

The California Environmental Flows Framework (CEFF) for the Los Angeles River

Technical Working Group Meeting #6
August 24, 2026

Mountains Recreation & Conservation Authority

Stillwater Sciences

McMillen

TWG#6 AGENDA

1	Introduction
2	Flow Recommendations
3	Lunch
4	Management Action and Supplemental Recommendations
5	Implementation Plan Recommendations
6	Looking Ahead

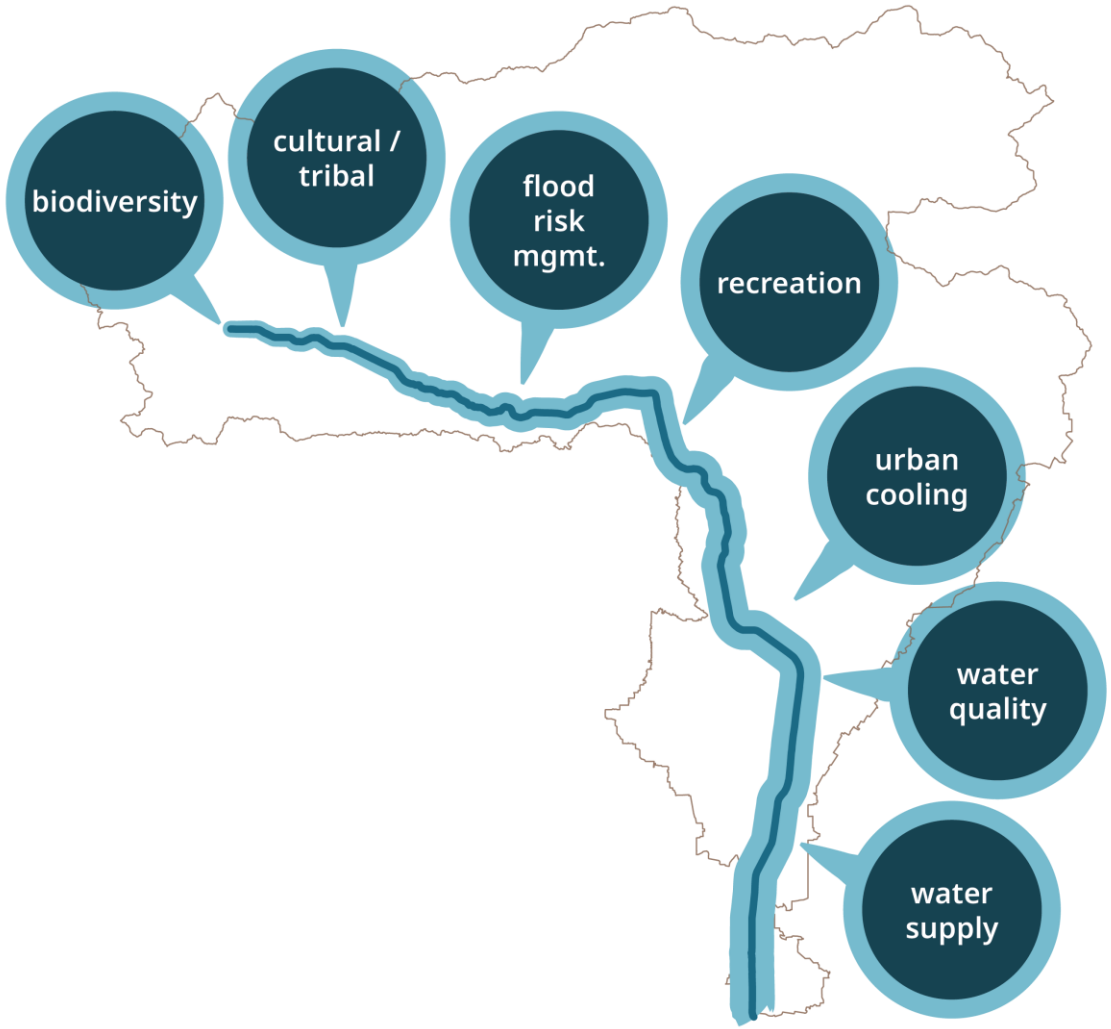


Welcome

In Memory of Steve Appleton



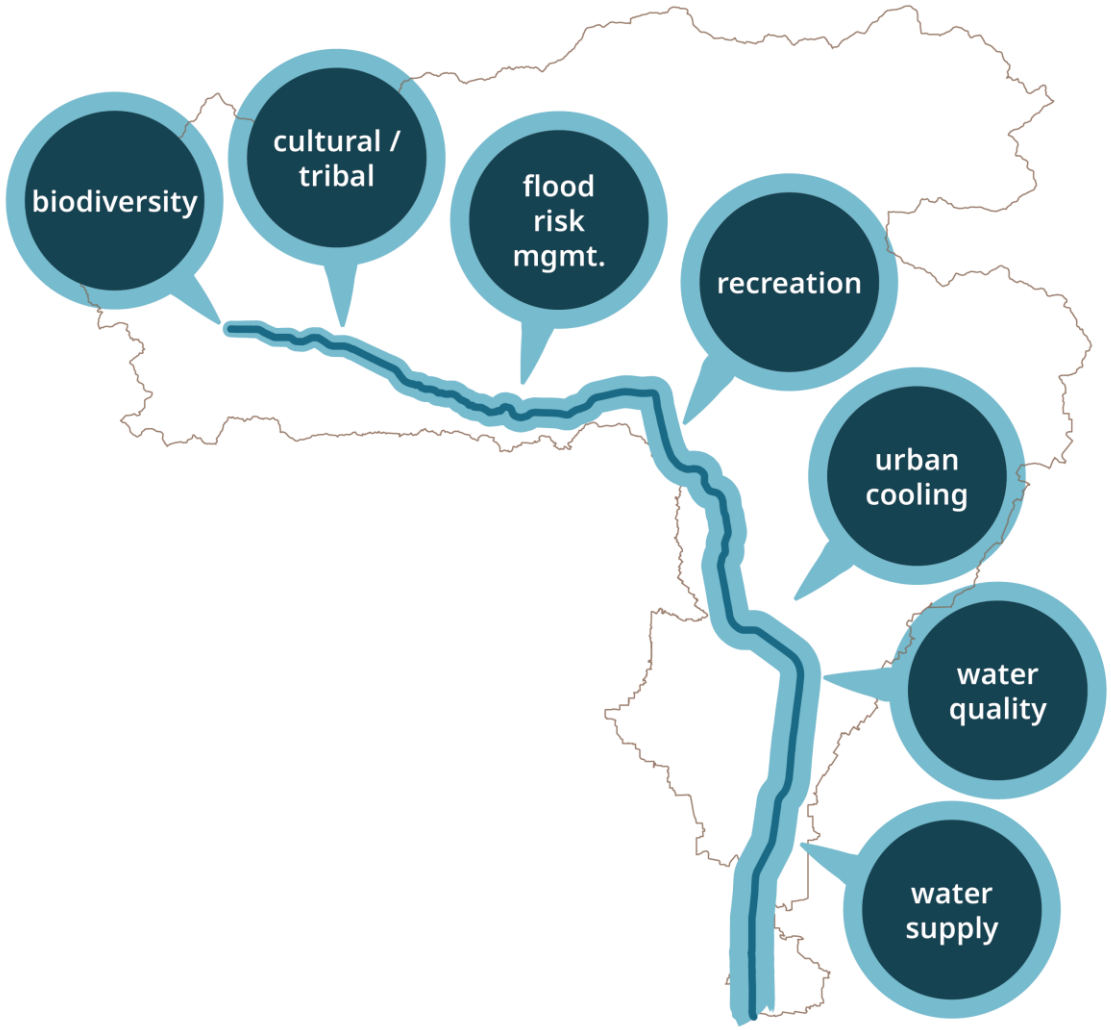
LA River CEFF Overview



CEFF Outcome

Flow recommendations that are aligned with management goals

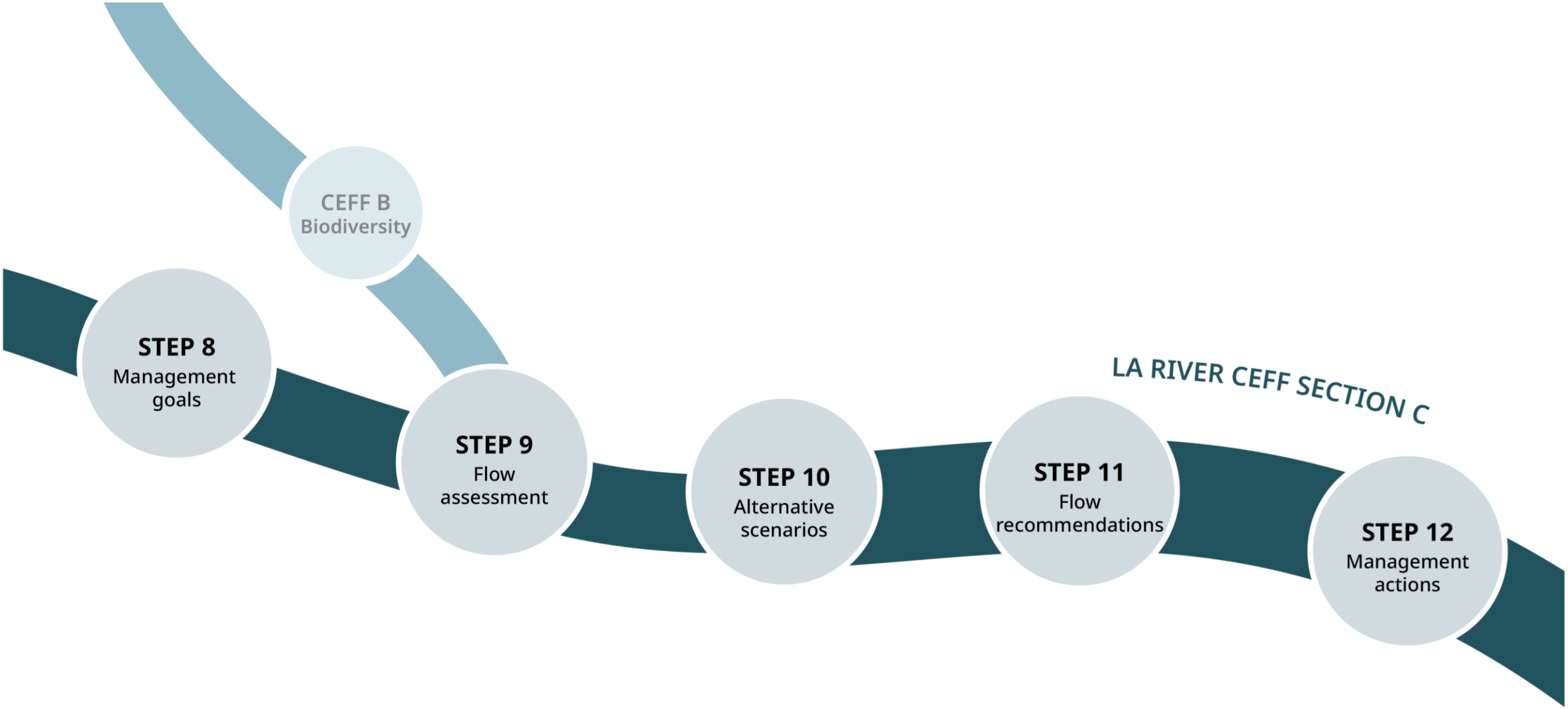
LA River CEFF Overview



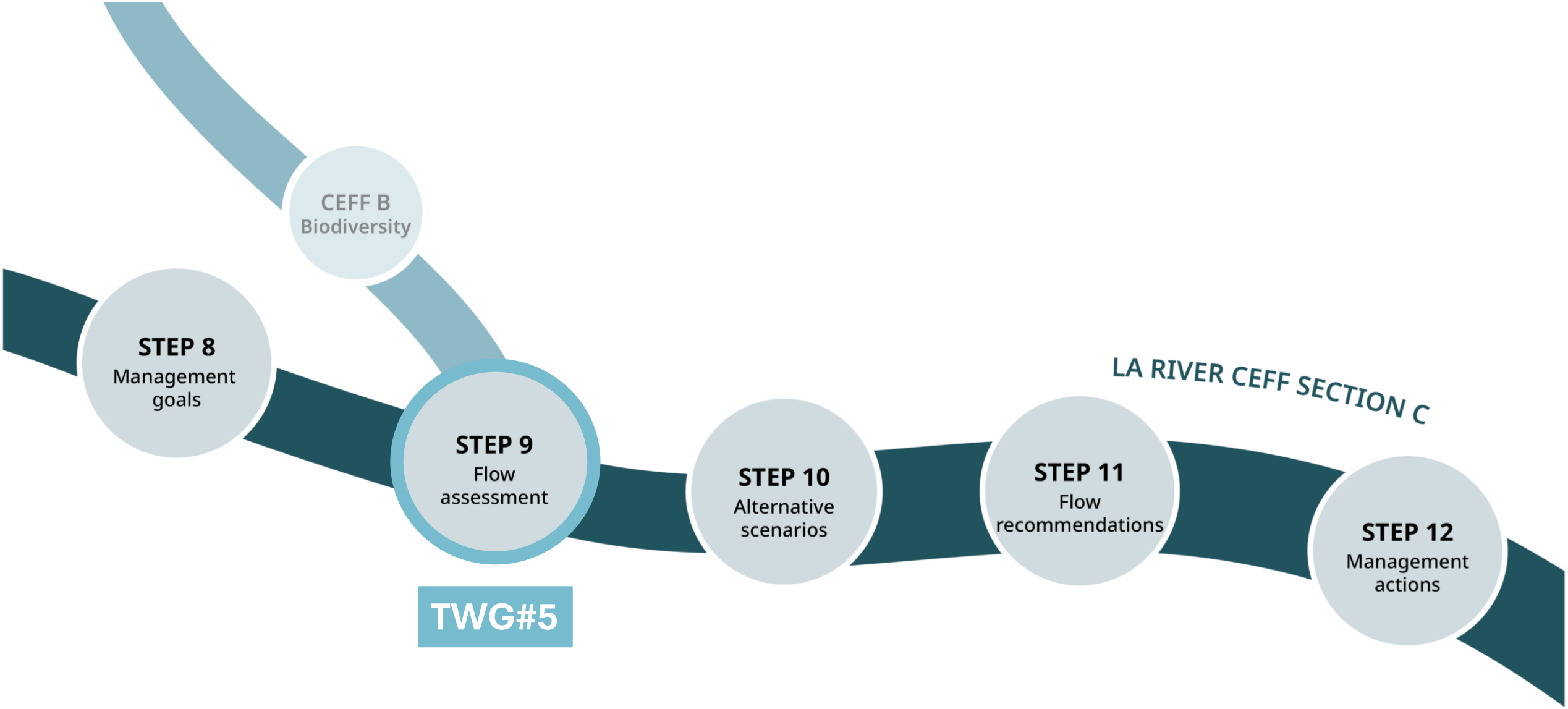
Flow recommendations are intended to support goals under *a* potential or planned channel form.

Flow recommendations may not support goals under *all* potential or planned channel forms.

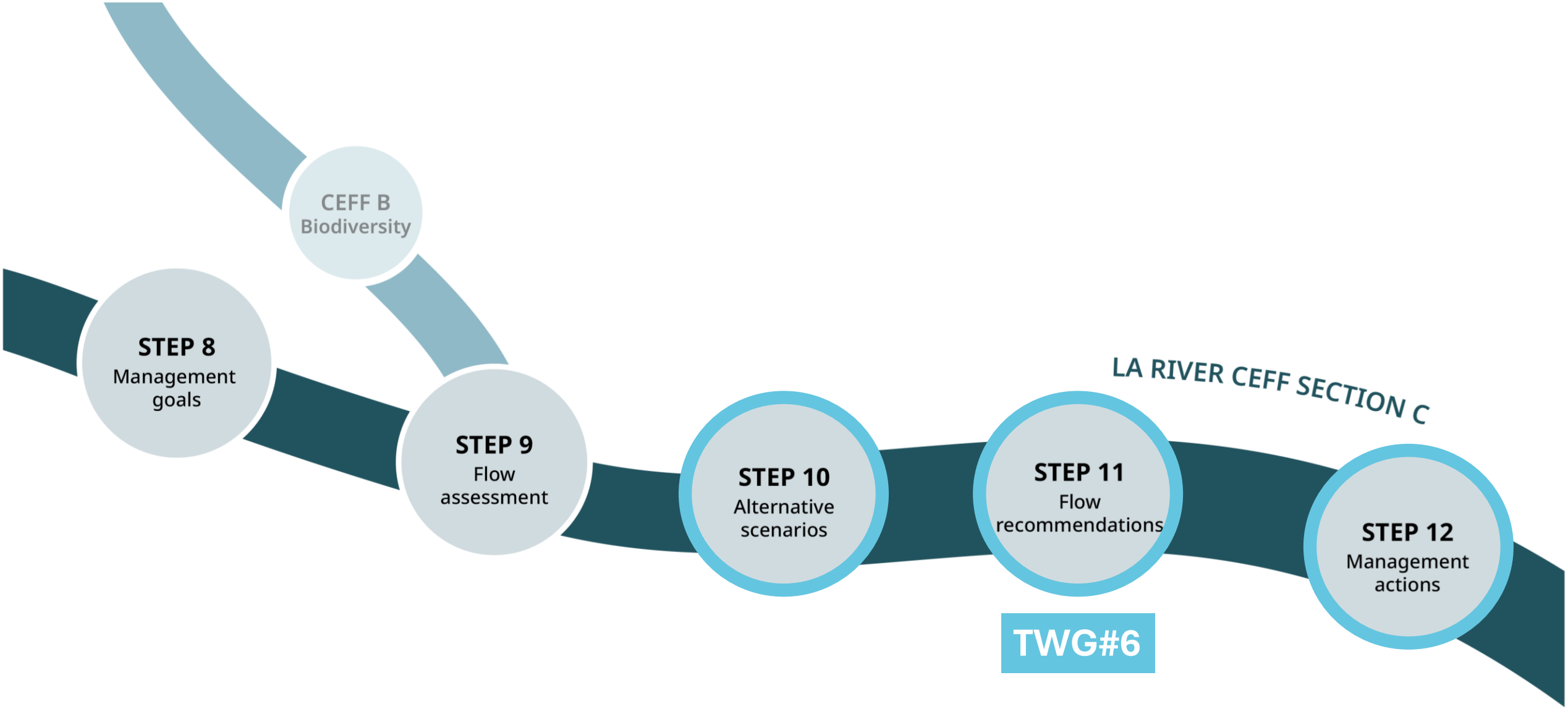
LA River CEFF Project Section C Progress



