

June 11, 2018

**Sarah Rascon**  
Mountains Recreation & Conservation Authority  
Los Angeles River Center and Gardens  
570 West Avenue Twenty-six, Suite 100  
Los Angeles, CA 90065

**Tetra Tech, Inc.**  
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**STUDIO-MLA**  
M I G

# Upper Los Angeles River and Tributaries Revitalization Plan



June 11, 2018

Ms. Sarah Rascon, Urban River Program Officer, Los Angeles River  
Mountains Recreation and Conservation Authority  
570 West Avenue 26, Suite 100  
Los Angeles, CA 90065

**Reference: PROPOSAL FOR THE UPPER LOWER LOS ANGELES RIVER AND TRIBUTARIES  
REVITALIZATION PLAN**

Dear Ms. Rascon:

The creation of the Upper Los Angeles River and Tributaries Revitalization Plan represents an extraordinary and timely opportunity for the surrounding communities to experience historic change. Having played a key role in efforts along the river for the past twenty years, we bring the contextual understanding of the power of this plan and its significance to the community.

We have assembled the most experienced environmental design team that will not only leverage expertise with the Upper Los Angeles River and Tributaries, but will also work seamlessly and collaboratively with the MRCA and the Working Group. We will maximize the opportunities for engaging the local community to identify and prioritize the goals and objectives in the areas for the environment, public space, water resources, water quality, and sustainable communities. Environmental Justice, and best practices for inclusive process and design are guiding our approach to creating a plan that brings the most benefit to the communities impacted by changes to the river and its tributaries. Our collective and comprehensive understanding of the communities will be key to support and resulting incremental change.

Our key project team members include **Oliver Galang**, Project Manager; **Ira Artz**, Hydrologist/Hydraulics Lead; and **Chad Helmlé**, Principal-in-Charge. In addition, we proposed to continue our teaming partnership with **Daniel Iacofano and Esmeralda Garcia**, Facilitators from MIG, and **Mia Lehr and Jan Dyer**, the premier landscape designers from StudioMLA.

We are ready to collaborate with MRCA on the development of a visionary and implementable plan, our team is diverse, strategic and leverages the skills of local experts to provide the full range of services for a creative, and sustainable plan for the Upper Los Angeles River and its tributaries. Our approach to this project is provided in the following section. Our team provides the following benefits for MRCA project delivery team.

- **Experienced Project Manager, Facilitator, and Landscape Architect.**
  - Our Project Manager, **Oliver Galang**, is a proven leader in planning, design, construction, and program management of multi-million dollar municipal capital improvement projects, programs, and on-call contracts, specifically in water resources infrastructure throughout Southern California. Oliver's experience includes leading the development of the *AB 530 Lower Los Angeles River Revitalization Plan*, serving as the Los Angeles County Flood Control District's *Los Angeles River Watershed Manager*, and managing the design and development of innovative stormwater capture projects including South Gate's *Urban Orchard Wetlands Project* and the City of Los Angeles' *Echo Park Lake Rehabilitation Project*.
  - Our Facilitators, **Daniel Iacofano and Esmeralda Garcia (MIG)**, are master collaborators for working with municipal leaders and under-served communities that face change and complex



issues for the Upper Los Angeles River. Esmeralda engages decision-makers, staff and stakeholders to craft visions, strategic and organizational development plans as well as community, neighborhood improvement and transportation plans.

- Acting as design director with oversight of the urban design and landscape architecture component of the project will be **Mia Lehrer**, a landscape urbanist who has deep roots working on projects along the Los Angeles River. Mia is President of **Studio-MLA**, a firm that has been instrumental in the transformation of the Los Angeles River from planning and design to implemented projects that are ambitious, transformative and connect communities to the River, such as the *South Gates Urban Orchard Wetlands Project*, *LA River Bikeway and Greenway Feasibility Study*, and *Metro's Purple Line Westside Extension*.
- **Unequaled Technical Services Capabilities.** Tetra Tech is the only firm to have led the development of the revitalization plan for the entire Los Angeles River, through our work on the *City of Los Angeles' Los Angeles River Revitalization Masterplan* and the *AB 530 Lower Los Angeles River Revitalization Plan*. In addition, we were responsible for the development of the Corps of Engineers' *Los Angeles River Ecosystem Restoration Feasibility Study* and the *Arroyo Seco Ecosystem Restoration Feasibility Study*. Also, Tetra Tech is also the only team who conducted the river hydraulic modeling analysis for the entire Los Angeles River as part of the *Los Angeles County Drainage Area Project* with the US Army Corps of Engineers. We have modeled and designed numerous regional BMPs for our clients throughout the Los Angeles region to make progress towards meeting EWMP or WMP goals. Our innovations and technical approach for the Rio Hondo San Gabriel River revised EWMP resulted in reducing the implementation cost of regional BMPs from \$2 billion to \$200 million, *a reduction by 90-percent*.
- **Proven Responsiveness.** We understand that adherence to schedule is of great importance to support the MRCA and the Santa Monica Mountains Conservancy with this project. For the *AB 530 Lower LA River Revitalization Plan development*, our team was responsible for facilitating 22 Working Group Meetings, 59 Committee Meetings, and 36 Community Outreach Events.

Finally, while we made some assumptions in putting this proposal that is responsive to the scope of services, our team is flexible and open to a discussion as to the best way to phase the project to accommodate the available budget and future funding. We look forward to demonstrating our unmatched professionalism, tested leadership, and superb technical fluency to support the MRCA with the development of this critical revitalization plan. Should you have any questions, please contact our Project Manager, Oliver Galang at 626.470.2423 or [oliver.galang@tetrattech.com](mailto:oliver.galang@tetrattech.com).

Sincerely,



Chad Helmle, PE  
Vice President, Water Resources

# Team Approach to Work

## Introduction

Tetra Tech has assembled a team of experts and leaders with extensive environmental design, engineering, and technical expertise coupled with seasoned facilitators and community planners to provide expert, technical, specialized support services for the development of a revitalization plan for the Upper Los Angeles River and Tributaries for the Mountains Recreation and Conservation Authority (MRCA) and the Santa Monica Mountains Conservancy.

We have developed a responsive approach that will:

- Leverage our Team's **in-depth understanding** of the Upper LA River Watershed, its communities, and Revitalization Plan development process.
- Develop a phased strategy to address the **community needs and project prioritization** that is considerate of the budgetary constraints.
- **Leverage existing relationships** with the City of Los Angeles, Corps of Engineers, and the Los Angeles County Flood Control District in order to develop a plan that will be integrated with the County of Los Angeles' LA River Masterplan and the City's LA River Revitalization Masterplan documents.

## Understanding

The Los Angeles (LA) River is a heavily channelized waterway, flowing 51 miles from its inception at the confluence of Bell Creek and Arroyo Calabasas to its outlet in Long Beach. It is surrounded by densely urbanized and populated land uses. The upper LA River meanders eastward through the San Fernando Valley, crossing multiple jurisdictions. While the Sepulveda Basin and some of the tributaries are more natural, the upper river and the majority of its tributaries are mostly concrete.

These unique challenges constrain state and local agencies as they attempt to manage, maintain, revitalize, and reimagine the River. Assembly Bill (AB) 466 was created to appoint a Working Group for the Upper LA River and Its Tributaries and develop a community-centric, watershed based revitalization plan. The Working Group will lead the development of a Revitalization Plan for the Upper LA River, Tujunga Wash, Pacoima Wash, Verdugo Wash, and any other tributary waterway that the Working Group determines relevant.

The AB 466 establishes within the Santa Monica Mountains Conservancy (SMMC) the Upper LA River and Tributaries Working Group. The Mountains Recreation and Conservation Authority (MRCA) is working with the SMMC and the Working Group to develop the Revitalization Plan.

## Goals and Objectives

The Tetra Tech team is pleased to submit our proposal for the development of the Upper LA River and Tributaries Revitalization Plan. The Tetra Tech team will work with the MRCA, SMMC, and the AB 466 Working Group to guide the effort by helping to shape achievable goals and objectives, providing facts and analysis to inform decision making, and developing project concepts that meet the needs of the Revitalization Plan.

Specific requirements for the project are described in AB 466:

- Development of a Revitalization Plan that includes community engagement and prioritization of disadvantaged communities
- Support the efforts of the Working Group with the development of the Revitalization Plan that will be submitted to the Santa Monica Mountains Conservancy

## Approach

Our team has a **unique and unparalleled understanding** of the LA River having led the **LA River Revitalization Master Plan, the Lower LA River Revitalization Plan, LA River Ecosystem Restoration Plan**, and numerous planning and implemented projects focused on segments or reaches of the LA River. The following outlines the Tetra Tech team's approach to accomplishing this work.



### Perform Project Management

Tetra Tech is committed to ensuring that the MRCA is fully informed of all project-related activities and progress. This will be achieved through regular project communication that will allow the MRCA Project Manager to measure the actual vs. plan work progress. Tetra Tech's Project Manager will be responsible for overall project management. Tetra Tech will develop and maintain a project schedule, review and monitor the project budget, and coordinate the project controls. The schedule will be consistent with the schedule commitments for development of the revitalization plan for this project. The schedule will serve as a planning tool and will be updated monthly to measure actual progress.



### Facilitate Working Group and Committee Meetings

Tetra Tech team will provide distinctive expertise to the facilitation of all meetings. We have assembled the same **LLARRP team** to facilitate Working Group and Committee meetings. Each meeting will include:

- A meeting facilitator. Working Group meetings will be led by our communications lead, MIG; committee meetings will be led by a member of the technical team, from either Tetra Tech or StudioMLA
- A presentation with visuals, graphics, background and pertinent information, project updates, project outcomes, and next steps



### Direct Community Engagement

A community-based plan that focuses on disadvantaged communities requires a team that is actively listening to ideas and feedback. The Tetra Tech team will develop the Community Engagement Plan, which will act as a roadmap to guide the community and public outreach component of the Revitalization Plan. The approach will consist of neighborhood-based stakeholders, participatory planning and design efforts, stakeholders, project partners, preparing exhibits large enough for display purposes, and community meetings. The Community Engagement Plan will include proposed outreach activities, identify key stakeholder groups, integrate online resources, surveys, and the roles of the NGOs and other partners.



## Develop Plan Elements Goals and Objectives

The Tetra Tech team will use committee meetings to develop the goals and objectives of the Revitalization Plan. These will be written with committee members, presented as draft form in an online format, such as a Google Document to enable the Working Group to comment and edit, and then presented as final at a Working Group meeting. These goals and objectives will establish the criteria for scoring the individual projects along the Upper LA River and Tributaries.



## Identify Potential Project Sites (Opportunity Areas)

The Tetra Tech team will present maps of the Upper LA River and Tributaries at one (1) Working Group Meeting and one (1) Committee Meeting to collect input and feedback from Working Group and committee members. Meeting participants will break out into smaller groups to identify areas and ideas for revitalization along the Upper LA River and its tributaries. These areas will be included in the Revitalization Plan and scored based on the goals and objectives developed in the committees.



## Build the Technical Framework

The Tetra Tech team will develop a Plan Element Framework, which will incorporate opportunity areas, goals and objectives, and revitalization ideas (building blocks), to create conceptual projects for each of the identified opportunity areas. The Tetra Tech team will use the framework to conduct a technical evaluation of project opportunities for economic, environmental, and social impacts as well as feasibility of implementation. The project evaluation and prioritization criteria generated by the Working Group Committees will be applied to assist with screening opportunities. New project opportunities will be categorized based on spatial relationships to include Supervisorial District, city jurisdictions, subwatershed area, etc. This information will be used as the basis for a distributed approach for selecting opportunities throughout the project area.



## Recommend Project Concept Alternatives

The Tetra Tech team will present the prioritized opportunities to the Working Group to develop alternatives for each project area. The nature of these alternatives will be derived from the Working Group, Working Group Committees, and community and stakeholder responses. The Alternatives will be evaluated based on the Plan Element Framework and crafted to demonstrate the potential outcome and impact of the proposed interventions along the river segments.



## Develop the Revitalization Plan

The Tetra Tech team will compile the Committees technical documents and develop alternatives to prepare the Revitalization Plan. The Final Revitalization Plan will also outline the planning process, clearly articulate the goals and objectives, document the project selection criteria, feature the selected project alternatives, and offer a discussion about programmatic needs to support the implementation of the Plan.

## Communication Process

The Tetra Tech project manager will manage this project through regular project reporting and communication and will establishing regular weekly conference calls with the MRCA and key project leads for the duration of the project or during times when we are actively working on a deliverable. During times when a significant work effort is ongoing, the telephone conference may involve several people to discuss the status of the project and any outstanding issues. When appropriate, conferences may include only the MRCA and Tetra Tech project manager for status review updates.

Tetra Tech will setup a project team SharePoint site for the MRCA to enhance coordination, sharing of project files, and provide access to project data 24/7.



A SharePoint site will be made available to enhance coordination and to provide MRCA with access to the project-specific data 24/7.

## Project Management and Quality Control

We will integrate the process of project management and coordination with MRCA within all tasks and across all appropriate entities related to each task order. Tetra Tech maintains a proactive style of project management designed to keep project schedules and budgets on track. Accounting reports are generated weekly and are immediately available for review by the Project Manager. By reviewing the financial information at will, the Project Manager is able to accurately assess costs even when multiple tasks run concurrently.

