CDFW Terrestrial- Sites 60 day Evaluation Meeting No.6 Agenda

Sites Reservoir Project

Date: *August 6, 2019*

Location: *HDR Office: 2379 Gateway Oaks Drive, Suite 200 Raleigh Conference Room. Or Skype with Call in: 866-583-7984,1502541*

Time: 9:00 am – 11:00 am

Purpose: Continue terrestrial 60-day evaluation process.

Invitees

Ali Forsythe, Sites Authority
Ian Boyd, CDFW
Monique Briard, ICF
John Howe, ICF
Jelica Arsenijevic, HDR
John Spranza, HDR

	Action Item	Owner	Deadline	Notes
1	Schedule CDFW Field Visit	John S.	07/11/2019	Complete: Scheduled for August 2
2	Extended write up for the model layers and land cover types.	Ellen B/John H.	7/10/2019	Pending Sent GGS as a template
3	Crosswalk table EIR/EIS	ICF	7/10/2019	Complete
4	Determine if Construction and Ops separate ITP or combine: Talk with Jeff RE: the structure prior to next steps.	CDFW	7/10/2019	Separate, but continue discussions
5	LSAA	CDFW	Ongoing	All separate , but continue discussions
6	Contact info for DWR Bank Swallow	CDFW	7/10/2019	Complete – email sent 7/3/2019
7	Meet with CDFW regional contacts provided by Ian	All	Late-August/early-September	Begin discussions to think about mitigation and regional perspective – add more value to species.
8	Funks Creek – Use of Creek	Ali F.	8/2/2019	Follow up on use of Funks Creek

Agenda		
Discussion Topic	**Topic Leader**	**Est Time**
1. Introductions/Safety/ Admin	John Sprazna	5 min
2. Review of Action Items from Previous Meeting	Ali Forsythe	15 min
3. Follow up from 8/2 Field Visit	All	15 min
4. Continued Discussion of Terrestrial Species a. Fully Protected Species Conservation Measures b. Geotech Environmental Commitments c. Discuss measures proposed to protect birds during construction d. Special-status plant surveys and measures e. Other	John Howe	75 min
5. Next Steps for 60 day Schedule	Group discussion	10 min

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Attendees

Ali Forsythe, Sites Authority	Monique Briard, ICF	Jelica Arsenijevic, HDR
Ian Boyd, CDFW	John Howe, ICF	John Spranza, HDR

	Action Item	Owner	Deadline	Notes
1	Extended write up for the model layers and land cover types.	Ellen B/John H.	8/13/2019	Complete – GGS template sent to Ian on 8/6/2019 after meeting 9
2	Determine if Construction and Ops separate ITP or combine: Talk with Jeff RE: the structure prior to next steps.	CDFW	Ongoing	Separate, but continue discussions
3	LSAA	CDFW	Ongoing	All separate , but continue discussions
4	Meet with CDFW regional contacts provided by Ian	All	Late-August/early-September	Begin discussions to think about mitigation and regional perspective – add more value to species.
5	Funks Creek – Use of Creek	Ali F.	8/2/2019	Follow up on use of Funks Creek Numerous water rights on both Funks and Stone Corral creeks.
6	Coordinate with engineer to attend next meeting	Authority	8/13/2019	
7	Send GIS to CDFW	Authority	8/13/2019	

Minutes

1. Follow up from 8/2 Field Visit
   - If meeting with other agencies, maybe attend future site meetings together to be on same page.
   - Previous meeting notes referred to "historical" CDFW perspective of no GGS habitat west of GCID canal. However, based on field visit, agree due to presence of orchards etc.
   - Fletcher concept – understanding the outfall structure vs. fletcher option.
   - Further discussion on design options – engineering team to attend next week's meeting. Current GIS developed with "on" and "off" features. Follow up on GIS and send to CDFW.
   - Looking at the intake was valuable to get idea of quality of cuckoo habitat. Doing preconstruction surveys is key to provide input on habitat use. Intake area may not provide suitable nesting habitat per Dettling, et. al. (2015) , but may provide foraging habitat and should be considered in CEQA analysis. Similar to BANS note below, should consider indirect effects to WYBC for intake structure impacts.
   - CDFW reviewing NOE and will provide feedback by end of week.
   - Bank swallow – proximity, noise, etc.
   - Geotech. CDFW will review AMM's for the geotech work.
     - Wording of killing, harming, etc. is a concern
     - Agreement to have joint meeting with USFWS when they are developing BO.
     - Discussed whether a NOE still acceptable with ITP or consistency determination?
       - NOE's not typically acceptable for ITP's, but CD's are not discretioanary actions that do no require CEQA. Federal Agencies are listed as Permitttees under section 2081.2(a)(3) of the Fish and Game Code.
2. Continued Discussion of Terrestrial Species
   - Fully Protected Species Conservation Measures
     - Discussed last week with example. Provided CDFW a draft write-up of proposed AMM's for all fully protected species. ICF to send to CDFW for review.
   - Geotech Environmental Commitments
     - Ian reviewing and will get feedback to team by end of week to incorporate into the geotech BA.
   - Discuss measures proposed to protect birds during construction
     - In geotech have migratory bird measure/nesting bird measures (Bio-9). If one in EIR is deficient, make similar.
   - Special-status plant surveys and measures
     - Measure (Bio-20) included in the NOE for plant surveys. Team will check for consistency between the geotech NOE and Draft EIR
     - CDFW typically recommends protocol level surveys, which may not be able to be done for geotech due to site access. Expand comments on the overall projects and include in EIR (try and do protocol level surveys for sensitive and natural areas).
3. Continuously update the modeling as surveys are being completed, as species are discovered (beyond CNDDB). Annual monitoring to see how things have changed.
   - Updating modeling to make case to build in flexibility, document land use changes, etc. ICF following up whether a conservation measure in EIR or in ITP? Would likely be a requirement in ITP.
4. Other
   - Mitigation meeting – Sites Authority have another internal meeting and then intents to start engaging agencies for collaboration. Intending to invite CDFW, including regional staff, USFWS, NMFS, NGO's, ag land organizations, mitigation banks (Westervelt), etc.

