

LOS ANGELES RIVER FLOWS PROJECT
Stakeholder Working Group (SWG)
Meeting #4

Date: Thursday, March 25, 2021
Location: Webinar
Time: 9:00 am – Noon

MEETING NOTES SUMMARY

Attendees:

- *See Full Attendee List (Appendix A)*
- Staff and Consultants
 - Jonathan Bishop, State Water Resources Control Board
 - Lori Webber, State Water Resources Control Board
 - Tatyana Isupov, State Water Resources Control Board
 - Jenny Newman, Los Angeles Regional Water Quality Control Board
 - Sam Boland-Brien, State Water Resources Control Board
 - David Coupe, State Water Resources Control Board
 - Lisa Beutler, Stantec
 - Gilberto Ruiz, Stantec
 - Kris Taniguchi-Quan, PhD, Southern California Coastal Water Research Project
 - Eric Stein, PhD, Southern California Coastal Water Research Project

Action Items

#	ITEM	OWNER	TIMEFRAME
1.	None	N/A	N/A

Major Themes/Topics:

- Overview of Purpose of Study and Process
- Summary of Coordination
- Recreational Use Survey
- Species and Habitats
- Process for Determining Flow Ranges
- Existing Conditions
- Relationship Between Focal Species and Beneficial Uses
- Discharge Scenarios and Sensitivity Curve Examples

Presentations: See PowerPoint presentation on Project Website ([Los Angeles River Environmental Flows Project - Southern California Coastal Water Research Projectscw](https://www.sccwrp.org/los-angeles-river-environmental-flows-project)) ([sccwrp.org](https://www.sccwrp.org))

Recordings: See recording of meeting (<https://attendee.gotowebinar.com/recording/568593060967223048>)

ORDER OF BUSINESS

9:00 AM

Welcome & Greetings

- The Stakeholder Working Group (SWG) members were welcomed by Jenny Newman, Jonathan Bishop, and Lori Webber. Gilberto Ruiz provided the safety moment and Lisa Beutler discussed meeting logistics.

Introductions and Agenda Review

- Lisa Beutler provided an overview of agenda, the SWG members on-line and participating in the meeting, an introduction of staff hosting the meeting, and information on how to work the webinar control panel. Jenny Newman, Jonathan Bishop, and Lori Webber provided additional information on the River Flow study and next steps.
- Lisa then turned the discussion over to Dr. Eric Stein. Dr. Stein serves as the lead for the Research Team¹ supporting the river flow studies.

Presentation of Flows Study by Dr. Eric Stein (see presentation and recording for details)

- Impetus for Study & Analysis Tools
Dr. Stein began with background information about the study and analytical tools. Following are highlights from his comments.
 - Water use practices in the Los Angeles River are evolving and changing with changing needs. There is a desire to re-use and recycle more water. There are also efforts to control storm drain discharge into the river. As water use practices in the watershed change, there are questions about the potential effects of those changing discharges on flows in the river, either positive or negative, in terms of existing and potential future beneficial uses.
 - These practices also affect Section 1211 petition applications.
 - The goal of the study was to develop technical tools to evaluate the implications of management scenarios that are being considered. In this way, it is possible to quantify the relationship between different flow regimes and the aquatic and non-aquatic life beneficial uses.
 - A series of hydrology and hydraulic models were developed by the Colorado School of Mines for this study.
 - The study focus is the zone within the banks of the river and not the streams in the upper portions of the watershed. It looks at how proposed changes in effluent discharge, from either the wastewater treatment plants or storm drains, may affect the conditions within the banks of the river, as it relates to beneficial uses and the Section 1211 process.
 - The Research Team is assuming that the physical structure of the channel remains as it is, although improving habitat conditions for many of the species and habitats the river may

¹The Southern California Coastal Water Research Project (SCCWRP) is working with the State Water Resources Control Board and the Los Angeles Regional Water Quality Control Board, in cooperation with local municipalities (including City of LA Bureau of Sanitation, City of LA Department of Water and Power, LA County Department of Public Works, and LA County Sanitation Districts), to conduct the Los Angeles River Environmental Flows Project (Project). The project Research Team is a collaboration of SCCWRP and the Colorado School of Mines, a public research university focused on science and engineering.

require some modification of the physical structure of the channel at some point in the future.

- Optimal Flow

Dr. Stein explained the word optimal is used in reference to optimizing needs across different species and beneficial uses. It doesn't imply any sort of regulatory recommendation in terms of an optimal flow. From a regulatory perspective, it's really more of a mathematical optimization across different species needs.