To apply consistent QA/QC standards to this project, Tetra Tech has proposed an experienced QA/QC Manager with the Los Angeles River Revitalization Masterplan, Patti Sexton, PE. Ms. Sexton has experience with a broad spectrum of relevant River Revitalization projects and service areas. Working closely with Mr. Galang and Mr. Helmle, Ms. Sexton will ensure all project/task order managers follow Tetra Tech's established QA/QC procedures to ensure calculations, reports, technical memoranda, design submittals, and deliverables are peer-reviewed by senior staff with expertise in the applicable technical service area.

## Project Team: Partners

Headquartered in Pasadena, CA, Tetra Tech, Inc. was founded in 1966 to provide engineering services for waterways, harbors, and coastal areas and has grown to be a leading provider of consulting, engineering, and technical services, with more than 17,000 associates worldwide. Tetra Tech brings a breadth of technical knowledge and capabilities as well as the national geographic reach and portfolio to address our clients' needs in water, natural resources, environment, and infrastructure services. Tetra Tech is rated consistently as a financially stable, top-quality environmental engineering firm and has been ranked by Engineering News-Record as the #1 firm in Water for 14 consecutive years and #1 in Environmental Management for 6 consecutive years.

We are pleased to be teaming with MIG, Studio-MLA, Fehr & Peers, Metropolitan Research and Economics (MR+E) and Estolano LeSar Advisors (ELA) to provide MRCA with the strongest team possible.



### MIG, Inc.

**Critical thinking. Strategic focus. Innovative solutions.** Since our founding in 1982, MIG has focused on planning, designing and sustaining environments that support human development. MIG's staff of professionals has successfully worked with public agencies and private clients throughout the nation

on projects that enhance community livability, support revitalization and connect people with places. MIG's approach is grounded in a thorough understanding of local issues regarding planning and design—as well as the social, economic and cultural context of the project area—to create successful plans that enjoy broad-based support and are readily implemented.

MIG is a multidisciplinary firm with specializations in inclusive community-based and strategic planning, urban design, landscape architecture, green infrastructure, community outreach and public engagement, health and universal design.

MIG's combination of expertise allows staff to conduct planning in a highly engaging and interactive process involving all stakeholder groups. Staff work directly with residents, elected and appointed officials, business and property owners, and community leaders to frame key issues, understand needs and goals, and create an action plan for change that is supported by all parties.

### AREAS OF EXPERTISE

- Visioning and Community-Based Planning
- Strategic Planning
- Sustainability and Healthy Community Planning
- Environmental Justice
- Urban Design and Placemaking
- Landscape Architecture and Green Infrastructure
- Recreation, Open Space and Trails Planning and Design
- Community Engagement and Public Outreach
- Facilitation and Strategic Communications
- Web Design and Technology
- Mapping, GIS Analysis and Graphic Design



# STUDIO-MLA

**Studio-MLA** (previously Mia Lehrer + Associates) is a Los Angeles based landscape architecture and urban design practice recognized for ambitious public and private-sector projects including complex mixed-use development and urban revitalization initiatives.

We believe in the transformative power of landscape design to enhance the livability of urban environments, connect people to natural systems, and create meaningful spaces for recreation, reflection and exploration. Our landscapes aspire to increase connection, encourage cultural expression, and instill reverence for nature. Our continued allegiance is to address complex urban issues with creativity, pragmatism and responsibility.

Our 50-person firm includes landscape architects, urban designers, community advocates, botanists, ecologists, and technical experts. Diversity and multiple perspectives adds depth and meaning to the collaborative process, allowing us to work at a diverse range of scales, and bring design innovation and implementation expertise to a variety of project types. Solutions are always the product of a rigorous methodology rooted in direct client and community engagement, rather than an imposed aesthetic.

MLA is known for its work on large-scale watershed projects in the Los Angeles area, such as the Pacoima Wash Vision Plan, the San Pedro Waterfront and Promenade Master Plan, and the Ballona Creek Trail and Bikeway Improvement Master Plan Study. In each project, the firm has skillfully managed to balance the needs of client and community with preservation, conservation, and active and passive recreation space.

A key focus of the firm is work on the Los Angeles River. MLA was a key team member on the Los Angeles River Revitalization Master Plan team, the Piggyback Yard Conceptual Master Plan and Feasibility Study projects. MLA has continued to contribute to Los Angeles River planning through the firm's work on the Los Angeles River Valley Bikeway and Greenway Project, the City of Vernon Los Angeles River Bike Path Feasibility Study and the Lower Los Angeles River Master Plan.

We do not begin our projects with a preconceived notion; rather, we ask questions of ourselves, our client, and our team that informs the project's design and implementation process. The diverse nature of our clients and projects inspires our ambitious and comprehensive approach. Regardless of a project's scale or level of complexity, we remain committed to innovative design, quality service, the process of collaboration, and the belief that landscape design has the power to enhance the livability of a city and heal the land.

# FEHR & PEERS

**Fehr & Peers** has specialized in providing transportation planning and engineering services to public and private sector clients since 1985. We develop creative, cost-effective, and results-oriented solutions to planning and design problems associated with all modes of transportation.

We offer our clients the right combination of leading-edge technical skills and extensive knowledge of the communities in which we work to deliver comprehensive solutions and superior client service. We are nationally-recognized experts who routinely publish original research, serve on national committees, and teach courses to others in the industry. We do this while maintaining our commitment to translating those techniques into practical solutions. At Fehr & Peers, we take a creative, data-driven approach to each of our practice areas:

- Travel behavior & forecasting
- Multimodal operations & simulation
- Transit planning
- Bicycle & pedestrian planning

- Sustainable transportation
- Freight systems & airports
- Integrated land use & transportation plans
- Conceptual street & trail design
- Transportation engineering & ITS design

Clients hire Fehr & Peers because of our commitment to being the best at what we do. We live out this commitment in three distinct ways. First, we invest heavily in our culture to ensure that we are attracting and retaining the best and brightest staff in the industry. Second, we have a robust, internally-funded research and development program that enables us to develop new analytical methods and advance the state of the practice. And third, we survey every client at the completion of every project to assess their satisfaction and to identify areas for improvement. We are very proud of the impact this commitment has had on the communities we have been fortunate to serve.



**Metropolitan Research and Economics (MR+E)** is a Los Angeles based consulting firm concentrating in economic analysis related to urban planning, real estate and economic development. MR+E has completed assignments throughout the United States and internationally with a particular focus on California communities. The firm has worked in a broad variety of contexts from small towns and rural areas to major metropolitan centers.

MR+E advises public agencies, private firms and not-for-profit institutions throughout the United States and the world about the intricacies of urban planning economics, project feasibility, public-private partnerships, and community development strategies. We understand the public sector’s policy objectives, the private sector’s economic imperatives, and the complexity of the planning and decision-making process.

Our principal’s 25+ years of experience spans topics ranging from downtowns, redevelopment, adaptive reuse zoning and entitlements, transportation, tourism, parks, public facilities, impact analysis, development policy, public-private partnerships, and community revitalization.



**Estolano LeSar Advisors** is a Los Angeles-based firm that brings deep experience conducting outreach, facilitating regional visioning projects, and explaining complex transportation and land use planning concepts to a variety of audiences. Our firm provides technical assistance related to several

California Climate Investments initiatives, including Transformative Climate Communities (TCC), Low Income Weatherization (LIWP), and Affordable Housing Sustainable Communities (AHSC) programs. Estolano LeSar has deep experience creating visually effective, compelling, and actionable documents that provide guidance to public agencies who are looking to implement new programs or policies.

Estolano LeSar helps clients build better communities through strategic vision, guided by principle and tempered by pragmatism. We provide fresh solutions to complex problems with our expertise in housing, workforce and economic development, sustainability, transportation, and community engagement. Our clients include public agencies, foundations, business associations, and other stakeholders that are looking to improve their communities. Estolano LeSar is led by recognized thought leaders supported by a team of diverse technical experts. Cecilia V. Estolano and Jennifer LeSar comprise the leadership team and bring decades of combined experience.

The founding members have built meaningful professional relationships in the areas of land use and environmental law and policy, real estate development and financing, transportation, planning, affordable housing, and economic and

workforce development. Our staff of diverse technical experts focus on research and development in these fields of expertise. Our firm brings new ideas and concepts to the table while being mindful of time-tested best practices. We work with clients to assess their needs and craft forward-thinking and customized strategies to address their unique challenges. We offer the following range of services:

- Economic Development Strategic Plans
- Financing Strategies
- Implementation & Action Plans
- Meeting Facilitation
- Multi-Stakeholder Process Management
- Nonprofit & Joint Powers Authority Management Services
- Philanthropic Advising
- Policy Education & Training
- Policy Research & Analysis
- Real Estate Advisory Services
- Technical Assistance & Grant Writing

## Project Team: Members

### Management Team

The Tetra Tech team is committed to delivering top quality professionals for the MRCA and the SMMC. We have dedicated our Management Team who will provide oversight and ensure delivery of services to the MRCA. The following section includes brief biographical sketches of our team members, followed by the team member resumes in the Qualifications and Background section.

**Principal-in-Charge, Chad Helmle, PE.** Mr. Helmle will be responsible for assuring the MRCA's satisfaction with the Tetra Tech team's work to support all scope areas. He will actively lead the strategic decision making for all task orders, ensure the team has appropriate resources to meet the MRCA's needs, and will be dedicated to seeing that project objectives, schedule, and budget goals are met. Drawing on his extensive experience managing large municipal on-call stormwater contracts, he will guide and assist our project manager with client and agency coordination. He prides himself in taking an active management role and will remain engaged in a meaningful and productive manner throughout the duration of the contract.



Mr. Helmle leads Tetra Tech's Water Resources Group and has overseen numerous large municipal on-call stormwater programs throughout southern California in the past ten years, including for the City of San Diego, County of Los Angeles, City of Los Angeles, County of Riverside, County of San Bernardino, and others. Projects emerging from these programs regularly include green infrastructure master planning efforts, distributed and regional-scale stormwater capture designs, and watershed and best management practices (BMP) modeling analyses. He also led Tetra Tech's modeling efforts to develop the Reasonable Assurance Analysis (RAA) for seven of the largest Enhanced Watershed Management Programs (EWMP) and WMP groups in the region.

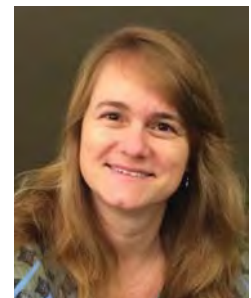
Through this work, he has developed a reputation as an innovator in the field and has established a trusted relationship with the Los Angeles Regional Water Quality Control Board—a relationship that is crucial for helping his clients effectively communicate progress towards regulatory goals.



**Project Manager and Engineer, Oliver Galang, PE, ENV SP, QSD/P, QISP.** Mr. Galang will be responsible for managing this contract, coordinating the individual task orders, and providing overall responsibility for the delivery of work products for this project. His experience encompasses more than 24 years of planning, design, construction and program management of multi-million dollar municipal capital improvement projects and programs, specifically in water resources and stormwater infrastructure throughout Los Angeles County. The following summarizes the unique qualifications and expertise he will bring to MRCA:

- **Technical expertise.** Mr. Galang has been responsible for or personally led the development of the AB530 Lower Los Angeles River Revitalization Plan and numerous major regional stormwater BMPs, including Lakewood Stormwater Capture Projects at Bolivar and Mayfair Parks, Santa Monica CBI Project at the Pier and Pico Kenter Basins, Signal Hill Total Maximum Daily Load (TMDL) Implementation, Aliso Creek and Limekiln Creek Restoration, Echo Park Lake Rehabilitation, and Penmar Water Quality Improvement Project. Mr. Galang’s career also includes service as the Head of the Los Angeles River Watershed Section of the Los Angeles County Department of Public Works’ Watershed Management Division. His responsibilities included staff management and direction for the planning of multi-use, multi-benefit projects, with an estimated construction value of more than \$60 million, along the Los Angeles River.
- **Experience working with regulatory agencies on behalf of clients.** Throughout his career, Mr. Galang, has established cooperative relationships with a number of regulatory agencies throughout the Los Angeles Region. He served as the Head of the Data Management Section of the Los Angeles County Department of Public Works’ Watershed Management Division and was responsible for an annual budget of more than \$10 million in urban runoff and stormwater quality monitoring programs, including Los Angeles County Flood Control District (LACFCD’s) National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Monitoring Program. His relationships with multiple local jurisdictions in the Los Angeles area will only enhance the City’s ability to address dry-weather and stormwater quality requirements.

**Quality Assurance and Quality Control Manager, Patti Sexton, PE.** Ms. Sexton is a senior program manager and water resource engineer with 23 years of experience. She leads the company’s levee work nationwide, specifically related to levee certification and FEMA processing. Ms. Sexton has served as the Technical Advisor/QC as well as the Project Manager on high profile levee projects throughout the southwest as well as in the Midwest and along the East Coast. She is also responsible for water resource projects including floodplain analysis (hydrology, hydraulics, and sediment transport studies) and restoration projects. Ms. Sexton’s experience includes hydraulic analyses and design for numerous watersheds in southern California. She is highly experienced with all hydraulic models for analyzing both natural and improved channels.



