



— BUREAU OF —
RECLAMATION

CVP Water Temperature Modeling Platform, Modeling Technical Committee Habitat Data Subgroup – Meeting #1 Summary

Wednesday, February 9, 2022; 1 p.m.–3 p.m. via Zoom

Meeting Objectives

- Provide an effective venue for topic-specific discussions under the MTC framework.
- Establish common understanding of the purpose and intended use of habitat data to support WTMP development and other related efforts.
- Develop shared knowledge through engaging subject matter experts for input and characterization for habitat data.

Agenda

See *20220209 WTMP_HabitatSubgroup01_Agenda_Accessibility.pdf*

Attendees

See *20220209 WTMP_HabitatSubgroup01_Participants_Accessibility.pdf*

Handouts

See *20220209 WTMP_HabitatSubgroup01_Handout_Accessibility.pdf*

Summary

This first meeting for the Habitat Data Subgroup was to establish common understanding of background and purpose of habitat data for the WTMP and facilitate the collaborative development of the habitat data for reference by the modeling team. This subgroup was established based on MTC03 discussion. The attendees were either volunteered in MTC03 meeting or subsequent recruited for their expertise. The draft habitat data that was organized by river with information on locations that are important for fishery species. As a working meeting, the draft habitat data were edited and augmented based on input by members. The discussion focused on the Clear Creek, Stanislaus River and American River. This 2-hour online meeting was attended by about 10

participants. The Subgroup agreed that other experts may be required to support the discussion for the Sacramento and Trinity River system in a follow-up meeting.

Meeting Logistics and Welcome Remark

Ms. Randi Field (Reclamation) went through the logistic and expectations of the meeting. The main focus of this meeting is to start reviewing the draft habitat information Reclamation has been collecting and to solicit feedback from the MTC participants. The request is to communicate the biological importance of reaches in the context of temperature significance, and review the accuracy, characterization, and applicability to water temperature model development.

Next, Mr. Yung-Hsin Sun (Stantec) provided the background and purpose of the habitat, noting the contributors for the current draft habitat data. The charge for the habitat subgroup is to develop data information by tributary and build common understanding for model developers/operators and subject matter experts and their manager.

The charge for MTC Habitat Data Subgroup participants were to review and supplement, if necessary, important habitat locations, relevant seasons for different species and life stage. Knowledge of additional information that may benefit the model development (e.g., bathymetric data) was also welcome.

Featured Discussion: Review of Clear Creek Tributary Data

The first discussion session was presented by Mr. Sun on the habitat data for Clear Creek. The group contributed input and comments on a real-time basis to improve the completeness and description of habitat data.

Questions and Feedback:

- Suggestion to include a site location between Gold Dredge and upstream of Sacramento River Confluence, near Phase 3C of restoration project. This site is currently being explored as a potential restoration site for habitat.
- Suggestion that the site location just upstream of Sacramento River confluence may not be an important habitat location. This location is mostly influenced by Sacramento River conditions and not Clear Creek conditions.

Featured Discussion: Review of American River Data

The next discussion focused on habitat data for American River. The group contributed input and comments on a real-time basis to improve the completeness and description of habitat data.

Questions and Feedback:

- Suggestion that the American River at Fair Oaks (Hazel Avenue) site location should be considered as a backup location for temperature compliance for drier/critical years. Note

that the group verified that drier/critical years were used as a general term, not specific to any water year type index.

- Suggestion to add American River at William B. Pond as a site location since there is an existing temperature gage at this location.
- For the American River at Watt Avenue site location, additional notation should be added to state that the American River from the confluence to Watt Avenue is recognized as a critical habitat.
- Suggestion to add American River at H Street Bridge as a site location because this location could be a good representation of the farthest upstream site that is outside of the backwater effect of the Sacramento River.
- Suggestion to add American River at Business I-80 bridge as a site location because it is an existing spawning location with temperature data available.
- Suggestion to add the confluence of Sacramento River as a site location. This is the current downstream reach location in the American River modeling.

Featured Discussion: Review of Stanislaus River Data

The next discussion focused on habitat data for Stanislaus River. The group contributed input and comments on a real-time basis to improve the completeness and description of habitat data.

Questions and Feedback:

- Suggestion to consider the Goodwin Dam site location as high priority.
- Suggestion to consider the Knights Ferry site location as high priority.
- Suggestion to consider the Orange Blossom Bridge location as high priority site. This is a potential future monitoring site for dissolved oxygen from the current LTO proposed action. This is located near the upstream screw trapping location.
- Suggestion to include a note that the Riverbank site location is located near the weir monitoring location.
- Suggestion to consider the Ripon site location as high priority.
- Suggestion to replicate seasonal information for Ripon, Caswell, and San Joaquin River at Vernalis/Mossdale. The team confirmed that the modeling domain for the Stanislaus River is to the confluence of the San Joaquin River only. However, the team also agreed to retain information that may be outside of the modeling domain for reference.
- The San Joaquin River at Vernalis/Mossdale site location needs to be verified with Mike Deas (Watercourse) and check on the model's ability to produce outputs for this location.
- The group participants confirmed that the habitat use for spring-run has been verified by data.
- Suggestion to identify tributaries that may influence mainstem river warming.

- Suggestion to identify thermal equilibrium locations, which may vary by season and other conditions.

Other Feedbacks and Suggestions

There were many clarification questions exchanged throughout the meeting. The major ones are provided below.

- Some members in the Subgroup suggested, if possible, the modeling domain should be extended to cover the entire river (e.g., the Sacramento River below Red Bluff Diversion Dam to the Delta, or the San Joaquin River at Vernalis). Even if the CVP facilities would not have any control over the water temperature at those locations, the projected water temperature would be still helpful to biologists.
 - The team stated the current geographic scope of modeling includes (1) northern system: Shasta Lake, Keswick Reservoir, and Sacramento River from Keswick Dam to Bend Bridge; Trinity Lake, Lewiston Lake, and Trinity River to North Fork Trinity River; and Whiskeytown Reservoir and Clear Creek from Whiskeytown Dam to Sacramento River; (2) American River system: Folsom Reservoir, Lake Natoma, and American River downstream from Nimbus Dam to Sacramento River; and (3) Stanislaus River system: New Melones Lake, Tulloch Lake, Goodwin Dam, and Stanislaus River from Tulloch Dam to San Joaquin River.
 - The model development focuses on the river reach where CVP facilities may have control over the resulting water temperature. Additional expansion of modeling domain can be a significant effort.
 - The expansion of the modeling domain can be considered after the current project is completed. However, Reclamation will discuss with the team regarding if any simplified relationships may be established and report back in the next meeting.
- Some members suggested that modeling output may be best shown by a heat map for the entire river reach. This is particularly for the Stanislaus River as the understanding of fishery conditions is evolving including the recent verification of certain fish in the Stanislaus River were the hatchery fish from the San Joaquin River Restoration Program. However, the group did recognize the utility for reporting projected water temperature at selective locations that are important for fishery species.
- Some members suggested that the team may augment the seasonal information for different species using the information from the 2019 LTO BiOp and supporting BA.

Wrap Up and Next Steps

The meeting was concluded with the following next steps.

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- Stantec to schedule the next Habitat Subgroup meeting with additional experts who are more familiar with the Sacramento and Trinity river system.
- Stantec to update the draft habitat data based on input received today and additional information that may be extracted by 2019 LTO BiOp and supporting BA.
- Members from NMFS and CDFW would connect the team with their corresponding inhouse experts for scheduling needs and context for the discussion.