- Current Conditions Report

He also provided an overview of the current conditions report. This is available on the [project website](#). It details a lot of the methods behind the hydraulic, hydrologic, and biological models.

- Species & Habitats

In coordination with the Technical Advisory Committee (TAC), the Team identified a series of habitats that are present in the river. They also identified different species that are associated with those habitats that we use as surrogates for different beneficial uses. Because not all habitat types are supported in all parts of the river, the Team prepared a graphic that shows which of those habitat types could potentially be associated with different reaches of the river.

- Process for Determining Flow Ranges

The process included such inputs as depth and base flow to arrive at probabilities of presence and ranked probability to cover, low, medium, and high. These are directly related to flow characteristics.

- Existing Conditions (Suitability)

Following are the existing conditions considered.

- Heat map evaluating different nodes.
- There is a temperature model. There will be additional analysis on temperature, including limitations. At this point, we are not looking at cold water habitat to occur. One question is whether or not reducing flows from wastewater treatment plants would bring conditions in the river closer to the range needed to support cold water species, potentially allowing for introduction of steelhead trout (or other cold-water species).

- Audience Question

- Q: What does the study indicate about existing conditions and the health of the system?
A: A lot of factors affect this, including substrate, temperature, etc. Requisite flows do not guarantee the presence of the species.

- Recreational Use Survey

The survey was based upon interviews, surveys, and other meetings. A different process was used to arrive at the needs. These are not based upon the empirical data but on a structured expert elicitation approach.

- Big Picture Summary

- There are a large set of candidate recommendations.
- Flow management will be dependent on management priorities.

- Process has been developed to assist in selection.
- Tools have also been developed to assist in the process.
- Managers can use these tools.
- Study focus was on three key questions -
 - What are the optimal flow ranges to support beneficial uses? (Reminding the group that meant optimal as a mathematical optimization, not a regulatory optimization.)
 - How much can wastewater treatment plants or a storm drain discharge, be reduced to, and still meet those ranges?
 - What scenarios can be used to achieve those different ranges within management desired targets?

The presentation continued with a presentation on the Flow Study and Recommendations Report.

- Flow Recommendations Report – Current Status
The report includes methodological models, flow range and the effects of reduced flow. The intent of the flow study was to identify flow ranges (seasonally) and establish a basis for evaluation. It was not intended to provide a definitive target or requirement.
- Sample Flow Recommendations Table
A large table is available with the presented information and is on the project website. The sample table shows willow species through their life cycles and the various flows required for these. In order to combine species (e.g., willows and cattails), a different flow regime, able to accommodate both, were both required. The table allows for a determination of the optimal flow and allows for analysis of relationship between focal species and beneficial uses. It also includes the following:
 - Process to Determine Optimal Flow
 - Flow chart explains how this is done and how species synthesis can be addressed too.
 - Example
 - Node
 - Winter/Spring
 - Beneficial Use
 - Proposed Synthesis Ruleset (see related presentation slide)
 - Synthesizing Recommendations: Individual Species
 - Shows optimal flow ranges for medium probability for juvenile and adult willow and Typha, but Cladophora would not be supported.
 - Output Summary Table
 - Can be used for areas throughout the river.
 - R-Shiny App Development
 - Is in-progress and under development.
 - Will allow you to explore different “scenarios.”
- **Questions and Answers**
 - Q. You're modeling to protect current beneficial uses, and I was wondering if/when you use the medium probability flows, do you get results that are below, above or at the current flow regime? And does the model allow us to compare these flows to existing?

A: Yes, we do include the current flow regime (over a time series). In some instances the current flow regime would capture the 50% probability of some species occurring. The actual models are public domain and can be accessed.

- Q: Do the current flows need to be close to the summer flows for certain species?

A: The example I showed for this particular set of choices in the Glendale Narrows, if you wanted to support both willow and cattail marsh in Glendale Narrows, then the summer flows would need to stay pretty close to where they are right now and not drop too much lower than they are right now. Now, if you just wanted to support willows, and you were less concerned about the cattail marsh, then you actually have a lot more options. Specific results would vary based on different reaches of the river.

Continuing discussion on the Flow Study and Recommendations Report, the following topics were addressed.