**Deputy Project Manager, Jaime Sayre, PhD, PE.** Dr. Sayre’s experience encompasses over 11 years of work and research in TMDLs and water quality projects. She has managed and led teams to provide public and private sector environmental support. Most recently, Dr. Sayre helped lead the Lower LA River Revitalization Plan, a complex project consisting of the development of a visionary, community-based revitalization plan for the Los Angeles River, from Vernon to Long Beach. Throughout her career, Dr. Sayre has managed complex projects within Southern California with high political and environmental stakes, and is an expert facilitator of regulatory compliance issues, as well as effective communication





among clients, subcontractors, and stakeholders. Her experience as an engineer in Los Angeles, includes authoring reports, performing quality assurance/quality control reviews, conducting data analyses, and facilitating workshops.

## Technical Leadership

**Hydrologist/Hydraulics Engineer, Ira Artz, PE.** Mr. Artz has more than 30 years of experience with water resources and flood hazard mitigation projects in Los Angeles County. He has extensive experience on water resources projects including providing QA/QC on large-scale, multi-disciplinary public works projects for municipal and federal agencies. His engineering and environmental sciences background bolsters his understanding of hydrology and hydraulic reports, drainage studies and analyses, watershed studies, ecosystem restoration studies, and floodplain analyses as well as the development and implementation of wetland and water quality programs involving BMPs, wetland creation and enhancement, regulatory permitting, and TMDL compliance. Mr. Artz has provided a variety of funding procurement assistance to local municipalities. This includes assistance with grant proposals for state and federal programs covering floodplain management, water supply and conservation, and wildlife restoration, development of legislative language for Federal water resources authorization acts and appropriations bills, and coordination of efforts among local municipalities, stakeholders, and Federal agencies to help initiate study/project efforts.

**Urban Design and Landscape Architecture, Mia Lehrer.** Acting as design director with oversight of the urban design and landscape architecture component of the project will be Mia Lehrer, a landscape urbanist who has deep roots working on projects along the Los Angeles River. Mia has led the design and implementation of ambitious public and private projects, including the Hollywood Park Racetrack redevelopment and its new LA NFL Stadium, the LA County Natural History Museum Gardens, Vista Hermosa Park, and many Los Angeles River-related projects.

**Landscape Architect, Jan Dyer, PLA.** Ms. Dyer has 25 years of project design and construction administration experience. Prior to joining Studio-MLA, she was the construction manager for a real estate developer. Ms. Dyer's experience on both sides of the tables helps her to successfully collaborate on a wide range of projects. As Director of Infrastructure for transportation, transit, airport, and river projects at Studio-MLA, she possesses knowledge of public agencies and processes that allows her to connect planning to strong design and successful implementation. She oversees watershed planning, civic master plans, park design and higher education projects, most recently for the LA River Bikeway and Greenway Feasibility Study and Metro's Purple Line Westside Extension. Ms. Dyer thrives on participating in strategic planning with all kinds of public and non-profit agencies.

**Facilitator, Daniel Iacofano, PhD, FAICP, FASLA.** Dr. Iacofano is a founding principal of MIG with 40 years of experience in process design, public involvement, facilitation and consensus building for environmental and land use planning projects throughout the country. He has managed and participated in a wide range of planning studies, addressing issues related to land use, growth strategies, river and watershed management, flood control, habitat conservation and natural resource management. He is expert in managing multi-disciplinary projects, developing and implementing public and stakeholder outreach strategies and building consensus. Dr. Iacofano has facilitated thousands of meetings with diverse groups of public and private sector clients in organizational and strategic planning projects. He has also demonstrated proven training techniques for all levels of management and staff in strategic planning, team building and performance evaluation. His extensive experience in creating cross-functional teams has helped organizations involve multiple stakeholders, build consensus and develop a base of support for project outcomes.

**Community Engagement, Esmeralda Garcia.** Ms. García is a public involvement specialist, Principal and Director of Operations for MIG's Pasadena office. Ms. García has managed numerous public involvement programs that engage the public in projects addressing a wide range of issues from transportation and land use to economic development, environmental and community services. She brings a unique perspective to her projects, having worked with public

and private sector clients as well as non-profit organizations. She applies her facilitative leadership skills in developing interactive program methodology to actively engage diverse stakeholders, including policymakers, advocacy groups, community leaders and the public at-large. In addition, Ms. García has extensive experience in developing interactive program methodology to identify the needs of ethnically diverse communities. Specifically, she has a great understanding of the Latino community and the issues that affect Latino families. Fluent in both Spanish and English, she has facilitated community meetings, workshops and focus groups in Spanish to determine community challenges, issues and opportunities.

**Biologist, Michelle Bates.** Ms. Bates has been working as biologist in California for the last 17 years and has substantial experience with the preparation of CEQA/NEPA documentation. She has conducted numerous biological surveys for listed and sensitive plant species and other sensitive wildlife species such as the California red-legged frog, southern steelhead, southwestern pond turtle, desert tortoise, and listed plant species. Ms. Bates has performed wetland delineations for a variety of projects and prepared various Clean Water Act permit packages. Ms. Bates has a California Department of Fish and Wildlife Scientific Collecting Permit, U.S. Fish and Wildlife Service 10(a)(1)(A) permit for California red-legged frogs, and has been authorized under Biological Opinions to handle California red-legged frogs and tidewater gobies. Ms. Bates depth of experience and relationships with the regulatory agencies will ensure that the City's project complies with the requirements under CEQA in the most expeditious manner.

**Economist, David Bergman, AICP.** With over 25 years of experience Mr. Bergman has participated in a broad range of real estate, economic development and planning projects. In particular, he has worked intensively on issues surrounding the formation of urban and regional development strategies, public private partnerships, and the role of culture industries in economic development. With a strong background in public policy analysis, and the communication of economic development goals to community stakeholders, Mr. Bergman's practice has centered on general plan economics, public private partnerships and infrastructure finance, and development services.

**Planning and Policy Expert and Housing/Social Equity Advisor, Tulsi Patel.** Ms. Patel joined Estolano LeSar Advisors (ELA) in October 2013. As Senior Associate, Tulsi provides project management and research to lead a range of project focused on inclusive community and economic development, strategic planning, and program design. She currently serves as the Project Manager for the LA Bioscience Hub, a nonprofit focused on the creation of a bioscience cluster in East Los Angeles. She designed and piloted the Biotech Leaders Academy summer program to provide entrepreneurship training to community college students and connect them with paid internships at bioscience start-ups.

**Website Developer, Steve Kokotas.** Steve Kokotas is a web technology director and urban planner with 20 plus years of experience synthesizing, analyzing and communicating complex multidisciplinary urban planning data and developing innovative information management, communication and visualization web tools and services that support public process decision making, education and planning initiatives. As the director of the MIG web team, Steve has overseen the development of, and ongoing support for, a wide range of web-based information services for government agencies. These projects include specialized database driven web applications, highly-customized content management systems, mission critical public agency data warehouses and interactive, online educational games, web animations and data visualizations.

## Certifications of Disadvantaged Business Enterprise

Tetra Tech is committed to supporting Disadvantaged Business Enterprises and has teamed with two disadvantaged business enterprises—Studio-MLA and Estolano LeSar. Studio-MLA is a DBE/SBE/WBE and is certified by the City of Los Angeles, State of California General Services, the California Unified Certification Program Los Angeles County, Los

Angeles Metro and the Metropolitan Water District. Estolano LeSar is certified DBE by the California Unified Certification Program, SMBE by The Supplier Clearinghouse for the CPUC, and SBE by Los Angeles County Metropolitan Transportation Agency (Metro). These teaming partners represent up to 30% of the proposed project fee to meet the requirement that the consultant team shall contain at least 25% certified disadvantaged businesses.

## Prior Participation with MRCA Project by Firm

Members of our team have previously worked on projects where MRCA was involved. Studio-MLA led many projects, including Vista Hermosa Park, Confluence Plaza, Taylor Yard Conceptual Study, Pacoima Wash Greenway, Puerco Canyon Nature Preserve Master Plan, Ivar Park, Piggyback Yard Feasibility Study, and Marsh Park Phase I. The Tetra Tech team has also been involved in projects for other clients, where MRCA was also participating, including the Los Angeles River Revitalization Master Plan and the Los Angeles River Ecosystem Restoration and Feasibility Study.

In addition, MIG led design and construction (2014-2017) for the **Compton Creek Natural Park at Washington Elementary School** in Compton. Compton Creek Natural Park is the result of a collaborative effort between the Mountain Recreation Conservation Authority (MRCA) and Compton Unified School District to develop the five-acre property behind Washington Elementary School adjacent to Compton Creek. The goal was to develop a natural park integrated with an outdoor learning environment to serve both the school and the surrounding community of Compton, California. Providing both schematic design and construction documents, MIG worked with the MRCA and CUSD to develop the educational concepts behind the site design, conducting multiple work sessions with Washington Elementary School teachers. The park is designed to create a multi-sensory experience that layers history, natural science and art into each area, and creates a safe place for student exploration adjacent to spacious green community areas for recreation, relaxation and socializing. The plan was constructed in two phases: phase 1 includes a multi-use trail along Compton Creek with interpretive signs, a community plaza and picnic area as well as a small amphitheater, exercise stations and a multi-use lawn; phase 2 comprises the outdoor learning area, including features such as a native stone climbing wall, play stream, local Native American history themed sand play and an historic California-themed children's garden. The site design emphasizes restoring the natural storm water system using surface bioswales and pervious paving, while also collecting storm water in an underground cistern for irrigation use. The planting emphasizes restorative native species.

## Statement of Non-Conflict of Interest

To the best of our knowledge and belief, Tetra Tech – DIV (IWM) represents and warrants that they, he, she, or the officers, directors, and/or employees of bidder are not related by blood or marriage to any member of the governing boards of the SMMC, the SMMC Advisory Committee, the MRCA, or any other joint powers authority for which the SMMC is a constituent member, or to any officer, director or staff member with discretion over the contract of any of the aforesaid public agencies.



# Qualifications and Background

## Key Project Personnel

The following organizational chart identifies our key leadership team. The skills table on page 3 identifies the proposed staff for this project, and their experience and expertise with key aspects of the project that will be needed to successfully develop the Upper Los Angeles River and Tributaries Revitalization Plan on an accelerated timeframe. In addition to the resumes provided here for our key leadership team, Appendix A includes additional resumes that demonstrate the depth of resources and experience we have available for the remainder of the team.



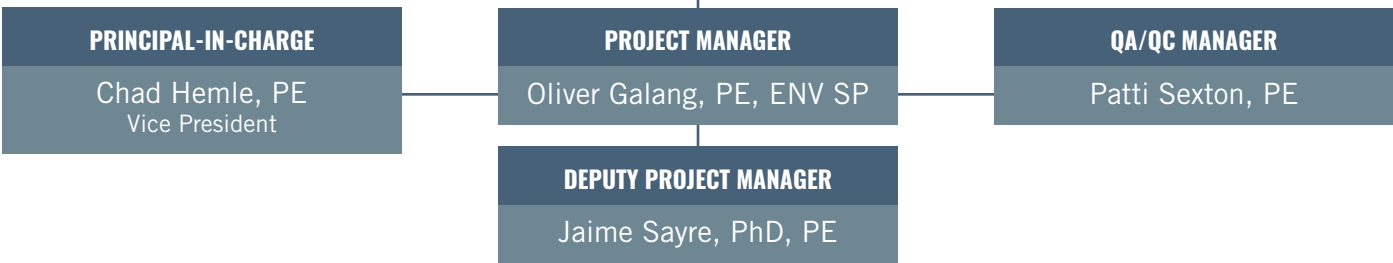




MRCA  
Attachment  
September 14, 2018  
Agenda Item IV

**MRCA PROJECT MANAGEMENT**  
Sarah Rascon  
Urban River Program Officer, Los Angeles River

**TETRA TECH PROJECT MANAGEMENT**



**TECHNICAL LEADS**

LANDSCAPE ARCHITECTURE AND DESIGN	ENGINEERING: HYDROLOGY/ BIOLOGY/ECOLOGY	COMMUNITY ENGAGEMENT/ FACILITATION	PLANNING: MOBILITY/ HOUSING/ECONOMICS
Mia Lehrer, FASLA Jan Dyer, RLA, ASLA —————StudioMLA Steve Lang, RLA, ASLA Mukul Malhotra —————MIG	Oliver Galang, PE, ENV SP Ira Artz, PE Michelle Bates, MS —————Tetra Tech	Daniel Iacofano, PhD, FASLA, FAICP Esmeralda García Andy Pendoley Steve Kokotas, MUPP —————MIG	Jeremy Klop, AICP —————Fehr & Peers Tulsi Patel —————ELA David Bergman —————MR+E
<b>CRITICAL TASKS</b> Conceptual Design Project Concepts Urban Design Visualization	<b>CRITICAL TASKS</b> Hydrology/Hydraulics Water Resources Geotechnical Biology/Ecology Environmental Remediation Environmental Planning Climate Change	<b>CRITICAL TASKS</b> Facilitation Outreach Community Engagement Graphic/Web Design Watershed Education NGO Collaboration & Coordination	<b>CRITICAL TASKS</b> Transportation Planning Housing/Social Equity Economic Planning Implementation & Funding GIS/Database



