

Los Angeles River Instream Flow Criteria: Technical Study
Technical Advisory Committee Meeting #4 – March 11, 2020

Summary of Key Action Items and TAC Recommendations:

Overall Conclusions:

The technical team is moving in the right direction with the analysis. Calibration of the hydrology models looks good and the refinements to the temperature model appear to be on track.

The habitat modeling approach is sound, but the TAC would like the team to explore development of more continuous response curves instead of discrete thresholds of response. Using data from outside the watershed to develop the models is acceptable if the systems are relatively comparable. If we wind up retaining bins, we should rename the intermediate bin to better convey that it actually represents a zone of uncertainty. Development of overall “suitability” ratings for each focal species should be based on a conceptual model of the most important physical factors that affect the ability of a site to support the species.

Use of sensitivity curves to evaluate scenarios is a good way to provide flexibility in evaluating a broad range of scenarios.

Specific recommendations are provided below:

Data Needs:

- Stream temperature - 2016 continuous data (Mongolo et al., 2017)
- WRP discharge data - Burbank
- Water quality: MS4 data (particularly pre 2015), mass emissions
- Depth to groundwater data
- Scenario capture:
 - Planned dry weather diversion locations
- Existing cross-sectional data for Sepulveda Basin from One Water City of LA study
- Sucker spawning and depth studies

Habitat Modeling:

- Develop an overall conceptual model that contextualizes the study reaches and physical habitats that may be supported at each reach - which species and limiting factors are important in what areas?
 - Set up a follow-up discussion on limiting factors and conceptual understanding with Stillwater Sciences
- Describe the limiting factors by channel setting
 - By life stage
 - Articulate synthesis
- Explore use of continuous functions (i.e. response curves) vs. binned thresholds (i.e. suitable or unsuitable bins) for habitat modeling
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- For the sucker thresholds:
 - Spawning:

- Sucker is a protracted spawner, so the spawning time period should not be constrained to an absolute narrow window. Recommended spawning period: at least from March to July
 - Follow up on sucker spawning and depth studies
- Look at temperature thresholds for southern CA trout as they co-occur with sucker in Tujunga
- Set-up web-based calls for remaining focal species
- Follow-up with CDFW on willow germination information

Physical Modeling:

- SWMM (hydrology):
 - Run the validated model on a wet year to see how well the prediction is
- HEC-RAS (hydraulics):
 - Additional cross-sectional data for soft bottom area of Sepulveda Basin
 - For all softbottom cross sections, manually designate left and right banks to get additional hydraulic outputs (i.e., velocity, shear stress, etc.) for left, center, and right side of channel
- Consider shading for temperature modeling – at appropriate reaches

Model Scenarios:

- Develop WRP model scenarios that consider diurnal variability and capture scenarios that consider the dry weather diversions
- Set up follow-up webinar on the flow management scenarios for continued discussion with TAC