

California Environmental Flows Workgroup
A Workgroup of the California Water Quality Monitoring Council

November 12, 2019 Meeting Notes

ACTION ITEMS FROM PREVIOUS MEETING:

- Technical webinar on modeling metrics (Ted and Sam S.)
- Review of CEFF factsheet (with Dan?)
- Ryan and Elijah to provide tech gage info?

RED-ROBIN UPDATES:

- Dan S. – no significant updates since last meeting
- Eric S. – session on freshwater environmental flows in general highlight the work in California; joint with Freshwater Society, meeting in June; updates to bioassessment effort
- Elijah P. – hosting hydrology session in Santa Cruz, June 2020
- Sam S. – working on impaired stream classifications; 1st iteration predictions

PRESENTATIONS:

Dan Schultz – Recommendations to Council

- Assistance in developing agency implementation guidance
- Help in coordination with other agencies not as actively engaged (e.g., DWR) as well as local watershed groups
- Support for additional case studies for applications not well represented by the current case studies or regions of the state not currently covered (e.g., groundwater driven systems such as the Cosumnes, agricultural return flows, N or S Sierras)
- Support for development of a monitoring and adaptive management strategy
- Development of a data management system to track CEFF implementation and associated data and tools developed
- Working on an E-flows web site to track ongoing implementation efforts
 - Working on a geodatabase and standardizing attribute tables
 - Working on a hosting location
 - Working on standard submittal tools so that studies can upload information
 - Want to have ability to gather information from other data sources/databases
- Stakeholder outreach and engagement
 - Additional CEFF case studies
 - Groundwater management
 - Floodplain restoration
 - Other geographies of the state that have not been as well represented by current case studies

- CEFF monitoring program
 - Usability
 - Need for additional tools
 - Program effectiveness
 - Adaptive management
- Tracking CEFF Implementation
 - Open data management system

CDFW case studies

- CDFW instream flow program provides technical oversight and coordination with other agencies. Also provide QA etc.
- Instream flow studies are question driven – suite of methods are used depending on the needs of the study.
- CDFW maintains a priority list on their web site based on Public Resources Code 10000 priority list and recommendations from the regions.
- Mattole case study:
 - Mimic natural hydrograph
 - Provide multi-faceted criteria
 - Uses Functional Flows approach and DRH approach
 - Also, ecosystem baseflows (mean monthly and mean annual), low flow threshold, steelhead optimum flows (PHABSIM wetted usable area method – one optimum discharge), juvenile steelhead passage flows in riffles (avg. dept of 0.4 ft)
- Redwood case study:
 - CA water action plan stream – cannabis impacts, salmon habitat
 - Flow-habitat relationships for rearing and low-flow thresholds
 - Baseflow needs are priority
 - Bed elevation, depth, velocity, discharge along with habitat suitability analysis based on where fish occurred or did not occur → area-weighted-suitability vs. flow curves. Select flow associated with median AWS
 - 50% of channel wetted perimeter method vs discharge curve
- Ventura case study:
 - Looking at a specific location and whether there is an impediment to passage and adult migration
 - Focus on depth sensitive riffles
 - Intermittent reaches under natural conditions, naturally a braided stream
 - Compared River 2D and HEC-RAS outputs

CEFF Update

Sarah provided an update on the four sections of the CEFF document that is now undergoing review by the State Board.

Alyssa gave an overview of the work being done to identify focal fish species to use in flow-ecology analysis and on some of the preliminary work being done to understand which flow metrics account for variability in benthic invertebrate data.

Future plans:

- See if there is fish data we can use to develop fish metrics for a similar analysis

- Try to include intermediate variable, such as temperature to inform fish analysis
- Do a similar analysis using algae data
- Expand analysis to entire bug reference data set using modeling reference flow metrics
- Expand the analysis to compare bugs and algae at non-reference vs. reference gauges

LA River Update

- Recurring questions apply to other areas/rivers
- No reference for LA River
- SWB Resolutions/work dependent upon this effort

POTENTIAL TOPICS FOR NEXT MEETING:

- Updates and how to deal with WCB case studies
- Impaired stream flow