## Proposed Staff Skills

PROJECT TEAM MEMBER	Knowledge of Los Angeles River and Its Challenges and Constraints	Experience in Low Flow Diversion Modeling and Design	Expertise in Water Quality Monitoring and Regulations	Experience Facilitating Meetings and Coordinating Stakeholders	Experience Developing and Executing Community Engagement Programs	Experience Creating Project Design Renderings
Oliver Galang, PE, ENV SP	■	■	■	■		■
Chad Helmle, PE	■	■	■	■	■	
Patti Sexton, PE	■	■				
Jaime Sayre, PE, PhD	■		■	■	■	
Ira Artz, PE	■	■	■	■		■
Michelle Bates, MS	■					
Renee Longman, AICP, LEED-AP BD+C	■		■			
Christy Williams	■		■	■	■	
Chung-Chen Yen, PE	■	■				
Jung Suh, PE	■	■				
Aric Torreyson, PE						
Brad Wardynski, PE	■	■	■	■		
Merrill Taylor, PE	■	■	■			
Peter Skopek, PhD, PE, GE						
Fernando Cuenca, PhD, PE						
Robert Kurkjian, PhD	■		■			
Cari Ferrell, PE, QSP/QSD, QISP	■		■			
Sujoy Roy, PhD	■					
John Stein	■					
Daniel Iacofano, PhD, FAICP, FASLA (MIG)	■			■	■	■

## Proposed Staff Skills

<b>PROJECT TEAM MEMBER</b>	<b>Knowledge of Los Angeles River and Its Challenges and Constraints</b>	<b>Experience in Low Flow Diversion Modeling and Design</b>	<b>Expertise in Water Quality Monitoring and Regulations</b>	<b>Experience Facilitating Meetings and Coordinating Stakeholders</b>	<b>Experience Developing and Executing Community Engagement Programs</b>	<b>Experience Creating Project Design Renderings</b>
Esmeralda Garcia (MIG)	■			■	■	
Andy Pendoley (MIG)	■			■	■	
Steve Lang, PLA (MIG)	■			■	■	■
Mukul Malhotra (MIG)	■			■	■	■
Steve Kokoas (MIG)	■				■	
Mia Lehrer (MLA)	■			■	■	■
Jan Dyer (MLA)	■			■	■	■
Benjamin Feldmann, RLA, LEED AP (MLA)	■			■	■	■
Astrid Sykes (MLA)	■			■	■	■
Kat Superfisky (MLA)	■			■	■	■
Jeremy Klop (Fehr & Peers)	■					
David Bergman (MR+E)	■					
Tulsi Patel (ELA)				■	■	

# Chad S. Helmle, PE

## Project Manager and Engineer Technical Lead

### Experience Summary

As the national lead for green infrastructure at Tetra Tech, Mr. Helmle has overseen numerous large and small water resources projects and programs across the country and in Southern California. His ongoing role as program manager or principal-in-charge of several large municipal on-call contracts has afforded him the unique opportunity to explore a broad spectrum of stormwater-related issues, ranging from strategic planning to design and implementation. Examples of his project leadership include numerous green infrastructure master planning efforts, over 50 different neighborhood-scale green infrastructure retrofit design efforts in parks and public parcels, and watershed and BMP modeling analyses. He is especially passionate about finding innovative solutions to the challenging prospect of retrofitting existing urban landscapes and infrastructure to meet the compliance or runoff management needs of municipal agencies. Over the course of managing these projects, he has continually pushed the envelope to improve his team's methods by innovating new processes, templates, and tools for creating effective and robust design concepts and modeling approaches for green infrastructure retrofits. This constant push for new approaches has yielded many key innovations, such as integrating real-time control elements to BMPs to facilitate boosted BMP performance or meeting the integrated needs of watershed managers. Mr. Helmle strives to strike the proper balance between form, function, and simplicity of operation.

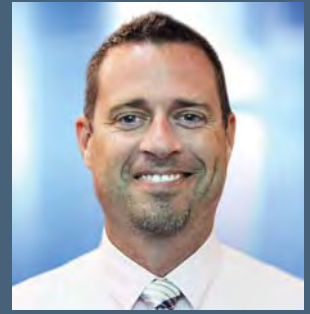
### Relevant Experience

#### **Watershed Engineering On-Call Contract, County of Los Angeles, CA. Principal in Charge.**

Principal in Charge for current \$6M, 3-year as-needed contract to support the county with wide-ranging watershed services, including the design of regional BMPs in parks, regional master planning work, and piloting of innovative regional stormwater capture programs. Tetra Tech's work for the County has been recognized at the national and regional level as precedent-setting, especially in terms of applying technical innovation to solve emerging stormwater problems. Signature projects that Mr. Helmle has personally led include (1) the Multi-Agency Collaborative Stormcatcher Project, which demonstrated the feasibility of leveraging parcel-based real time control systems to capture runoff and augment water supplies; (2) the Lower Los Angeles River Revitalization Plan, which emphasizes a watershed-based approach to revitalizing a 19-mile long, two-mile wide reach of the LA River corridor; and (3) multiple park-based regional stormwater capture BMP designs intended to meet pressing TMDL compliance needs.

#### **As-needed Stormwater Engineering and Consulting Services, City of San Diego. Program Manager.**

Program Manager for current \$21.5M, 5-year as-needed contract to provide the full spectrum of stormwater program support, including all City Water Quality Improvement Plans, stormwater capital project design, special scientific studies, BMP research and development, compliance reporting, and general permit support. Managing one of the largest stormwater contracts of its kind, Tetra Tech's leadership in these areas has



### EDUCATION

BM.S., Civil Engineering,  
Environmental Fluid  
Mechanics/Hydrology,  
Cornell University, 2005

B.S., Engineering and  
Environmental Science,  
University of Notre Dame,  
1997

### REGISTRATIONS

Professional Engineer  
(Civil), State of California  
(69525), 2006



### YEARS OF EXPERIENCE

19



### YEARS WITH TETRA TECH

12





helped the City gain attention on a national stage, especially regarding the cutting-edge BMP master planning, design, and innovative permit compliance strategies. Signature projects recently completed include: (1) a comprehensive green infrastructure master plan that utilized first-of-their-kind analytical approaches to strategically identify and prioritize regional and green infrastructure project opportunities; (2) an innovative regional stormwater harvesting analysis that demonstrated the degree to which local stormwater capture can feasibly and realistically augment water supplies by upwards of 25%; and (3) regionally-critical re-negotiation of bacteria TMDL requirements that will set the stage for reducing municipal bacteria mitigation requirements across the state.

**LA River Upper Reach 2 WMP Feasibility Study, Gateway Water Management Authority. Water Resources Manager.**

The Los Angeles River (LAR) Upper Reach 2 (UR2) Watershed Management Area (WMA) is a highly urbanized area consisting of 14,216 acres that discharges to Reach 2 of the LAR, a concrete-lined river channel with year-round flows comprised primarily of treated wastewater. Tetra Tech is conducting a feasibility study for six regional BMP projects to further assess the feasibility and quantification of water quality benefits set forth in the WMP. For each site, the project feasibility study consolidates the desktop evaluations, site investigations, hydrology and water quality analysis, and regulatory standards to provide guidance on the next steps in the project implementation

**Aliso Creek and Limekiln Creek Restoration Project, City of Los Angeles CA. Project Manager and Water Quality Lead.**

The Aliso Creek – Limekiln Creek Restoration Project represents a major opportunity for the City of Los Angeles (City) to continue the City’s ability to set the standard for ecosystem services and social benefits by the “Restorative” objectives of the Envision certification program. The benefits of this project, and of all the Proposition O projects, include water quality and other multiple benefits to the neighborhood by enhancing a specifically built flood control facility into a multifunction green infrastructure facility. Tetra Tech is designing the Aliso-Limekiln Creek Project by implementing innovative BMP optimization tools to seamlessly integrate a cutting-edge and innovative water quality management system. Tetra Tech’s unique design approach includes routing wet- and dry-weather

flows into green infrastructure features as a proven technique for reducing pollutant loads.

**Albion Riverside Park Project, City of Los Angeles, CA. Principal in Charge.**

Full design of a multi-BMP system to treat runoff generated in the Albion Riverside Park and the 300-acre watershed draining to the adjacent storm drain. The project included modeling runoff hydrology and water quality and design of a multiple BMP system, including permeable pavement and bioretention areas, to treat 100 percent of the runoff from the park and a series of subsurface infiltration galleries sized to eliminate dry-weather flows and reduce the zinc load from the stormwater runoff entering the LA River. The project transforms a 6-acre site previously used for dairy warehousing and distribution into a riverfront park and recreational facility that will benefit nearby disadvantaged neighborhoods.

**Upper Los Angeles River and Ballona Creek Enhanced Watershed Management Programs (EWMPs). City of Los Angeles (as sub to Black & Veatch). Project Manager.**

Project Manager to support two watershed management groups and 23 jurisdictions across greater Los Angeles County to develop EWMPs for Upper Los Angeles River and Ballona Creek watershed management groups that will provide a collaborative and prescriptive strategy for compliance with multiple TMDLs while also identifying opportunities for enhanced, interagency projects promoting water quality improvement, water supply augmentation, and community services/co-benefits.

**Capital Project Co-Benefits Planning Platform, City of Los Angeles, CA. Project Manager.**

Project Manager to develop a capital project planning platform for the City of Los Angeles’ stormwater program. This tool provides the City staff with the ability to outline basic project needs and ultimately quantify the potential benefits, such as water capture, cost, pollutant removal, impacts to green jobs, improved air quality, etc. The tool provides an easy-to-use user interface for project input and summarizes the cumulative impacts of the proposed capital program. This platform establishes the foundation for potential future grant application data and is key for communicating with City leadership.

# Oliver Galang, PE, ENV SP, QSD/P, QISP

## Project Manager and Engineer Technical Lead

### Experience Summary

Oliver Galang's experience encompasses over 24 years of planning, design, construction and program management of multi-million dollar municipal capital improvement projects, specifically in water resources and stormwater infrastructure throughout Los Angeles County. Highlights of Oliver's career also include service as the Head of the Los Angeles River Watershed Section of the Los Angeles County Department of Public Works' Watershed Management Division. His responsibilities included staff management and direction for the planning of multi-use, multi-benefit projects, with an estimated construction value of more than \$60 million, along the Los Angeles River. He served as the Head of the Data Management Section of the Watershed Management Division, and was responsible for an annual budget of more than \$10 million in urban runoff and stormwater quality monitoring programs, including Los Angeles County Flood Control District (LACFCD's) National Pollutant Discharge Elimination System (NPDES) Municipal Stormwater Monitoring Program. He was also responsible for managing the operations of the LACFCD flood control and water conservation system, which consisted of 14 reservoirs, 500 miles of conveyance channels, and 27 groundwater recharge facilities.

### Relevant Experience

#### **AB530 Lower Los Angeles River Revitalization Plan, County of Los Angeles Department of Public Works, Vernon to Long Beach, CA. Project Manager.**

This project consists of the development of a visionary, community-based revitalization plan for the 19-miles of the Los Angeles River, from Vernon to Long Beach. Mr. Galang is managing the direction of the technical documentation for the Working Group, the technical teams in assessing the multiple facets of the revitalization plan, which includes a robust Community Engagement Program, assessment of the Community Economics, Public Recreation needs, sustainable water resources, and environmental enhancement opportunities.

#### **Aliso-Limekiln Creek Restoration Project, City of Los Angeles, Bureau of Engineering, CA, 2015-Ongoing. Technical Lead.**

This project consists of the development of a regional stormwater BMP under the City's Proposition O Program. The project consists of diverting dry-weather urban runoff from Aliso Canyon Creek and Limekiln Creek to an adjacent undeveloped property in the Northridge community. He is responsible for leading the development of the watershed hydrology, hydraulic analysis, and the BMP sizing effort for this project.

#### **Los Angeles River Upper Reach 2 Feasibility Study. Project Manager.**

Responsible for leading concept development activities for six project concepts that will divert wet-weather and dry-weather urban runoff from various storm drains to an underground infiltration gallery or storage system at four local city parks, an LADWP easement, and a railroad right-of-way facility. Facilitated concept reviews and coordinated project



### EDUCATION

B.S., Civil Engineering,  
California State  
University, Fullerton, 1993

Engineering Management  
Graduate Studies,  
California State  
Polytechnic University,  
Pomona, 2005

### REGISTRATIONS

Civil Engineer, CA,  
No. 56588, 1997

Envision Sustainability  
Professional,  
November 2014

Qualified SWPPP  
Developer (QSD/P)

Qualified Industrial Storm  
Water Practitioner (QISP)



### YEARS OF EXPERIENCE

24



### YEARS WITH TETRA TECH

2



scheduling with a large stakeholder team including representatives from the Cities of Bell, Bell Gardens, Commerce, Cudahy, Huntington Park, Maywood, and Vernon. This project concepts effort resulted in the development of 10% design documents for five optimized regional BMPs in the watershed.

**Los Angeles River Urban Orchard Wetlands Park Project. Trust for Public Lands. Project Manager.**

The Urban Orchard project is located along the Los Angeles River in the City of South Gate, 30 acres of postindustrial land will become the centerpiece of a community-driven revitalization effort. Anchored by an urban orchard with trees chosen, tended, and harvested by the local community, the site will include a multi-benefit park including green infrastructure and recreational features. In 2017, The Trust for Public Land (TPL) was awarded funding from the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Proposition 1 Grant Program to further develop the design of the 30-acre site. In 2016, the City of South Gate (City) was awarded funding through the State Water Resources Control Board Proposition 1 Grant Program for the implementation of 7 acres of the 30-acre project. TPL intends to approach this project in three phases based on current available funding and the Preliminary Concept Plan. Tetra Tech is providing water resources, water quality, civil design, structural design, and geotechnical support services for this project.