- Discharge Scenarios
 - The study included stormwater flows and wastewater treatment plants capture plans that could/would alter the instream flows and how flows would be affected.
- Recap of Sensitivity Curve
 - The Sensitivity approach/curve allows for many scenarios to be evaluated under a wide range of scenarios of discharge.
 - Models can predict the discharge and how this affects the ecology throughout various seasons, etc. A Monte Carlo or a randomized simulation was used to run the models under a wide range of different conditions. The team performed 500 model runs and simulated a broad range in discharge scenarios from current wastewater treatment plant discharges, all the way down to zero discharge, and then, similarly, different degrees, zero to 100% retention of stormwater. These curves were developed for multiple seasons, for multiple locations, and for different scenarios, and related to different species.
- Flow Sensitivity Curve
 - There are a number of curves available for review online.
 - Wet, dry, and moderate rain years were included. However, the LA River is different since there are conservation practices in place that are not really good to use for modeling as wet, dry, and moderate rain (i.e., there is not a uniform relationship between rainfall and river flow due to the influence of conservation practices)

Question and Answer

- Q: Is the probability of the Monte Carlo run at 50%?
 - A: Curves are independent from the probability of species occurrence. We were interested in optimal flow range, based upon species. Either the medium or high probability ranges can be applied to the sensitivity curves
- Flow Sensitivity Curves by Season
 - Example: Glendale Narrows flow for willow and Typha -
 - Scenario 1: Only wastewater treatment flows
 - Scenario 2: Stormwater flows were eliminated

- **Question and Answer**

- Q: When averaging, what was your time stamp?

A: Hourly time stamp. For focal species, we aggregated to daily and seasonal, based upon needs of the species.

- Q: Flows are lower at night. How did you account for this?

A: We haven't addressed diurnal availability. We need to be within a flow range throughout the course of the year. For willows this wouldn't be problematic, but for a fish species, this would not be true.

- Q: For willow, what about if channel configurations change?

A: If physical changes occur, it could change the existing scenarios. That will be the next step in the analysis.

- Q: Wet and dry scenarios don't necessarily apply anymore.

A: If you look at the yearly rain flows and the actual flows in the river, these are not aligning so that is why we have provided ranges of response that represent flows observed in the river over time. Because of the influence of conservation practices, wet vs. dry years is not a useful distinction.

- Q: Is it possible to look at this more holistically in lieu of reach or node and instead look at the entire mainstem and then look at the reduction from all water treatment plants and then let the group know what species would be lost.

A: Yes, the example heat map accomplishes this. The user app will also be able to show this.

- Q: What about groundwater recharge?

A: Softbottom reaches are limited. We hold constant the amount of groundwater released into the Glendale Narrows. Regarding lateral inputs, infiltration is conveyed through the storm drains and are manifested in the model this way. Model looks at increases and decreases in storm drains, but we looked at reduced storm drains since MS4 permit requires this.

- Q: Did you focus on a bio-diversity level analysis?

A: No, we did not look at general biodiversity. Given the goals of the study, we focused on species-specific analysis. We do have a table that crosswalks the species related to overall river functions. In the future, we could also compare flows to regional models that relate flow to CSCI and ASCI as a measure of biodiversity.

- Q: Could the tools be used in reverse to assess how a proposed restoration project would change the flow needs for species and habitats and potentially free up water for other uses?

A: Yes, that's exactly what could happen. An example would be the Compton Creek confluence. In this case, a scenario might be developed where the restoration allows for a reduction in flows.

10 Minute Break

General Discussion

- For the technical report, a draft is being completed in March. There will be a review and comment period in April. Monitoring and adaptive management recommendations in will also

be in March. There will be continued water quality monitoring and temperature analysis. There will also be an assessment of Restoration Opportunities.

Next Steps

- Lori Webber provided an overview of next steps.
 - This is a tool that can be used by stakeholders and to make management decisions.
 - Short-term it will be used as non-binding guidance that may be helpful in evaluating wastewater change petitions.
 - It will look at trade-offs from flow changes.
- Other Team Comments included:
 - Sam Boland-Brien – this provides a good road map with the science. The end point goal will be through the process of the 1211 permit filings.
 - Jenny Newman thanked the team, Technical Advisory Committee, and Stakeholders.
 - Jonathan Bishop - considers this a leap forward in being able to analyze impacts in an objective manner. This is a tool that decisions can be made with.
- **Questions/Answers**
 - Q: How can this information be used by stakeholders?
A: For wastewater treatment plants, using this tool will assist in making the process easier. It would be great if all dischargers spoke in advance and coordinate the scenarios they evaluate.
 - Comment: Tool should not be limited to the Section 1211 process, but instead should be used more broadly. Hopes to assist the State Boards to protect the beneficial uses from a holistic perspective.
 - Comment: Great work produced. We talked about optimal flows and about maximizing habitat. Next steps would be to figure out what the best approach would be to maximize habitat and water supplies to the City.
 - Q: Great piece for the Section 1211 process. Will you be considering where the water comes from? It's comes from the Owens and Feather Rivers, so its origin is important and should be included in the process and considerations. For the LA River flows, your analysis should look at the timing of when these baseflows were added to the river. In normal pumping rights, this depends on when you started pumping. So, if there are petitions related to reduced flows, this has to consider where it's being taken from.
A: This is part of the overall 1211 process. The 1211 review is designed to balance water and in stream needs or beneficial uses. There is always an impact, but this tool is trying to figure out how to determine impacts. Whether or not it comes from outside of the basin is a consideration, but it's not the only one. How it affects the users of the water and how it affects the wildlife. What issues are raised in protest and the evidence provided will allow for a response. Right now, there is an LA River Master Plan. It would be interesting to understand how the wastewater treatment plants are considering those.
 - Q: Would reductions in wastewater and stormwater discharge affect water quality?
A: Potentially, we can look at that and how the flow seasons are affecting species and water quality

