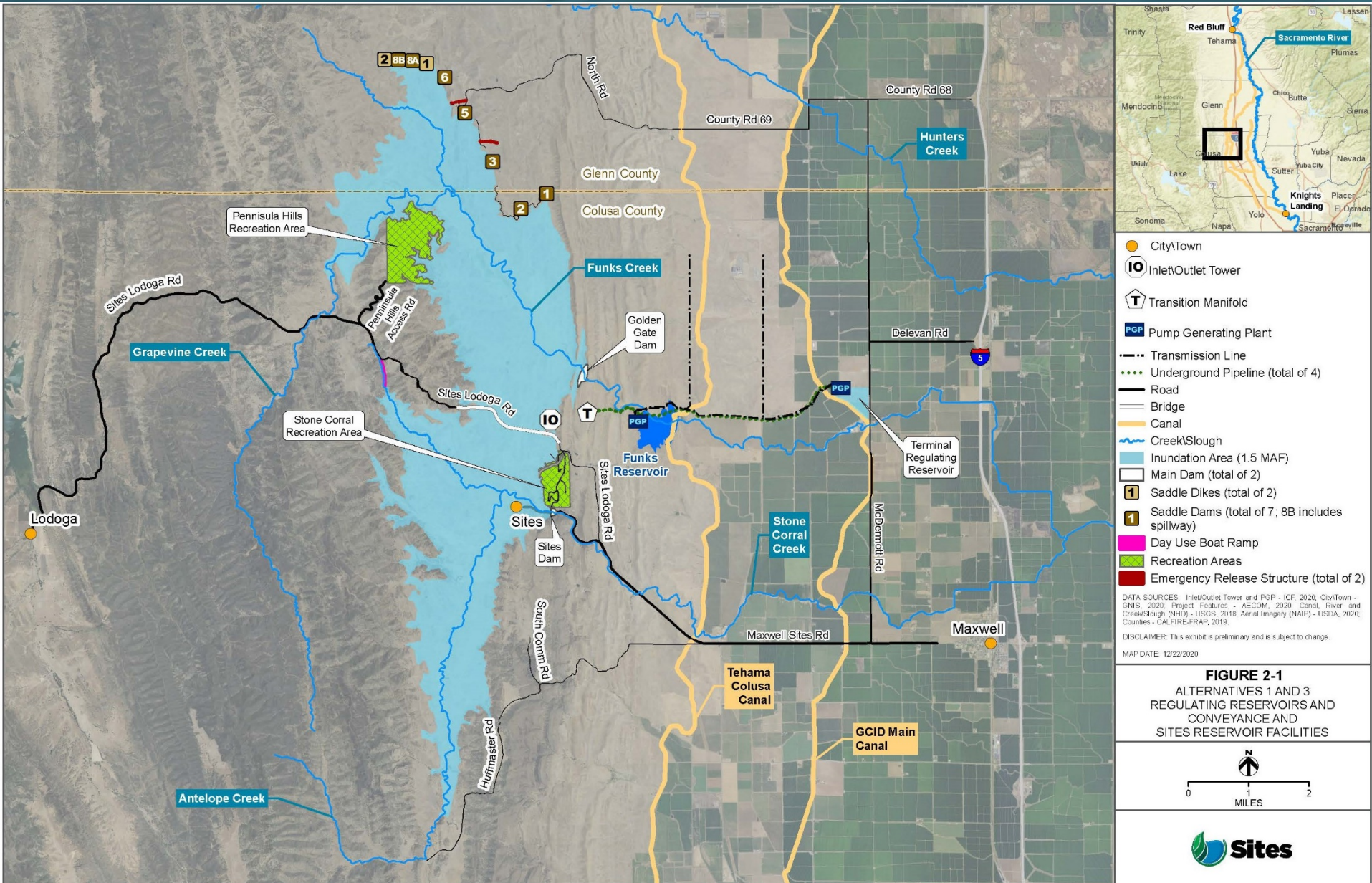
Thank you!