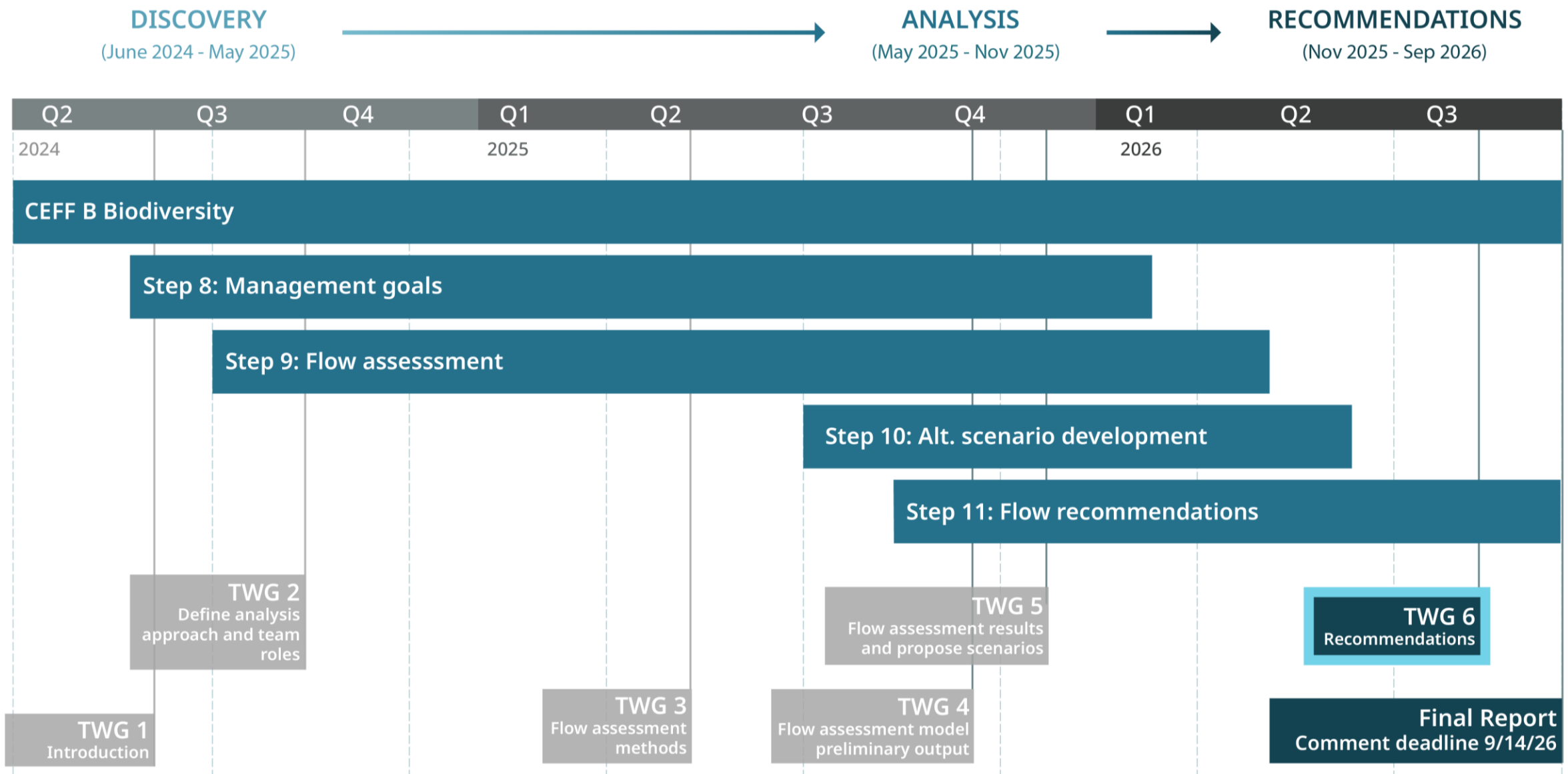
LA River CEFF Project Section C Progress



LA River CEFF Project Section C Progress



LA River CEFF Project Schedule

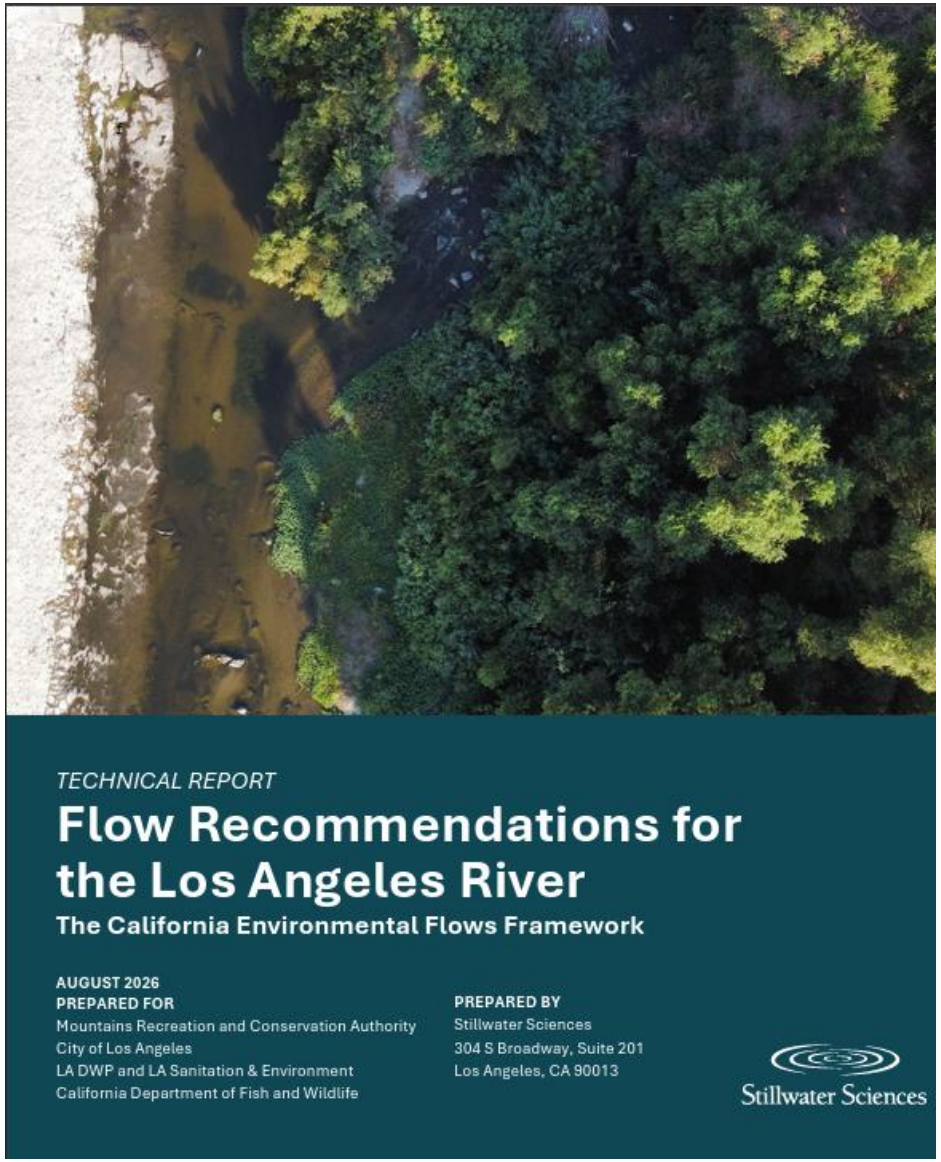


LA River CEFF Project Section C Technical Report

Flow Recommendations for the Los Angeles River: the California Environmental Flows Framework Technical Report and its executive summary is provided on the LA River CEFF TWG share folder
(LAR CEFF TWG share → CEFF Section C → LA River CEFF Technical Report)

Link was provided in the TWG 6 meeting invite

Your input on the LA River CEFF Section C Technical Report is welcome by **Sept 14, 2026**





TWG#6 Purpose

High-level overview of the
LA River CEFF Project recommendations

LA River CEFF Project – TWG #6 Purpose

1. Share the LA River CEFF Project flow recommendations with TWG

2. Explore a set of management action and supplemental recommendations to improve achievement of goals

3. Look ahead to potential next steps, including implementation plan recommendations

Summary of Previous LA River CEFF Progress

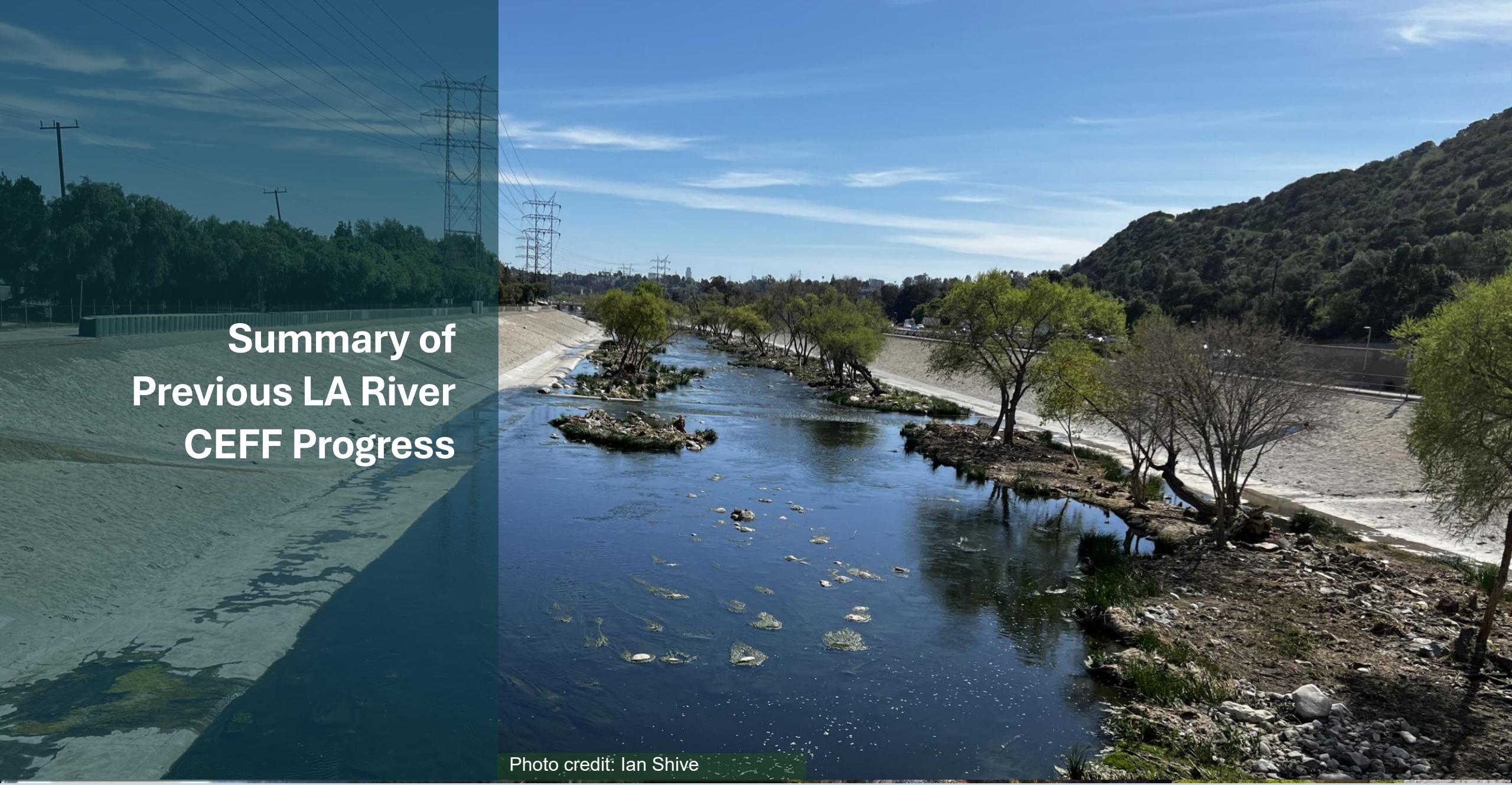


Photo credit: Ian Shive

LA River CEFF Project Achievements

The LA River CEFF Project has successfully:

- Facilitated discussions between stakeholders
- Shared watershed goals
- Defined metrics for assessing those goals
- Leveraged best available models
- Assessed flows that support goal metrics

The LA River CEFF analysis has advanced our **shared understanding of watershed conditions, recognition of future needs, and opportunities for collaboration** to support achieving our goals.



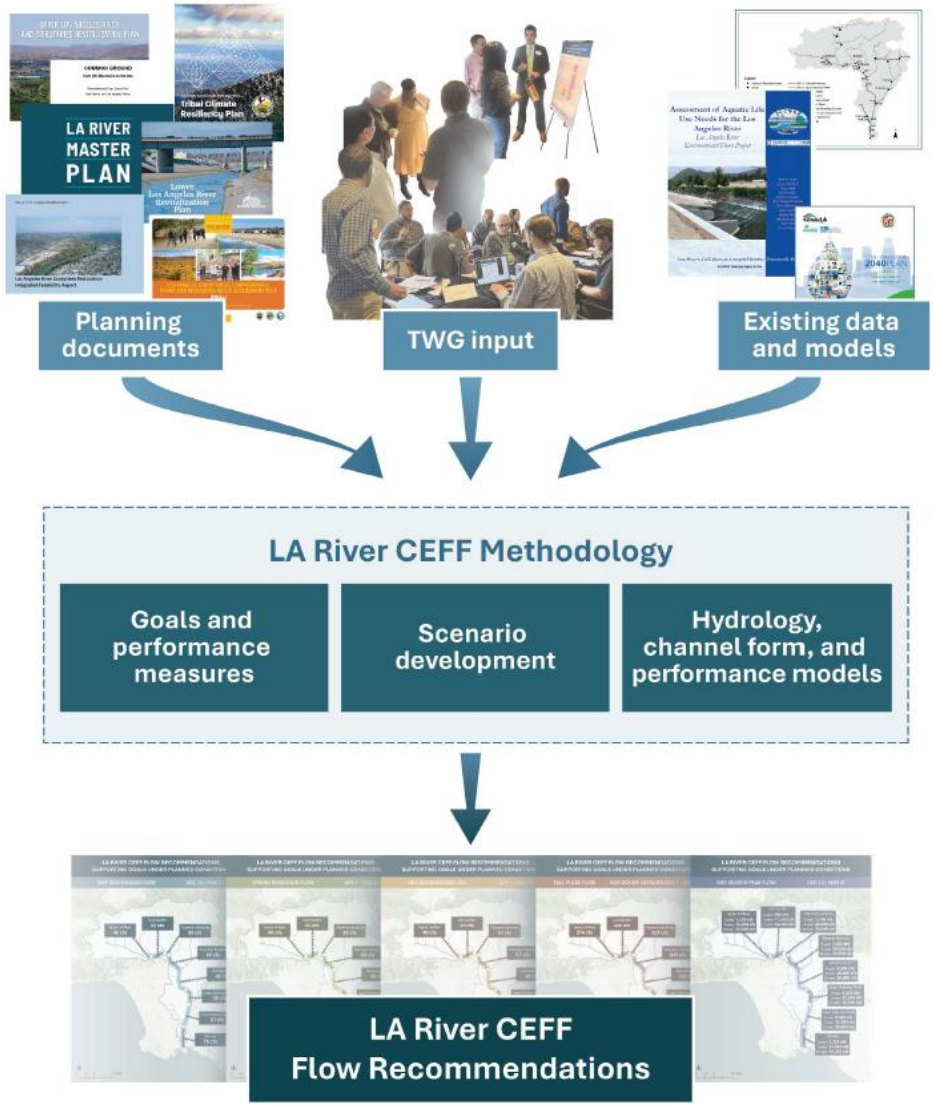
Photo credit: Stillwater Sciences

LA River CEFF Section C – Methodology

The LA River CEFF Project team collaboratively developed methodology with TWG based on CEFF principles.

TWG, TTWG, and smaller group meetings focused on compiling:

- watershed goals
- metrics for assessing goals
- planned changes to watershed
- available data and models for assessing watershed conditions

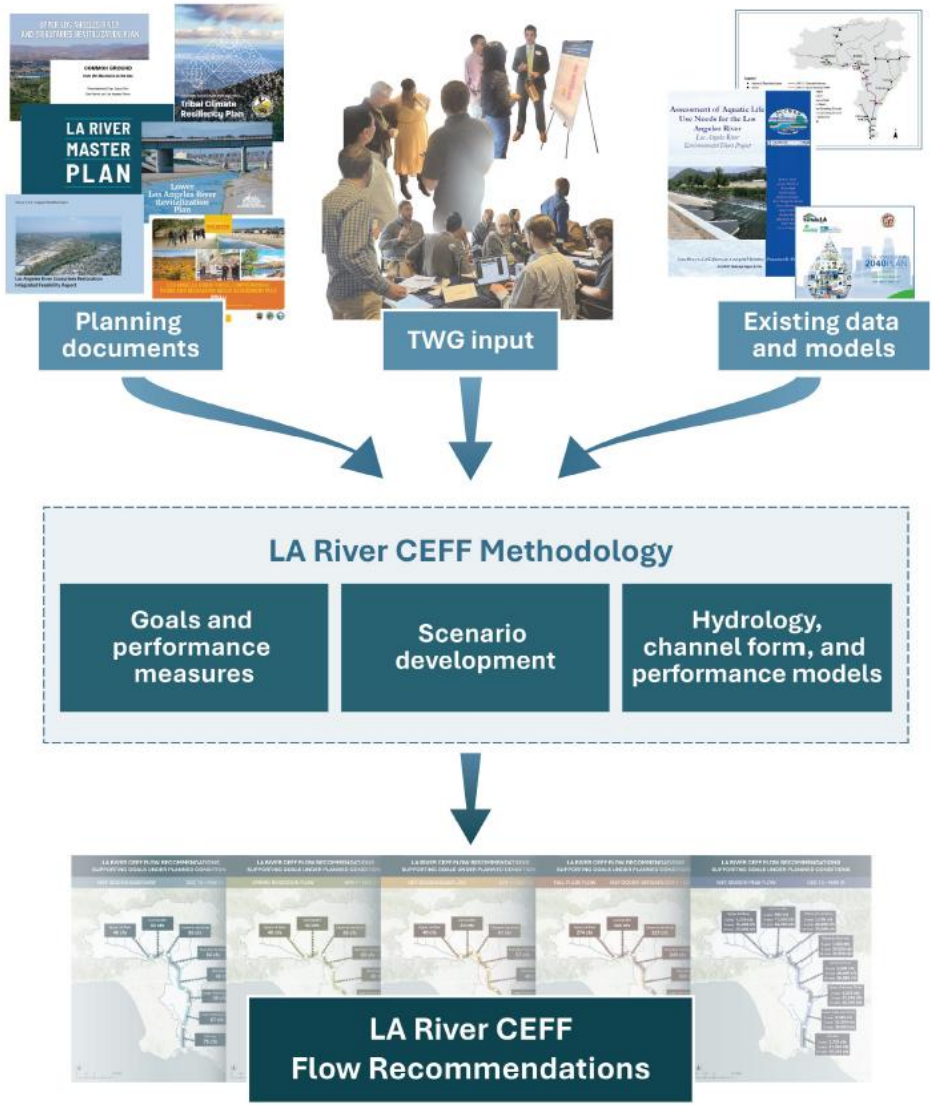


LA River CEFF Section C – Methodology

LA River CEFF approach and results presented at TWG meetings enabled the TWG to **provide input at key milestones and refine methods.**

TWG 1:	Intro to CEFF and LA River CEFF Project
TWG 2:	Discovery of goals and metrics
TWG 3:	Summary of metrics
	Flow assessment approach
TWG 4:	Flow assessment scenarios
	Flow assessment initial results
TWG 5:	Additional flow assessment initial results
	Flow recommendation approach

The data and input collected **were combined to estimate flow recommendations** that support achieving our watershed goals.