**Lakewood Stormwater Capture Project at Bolivar Park, City of Lakewood, Lakewood, CA. Project Manager.**

Providing project management services, preliminary engineering project development, water quality modeling and water quality compliance documentation, detailed design services, and design support services during construction that will assist the City of Lakewood in implementing innovative smart systems to improve water quality and meet irrigation needs in the drought-stricken region. Tetra Tech received the Environmental Business Journal's (EBJ) Technology Merit Award in the Water category for implementing innovative stormwater management using smart systems.

**Sun Valley Strathern Wetlands Park Project, Los Angeles River Section, Watershed Management Division, County of Los Angeles, Department of Public Works, Los Angeles, CA. Watershed Manager.**

Oversaw the design development of this \$48 million multi-use wetlands park. The project is a significant

component of the Sun Valley Watershed Master Plan that seeks to address major flooding through a stakeholder-based multi-benefit project approach. The project consisted of redeveloping a 46-acre former landfill site into a multi-use stormwater facility. The facility consisted of 21-acres of flood control detention ponds, 10-acres of treatment wetlands, 15-acres of natural open space, and recreational park facilities that integrate low impact development (LID) components of permeable pavements, native landscaping and swales. The project also infiltrated stormwater runoff flows in the adjacent infiltration basins of the Sun Valley Park Project. Mr. Galang managed development of the final project concept; initiated the geotechnical investigations and pond liner design; met with the multiple stakeholders, political leaders, and partner agencies; managed funding grants; and presented the final project concept to the local community.

**Compton Creek Flood Risk Mitigation Project, Los Angeles River Section, Watershed Management Division, County of Los Angeles, Department of Public Works, CA. Watershed Manager.**

Oversaw the alternatives feasibility study and hydraulic analysis of a \$20-million flood risk mitigation of Compton Creek to contain the 100-year storm event. Mr. Galang conducted technical review of the alternative concepts that consisted of using existing open space areas (parks, schools, undeveloped) within the Compton Creek Watershed to detain stormwater and constructing additional flood wall levees to contain the storm water flows within the Compton Creek Channel. He presented the alternative concepts and recommended plan to the County of Los Angeles Public Works.

**Pacoima Spreading Grounds Water Conservation Park Project, Los Angeles River Section, Watershed Management Division, County of Los Angeles, Department of Public Works, CA. Watershed Manager.**

Developed a \$6 million project that proposes intake modifications and redevelopment of a multi-use park project. The project consisted of a rubber dam diversion structure, storm drains, and a multi-use recreational area and educational plaza. Provided oversight and direction for developing the project's concept, and was responsible for technical review of the Proposition 84 Grant Application, coordination with the City Council, and meeting with community stakeholders.

# Patti Sexton, PE, CFM

## QA/QC Manager

### Experience Summary

Mr. Torreyson has over 16 years of diverse engineering experience in the fields of water resources engineering, environmental engineering, and infrastructure assessment and master planning. He is the current Program Manager for the Los Angeles District IDIQ contract and his expertise in water resources issues covers a broad range of subjects, including infrastructure improvements, surface water hydrology; sediment transport; storm water runoff; hydraulic and hydrodynamic modeling. He has specific experience in flood control projects throughout California and Arizona, specifically the bay area in northern California and throughout all of Southern California. He and has recently managed numerous large scale flood control projects which included UPRR permitting, R/W mapping and acquisition, geotechnical engineering, structural analysis, and environmental permitting.

### Relevant Experience

#### **Los Angeles River Revitalization Master Plan, City of Los Angeles, CA. Project Engineer.**

Responsible for the stormwater management element of the project. As part of the Master Plan, recommendations were made for typical structural treatment control BMPs that could be implemented along the river corridor. BMP selection considered the typical site conditions as well as the need to reduce loadings on the receiving water per the metals and bacteria TMDLs. Redevelopment guidelines were prepared that emphasize a low impact development philosophy at the site development level.

#### **Aliso Creek Baseline Conditions (F3) and Alternative Analysis (F4), USACE, Los Angeles District; Orange County, CA Project Manager.**

Hydrologic (HEC-1), hydraulic (HEC-GeoRAS), and sediment transport (SAM) baseline conditions were reanalyzed based on updates to the topographic information. A sediment budget analysis was performed to determine the volume of sediment transported to the beach and the creek outlet. Comparisons of results using SAM and SIAM were made to determine the best modeling approach. Ongoing work for the alternative analysis includes a geomorphic assessment to provide a more accurate future without project conditions scenario and analysis of 5 alternatives. Additional sediment transport analyses will be performed using HEC-6T.

#### **Aliso Creek Restoration Project, Orange County, CA. Project Manager.**

Using a previous USACE recommended alternative as a basis, 3 new alternatives were developed for restoration of Aliso Creek from AWMA Road Bridge to the Ocean outlet. The primary objective of the project was stabilization with secondary objectives for terrestrial restoration and water quality improvements at the ocean. Concept plans were produced to the 10% level of design. This project was submitted as part of the County IRWMP Proposition 50 Grant and \$5million was awarded for implementation.



### EDUCATION

M.S., Water Resource and Environmental Engineering, George Washington University (1995)

B.S., Civil Engineering, Virginia Tech (1991)

### REGISTRATIONS

Professional Engineer, Civil: CA, License No. 58643 (1996)

Professional Engineer, Civil: LA, License No. 37416 (2012)

Certified Floodplain Manager (CFM) (2009)



### YEARS OF EXPERIENCE

23



### YEARS WITH TETRA TECH

21





**2D Modeling of Los Angeles River Bicycle Path Underpasses, Los Angeles County, CA. Project Manager.**

Managed an evaluation of the hydraulic effects of proposed pedestrian path underpasses designed as part of the Los Angeles River Headwaters Project. The bicycle path will run along a 1.25 mile reach of the Los Angeles River between Owensmouth Avenue and the confluence with Browns Creek. The modeling was performed using the Corps ADH software. Project responsibilities included management of the project and coordination with the County and Corps of Los Angeles District to process the channel modification permit.

**Ventura River CTP Program LOMR; Ventura County Watershed Protection District, QA/QC and Technical Advisor.**

Served as advisor for a re-study of the VR-1 levee system under the Cooperating Technical Partner Program. This project included an integration of a unsteady HEC-RAS model (for the channel analysis) and a FLO-2D model (for the overbank flooding). This study was submitted to FEMA, reviewed, and approved.

**Borrego LOMR, Orange County Public Works. Project Manager.**

Managed a floodplain study to show the impacts of improvements – channelization and a covered box culvert. A Letter of Map Revision (LOMR) application was prepared for the County of Orange and will be submitted to FEMA for update the 100-year floodplain limits in the City of Irvine and Orange County unincorporated area.

**Riverside Drive Bridge Widening and Bikeway Realignment Hydraulic Analysis, Los Angeles County. Engineer.**

Performed hydraulic analysis and bridge scour calculations for the Riverside Drive Bridge where it crosses the Los Angeles River Project. The analysis was performed to support the design of the bridge widening as well as meet the requirements associated with a USACE 408 permit.

**Levee Certification for Tillman Wastewater Treatment Plant, City of Los Angeles Bureau of Sanitation. Project Manager.**

LA County leases space from the USACE in the Sepulveda Flood Basin for the wastewater treatment plant. For occupancy of a new building, the USACE has required that the levee/floodwall system be certified to FEMA standards. The complicating factor in this project is the vegetation (including large trees) that were planted as part of the initial USACE construction in conjunction with the Japanese Gardens and project mitigation. Resolutions are

being investigated including considering the overbuild section above the freeboard as sacrificial and determining if geotechnical failure planes can be confined in that portion of the levee.

**Aliso Creek Stabilization, South Orange County Water Agency. Project Manager.**

Managed an erosion assessment of the relative vulnerabilities of proposed pipeline alignments. The vulnerable locations were prioritized to support capital improvement decisions. For high priority locations, bank stabilization alternatives are being developed. At some locations opportunities for water quality and environmental restoration are being incorporated into the designs.

**Covington Wash Floodplain Study, Hi-Desert Water District, Yucca Valley, CA. Project Manager.**

Managed a floodplain study and alternatives analysis to determine the existing flooding impacts associated with a 100-year flood event and develop alternatives for mitigating the impacts at the proposed wastewater treatment plant site. New hydrologic analysis was developed to update the rainfall values and calibrate to the results of the previous study. The hydraulic analysis was based on HEC-RAS modeling and identified potential flood issues related to the alluvial flooding present in the area. Current work includes developing 2-dimensional hydraulic models to refine the potential for lateral flows and determine likely paths of on-site flows into the proposed treatment plant site.

**Tapia Canyon Bridge Replacement, Castaic, CA, Toll Brothers. Project Manager.**

Hydraulics and scour analysis of a project to replace a culvert/dip crossing with an all-weather bridge. Alternatives were investigated that include deep bridge pier construction as well as grade control with fish passage. The project includes a geomorphic assessment of the areas including the dam release from Castaic Lake and the contribution from the uncontrolled canyons.

**San Diego Creek Floodplain Study, Orange County RDMD, Project Manager and Project Engineer.**

Analysis of San Diego Creek to assess the hydraulic impacts for various vegetation management plans. The hydraulic analysis was performed using steady and unsteady HEC-RAS and included both in-channel and overbank flooding assessment. Scenarios with and without the levee were analyzed.

# Jaime M. Sayre, Ph.D., P.E., QSD/P

## Project Manager and Engineer Technical Lead

### Experience Summary

Jaime is an environmental engineer who specializes in urban watershed management and stormwater remediation. Jaime's experience encompasses over 11 years of work and research in TMDLs and water quality projects. For her doctoral dissertation, she investigated the total maximum daily loads (TMDL) for hydrophobic organic contaminants and performed a cost benefit analysis for reducing stormwater runoff and contamination in the Los Angeles region. Her experience includes conducting water/field sampling, data collection and analysis, laboratory analyses, and experiments to establish TMDLs and baseline conditions for organic contaminants in Ballona Creek and Marina del Rey Harbor polyethylene devices (PEDs) and solid-phase microextraction (SPME). As project engineer for several TMDL special studies and stormwater projects in Los Angeles, Jaime led the technical development of the projects, authored technical reports, performed quality assurance/quality control reviews, and conducted data analyses. Jaime has managed and led teams to provide public and private sector clients with quality products. Most recently, Jaime led the Lower LA River Revitalization Plan, a complex project consisting of the development of a visionary, community-based revitalization plan for the 19-miles of the Los Angeles River, from Vernon to Long Beach. Through-out her career, Jaime has managed complex projects within Southern California with high political and environmental stakes, and is an expert facilitator of communication among clients, subcontractors, and personnel; and regulatory compliance issues.

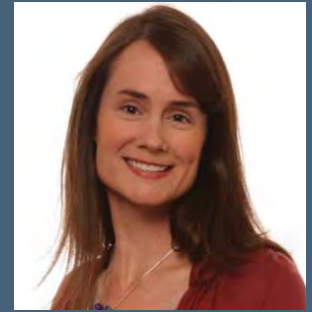
### Relevant Experience

#### **AB 530 Lower Los Angeles River Revitalization Plan, Vernon to Long Beach, CA. Los Angeles County Department of Public Works. Deputy Project Manager.**

This project consists of the development of a visionary, community-based revitalization plan for the 19-miles of the Los Angeles River, from Vernon to Long Beach. The project is being developed in response to Assembly Bill 430, which requires the development of the Lower Los Angeles River Working Group and the development of a revitalization plan that addresses the unique and diverse needs of the Lower Los Angeles River. Ms. Sayre is responsible for the daily management activities, client coordination, preparing technical documentation for the Working Group and committees in order to assess the multiple facets of the revitalization plan and the implementation of a robust Community Engagement Program.

#### **Los Angeles River Urban Orchard Wetlands Park Project. Trust for Public Lands. Deputy Project Manager.**

The Urban Orchard project is located along the Los Angeles River in the City of South Gate, 30 acres of postindustrial land will become the centerpiece of a community-driven revitalization effort. Anchored by an urban orchard with trees chosen, tended, and harvested by the local community, the site will include a multi-benefit park including green infrastructure and recreational features. In 2017, The Trust for Public Land (TPL)



### EDUCATION

Ph.D., Environmental Engineering, University of Southern California, 2009

M.S.C.E., Civil Engineering, West Virginia University, 2001

B.S.C.E., Civil Engineering, West Virginia University, 1999

### REGISTRATIONS

Professional Civil Engineer, California, 80240, 2012

Qualified SWPPP Developer/ Practitioner 24236, California

### AFFILIATIONS

American Society of Civil Engineers (ASCE)

California Stormwater Quality Association (CASQA)



**YEARS OF EXPERIENCE**

11



**YEARS WITH TETRA TECH**

2



was awarded funding from the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy Proposition 1 Grant Program to further develop the design of the 30-acre site. In 2016, the City of South Gate (City) was awarded funding through the State Water Resources Control Board Proposition 1 Grant Program for the implementation of 7 acres of the 30-acre project. TPL intends to approach this project in three phases based on current available funding and the Preliminary Concept Plan. Tetra Tech is providing water resources, water quality, civil design, structural design, and geotechnical support services for this project.