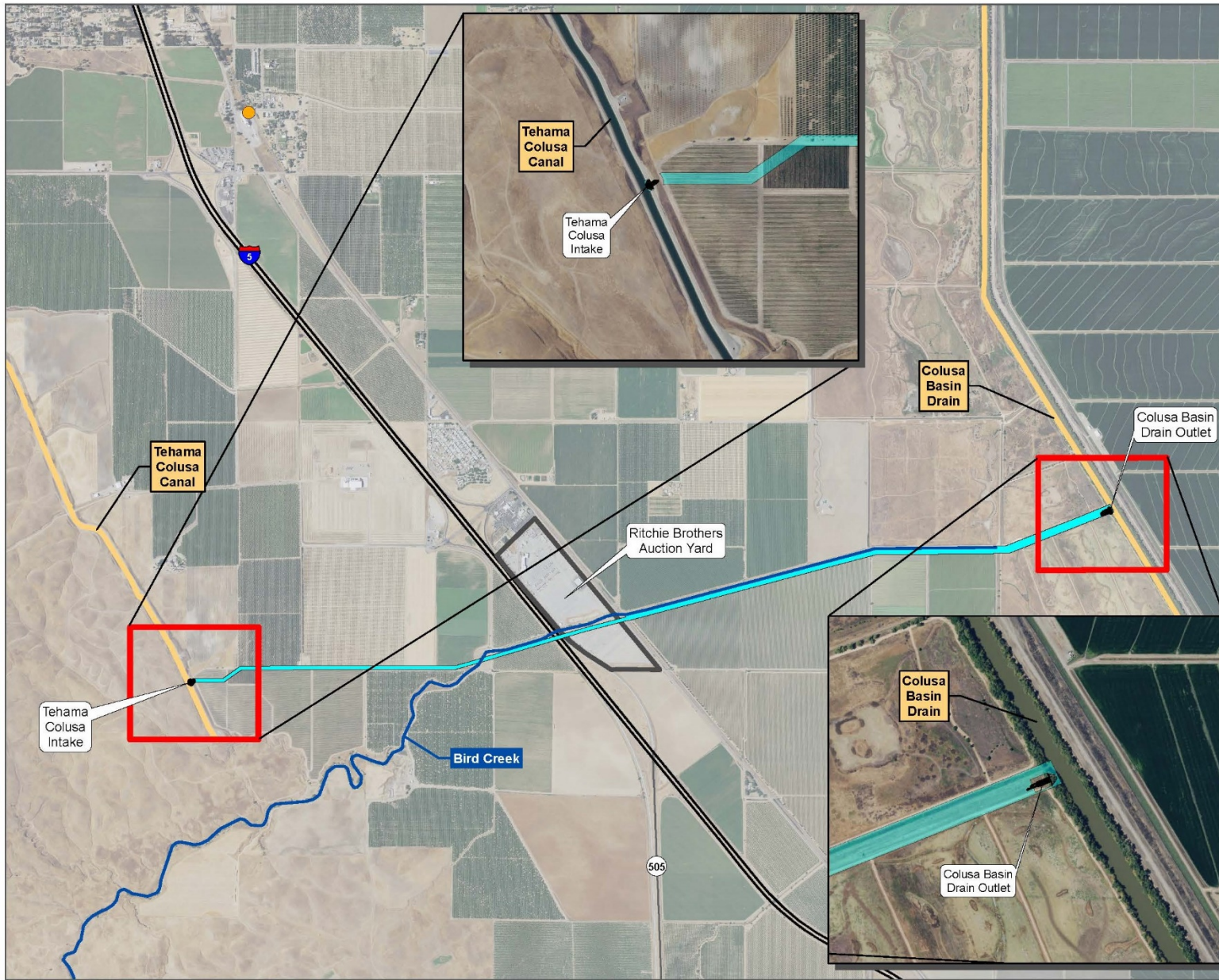
Alt 1 – Authority’s Preferred Project

Facilities / Operations	Alternative 1
Reservoir Size	1.5 MAF
Diversion(s)	Diversion from Sacramento River into existing TC Canal at Red Bluff and the existing GCID Main Canal at Hamilton City
Conveyance Release / Dunnigan Release	Release 1,000 cfs into new pipeline to the Colusa Basin Drain
Releases into Funks and Stone Corral Creeks	Specific flow criteria to maintain flows to protect downstream water right holders and ecological function
Reclamation Involvement	<ul style="list-style-type: none"> • Funding Partner up to 7% Cost-Share • Operational exchanges
DWR Involvement	Operational Exchanges with Oroville and use of SWP facilities South-of-Delta
Hydropower	Incidental power generation up to 40 megawatts each at Funks PGP and TRR PGP

Alt 1 – Preferred Project



Alt 1 – Preferred Project



- LEGEND**
- City/Town
 - Bird Creek
 - Dunnigan Underground Pipeline

DATA SOURCES: City/Town - GNS, 2020; Project Features - AECOM, 2020; Canals (NHD) - USGS, 2018; Aerial Imagery (NAIP) - USDA, 2020.
 DISCLAIMER: This exhibit is preliminary and is subject to change.
 MAP DATE: 12/22/2020

FIGURE 2-2
 ALTERNATIVE 1 AND 3
 CONVEYANCE TO SACRAMENTO
 RIVER COMPONENTS