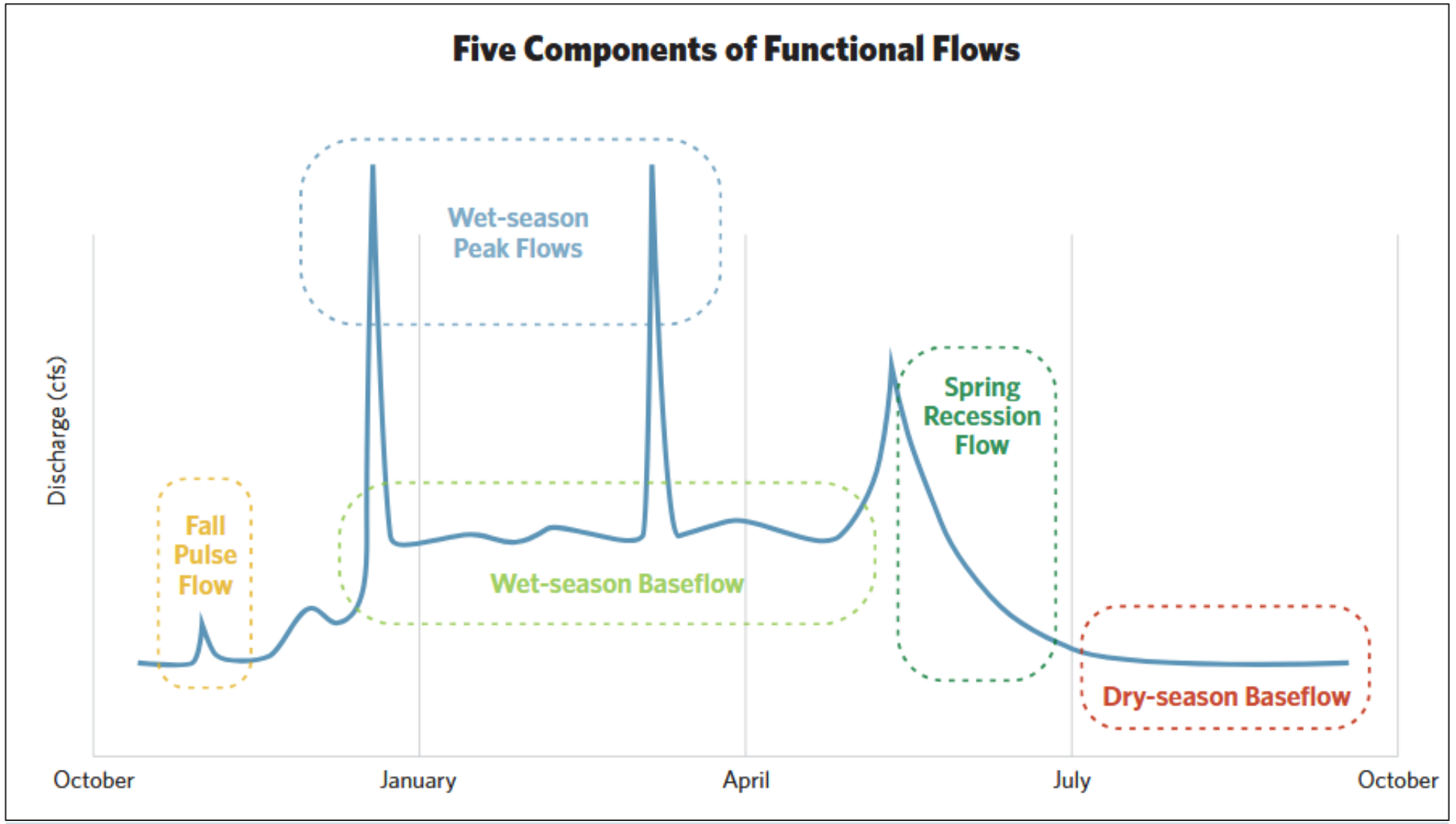
LA River CEFF Project Flow Recommendations



Photo credit: Ian Shive

Mountains Recreation & Conservation Authority
Stillwater Sciences
McMillen

Functional Flow Metrics Refresher – Reading a Hydrograph

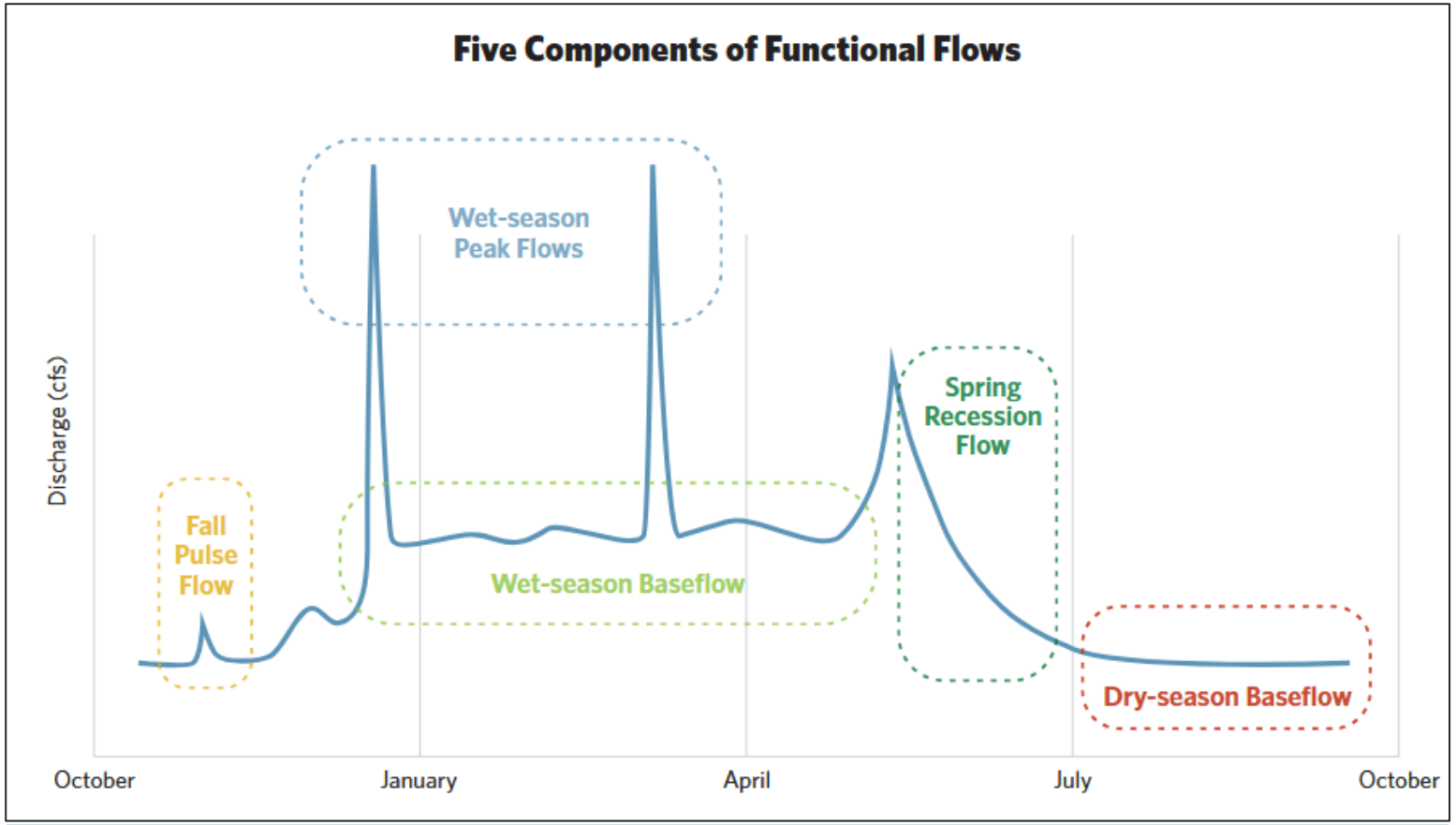


Source: The California Environmental Flow Framework Executive Summary (CEFWG 2024)

Functional Flow Metrics Refresher – Reading a Hydrograph

Flow recommendations are grouped into two categories:

- Baseflows
- Stormflows

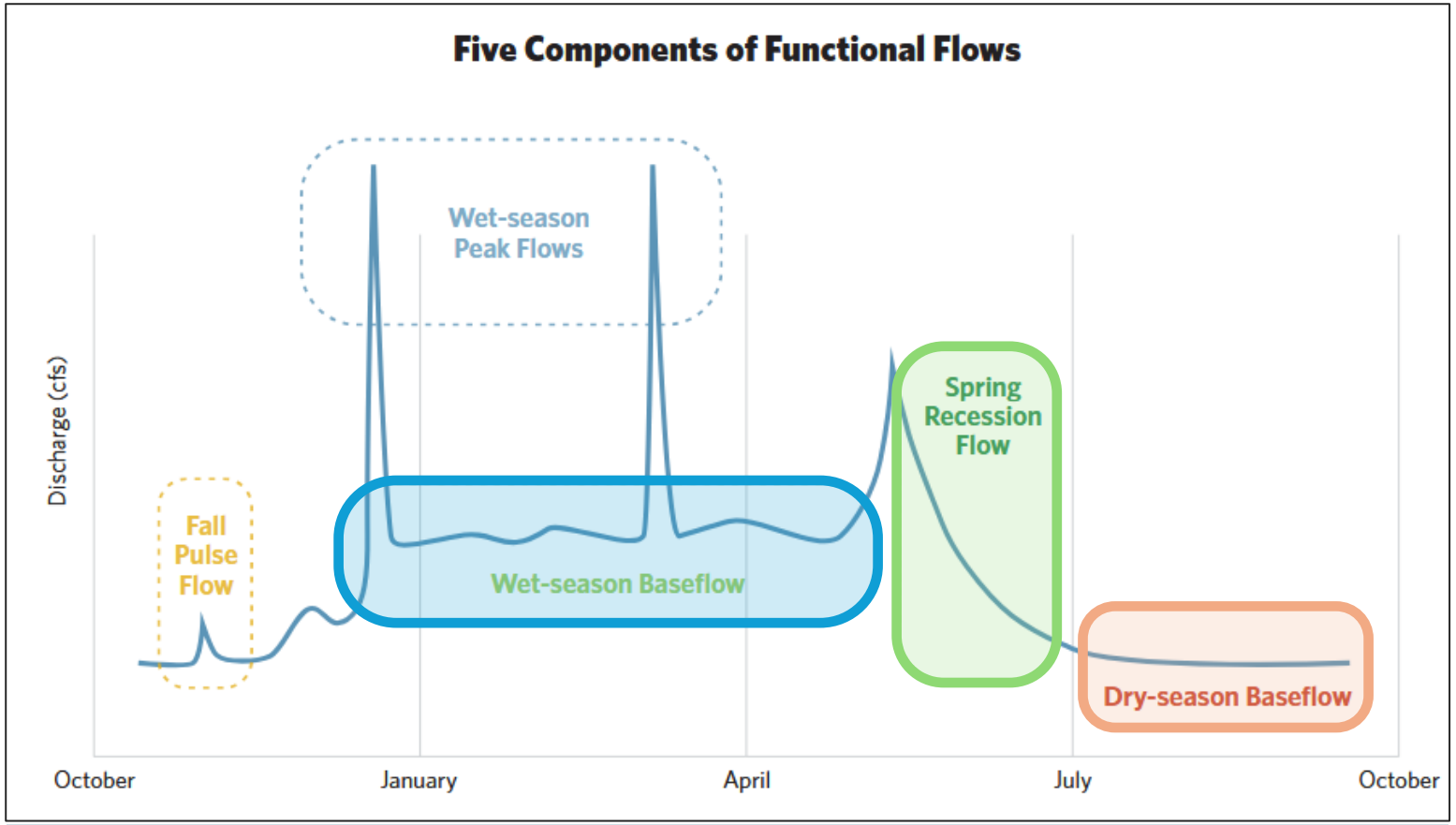


Source: The California Environmental Flow Framework Executive Summary (CEFWG 2024)

Functional Flow Metrics Refresher – Reading a Hydrograph

Baseflows

- Wet-season baseflow
- Spring recession flow
- Dry-season baseflow



Source: The California Environmental Flow Framework Executive Summary (CEFWG 2024)

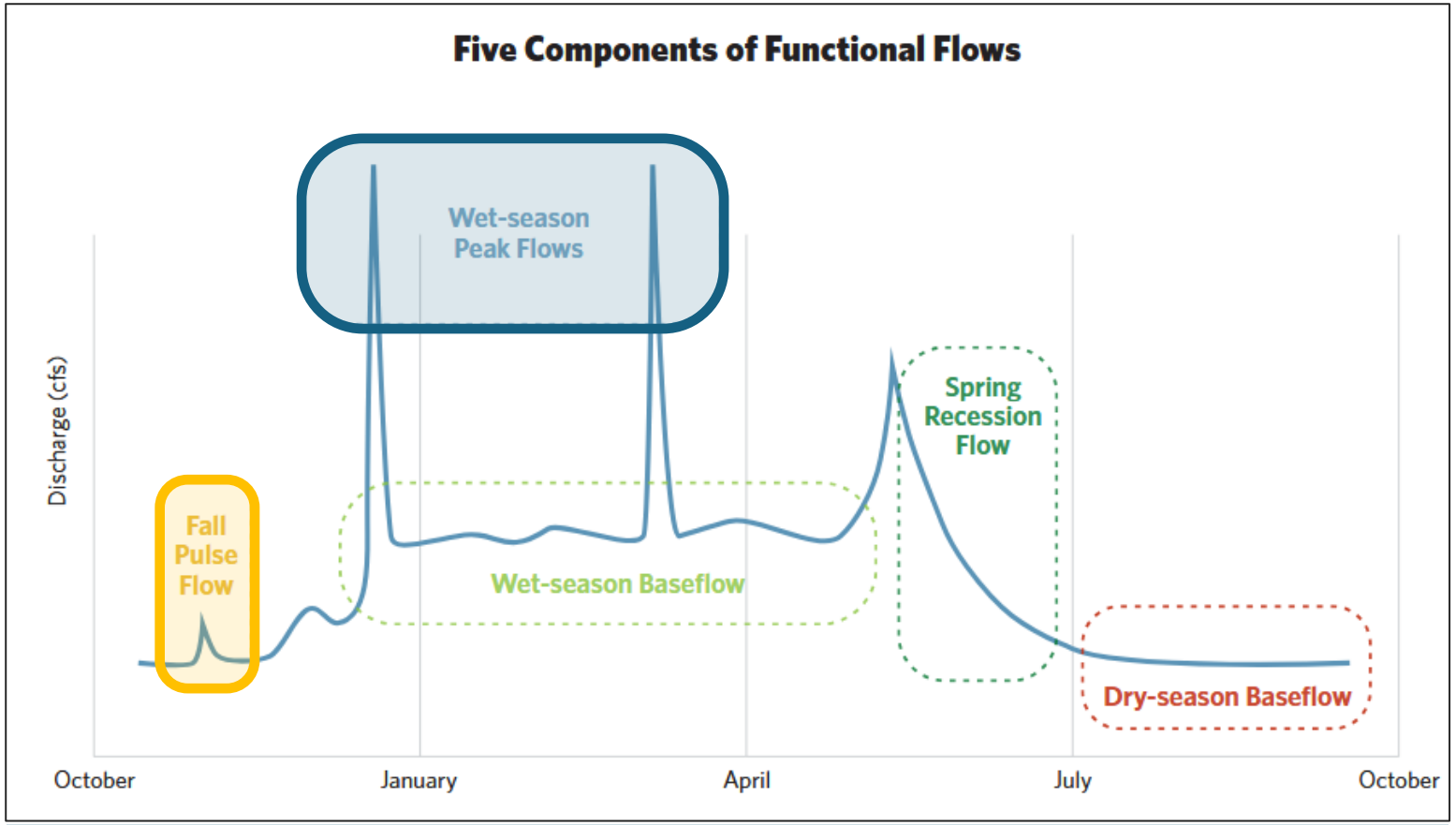
Functional Flow Metrics Refresher – Reading a Hydrograph