- Q: Is it possible to convene stakeholders again? It would be interesting to consider if there is a way to augment flows from tree plantings, or from water and habitat enhancement as a way to address some of the species and recreation beneficial uses?
A: It's part of the ongoing discussion with treatment plants. They may be able to augment recycled water through use of treated stormwater or restoration projects. Flow typically is only one part of the equation. It's up to the stakeholders to facilitate the conversation concerning these issues.
- Q: If a private company wants to start kayaking on the river, does that trigger a California Environmental Quality Act (CEQA) evaluation?
A: This would not be subject to CEQA, unless a discretionary action was needed and, in that case, it would be subject to the local jurisdiction.
However (Comment from Sarah Rascon) – Mountains Recreation and Conservation Authority (MRCA) helps to administer the recreation and biological resources component. MRCA does issue permits and coordinates closely with the USACE. Permits are valid during dry-season period. LA River was deemed a “navigable waterway” it does contain protections for habitat and biological resources.
- Comment: Really applaud the group for their work. Not sure how the tool will work, but it looks like for advocacy work they are doing it will provide useful.
- Comment: Would be great if this tool could be used to support other initiatives TNC and others are undertaking.
- Comment: Eric Stein thanked everyone involved in the study and who provided feedback throughout the process.

Closing Comments from Meeting Hosts

- Thanks to everyone for supporting this effort. It will be a useful tool for the State and Regional Water Boards. The work has exceeded many expectations, especially since its science-based, but the hope is for it and the associated work to continue. Hopefully, this model can be used for other watersheds, especially in the urban watersheds.

END: 11:40 AM

Respectfully submitted:
Gilberto Ruiz, Stantec

Appendix A – Attendee List

SWG Members and Public

Michael Affeldt	Tricia Lee
Manuel Aguilar	Mia Lehrer
Paul Alva	Michael Lyons
Ginachi Amah	Sean Maguire
Mike Antos	Christine Medak
Brian Baldauf	Chris Minton
Edward Belden	Mitchell Mysliwiec
Tim Brick	Mary Ngo
Josiah Cain	Rudy Ortega
Paul Cobian	Alexander Prescott
Michael De Ghetto	Ian Prichard
Mas Dojiri	Hassan Rad
Jan Dyer	Sarah Rascon
Debbie Enos	Anthea Raymond
Kimia Fatehi	Ernesto Rivera
Shona Ganguly	Matt Romero
Luke Ginger	Susie Santilena
Madelyn Glickfeld	Daniel Schultz
Joe Gonzalez	Dian Tanuwidjaja
Henry Graumlich	Dan Tormey
Liliana Griego	Melanie Tory
Michael Hanson	Martha Tremblay
Adena Hopenstand	Marcos Trinidad
Katie Irving	Jane Tsong
Nina Jazmadarian	Rafael Villegas
Rita Kampalath	Pavlova Vitale
Venu Kolli	Dean Wang
Yao Kouwonou	Josh Westfall
Ronaldo Lacayo	Kody Whisman
Susana Lagudis	Milo Yukimoto
Jared Lee	

Staff and Consultants

Jonathan Bishop, State Water Board
Lori Webber, State Water Board
Tatyana Isupov, State Water Board
Jenny Newman, Los Angeles Regional Water Quality Control Board
Sam Boland-Brien, State Water Board
David Coupe, State Water Board
Lisa Beutler, Stantec
Gilberto Ruiz, Stantec
Kris Taniguchi-Quan, PhD, Southern California Coastal Water Research Project
Eric Stein, PhD, Southern California Coastal Water Research Project