**Owner's Agent, Los Angeles Department of Water and Power (LADWP) Project Manager.**

Responsible for all preliminary project initiation duties including development of scope and effort, schedule, and budget. Managed internal staff of engineers, geologists, scientists, and several subconsultants. Maintained written correspondence with client, including invoicing and monthly report development.

**Dominguez Channel Coordinated Integrated Monitoring Program, City of Los Angeles, CA. Project Engineer/TMDL and Regulatory Lead.**

Helped to develop the CIMP, including summarizing and explaining the applicable TMDLs and monitoring programs and working with the City of Los Angeles' Toxicity Group to develop an approach to address the aquatic toxicity requirements of the new MS4 NPDES permit.

**Antelope Valley Granular Activated Carbon Public Survey, As-Needed Urban Runoff and Stormwater Quality Engineering Services, County of Los Angeles Department of Public Works, CA. Project Manager.**

Managed public opinion research and analysis on issues related to the proposed change in the way drinking water is disinfected for the Districts' Acton and Antelope Valley customers. The survey included 400 random customers residing in Antelope Valley, averaging 15 minutes per interview, survey instrument development (questionnaire), sample design and acquisition (random customer selection process), interviewing, data processing, analysis of results, PowerPoint presentation and summary report of the final results.

**Ballona Creek Auto Sampler Design and Implementation, City of Los Angeles, Department of Public Works, Bureau of Sanitation, Los Angeles, CA. Project Engineer.**

Project involves designing automatic water sampler stations for wet-weather water sampling in compliance with the Ballona Creek Metals and Ballona Creek Estuary Toxic Pollutant Total Maximum TMDLs. Coordinating the water sampler station design to implement wet-weather sampling in accordance with the Coordinated Monitoring Plan, and managing scope, schedule and budget of this \$80K TMDL project.

**Task Order 4 Penmar Water Quality Improvement Project, City of Los Angeles, Department of Public Works, Bureau of Engineering, Venice, CA. Project Engineer.**

The Penmar Water Quality Improvement Project is a recipient of Prop O funding with the objective of improving water quality for stormwater runoff from the Penmar area located in the Venice neighborhood of Los Angeles and reducing bacterial levels in the surf zone of Santa Monica Bay. Design and construction of this project is a critical component of the City's efforts to achieve compliance with the NPDES and Santa Monica Bay Beaches Wet Weather Bacteria TMDL regulations mandated by the California Regional Water Quality Control Board. Critical stormwater best management practices (BMPs) for this \$1.5M project include a hydrodynamic separator, metals filters, a 2-million-gallon reservoir, infiltration, and disinfection (ultraviolet). Treated stormwater will be reused for irrigation purposes to offset potable water consumption associated with the Penmar Golf Course and will be stored in a water storage pond designed to serve as a golf course water hazard. Ms. Sayre assisted with data collection, budget/report preparation, and field work.

**Legg Lake Trash TMDL Public Outreach Campaign, As-Needed Urban Runoff and Stormwater Quality Engineering Services, County of Los Angeles Department of Public Works. Project Engineer.**

Project involves an information campaign to reduce littering by Legg Lake Park, educate and raise awareness of what constitutes litter, proper disposal of trash, educating the public about potential negative impacts on community, and developing an anti litter campaign to attain a zero trash discharge into Legg Lake and its shoreline. Responsible for site visits, field observations, and assisting in the development of a new anti-litter campaign.

# Ira Artz, PE

## Hydrologist Technical Lead and Implementation and Funding

### Experience Summary

Mr. Artz has over 30 years of experience in the engineering, management, and planning of water resources projects and has managed and provided a QA/QC role on large-scale, multi-disciplinary public works projects for municipal and federal agencies. Since 1986, Mr. Artz has worked on select water resources and flood hazard mitigation projects for the County of Los Angeles. His engineering and environmental sciences background enabled his preparation and understanding of hydrology and hydraulic reports, drainage studies and analyses, watershed studies, ecosystem restoration studies, and floodplain analyses and the development and implementation of wetland and water quality programs involving BMPs, wetland creation, regulatory permitting, and TMDL compliance.

### Relevant Experience

**AB530 Lower Los Angeles River Revitalization Plan, County of Los Angeles Department of Public Works, Vernon to Long Beach, CA. Implementation Lead.**

This project consists of the development of a visionary, community-based revitalization plan for the 19-miles of the Los Angeles River, from Vernon to Long Beach. Mr. Artz provided leadership and facilitation of the Implementation Subcommittee, including development of proposed financing and organizational structure for implementing the plan. He also provided input to revitalization alternatives including hydraulic analysis.

**Los Angeles River Ecosystem Restoration Feasibility Study, USACE, Los Angeles District. Project Manager.**

Managed facilitation, writing, plan formulation, design and cost, economic analysis, CEQA/NEPA, and GIS services associated with the Los Angeles River Ecosystem Restoration Study' plan formulation phase. The effort included developing a three-day charette workshop with 60 stakeholders with GIS/design representation of the results, to prioritize problems, objectives, and alternative measures for an 11-mile reach of the Los Angeles River between Forest Lawn Drive and 1st Street in downtown LA. One of the study's priorities was to consider flood hazards along the Los Angeles River and ensure flooding would not be worsened by any of the proposed alternatives.

**Los Angeles River Revitalization Master Plan, City of Los Angeles, CA. Project Manager.**

Responsible for this highly-visible effort for the City of Los Angeles. The Plan process developed and considered alternatives for the 32-mile River corridor. The goal of the Master Plan is to create a 20-year blueprint for development and management of the LA River. The 20-month process resulted in a master plan for revitalization of the River for the purposes of habitat development, recreation/open space, water quality, economic development, and fostering a growth in community awareness and pride in the Los Angeles River. Mr. Artz directed the hydraulic/flood hazard, cost, design, environmental, and alternative analyses.



### EDUCATION

M.S., Civil Engineering/  
Infrastructure  
Management, Stanford  
University, 1986

M.A., Geography/  
Geomorphology, University  
of California, Los Angeles,  
1979

B.A., Ecosystems  
Analysis, University of  
California, Los Angeles,  
1976

### REGISTRATIONS

Professional (Civil)  
Engineer, CA, No. 45467,  
1990

### AFFILIATIONS

American Society of Civil  
Engineers

Society of American  
Military Engineers



### YEARS OF EXPERIENCE

39



### YEARS WITH TETRA TECH

21



**Los Angeles River Headwaters Underpass 2-D Modeling for Pedestrian Underpasses, City of Los Angeles, Bureau of Engineering. Project Manager.**

Tetra Tech was retained by the City to develop and apply two-dimensional (2-D) hydraulic models to evaluate the proposed pedestrian path underpass design at the Canoga Avenue and De Soto Avenue Bridge crossings along the Los Angeles River. The modeling was performed using the Corps of Engineers Adaptive Hydraulics (ADH) hydraulic model. Mr. Artz was able to provide creative solutions to solving water surface issues that otherwise would have resulted in a denied USACE 408 permit.

**Sediment Management Plan, Los Angeles County Department of Public Works. Planning Reviewer.**

Lead planning review for Tetra Tech's team that provided technical support to the County for the development of a plan for long-term, sustainable management of sediment in the County. Mr. Artz reviewed documents that involved analysis and screening of sediment management alternatives, modeling of sluicing at Pacoima Reservoir, and developing a plan for a pilot project for processing of sediment for multiple uses.

**One Water Los Angeles, Carollo Engineers, Inc. Hydrologist.**

Mr. Artz has been responsible for developing the water budget related to the habitat needs of the ARBOR Reach of the Los Angeles River Ecosystem Restoration Study. The water budget considers groundwater, rainfall runoff, infiltration, and evapotranspiration to help determine water within the river that would be available to existing and future habitat as well as other water requirements.

**The Piggyback Yard Conceptual Master Plan, Friends of the Los Angeles River. Project Manager.**

Pro bono effort of several firms on behalf of the Friends of the Los Angeles River. Created two alternative visions for the large Mission Rail Yard currently owned by Union Pacific in downtown Los Angeles. Coordinated with several agencies including the Corps of Engineers, and will become one of the measures considered for the Los Angeles River Ecosystem Feasibility Study.

**Program Implementation Plan for the Foothill Communities Water Supply Reliability Study, Los Angeles and San Bernardino Counties, CA, USACE, Los Angeles District. Project Manager.**

Responsible for this Program Implementation Plan addressing water supply reliability, water quality, and

water system infrastructure enhancement for a 42-city region in Los Angeles and San Bernardino Counties. Eight individual alternatives were formulated. The effort included an environmental analysis, alternative description, cost estimates, and a scope of study for potential spin-off studies in the future.

**Los Angeles River Headwaters Bikeway, Owensmouth Avenue to Mason Avenue, City of Los Angeles, CA. Flood Hazard Mitigation Specialist/Project Manager.**

Responsible for ADH hydraulic modeling for two bridge undercrossings along the Los Angeles River in the San Fernando Valley. Evaluated the hydraulic impact of the proposed bicycle/pedestrian undercrossings to ensure adverse flood conditions were not created. A detailed report was developed and submitted to the client.

**Taylor Yard Bridge, City of Los Angeles, CA. Hydrologist.**

Mr. Artz has been responsible for the 408 permit application for the City's bridge across the Los Angeles River near Taylor Yard. This effort is in conjunction with Tetra Tech's contract for structural design and hydraulic analysis of the bridge. The 408 permit has required coordination with the US Army Corps of Engineers to show minimal impact on the river's water surface for design flows.

**Taylor Yard Data Gap Remediation Study, City of Los Angeles. Planner.**

As part of Tetra Tech's task order to identify remediation costs for Taylor Yard, Mr. Artz helped develop concepts for potential land uses that included revenue-generating land uses as well as habitat and park uses.

**Atwater Park Multi-nodal Bridge, Los Angeles River, River Revitalization Corporation. Project Manager.**

This highly visible effort in the City of Los Angeles spans the river with a multi-modal bridge in the North Atwater neighborhood. Mr. Artz is assisted with the review of the design cost estimates, agency coordination efforts, and securing a 408 permit for modifications to Corps projects.

**Groundwater Hydrology Study, Raymond Basin, CA, USACE, Los Angeles District Project Manager.**

Managed groundwater and constituent transport study. The hydrology study defined the baseline groundwater condition and developed a groundwater flow and contaminant transport model, considered a with-project condition, and potential sources of water importation for surface water/groundwater.

# Michelle Bates

## Biologist/Ecologist Technical Lead and Environmental Planning

### Experience Summary

Ms. Bates has been working as a Principal Biologist in California for the last 20 years. She has managed and completed various projects throughout California and the western U.S. Ms. Bates was the program manager for an ongoing base-level natural resources contract at Vandenberg AFB for 10 years under which 30 task orders were completed. The contract included various types of natural resources projects, including invasive species treatments, special-status species surveys, habitat restoration, preparation of Biological Assessments, NEPA compliance projects, and Clean Water Act Compliance projects.

Ms. Bates has managed various task orders for the Navy for the last 10 years. Habitat restoration, rare plant surveys, invasive plant treatments, and management plans projects have been conducted. She has served as a project manager, lead biologist, and quality assurance/quality control specialist. She has conducted numerous biological surveys for listed and sensitive plant species and other sensitive wildlife species.

### Relevant Experience

#### **Aliso Creek – Limekiln Creek Restoration Project, City of Los Angeles, CA. Lead Biologist.**

Aliso Creek is located adjacent to the Los Angeles River. Tetra Tech engineers developed proposed design improvements, which included constructing several stormwater Best Management Practices (BMPs) to reduce contamination in Aliso Creek, Limekiln Creek, and the Los Angeles River. A passive trail system was also included to expand the existing park facilities. Ms. Bates worked closely with Tetra Tech engineers during the design process and managed completion of the wetlands delineation, biological survey, and habitat restoration elements of the project.

#### **Sand Canyon Trail Design, City of Santa Clarita, CA. Lead Biologist.**

The Sand Canyon Trail Phases IV through VI Project consisted of the installation of a multi-use trail along Sand Canyon Road in the City of Santa Clarita. The proposed trail is approximately 1.6 miles in length, and will be separated from motor vehicular traffic by fencing, providing a safe route for pedestrian and equestrian use. Tetra Tech completed a biological survey of the project area to characterize the habitats and species present. A preliminary assessment of oak trees that could be impacted by the project was also conducted. Based on this analysis, recommendations were developed to minimize impacts to oaks. A wetlands delineation was also completed according to the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB) criteria. Ms. Bates designed the methods for the biological survey and wetlands delineation, oversaw completion of the field surveys, provided input into the constraints analysis, and managed completion of the natural resources reports.