Baseflows

- Wet-season baseflow
- Spring recession flow
- Dry-season baseflow

Stormflows

- Fall pulse flow
- Wet-season peak flow

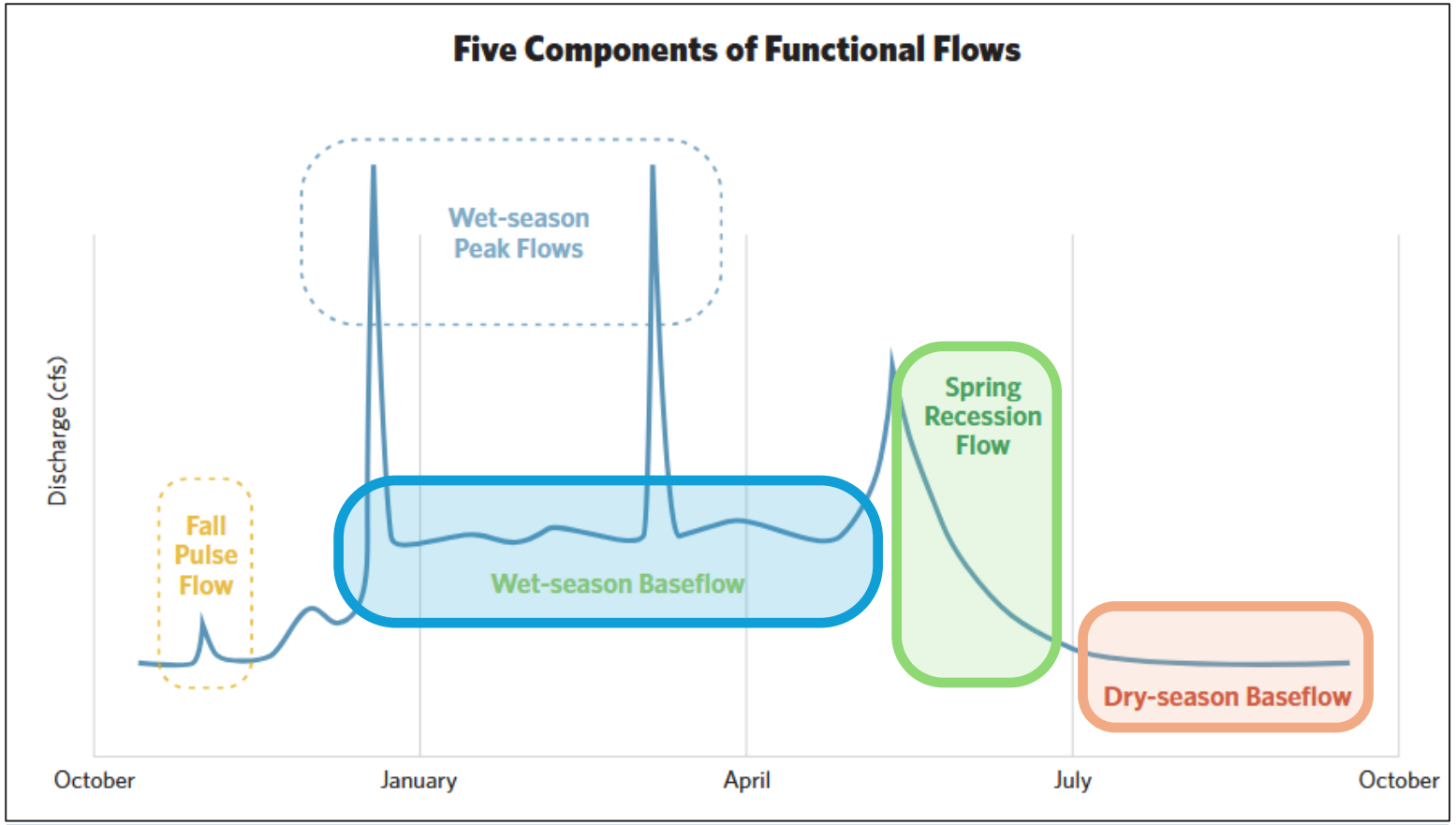


Source: The California Environmental Flow Framework Executive Summary (CEFWG 2024)

Functional Flow Metrics Refresher – Reading a Hydrograph

Baseflow recommendations are the focus of TWG#6 since they are within range of what would be operationally feasible for discharges to the LA River to influence.

Stormflow recommendations are discussed further in the LA River CEFF Section C Technical Report and executive summary.



Source: The California Environmental Flow Framework Executive Summary (CEFWG 2024)

LA River CEFF Project Section C – Flow Recommendations Introduction

LA River CEFF Project assessed **existing conditions, planned conditions, and three hypothetical alternatives**.

Modeled results provides insight into how well goals are supported under:

- the existing channel form at existing or reduced flows
- a range of planned channel forms and flows
- hypothetical combinations of channel forms and flows

The ***Flow Recommendations for the Los Angeles River: the California Environmental Flows Framework Technical Report*** and its **executive summary** further discuss results for **modeled scenarios**.

Photo credit: Stillwater Sciences

LA River CEFF Project Section C – Flow Recommendations Introduction

Flow recommendations are based on TWG developed metrics and range of **planned channel form conditions** in available planning documents.

Flow recommendations are **not** minimum flow thresholds.

Photo credit: Stillwater Sciences

LA River CEFF Project Section C – Flow Recommendations Introduction

Flow recommendations are provided per reach for each functional flow period.

Flow recommendations are specified for eight reaches along the mainstem LA River.

Functional flow period is based on timing in California Natural Flows Database (CNFD)



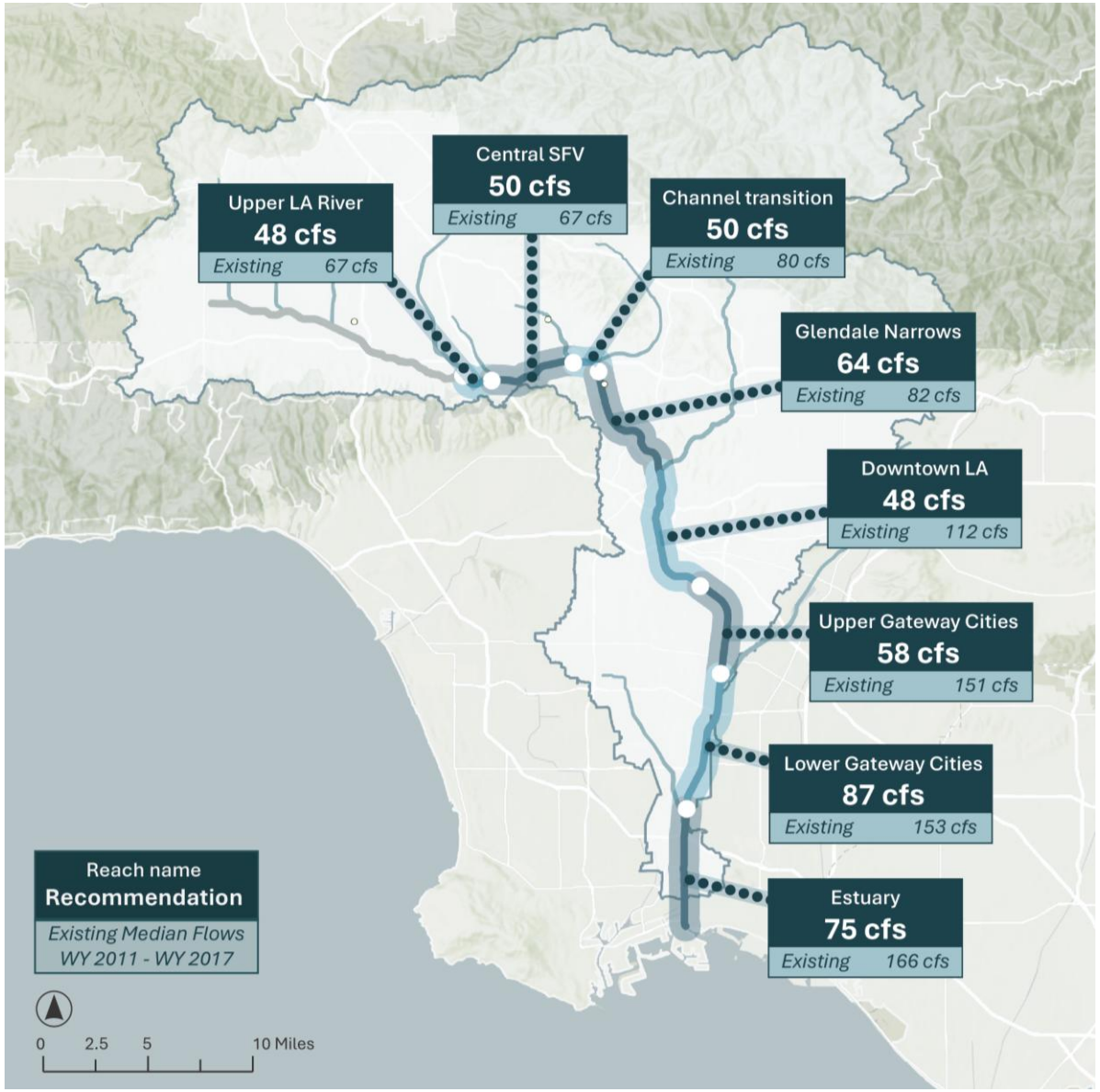
LA River CEFF Project Section C – Flow Recommendations Introduction

Variations in flow recommendations per reach typically reflect how **channel form changes alter** how well performance measures (PMs) are supported at a specific flow.

Lower flow recommendations generally indicate a reach where channel form better supports PMs.



Flow Recommendations: Wet-season Baseflow (Dec 15 – Mar 31)



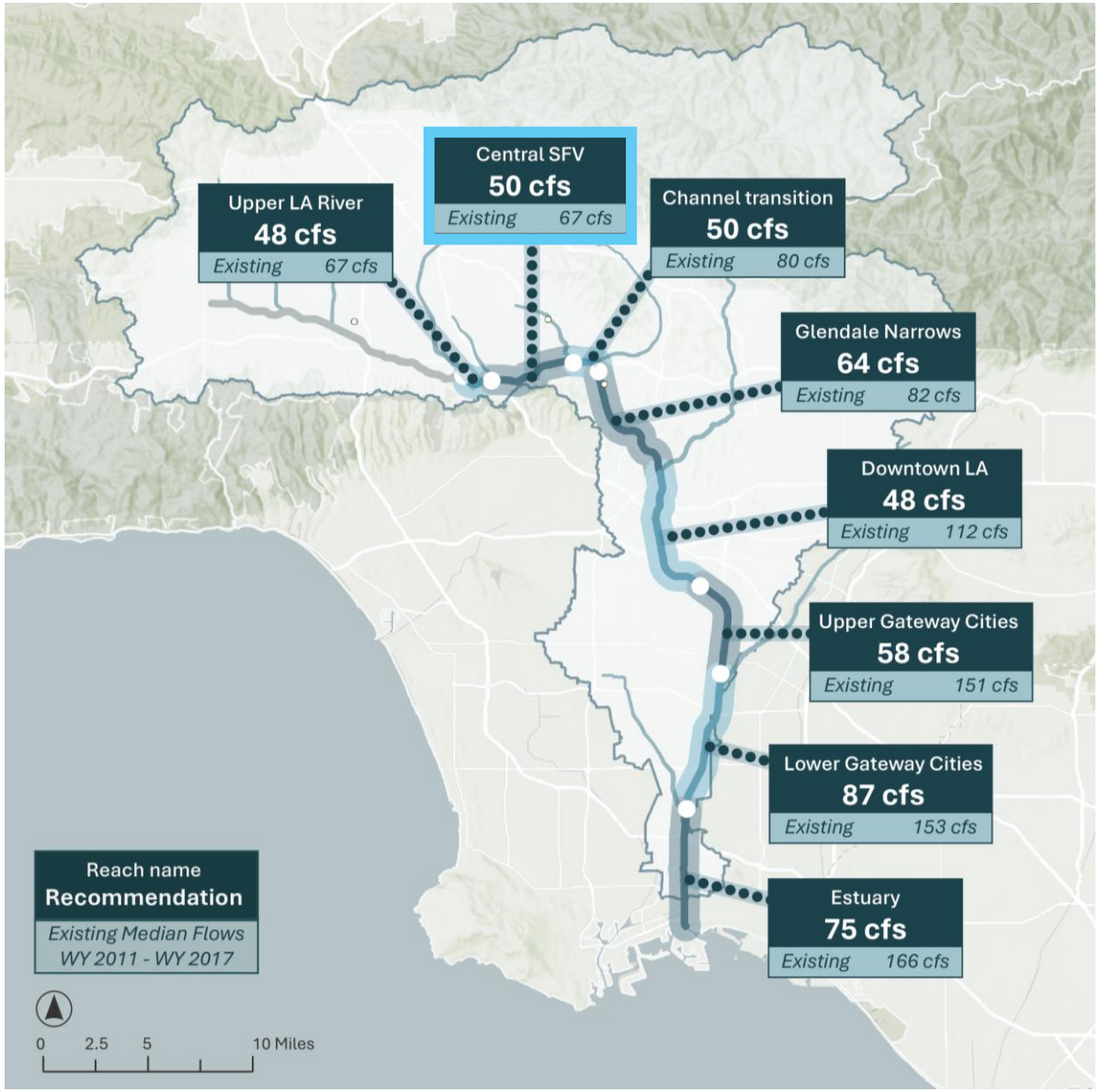
Baseflow recommendations characterize the *lower limit flow* to support performance measures (PMs).

Wet-season baseflow recommendations are typically set by flow necessary to support biodiversity and recreation PMs (tied).

Flow recommendations support 100% of applicable performance measures in all reaches, except:

- Central San Fernando Valley
- Glendale Narrows

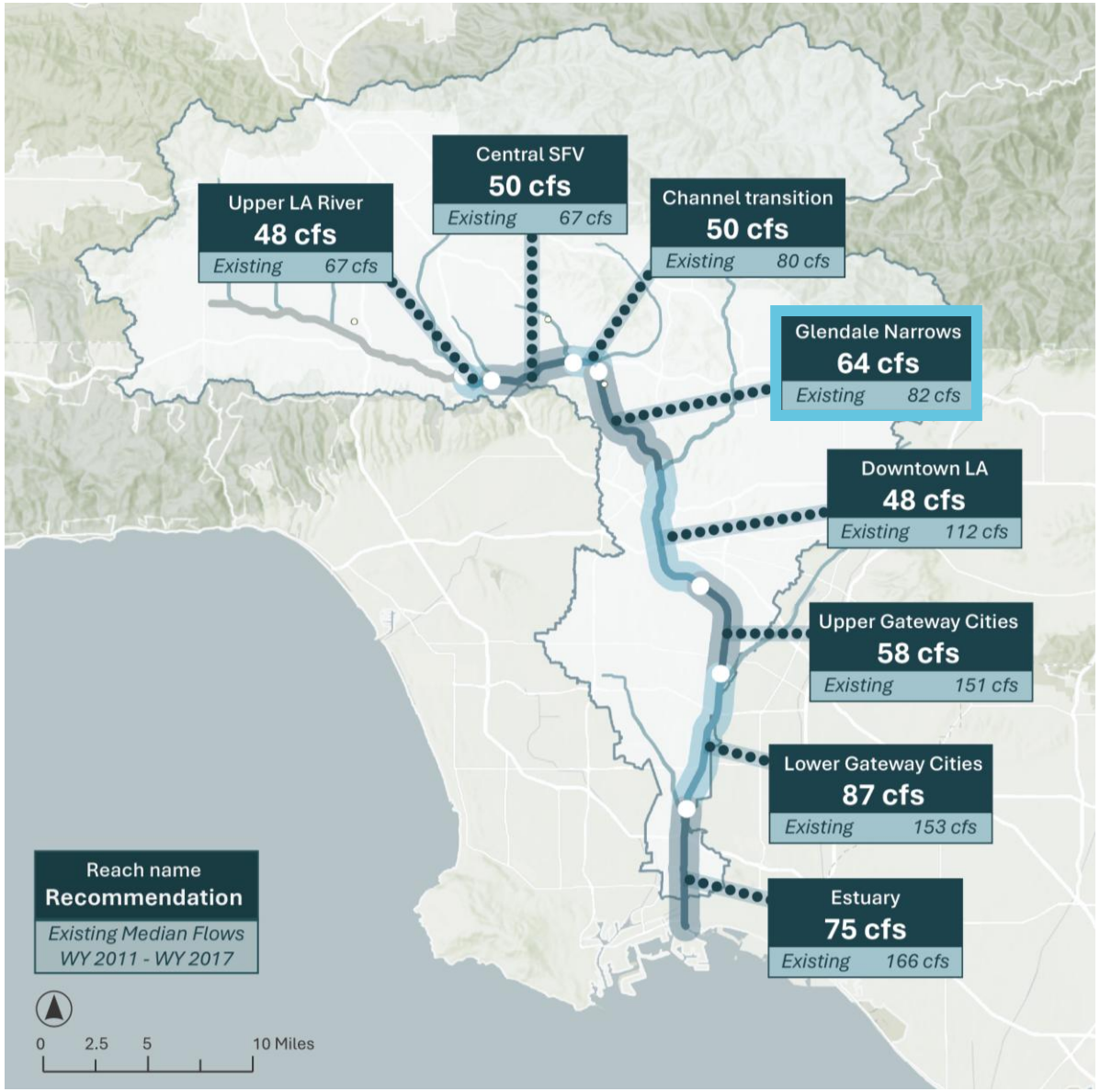
Flow Recommendations: Wet-season Baseflow (Dec 15 – Mar 31)



Central San Fernando Valley (SFV)

- Flow to support all PMs in entire reach is 55 cfs
- Flow to support all PMs upstream and downstream of reach is lower though.
- Recommendation assumes **future design work could improve channel form** in this reach and support 100% of PMs at this flow
- **Recommendation supports 80% of PMs** in the reach given available planned channel form conditions

Flow Recommendations: Wet-season Baseflow (Dec 15 – Mar 31)



Glendale Narrows

- Multiple shallow, wide sections in this reach without a well-defined low flow passage area
- Planned channel form changes were not extensive enough to consistently support 1-ft water depths required by multiple PMs at lower flows
- Sections of reach supported 1-ft water depths, but only *limited* sections (<50% of the reach)
- Recommendation selected to consistently support 0.5-ft water depth (> 50% of the reach)
- Recommendation supports 86% of PMs

Flow Recommendations: Wet-season Baseflow (Dec 15 – Mar 31)