Giant Garter Snake

Habitat Model Description

The modeled habitat for giant garter snake in the study area is bound to the west by GCID Canal, including areas of upland habitat 200 feet west of GCID.

The modeled aquatic habitat for giant garter snake includes the following land cover categories:

- Canal (includes agricultural ditches and earthen lined canals)
- Freshwater marsh
- Managed wetland
- Rice

Modeled upland habitat for giant garter snakes includes the following terrestrial land cover types immediately adjacent to and within 200 feet (61 meters) of the aquatic habitat types previously listed.

- Annual grassland
- Disturbed (includes barren areas)

Assumptions

Giant garter snakes inhabit marshes, ponds, sloughs, small lakes, low-gradient streams and other waterways, and agricultural wetlands, including irrigation and drainage canals, rice fields, and the adjacent uplands (U.S. Fish and Wildlife Service 2006). Suitable aquatic habitat consists of slow-moving or static water that is present from March through November with a mud substrate and the presence of prey (amphibians or fish) (USFWS 2017). Emergent and bankside vegetation that provides cover from predators and for thermoregulation is also required. Other components of suitable aquatic habitat are the absence of a continuous riparian canopy, basking sites with supportive vegetation (such as folded tule clumps) adjacent to escape cover, the absence of large predatory fish, and upland refugia in locations subject to recurrent flooding (USFWS 2017). Riparian woodland is generally considered unsuitable habitat because of the lack of basking sites, excessive shade, and lack of prey.

Upland habitat consists of land that is not typically inundated during the active season and is adjacent to aquatic habitat. Characteristics of suitable upland habitat are available bankside vegetation, such as cattails or tule, permanent shelter, such as bankside cracks and crevices, holes or small mammal burrows, and areas that are not overgrazed. Giant garter snakes use upland habitat for basking, to regulate body temperature, and for cover. Giant garter snakes use mammal burrows to avoid predation, shed skin, and cool their bodies during hot days (USFWS 2017).

- **Assumption:** Giant garter snakes do not use areas west of GCID Canal; however the model does include upland habitat 200 feet west of GCID.

  Rationale: Areas east of GCID Canal support agricultural areas including rice and agricultural ditches that are typically used by giant garter snakes. There are also managed wetlands east of the canal. West of the canal consists primarily of grasslands and creeks that generally don't have slow moving or static water for an extended period of time between March and November and have substrates dominated by gravel, which are not suitable for giant garter snake as they are found in areas with mud substrates (USFWS 2017). These streams have high flows during the winter and spring, and generally go dry toward the middle of the summer. Funks Creek, Antelope Creek, Grapevine Creek, and Stone Corral Creek have been defined as intermittent streams (Sites 2017). During summer, much of the streambed of these streams are dry, except for occasional pools or when receiving agricultural drainage or runoff. In addition, water quality is reported to be poor and high in dissolved minerals (Brown, 2000). West of GCID in the project vicinity there is no rice and ditches there are not directly connected to ditches east of GCID. Also, there are no giant garter snake occurrences west of GCID in the project vicinity; however, there is one record (Occurrence Number 205) from 1984 on Stone Corral Creek, which is plotted in the CNDDB as being west of GCID and which is adjacent to areas of rice. This occurrence is approximately 3.2 miles south of the project footprint.

Assumption: Giant garter snakes may use earthen canals but do not likely use concrete lined canals due to a lack of soft substrate (e.g., mud, silt).

- **Rationale:** Giant garter snakes prefer emergent, herbaceous aquatic vegetation accompanied by vegetated banks (USFWS 2017). Concrete lined canals do not allow for establishment of the vegetation and support of the prey base needed to support giant garter snakes.

Assumption: Potentially occupied giant garter snake upland habitat consists of the vegetation types listed in *Habitat Model Description*, above.

Rationale: Giant garter snakes require basking habitat of grassy banks and openings in waterside vegetation. They also require uplands for cover and refuge from floodwaters during the snake's dormant season in the winter (USFWS 2017). Riparian woodlands are unlikely to provide suitable habitat as a result of excessive shade and generallack of basking sites.

Assumption: Potentially occupied giant garter snake upland habitat consists of appropriate land cover types within 200 feet (61 meters) of modeled aquatic habitat.

Rationale: Giant garter snakes use grassy stream banks and upland habitats adjacent to perennial watercourses or wetlands as overwintering, areas to temporarily seek refuge during the summer, and movement habitat (USFWS 2017).

Model Limitations

The model is limited primarily by the accuracy of aerial imagery interpretation and the inability to ground truth the land cover mapping (e.g., identifying area with suitable upland refugia). The model provides a conservative estimate of potentially suitable giant garter snake habitat because the amount of aquatic habitat and upland habitat mapped is all deemed to be equally suitable.

References

Brown, C. J. 2000. *North of the Delta Offstream Storage Investigation Progress Report.* Appendix D: Fish Survey Summary. Assisted by W. Yip, G. Gorden, G. Low, and A. Scholzen. CALFED Bay-Delta Program.

U.S. Fish and Wildlife Service. 2017. Recovery Plan for the Giant Garter Snake (*Thamnophis gigas*). U.S. Fish and Wildlife Service, Pacific Southwest Region, Sacramento, California. vii + 71 pp..