#### **Completion of a Watershed Plan for Rincon Creek, Santa Barbara County, CA. Project Manager.**

Tetra Tech prepared the Rincon Creek Watershed Plan for the County of Santa Barbara. Specific objectives of the plan were to provide an overview of the baseline physical



### EDUCATION

M.E.S.M, Environmental Science and Management, University of California, Santa Barbara, 2000

B.S., Biology, Pepperdine University, 1997

### REGISTRATIONS

California Department of Fish and Wildlife Scientific Collecting Permit

U.S. Fish and Wildlife Service 10(a)(1)(A) permit for California red-legged frogs



### YEARS OF EXPERIENCE

20



### YEARS WITH TETRA TECH

19



conditions in the watershed, identify key issues affecting watershed health, develop and prioritize projects to remedy the identify problems, and improve stewardship of the watershed's natural resources. One aspect of the project involved the assessment of steelhead habitat and upstream migration barriers. Another important issue within the creek is the presence of non-native invasive plant species. A field survey was completed in May of 2006 to assess steelhead habitat and barriers, non-native invasive plant species, the geomorphology of the creek, and riparian function. Results of this assessment were used to help design an implementation strategy for high priority restoration projects. Tetra Tech worked closely with a stakeholder group, the Rincon Creek Watershed Council, throughout the development of the watershed plan. The Rincon Creek Watershed Plan developed 24 projects to address the key issues within the watershed. An implementation plan was also developed, which identified the next steps to project implementation, additional studies needed, target dates for implementation, maintenance and monitoring requirements, and potential funding sources. Ms. Bates managed the entire project and presented the draft watershed plan at the 2007 conference of the Salmonid Restoration Federation (SRF).

**Steelhead Habitat Assessment in the Santa Monica Mountains, CA. Coastal Conservancy and California Department of Fish and Wildlife. Biologist.**

Tetra Tech completed a habitat assessment and fish passage barrier analysis for steelhead in 13 watersheds within the Santa Monica Mountains. A goal of the project was to provide data and recommendations that can be used to design and prioritize restoration projects for the species on a regional scale. Tetra Tech designed the field study work plan, conducted the data analysis, created a GIS application, assisted in the development of habitat evaluation criteria and watershed prioritization methods, and contributed substantially to the final report. The project was led by California Trout and additional project partners included Heal the Bay, the Santa Monica Resource Conservation District, and the University of California at Santa Barbara. The project was funded by grants received from the Coastal Conservancy and California Department of Fish and Wildlife.

**Design and Implementation of Habitat Restoration Plans, Vandenberg Air Force Base, CA. US Air Force. Ecologist.**

Ms. Bates designed and implemented two habitat restoration plans to revegetate two sites on Vandenberg Air Force Base that were former inert debris rubble yards. The purpose of these projects was to revegetate approximately 20 acres of highly disturbed Burton Mesa chaparral habitat. Initial site assessments were performed and complete design of the revegetation plans followed. Project responsibilities included research of planting methods, selection of native species to be used in both hydroseeding and plantings, and design of a five-year monitoring and maintenance schedule, including the use of performance criteria to evaluate project success.

**Environmental Impact Reports for Three Proposed School Projects, Los Angeles Unified School District, CA. Project Manager.**

Tetra Tech recently prepared Initial Studies and EIRs for three projects proposed by the Los Angeles Unified School District. Projects consisted of the addition to or modification of existing schools. Key issue areas analyzed were Air Quality, Cultural Resources, Hazards and Hazardous Materials, Noise, Pedestrian Safety, and Traffic. An Air Quality Study was done in both regional and local contexts in order to assess the potential impacts on air quality from construction and operation of each project. Technical studies on Noise and Traffic were also done in order to identify potentially significant impacts, assess potential mitigation strategies, and assure compliance with state regulations. As Project Manager, contributed to and managed the completion of each project.

**Environmental Impact Report for the Placerita Canyon Sewer Backbone Project, City of Santa Clarita, CA. Planner.**

Contributed to portions of an Environmental Impact Report for the City of Santa Clarita regarding a mainline sewer construction project. Since the sewer main crossed Placerita Creek, a major tributary to the Santa Clara River, issues associated with the project included potential impacts to the arroyo toad and the coastal California gnat-catcher. Other key issues included impacts to wetlands and waters of the United States and oak tree protection and mitigation. The project required coordination with the U.S. Army Corps of Engineers, the California Department of Fish and Wildlife, and the California Regional Water Quality Control Board in order to obtain appropriate permits from each agency.

# MIA LEHRER, FASLA

PRESIDENT



Mia Lehrer founded Studio-MLA with a vision to improve quality of life through landscape. She is internationally recognized for progressive landscape design, advocacy for sustainable and people-friendly public places, and catalyzing work for a climate-appropriate future. Mia has led the design and implementation of ambitious public and private projects, including the Hollywood Park Racetrack redevelopment and its new LA NFL Stadium, the LA County Natural History Museum Gardens, Vista Hermosa Park, and many Los Angeles River-related projects. Among recent accomplishments, she serves on the US Fine Arts Commission, received the ASLA's LaGasse Medal last year and lectures around the world.

## EDUCATION

Harvard University Graduate School of Design  
Master of Landscape Architecture  
Tufts University, Bachelor of Arts

## RECENT LECTURES

- "Recalibrating the City: Advocacy by Design," Isabella Stewart Gardner Museum, Boston, MA, 2017
- "Lessons Learned from Los Angeles," Leading with Landscape III, Renewing San Antonio's Brackenridge Park Summit, The Cultural Landscape Foundation, San Antonio, TX, 2017
- "Connecting Community through Advocacy and Design," Reimagining Local Government, Chapman University, Orange, CA, 2016
- "Recalibrating the City: Advocacy by Design", Architectural League Lecture, New York, NY, 2016
- "Adapting by Design: Sense of Place," Conversations in Place, Rancho Los Alamitos, 2015
- "Adapted by Design," Sink or Swim, Annenberg Space for Photography
- "Embracing the Beauty in Sustainability, challenges of the drought in L.A.," Ebell Women's Club, Los Angeles, CA, 2015
- "Adapting by Design: Urban Interventions," Landscape as Necessity Debate Series, Culver City, CA, 2015
- "Recalibrating Urban Rivers", ASLA, Chicago, IL, 2015

## YEARS AT STUDIO-MLA

22

## PROJECT EXPERIENCE

- Aerospace Campus Master Plan, Pasadena, CA
- Annenberg Community Beach House, Santa Monica, CA
- Atwater Multi-modal Bridge, Los Angeles, CA
- Baldwin Hills Park Master Plan, Los Angeles, CA
- Ballona Creek Master Plan and Trails Study, Los Angeles, CA
- Beverly Gardens Park Lily Pond Restoration, Beverly Hills, CA
- Bio Tech Campus Site Improvements, Thousand Oaks, CA
- Caltech Keck Institute, Pasadena, CA
- California EPA Headquarters, Sacramento, CA
- Campus at Playa Vista Master Plan, Los Angeles, CA
- Dodger Stadium Site Improvements Los Angeles, CA
- Ishihara Park, Santa Monica, CA
- Hollywood Park Specific Plan, Inglewood, CA
- Hollywood Park Tomorrow, Inglewood, CA
- Hollywood Roosevelt Hotel, Hollywood, CA
- John Anson Ford Amphitheater, Los Angeles, CA
- Los Angeles River Bikeway and Greenway, Los Angeles, CA
- Los Angeles Riverfront Greenway, Los Angeles, CA
- Los Angeles River Revitalization Master Plan, Los Angeles, CA
- Los Angeles NFL Entertainment District, Los Angeles, CA
- Los Angeles Football Club Stadium, Los Angeles, CA
- Lower Los Angeles River Master Plan, Los Angeles County, CA
- MGM Tower, Los Angeles, CA
- Nature Gardens, Natural History Museum, Los Angeles, CA
- Northeast Los Angeles Placemaking Project, Los Angeles, CA
- Orange County Great Park, Irvine, CA
- Piggyback Yard Master Plan, Los Angeles, CA
- Piggyback Yard Feasibility Study, Los Angeles, CA
- Rand Corporation, Santa Monica, CA
- Rio Olympics Master Plan Design Competition, Brazil
- Sampson Way Roadway Improvements, San Pedro, CA
- Waterfront Promenade and Development Plan, San Pedro, CA
- Downtown Revitalization Specific Plan, San Bernardino, CA
- Sunset Millennium, West Hollywood, CA
- Vernon Los Angeles River Bikeway Project, Vernon, CA
- The Village, Santa Monica, CA
- Vista Hermosa Natural Park, Los Angeles, CA

## ORGANIZATIONS

- US Fine Arts Commission, 2014-Present
- City of Los Angeles, Zoning Advisory Committee, 2014-Present
- Landscape Architecture Foundation Board, 2010-Present
- Latino Urban Forum Board, 2006-Present
- Los Angeles-San Salvador Sister City Committee, 2005-Present
- Hollywood Design Review Committee, 2000-Present
- Salvadoran-American Leadership Fund, 2000-Present
- City of Los Angeles, Mayor's Design Advisory Panel, 2010-2013
- National Gardening Association Board, 2010-2012
- Harvard Design Magazine Advisory Board, 2008-2012
- City of Los Angeles, Cultural Affairs Commissioner, 2007-2010



# JAN DYER, PLA, ASLA, ULI, LABC, CCA

PRINCIPAL



Jan has 25 years of project design and construction administration experience. Prior to joining Studio-MLA, she was the construction manager for a real estate developer building hotels, high-rise office and residential developments, and industrial parks. Jan's experience on both sides of the table helps her to successfully collaborate on a wide range of projects. As Director of Infrastructure for transportation, transit, airport and river projects at Studio-MLA, Jan possesses knowledge of public agencies and processes that allows her to connect planning to strong design and successful implementation. She oversees watershed planning, civic master plans, park design and higher education projects, most recently for the LA River Bikeway and Greenway Feasibility Study and Metro's Purple Line Westside Extension. Jan thrives on participating in strategic planning with all kinds of public and non-profit agencies.

## PROFESSIONAL EXPERIENCE

Mia Lehrer + Associates, Principal, 2007-Present  
LA Group, Project Manager, 2005-2006  
James Dean ASLA, Senior Project Manager, 2004-2005  
Borstein Enterprises, Project Manager, 1991-2004

## EDUCATION

University of California, Los Angeles Extension, Professional Certificate,  
Landscape Architecture, 2006

## PROFESSIONAL LICENSE

California, #5623

## YEARS AT STUDIO-MLA

11

## PROJECT EXPERIENCE

Atwater Bridge, Los Angeles, CA  
Avenue Q Improvements, Palmdale, CA  
Biotech Campus, Thousand Oaks, CA  
Compton Creek Earthen Bottom Feasibility Study, Compton, CA  
Crenshaw LAX Transit Project, Los Angeles, CA  
East Los Angeles Transit Oriented District Specific Plan, LA, CA  
Gerald Desmond Bridge, Long Beach, CA  
Glendale Water Treatment Facility, Glendale, CA  
Jordan Downs Public Housing Master Plan, Los Angeles, CA  
Dept of Rec & Parks Needs Assessment, Los Angeles, CA  
Los Angeles Mission College, Sylmar, CA  
Los Angeles Needs Assessment, Los Angeles, CA  
Los Angeles River Bikeway and Greenway, Los Angeles, CA  
Los Angeles Riverfront Greenway, Los Angeles, CA  
Los Angeles River Revitalization Master Plan, Los Angeles, CA  
Los Angeles World Airports Bradley West, Los Angeles, CA  
Lower Los Angeles River Master Plan, Los Angeles County, CA  
MetroLink Raymer to Bernson, Encino, CA  
MTA Westside Subway Extension, Los Angeles, CA  
MTA Crenshaw LAX Metro, Los Angeles, CA  
Owens Lake Dust Mitigation Program Phase 7a, Lone Pine, CA  
Pacoima Bikeway Feasibility Study, Pacoima, CA  
Palmdale Transit Oriented District Plan, Palmdale, CA  
Piggyback Yard Conceptual Master Plan, Los Angeles, CA  
Pitzer College Residential Life Phase II, Claremont, CA  
Queen Mary Island Development, Long Beach, CA  
Greening the Code, San Gabriel, CA  
Saban Media Center, North Hollywood, CA  
Sony Studios, Main Street Schematic Design, Culver City, CA  
Strathmore Multi-Unit Housing at UCLA, Los Angeles, CA  
Terminal Island Visitor Experience, Los Angeles, CA  
Thermal Property Master Plan, Indio, CA  
UCLA Health Services Teaching and Learning, Los Angeles, CA  
Ventura Botanical Gardens Vision Plan, Ventura, CA  
Vernon Los Angeles River Bikeway Project, Vernon, CA  
Water Replenishment District, Pico Rivera, CA

## LECTURES/EVENTS

De LAB Making LA, "Envisioning the Future of the LA River" 2014  
ULI Technical Assistance Panel – South Park, 2013  
"Women & Architecture" Dwell On Design, 2012  
CA Architects Panel "Looking Up, Moving Forward" 2011  
11th Congresso Brasileiro de Paisagismo "Los Angeles River  
Revitalization Master Plan" Sao Paulo, Brazil, 2009

## ORGANIZATIONS

American Society of Landscape Architects  
Central City Association  
Los Angeles Business Council  
Society for Marketing Professional Services  
Southern CA Planning Congress, Board of Directors (former)  
Theodore Payne Foundation

## Daniel Iacofano, PhD, FAICP, FASLA

### Working Group Facilitation

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#### AREAS OF EXPERTISE

Land Use Planning / Strategic Planning / Facilitation  
Organizational Development / Public Outreach

#### YEARS OF EXPERIENCE AT MIG

36

#### QUALIFICATIONS

Daniel Iacofano is a founding principal of MIG with 40 years of experience in process design, public involvement, facilitation and consensus building for environmental and land use planning projects throughout the country. Dr. Iacofano has managed and participated in a wide range of planning studies, addressing issues related to land use, growth strategies, river and watershed management, flood control, habitat conservation and natural resource management. He is expert in managing multi-disciplinary projects, developing and implementing public and stakeholder outreach strategies and building consensus.