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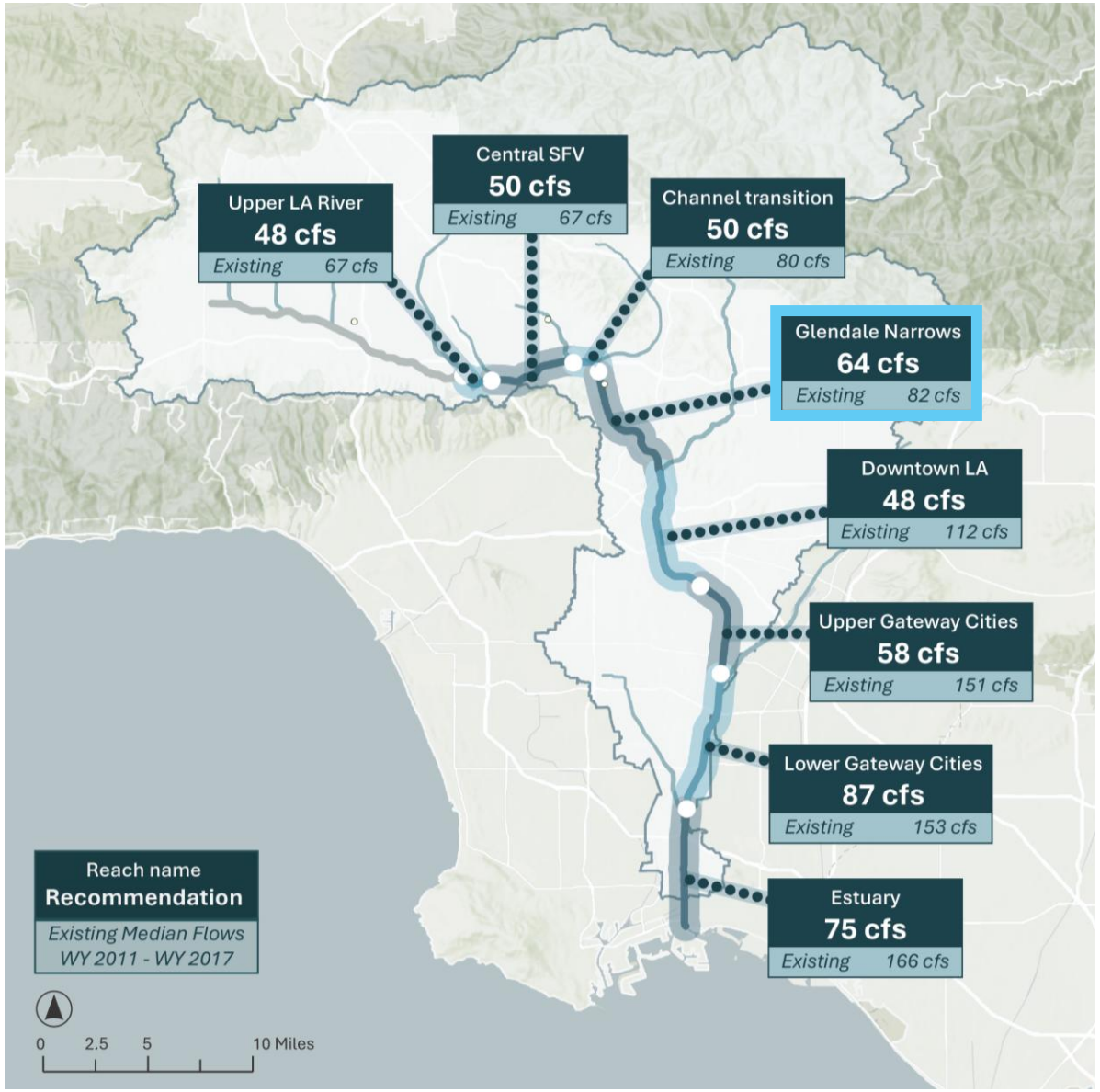

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- Recommendation selected to consistently support 0.5-ft water depth (> 50% of the reach)
- **Recommendation supports 86% of PMs**

Flow Recommendations: Spring Recession Flow (Apr 1 – May 31)



Spring recession flow recommendations are nearly identical to wet-season baseflow recommendations.

- Same channel forms
- Same set of PMs driving flow needs

Spring recession flow recommendations differ because flows under existing and planned conditions change between seasons.

Flow Recommendations: Spring Recession Flow (Apr 1 – May 31)



Glendale Narrows

- Recommendation is lower because less flow is likely to be available during this time period under planned conditions
- **Recommendation still supports 83% of PMs**
- Sections of the reach support 0.5-ft and 1-ft water depths, but only in *limited* sections (<50% of the reach)
- Recommendation assumes **future design work could improve channel form** in this reach and support more PMs at this flow

Flow Recommendations: Dry-season Baseflow (Jun 1 – Dec 14)



Dry-season baseflow recommendations differ from other functional flows because

- Different set of PMs driving flow needs
- Flows in the river change between seasons

Dry-season baseflow recommendations typically set by flow necessary to support recreation.

Biodiversity is often still supported at lower flows.

Flow Recommendations: Dry-season Baseflow (Jun 1 – Dec 14)



Dry-season baseflow recommendations support 100% of applicable performance measures in all reaches, except:

- Central San Fernando Valley
- Glendale Narrows

Flow Recommendations: Dry-season Baseflow (Jun 1 – Dec 14)



Central San Fernando Valley (Central SFV)

- Flow to support all PMs in *entire* reach is 55 cfs
- Flow to support all PMs upstream and downstream of reach is lower though
- Recommendation assumes **future design work could improve channel form** in this reach and support 100% of PMs at this flow
- **Recommendation supports 94% of PMs** in the reach given available planned channel form conditions

Flow Recommendations: Dry-season Baseflow (Jun 1 – Dec 14)



Glendale Narrows

- Shallow, wide sections without a well-defined low flow passage area limit support for all PMs
- Dry-season baseflow recommendation is lower than other seasons because less flow available under planned conditions
- **Recommendation supports 85% of PMs**
- PMs only partially supported (<50% of reach):
  - RE-10 (Fishing)
  - RE-3 (Canoeing), and
  - BD-2 (Steelhead Juvenile Migration)

LA River CEFF Project Results in Action

LA River CEFF Project flow recommendations are synthesis of ***a lot*** of model results.

Detailed model results can be used to understand what performance measures (and goals) are supported at different flows.

LA River CEFF Technical Report, Appendix G summarizes how performance measures are (or are not) supported across wide range of flows.



Photo credit: Stillwater Sciences

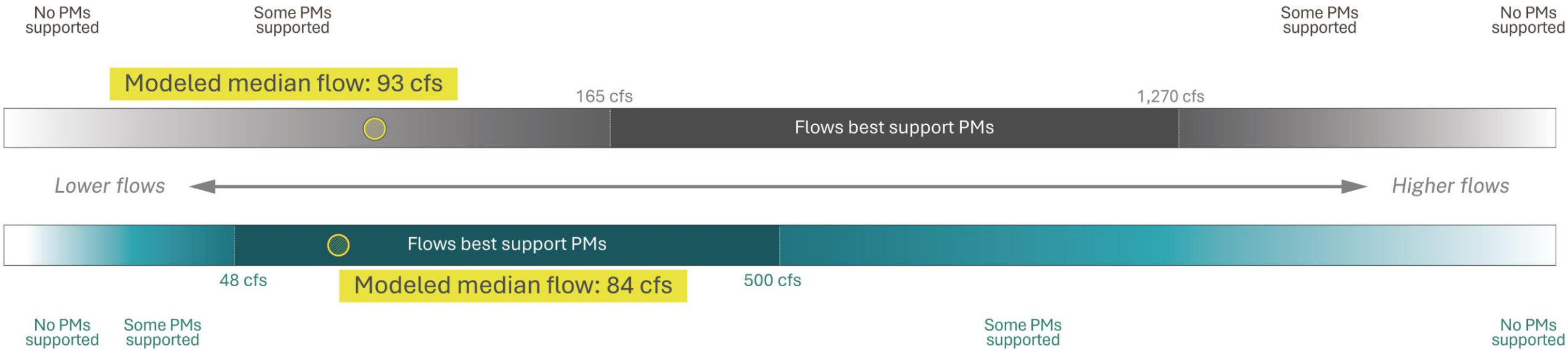
Downtown LA (LOI 17.23) detailed **dry-season baseflow** lower and upper limit flows for each applicable performance measure under Existing Conditions and Synthesis of Planned Conditions.

Adapted from Appendix G, Table G-12

Functional Flow	Rank	Lower Limit Flow Supporting Performance Measure (cfs)	Performance Measure(s) Associated with Lower Limit Flow	Total Number of Applicable Performance Measures	Number of Applicable Performance Measures Supported	Percent of Performance Measures Supported	Rank	Upper Limit Flow Supporting Performance Measure (cfs)	Performance Measure(s) Associated with Upper Limit Flow	Total Number of Applicable Performance Measures	Number of Applicable Performance Measures Supported	Percent of Performance Measures Supported
Existing Conditions												
Dry-season baseflow	1	165	RE-10	8	8	100%	1	1,271	RE-10	8	8	100%
	2	73	RE-3	8	7	88%	2	1,274	RE-1	8	7	88%
	3	70	RE-2	8	6	75%	3	3,339	BD-2	8	6	75%
	4	59	BD-2	8	5	63%	4	4,765	RE-2, RE-3	8	5	63%
	5	57	RE-1, RE-11	8	4	50%	5	43,902	BD-30, RE-11, UC-6	8	3	38%
	6	55	BD-30, UC-6	8	2	25%	6					
Lowest of Planned - Low Implementation, Planned - High Implementation, Alternative 2												
Dry-season baseflow	1	48	RE-10	16	16	100%	1	496	RE-1, RE-10	16	16	100%
	2	31	BD-24, RE-2, RE-3	16	15	94%	2	994	BD-48	16	14	88%
	3	27	RE-1, RE-11	16	12	75%	3	1,316	BD-31	16	13	81%
	4	22	BD-2, BD-25, BD-30, BD-31, BD-32, BD-33, BD-47, BD-48, BD-49, UC-6	16	10	63%	4	2,255	BD-2	16	12	75%
	5						5	2,302	RE-2, RE-3	16	11	69%
	6						6	2,499	BD-24	16	9	56%
	7						7	4,402	BD-47	16	8	50%
	8						8	28,596	BD-49	16	7	44%
	9						9	35,946	BD-25, BD-30, BD-32, BD-33, RE-11, UC-6	16	6	38%

LA River CEFF Project Results in Action

Downtown LA (LOI 17.23) detailed **dry-season baseflow** model results can also be visualized to highlight how **changes in channel form** and **changes in flow** between model scenarios alter what performance measures (goals) are supported.



Existing Conditions Scenario *(top bar)*

Synthesis of Planned Conditions Scenarios *(bottom bar)*

Median Flow under modeled scenario

LA River CEFF Project Results in Action

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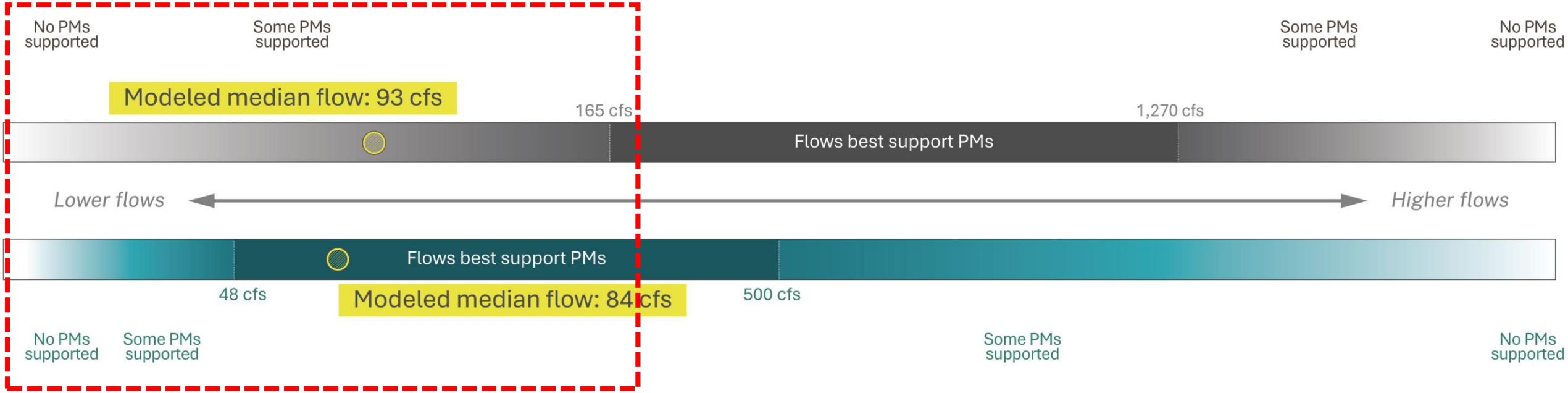

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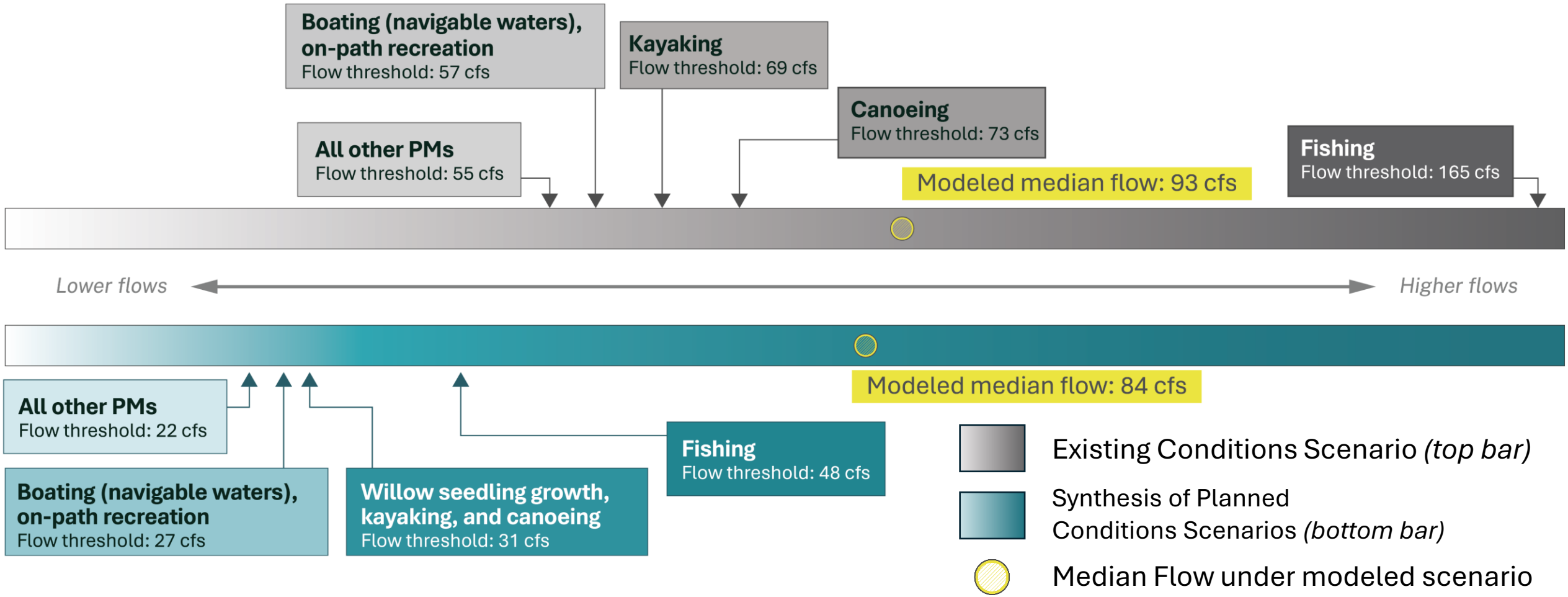
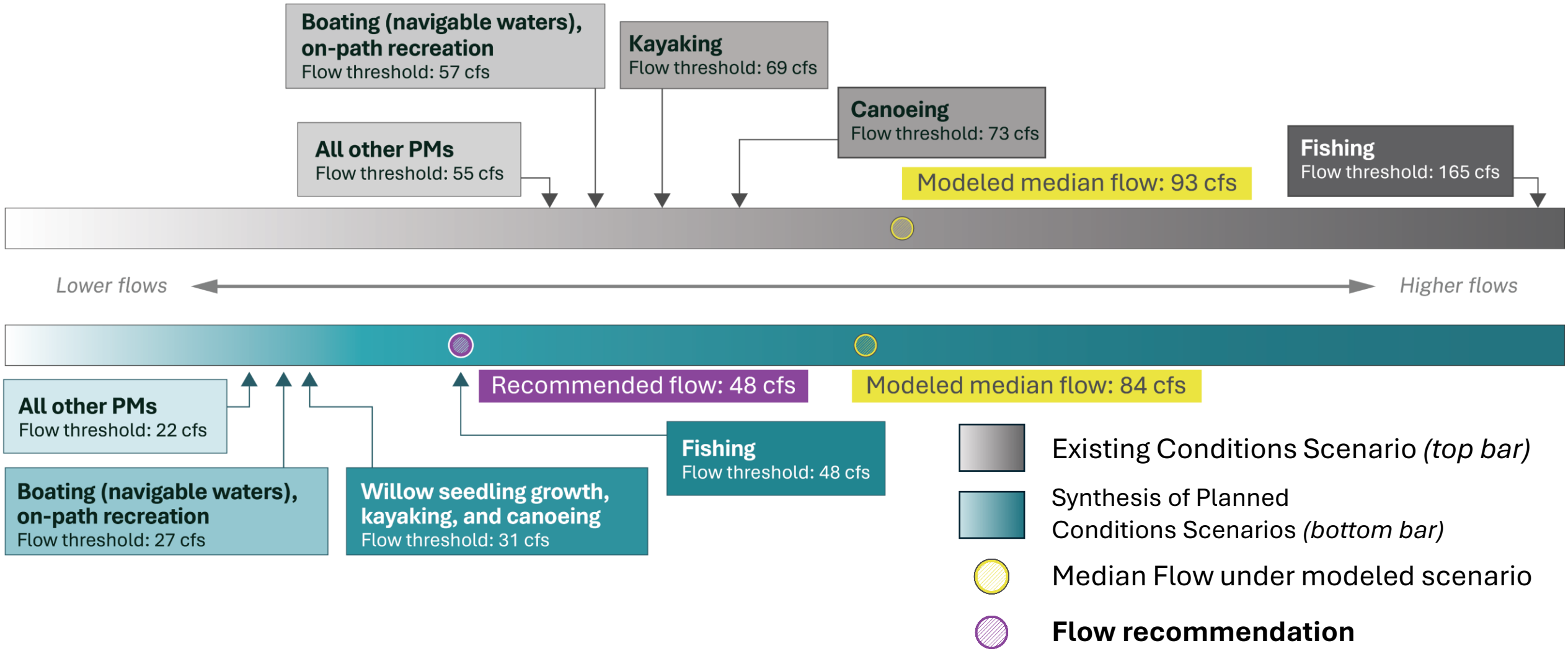
LA River CEFF Project Results in Action



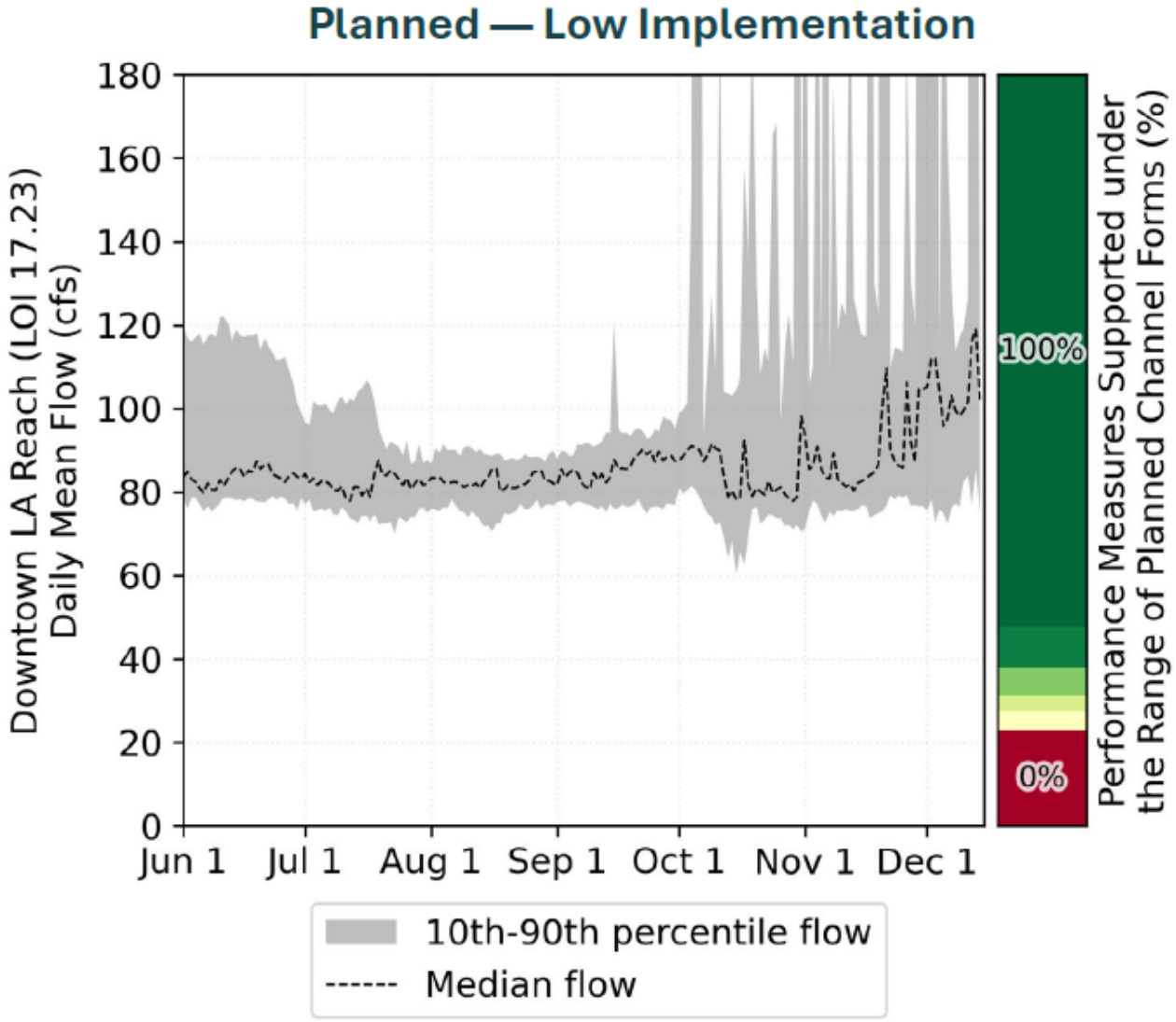
LA River CEFF Project Results in Action



LA River CEFF Project Results in Action

Flow that support performance measures can be compared with measured or modeled flow.

Watershed managers and stakeholders can assess implications of potential changes in flows for range of modeled channel forms.



LA River CEFF Project Results in Action

Flow that supports performance measures is primarily dependent on channel form.

LA River CEFF Project results provide insight into modeled conditions only.

Future changes to the LA River channel form may enable achievement of performance measures and goals at lower flows.



More flow needed to support 1-ft water depth



Less flow needed to support 1-ft water depth


Questions

Lunch



Photo credit: NPS / Jeff Sikich

Management Actions and Supplemental Recommendations



Photo credit: Ian Shive

LA River CEFF Project Management Action Recommendations

Management action recommendations are **additional steps** to be taken in conjunction with the range of planned projects.

Management action recommendations focused on **channel form or flow changes.**

Model results and TWG input guided the development of management action recommendations.

Actions to improve support for goals should continued to be explored into the future.

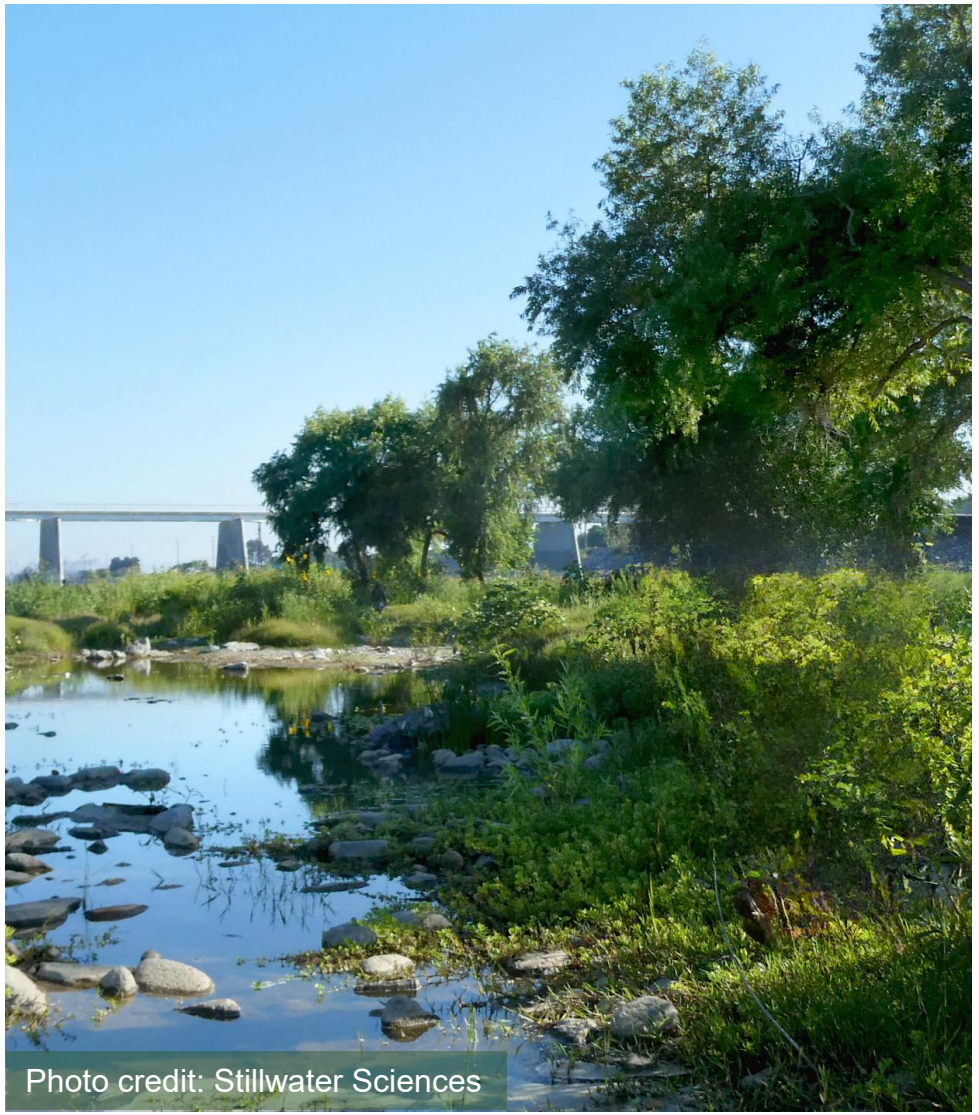


Photo credit: Stillwater Sciences

LA River CEFF Project Management Action Recommendations

1	Dynamic flow optimization through operational changes and additional infrastructure	4	Channel form design refinements
2	Channel modifications to provide continuous low-flow passage through soft-bottom reaches	5	Additional regional capacity to store and release stormwater
3	Improved recreational infrastructure along the river	6	Completion of a soft-bottom channel bed feasibility study

LA River CEFF Project Management Action Recommendations

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2	Channel modifications to provide continuous low-flow passage through soft-bottom reaches	5	Additional regional capacity to store and release stormwater
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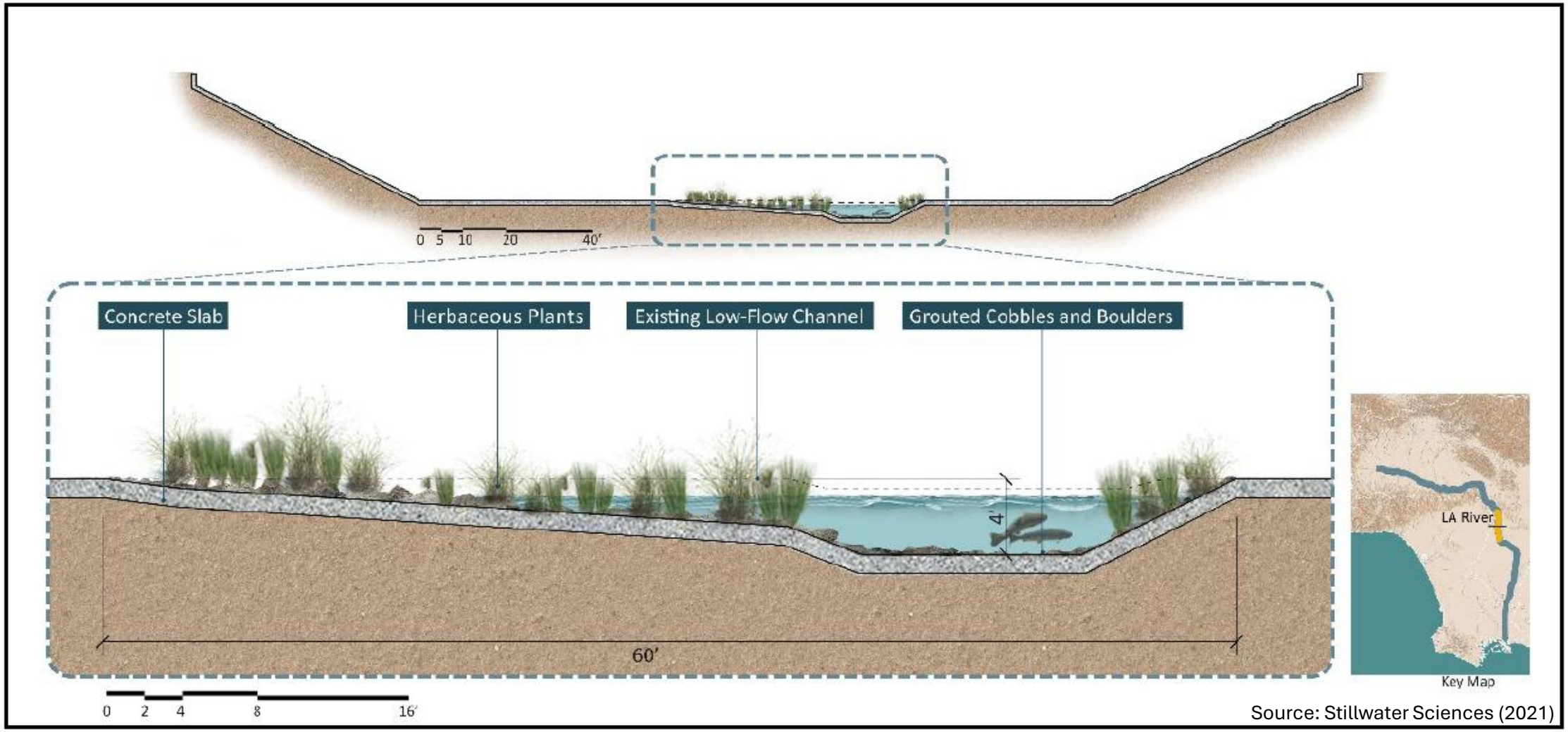
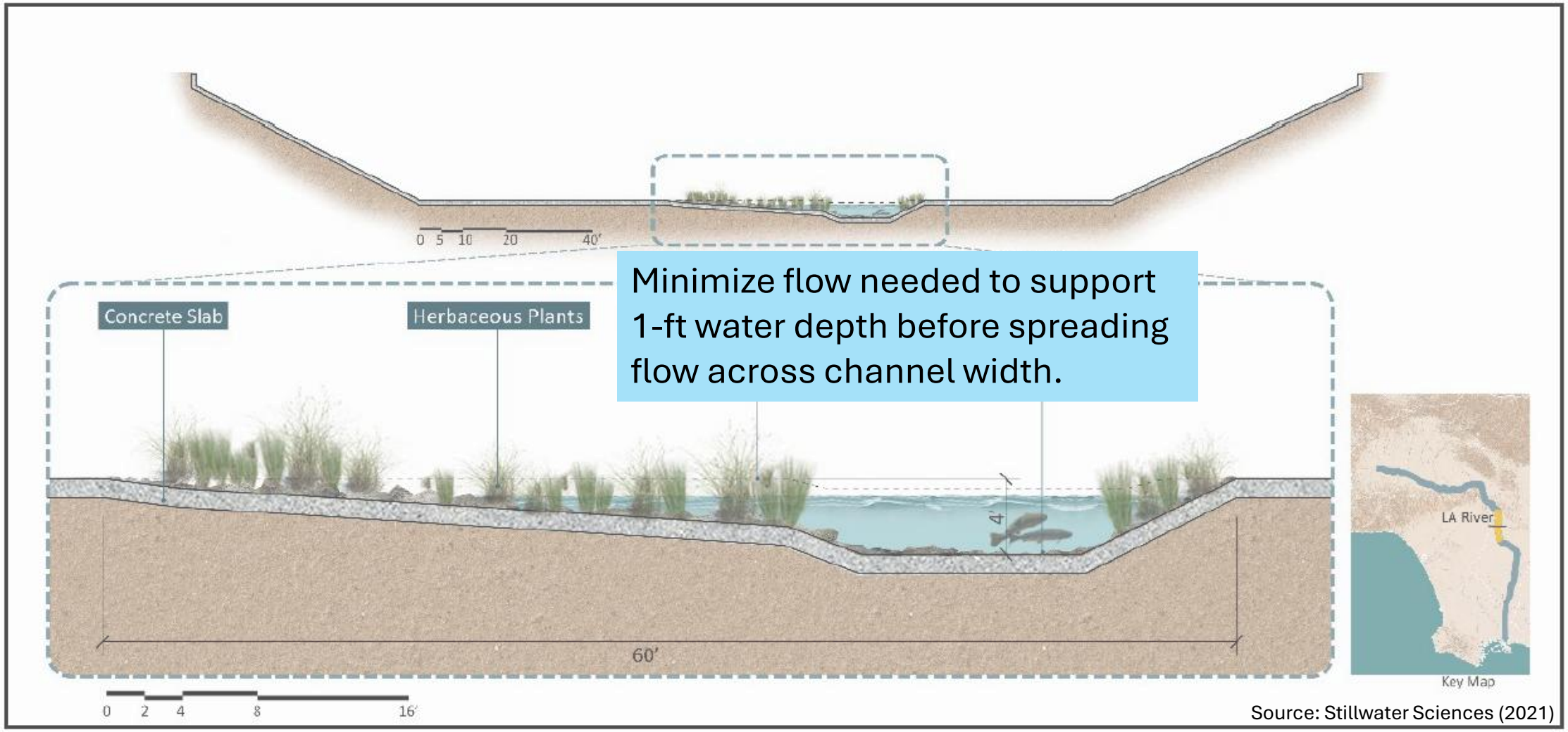
Recommendation 4: Channel form design refinements



Source: Stillwater Sciences (2021)

Recommendation 4: Channel form design refinements



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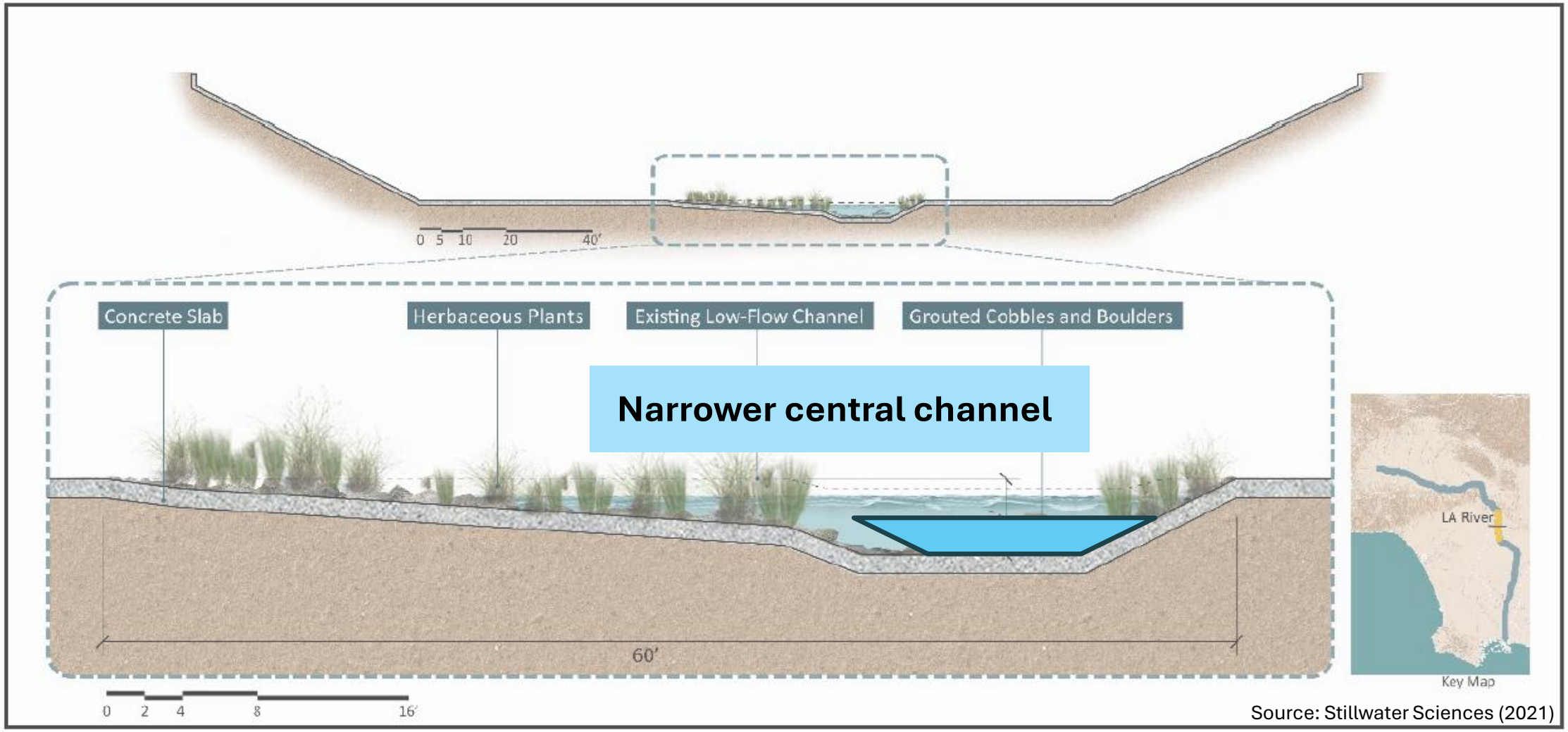

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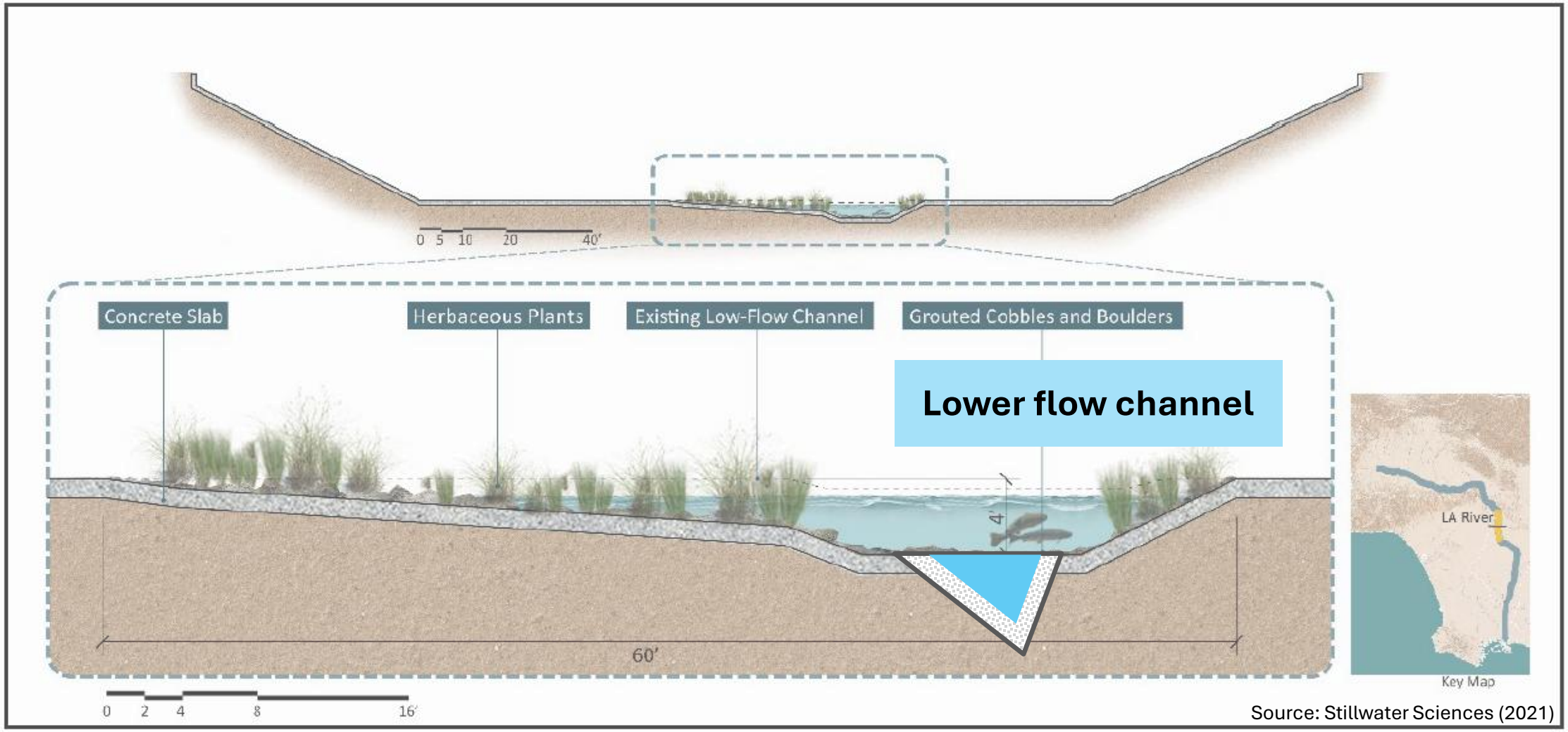

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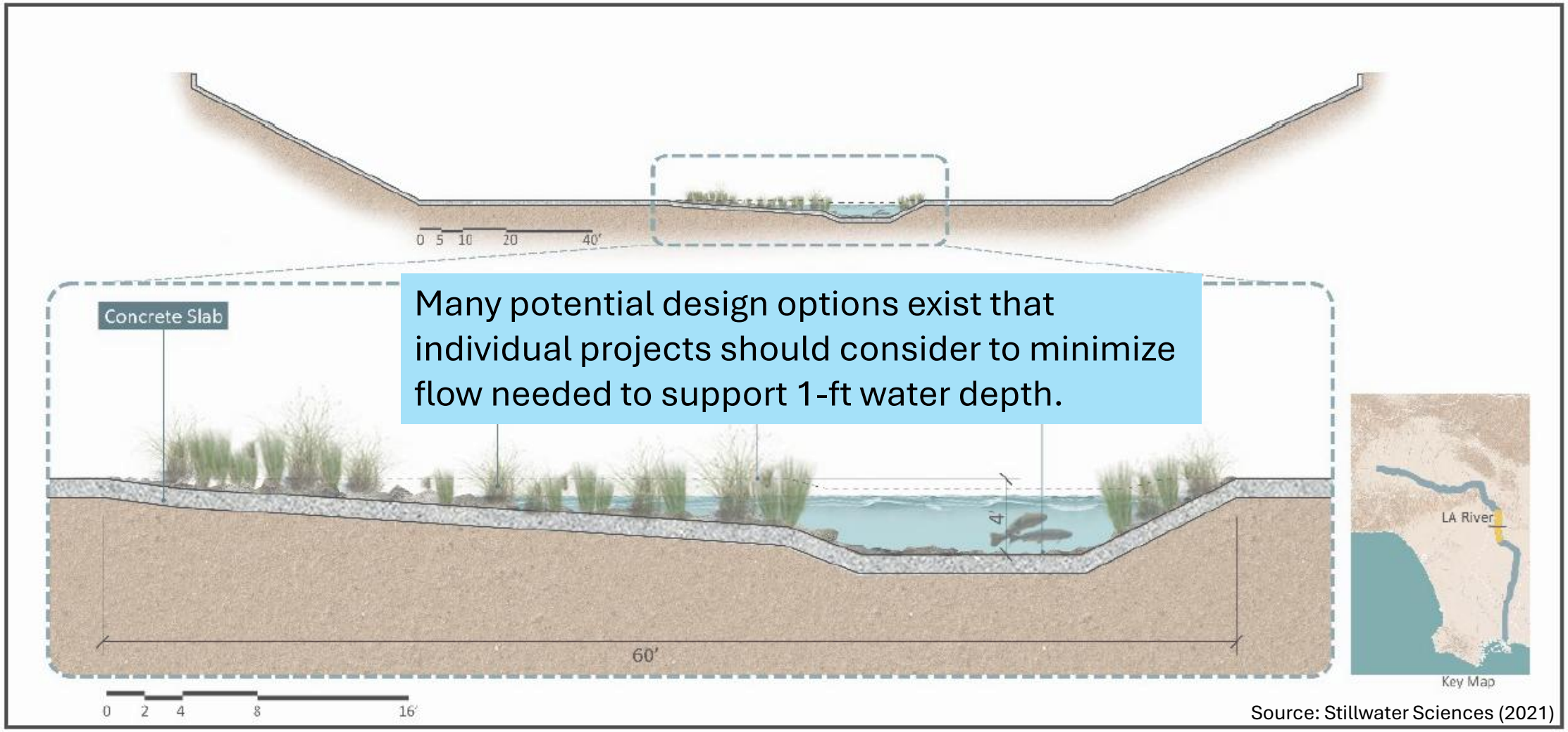


Source: Stillwater Sciences (2021)

LA River CEFF Project Management Action Recommendations

Management actions recommendations detailed further in the ***Flow Recommendations for the Los Angeles River: the California Environmental Flows Framework Technical Report.***

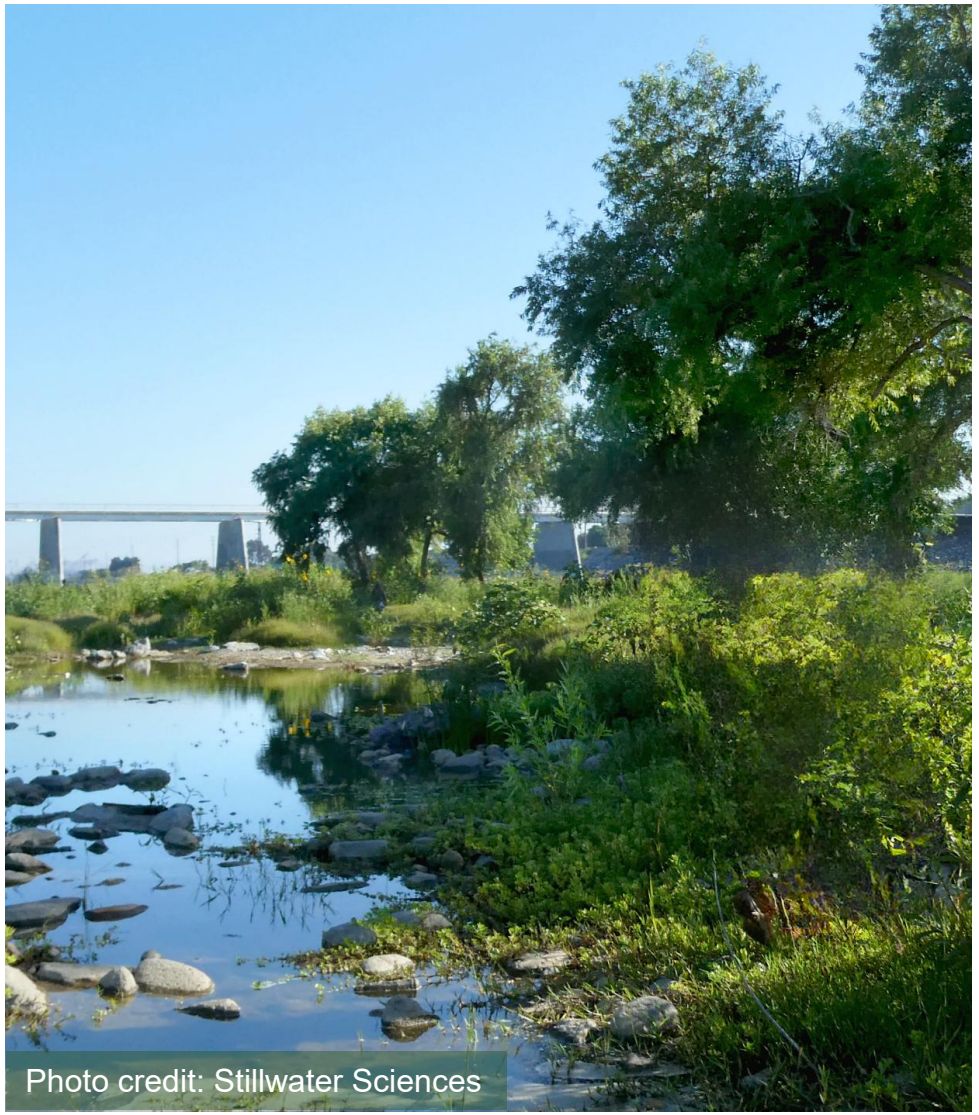


Photo credit: Stillwater Sciences

LA River CEFF Project Supplemental Recommendations



Supplemental recommendations are **broader** than management actions:

- **Governmental, policy, and watershed-wide** actions to support achievement of watershed goals under planned conditions.
- Synthesized from TWG input and best management practices for environmental flows

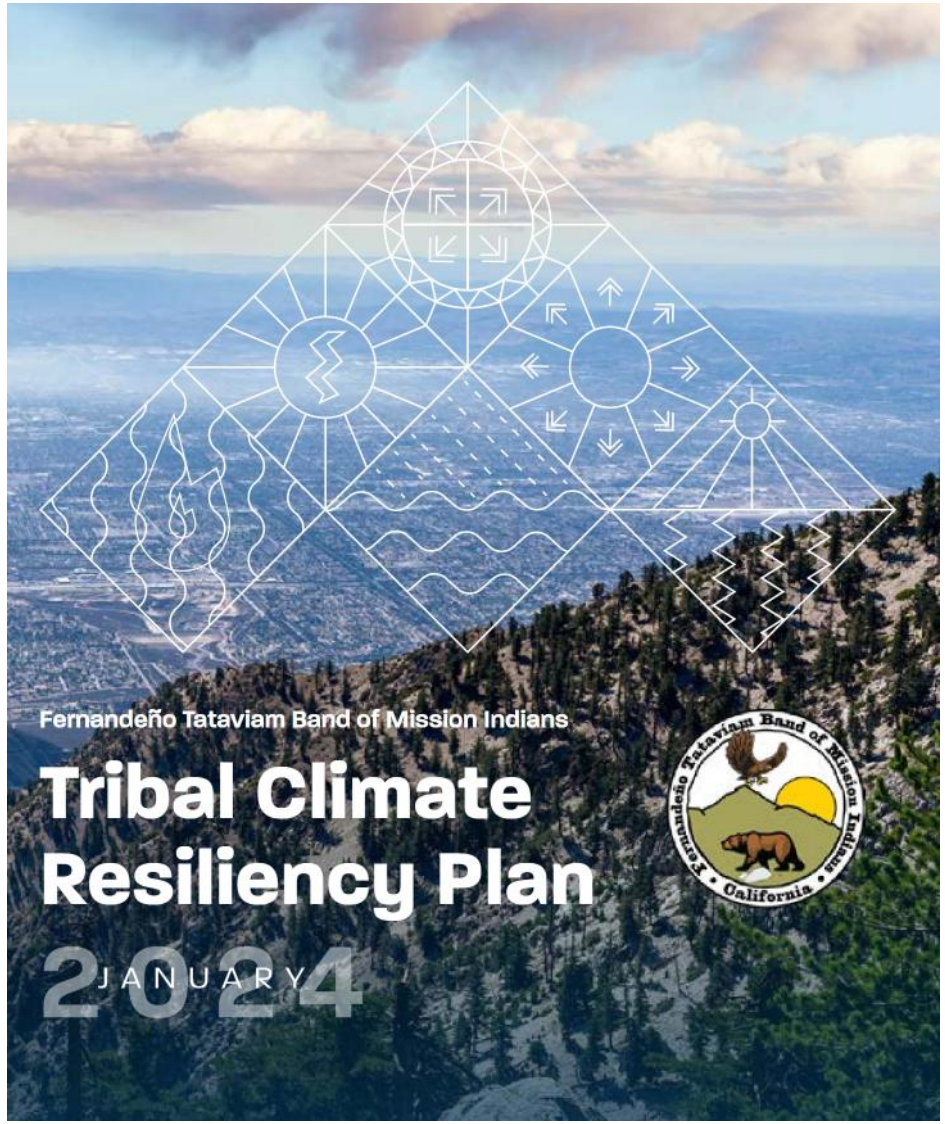
LA River CEFF Project Supplemental Recommendations

1. Create a dedicated LA River watershed governance structure

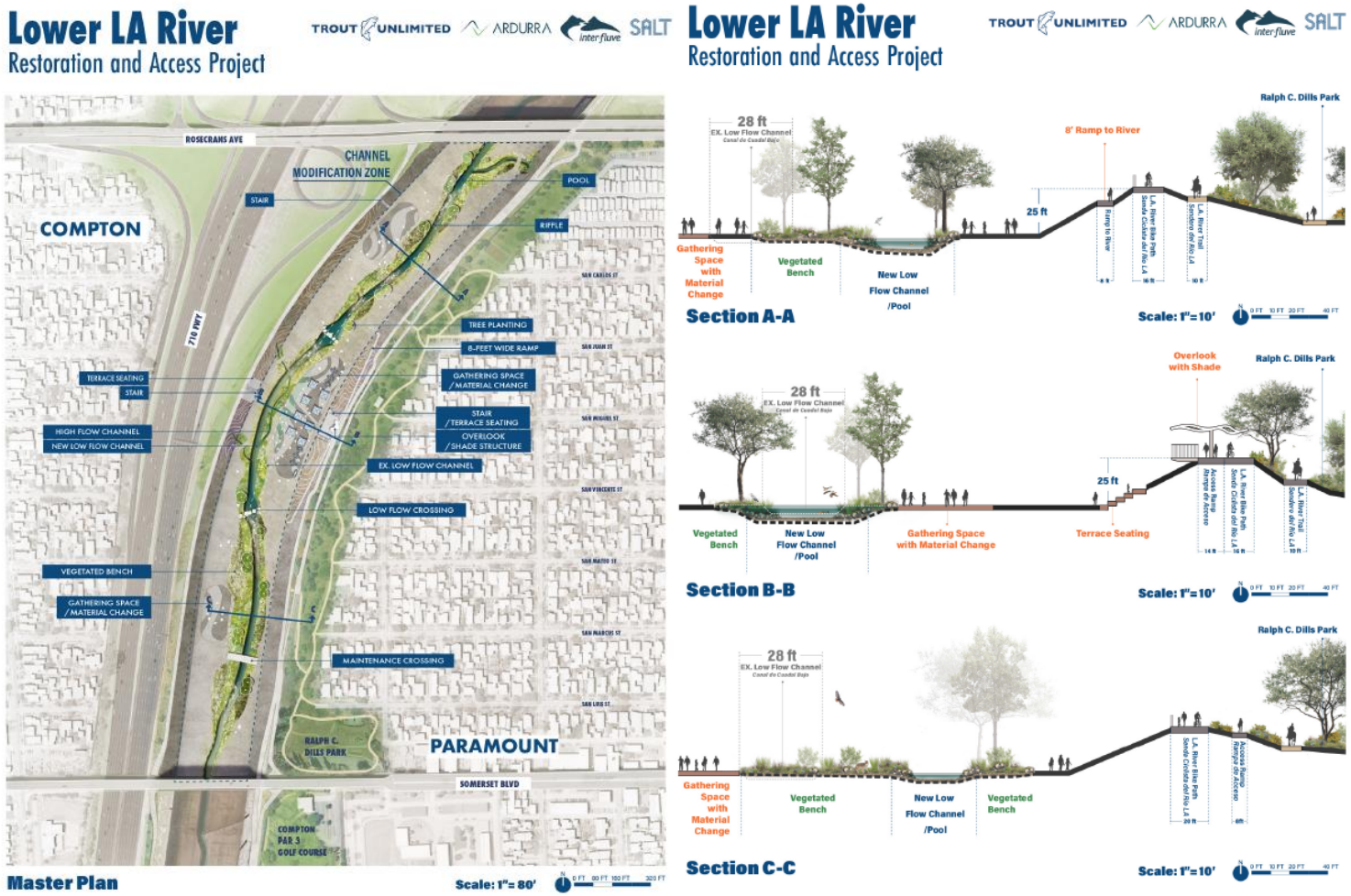
2. Elevate tribal representation throughout the LA River planning process

3. Improve management of tributary flows and channel forms

4. Increase parks and upland habitat adjacent to the river, and invest in improvements such as access, path continuity, and shade



LA River CEFF Project Supplemental Recommendations



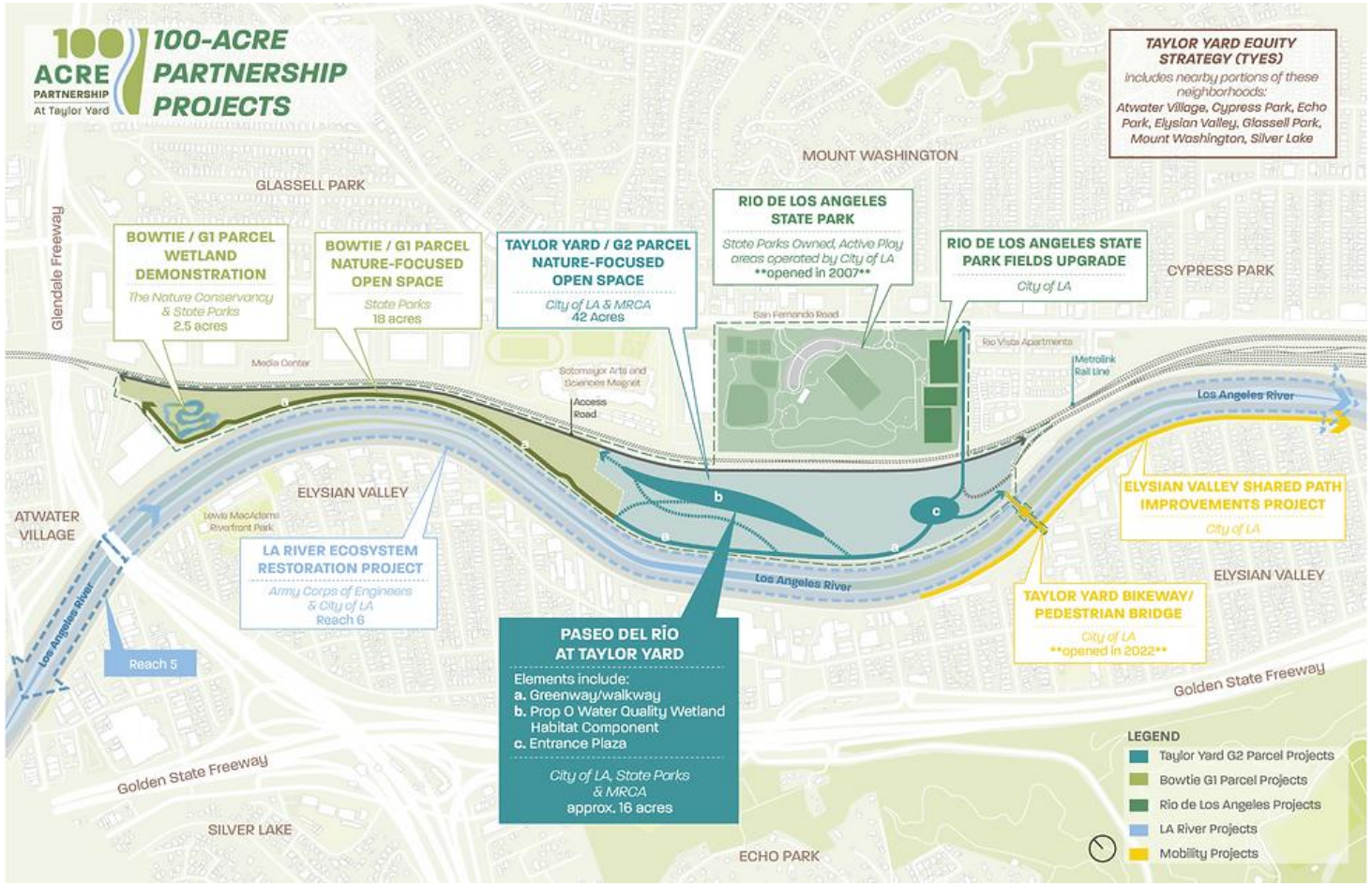
Source: Bob Blankenship, Trout Unlimited

5. Establish a process to prioritize when and where flow and channel form modifications should be implemented

6. Develop sustainable funding opportunities to support planning and implementation projects

7. Promote multi-benefit projects that revitalize and support existing communities along the river

LA River CEFF Project Supplemental Recommendations



Source: https://www.100acrepartnership.org/

5. Establish a process to prioritize when and where flow and channel form modifications should be implemented

6. Develop sustainable funding opportunities to support planning and implementation projects

7. Promote multi-benefit projects that revitalize and support existing communities along the river

LA River CEFF Project Supplemental Recommendations



Supplemental recommendations detailed further in the ***Flow Recommendations for the Los Angeles River: the California Environmental Flows Framework Technical Report.***


Questions

Looking Ahead



Photo credit: Nurit Katz

Mountains Recreation & Conservation Authority
Stillwater Sciences
McMillen

LA River CEFF Project Flow Implementation Plan

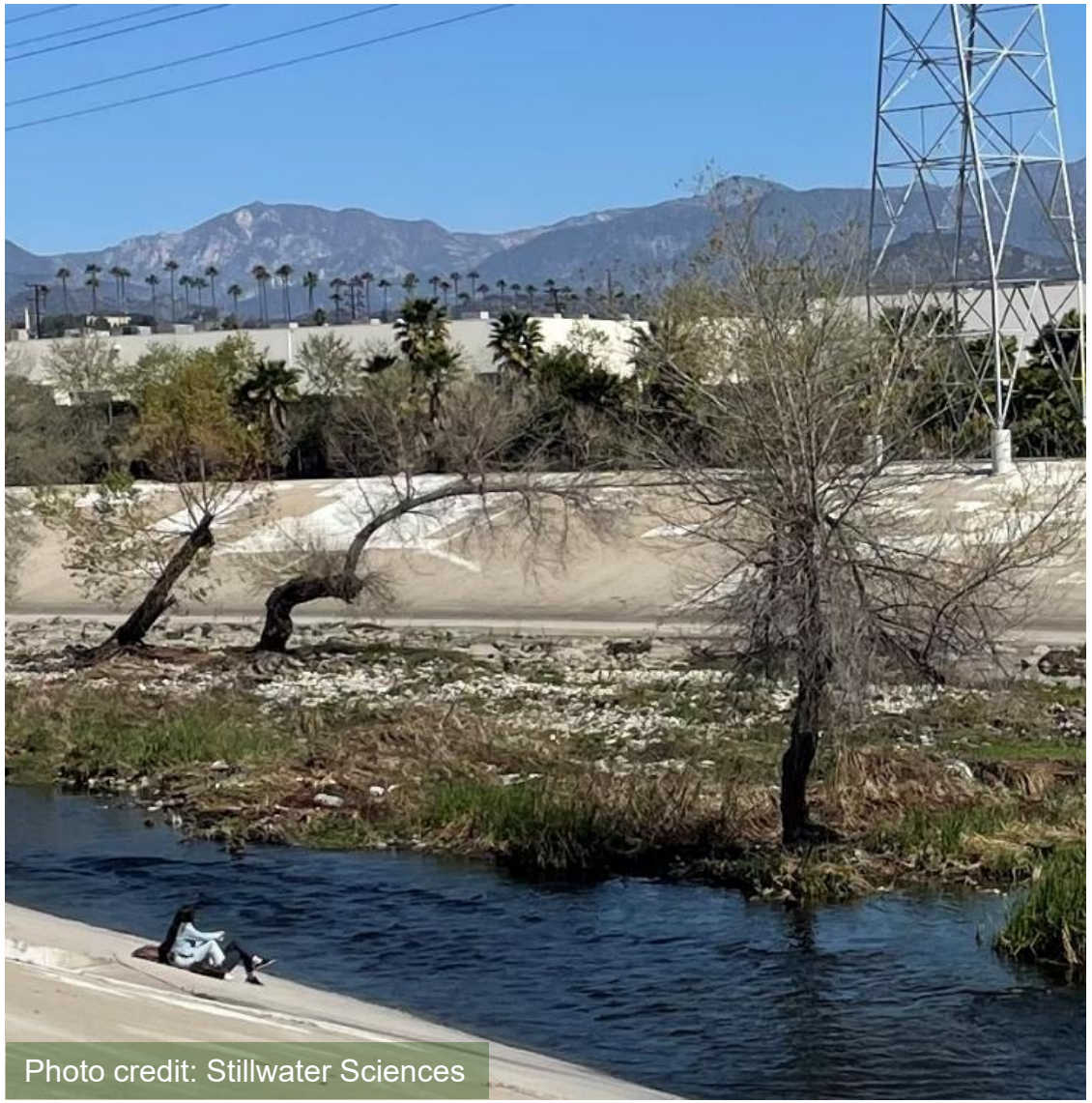


Photo credit: Stillwater Sciences

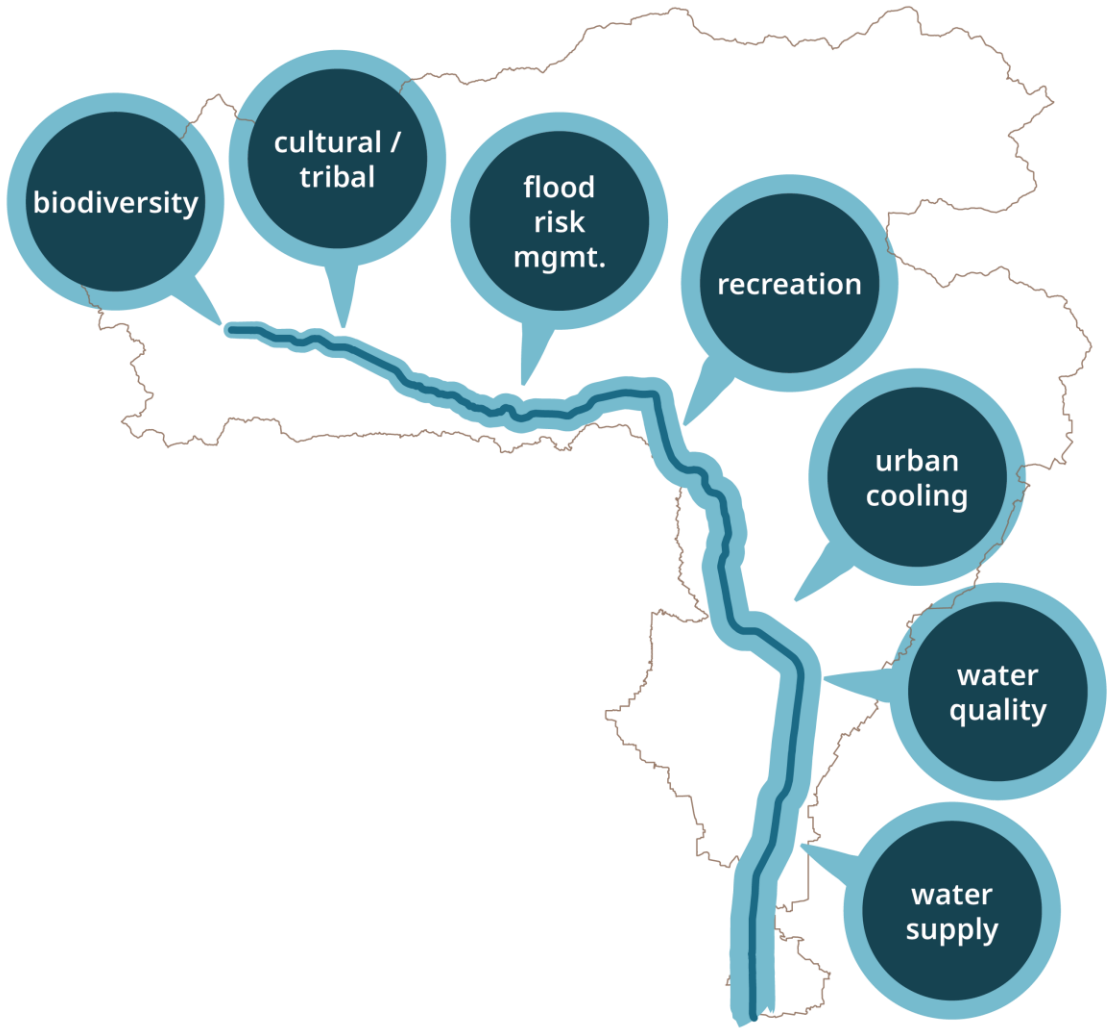
An implementation plan would be a next step to **coordinate flow and channel form changes** to support achievement of goals.

An implementation plan would provide a map of how stakeholders can **work together** to achieve our individual and shared goals.

Many elements need to be considered.

LA River CEFF Project Flow Implementation Plan Recommendations

- Legislative and regulatory considerations
- Governance structure
- Financial and human resourcing
- Flow, channel form, and operational changes
- Monitoring and analysis of outcomes
- Adaptive management framework
- Phasing and schedule



Discussion



Photo credit: David Ross


Your input on the LA River CEFF Technical Report is welcomed by **Sept 14, 2026**.


MRCA will continue as
lead contact for the LA River CEFF
Project.
https://mrca.ca.gov/los-angeles-river/ceff-study/



How can LA River CEFF Project results and flow recommendations be used in the future?



What support do organizations need to apply the LA River CEFF Project results?


Questions

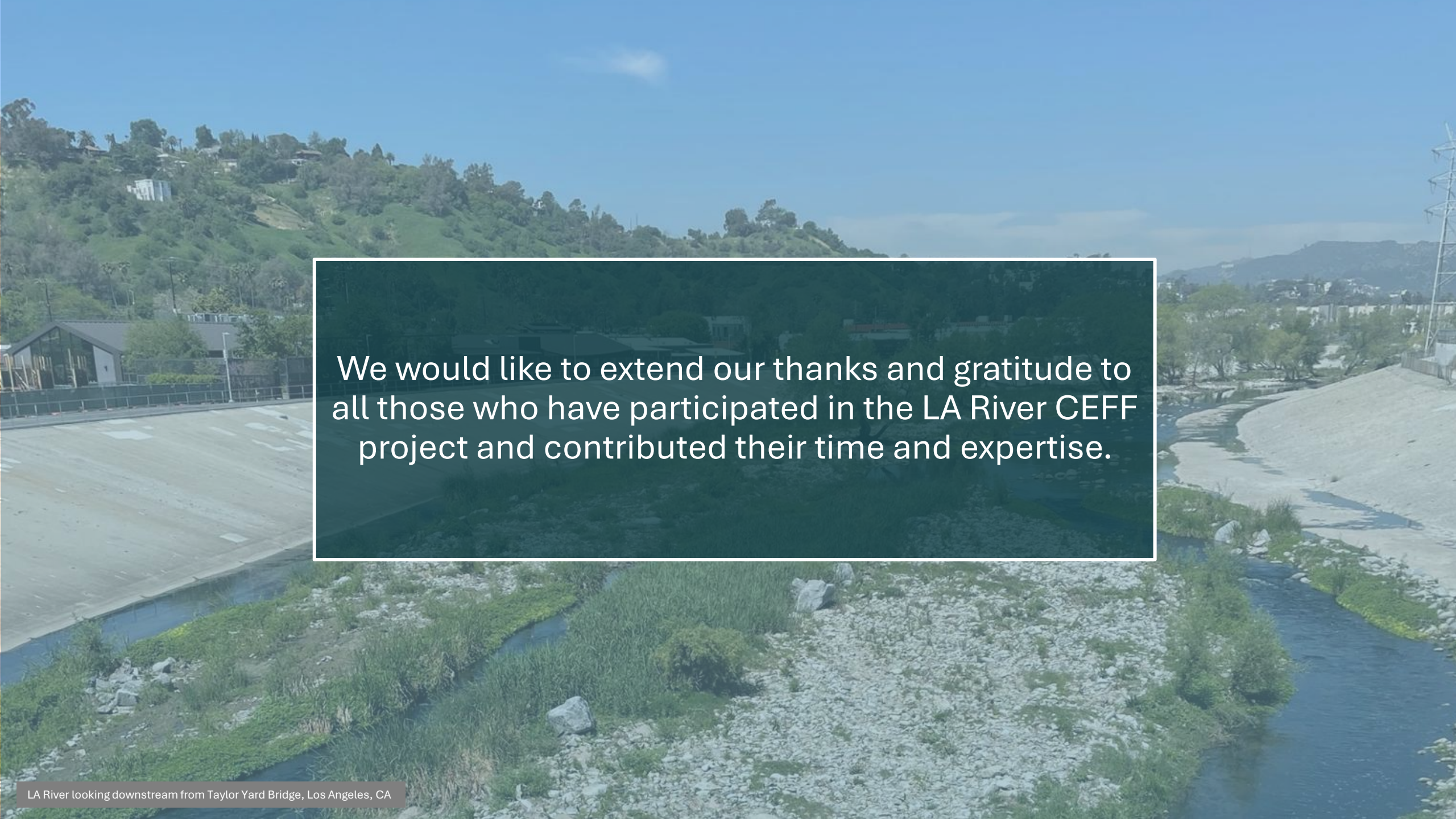


Thank you to the City of Los Angeles, the Mountains Recreation & Conservation Authority, and the California Department of Fish and Wildlife for funding this study.

LA River from Fletcher Street Bridge, Los Angeles, CA

Cropped photo by "Downtowngal" used under CC BY-SA 4.0

We would like to extend our thanks and gratitude to all those who have participated in the LA River CEFF project and contributed their time and expertise.



LA River looking downstream from Taylor Yard Bridge, Los Angeles, CA