Dr. Iacofano has facilitated thousands of meetings with diverse groups of public and private sector clients in organizational and strategic planning projects. He has also demonstrated proven training techniques for all levels of management and staff in strategic planning, team building and performance evaluation. His extensive experience in creating cross-functional teams has helped organizations involve multiple stakeholders, build consensus and develop a base of support for project outcomes.

Dr. Iacofano has been a visiting lecturer at Stanford University, the University of California at Berkeley and the University of California at Davis, teaching courses in urban planning, urban and environmental conflict management, group process management and advanced communications. He is author of Public Involvement as an Organizational Development Process, Meeting of the Minds: A Guide to Successful Meeting Facilitation and The Inclusive City, a collection of project studies highlighting the best of universal, inclusive design for buildings, neighborhoods and urban spaces.

#### REGISTRATIONS

- American Certified Institute of Planners, Fellow
- American Society of Landscape Architects, Fellow

#### PROFESSIONAL AFFILIATIONS

- American Planning Association
- International Association for the Study of People and Their Physical Surroundings (IAPS)
- Visiting Lecturer, Urban Studies Program, Stanford University

#### EDUCATION

- PhD, Environmental Planning, University of California, Berkeley
- Masters of Science, Environmental Psychology, University of Surrey, England
- Bachelor of Urban Planning, Summa Cum Laude, University of Cincinnati

#### RELEVANT EXPERIENCE

- Lower Los Angeles River Revitalization Plan, Los Angeles County, CA
- Spokane River Gorge Strategic Master Plan, Spokane, WA
- Downtown Spokane Plan and Riverfront Plaza Plan, Spokane, WA
- Trinity River Strategic Master Plan, Fort Worth, TX
- Merced Wild and Scenic River Management Plan, Yosemite National Park, CA
- Napa River Flood Protection and Watershed Management Plan, Napa, CA
- San Gabriel River Master Plan, Los Angeles County, CA
- Truckee River Flood Protection Management Plan, Reno, NV
- Napa Sanitation District Strategic Plan Update (2013), Napa, CA
- Castaic Lake Water Agency Strategic Plan, Santa Clarita, CA
- Pajaro River Flood Management Project, Pajaro Valley, CA
- County of Los Angeles Watershed Management Division Strategic Plan, Los Angeles County, CA
- Los Angeles County Department of Public Works Watershed Management Division Strategic Plan, Los Angeles County, CA
- Los Angeles County Water Quality Funding Initiative, Los Angeles County, CA
- Metropolitan Water District of Southern California Information Technology Governance Process, Los Angeles, CA
- Santa Barbara Watershed Public Involvement, Santa Barbara, CA
- Gateway Cities Council of Governments Sustainable Communities Strategy, Los Angeles County, CA
- Los Angeles Downtown Development Strategy, Los Angeles, CA

## Esmeralda García

Facilitator Technical Lead, Working Group Facilitation, Community Engagement, Website Design

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### AREAS OF EXPERTISE

Community Engagement / Diverse Communities  
Multicultural Outreach / Facilitation  
Strategic Communications

### YEARS OF EXPERIENCE AT MIG

17

### QUALIFICATIONS

Esmeralda García is a public involvement specialist, Principal and Director of Operations for MIG's Pasadena office. Ms. García has managed numerous public involvement programs that engage the public in projects addressing a wide range of issues from transportation and land use to economic development, environmental and community services. She brings a unique perspective to her projects, having worked with public and private sector clients as well as non-profit organizations. She applies her facilitative leadership skills in developing interactive program methodology to actively engage diverse stakeholders, including policymakers, advocacy groups, community leaders and the public at-large. Most recently Ms. García has managed the outreach program for the I-710 Corridor Improvement Project EIR/EIS. The program includes facilitation of corridor stakeholders meetings and discussions to identify and evaluate alternatives, discuss contentious environmental issues and developing recommendations for consideration in the environmental process.

In addition, Ms. García has extensive experience in developing interactive program methodology to identify the needs of ethnically diverse communities. Specifically, she has a great understanding of the Latino community and the issues that affect Latino families. Fluent in both Spanish and English, she has facilitated community meetings, workshops and focus groups in Spanish to determine community challenges, issues and opportunities.

### PROFESSIONAL AFFILIATIONS

- American Planning Association
- Transportation Research Board - Environmental Justice Committee Member

### EDUCATION

- Bachelor of Arts, Art History, California State University, Los Angeles

### RELEVANT EXPERIENCE

- Lower Los Angeles River Revitalization Plan, Los Angeles County, CA
- Pacoima Beautiful Walking Tour and Mobile Workshop
- Metro I-710 Livability Initiative, Los Angeles County, CA
- Los Angeles County Metropolitan Transportation Agency (MTA) I-710 Major Corridor Study and Corridor Project EIR/EIS, Los Angeles County, CA
- Vision Zero Action Plan, Los Angeles, CA
- Los Angeles Great Streets Corridors Urban Design, Outreach and Environmental Analysis Services, Los Angeles, CA
- Los Angeles Great Streets Challenge and Vision Zero Evaluation, Los Angeles, CA
- Big Tujunga Wash Mitigation Bank, Los Angeles County, CA
- City of Commerce Planning Outreach Projects and Commerce Green Zones Working Group, Commerce, CA
- Gateway Cities Council of Governments Sustainable Communities, Los Angeles County, CA
- SR-91/I-605/I-405 Initial Feasibility Study, Gateway Cities COG, Los Angeles County, CA
- Long Beach General Plan Update, Long Beach, CA
- Marina del Rey Visioning and Local Coastal Program Update, Department of Regional Planning, County of Los Angeles, CA
- Los Cerritos Wetlands Facilitation, Los Cerritos, CA
- Jacobs Center for Neighborhood Innovations Market Creek Village Center Project, San Diego, CA

## Steve Kokotas, Director of Technology

Website Designer Technical Lead

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### AREAS OF EXPERTISE

Web Application Development / Planning Data Analysis  
And Modeling / Software as a Service Solution

**YEARS AT MIG:** 17

### QUALIFICATIONS

Steve Kokotas is a web technology director and urban planner with 20 plus years' experience synthesizing, analyzing and communicating complex multidisciplinary urban planning data and developing innovative information management, communication and visualization web tools and services that support public process decision making, education and planning initiatives. As the director of the MIG web team, Steve has overseen the development of and ongoing support for a wide range of web-based information services for government agencies. These projects include specialized database driven web applications, highly-customized content management systems, mission critical public agency data warehouses and interactive, online educational games, web animations and data visualizations.

### EDUCATION

- Masters of Urban Planning and Policy, University of Illinois, Chicago
- Bachelor of Arts with High Honors, Social Sciences, University of California, Berkeley
- Undergraduate Studies, Economics, Northwestern

### RELEVANT EXPERIENCE

- Project Director, Townsquare™: directed the development of an integrated suite of web-based tools that promote public education and outreach, foster collaboration and improve public sector decision-making. Planning versions include easy-to-use integrated Web GIS, customizable content management templates, social media communication tool integration and distributed stakeholder and plan development content management capability. Townsquare™ has been implemented successfully for scores of public planning agencies.
- Project Director, The Health Registry Network™: directed the development and implementation of an online data warehouse and research and analysis center that enables health professionals to more quickly and accurately identify possible environmental or occupational health issues and trends. Subscribers included the Public Health Departments of the states of North Carolina, North Dakota, South Dakota and Mississippi. Thriving Plan, County of San Diego, CA

### RELEVANT EXPERIENCE

- OurLA2040 General Plan Outreach Portal, Los Angeles, CA
- Pajaro River Flood Management Project, Pajaro Valley, CA
- Anaheim Urban Greening/Connectivity Plan, Anaheim, CA
- Napa County Watersheds Information Center, Napa County, CA
- Los Angeles County Clean Water, Los Angeles, CA
- re:Streets, National Endowment for the Arts, Various U.S. Cities





**David Bergman, AICP Principal**  
***Economist Lead and Watershed Education***

Years of Experience at MR+E: 9

With over 25 years of experience Mr. Bergman has participated in a broad range of real estate, economic development and planning projects. In particular, he has worked intensively on issues surrounding the formation of urban and regional development strategies, public private partnerships, and the role of culture industries in economic development. With a strong background in public policy analysis, and the communication of economic development goals to community stakeholders, Mr. Bergman's practice has centered on the following interrelated disciplines:

### Selected Projects

Affordable and Multi-Unit Housing Development Plan, City of San Fernando. San Fernando California.

LAX/Crenshaw Line Extension Plan, LA Metro. Los Angeles County California

MLK Medical Campus Master Plan and Development Strategy, Los Angeles County Dept. of Public Works. Willowbrook California

Reseda Town Center South Development Scenarios, City of Los Angeles

Downtown Core Master Plan, City of Thousand Oaks, Thousand Oaks California.

Chino Men's Institution Surplus Land Master Plan, State of California Dept. of General Services, Chino, California

Orange County Great Park, Cultural Facilities Financing Plan. City of Irvine California.

**General Plan Economics**—As a member of the American Institute of Certified Planners (AICP), Mr. Bergman is qualified to consult on a broad variety of land use planning topics related to community revitalization and the economic and fiscal impacts of development proposals. Recent examples include general plan economics and land use element studies in Pasadena and Santa Clarita, California. In addition, Mr. Bergman has worked collaboratively with leading land planning firms on specific plans and downtown revitalization plans in communities ranging from small towns and rural areas to major metropolitan cores. Specialized work has included economic strategies for transit oriented development and structuring public private partnerships for infrastructure development.

**Public Private Partnerships and Infrastructure Finance**—As a lead consultant, Mr. Bergman has been involved in financing some of the largest public private partnerships and infrastructure projects in California. He has been involved in the early stages of the California High Speed Rail Authority, working with the agency on development plans and implementation strategies. Other notable projects in this area include refinancing strategies for the SR-91 and Eastern Foothill toll roads in Orange County and planning for new facilities at the Port of San Diego.

**Development Services**—Mr. Bergman is well known in the industry for providing clients with a market-driven development program and realistic estimates of financial feasibility. He has experience with projects ranging from major mixed-use developments, urban infill developments, and planned communities. In addition he has worked on providing feasibility analysis across all major property sectors including, residential, retail, office, industrial, hospitality, and institutional properties. Clients have included the Tejon Ranch Corporation, California's largest single property owner, AEG Worldwide and the University of Southern California.

Metropolitan Research and Economics (MR+E) is a Los Angeles based consulting firm concentrating in economic analysis related to urban planning, real estate and economic development. MR+E has completed assignments throughout the United States and internationally with a particular focus on California communities. The firm has worked in a broad variety of contexts from small towns and rural areas to major metropolitan centers. MR+E advises public agencies, private firms and not-for-profit institutions throughout the United States and the world about the intricacies of urban planning economics, project feasibility, public-private partnerships, and community development strategies. We understand the public sector's policy objectives, the private sector's economic imperatives, and the complexity of the planning and decision-making process

**Estolano LeSar**  
ADVISORS



# Tulsi Patel

## Planning/Policy/Housing/Social Equity Expert Implementation and Funding

### EDUCATION

**Master of Urban and  
Regional Planning**  
University of California,  
Los Angeles  
2014

**Bachelor of Science**  
Environmental Economics  
& Policy  
University of California,  
Berkeley  
2011

### OTHER PROJECTS

**Trust for Public Land: LA  
River/Verdugo Wash  
Confluence Study**

**Goldhirsh Foundation:  
LA 2050**

**LA Bioscience Hub:  
Biotech Leaders  
Academy**

**Open Society Institute &  
Surdna Foundation:  
Local Economies Fellows**

**LA County Metro: LA  
Union Station/Civic  
Center Taskforce**

### AFFILIATIONS

**People for Parks, Board  
Member**

**New Leaders Council  
Institute, Fellow**

Tulsi Patel joined Estolano LeSar Advisors (ELA) in October 2013. As Senior Associate, Tulsi provides project management and research to lead a range of project focused on inclusive community and economic development, strategic planning, and program design. Tulsi currently serves as the Project Manager for the LA Bioscience Hub, a nonprofit focused on the creation of a bioscience cluster in East Los Angeles. She designed and piloted the Biotech Leaders Academy summer program to provide entrepreneurship training to community college students and connect them with paid internships at bioscience start-ups.

### REPRESENTATIVE PROJECTS

#### **Implementing the LA Bioscience Corridor Strategy (2013-present)**

LA County Supervisor Gloria Molina's office contracted ELA to advance the economic revitalization of an East Los Angeles corridor as a hub for bioscience activity. In her role as programs manager, Tulsi carries out the nonprofit's day-to-day operations and efforts around its four initiatives: Workforce & Economic Development; Real Estate; Planning & Infrastructure; and Communications & Advocacy. Most recently, Tulsi designed and piloted the Biotech Leaders Academy, a summer program that gives community college students entrepreneurship training and connects them with paid internships with biotech start-ups.

#### **Strong Local Economies – Program Strategy Refinement (2017-present)**

ELA is working with Surdna Foundation to produce the Strong Local Economies' new Five-Year Program Strategy. As part of this process we work with program staff to update and refocus the program's problem statement to capture its concerns with the current economic systems that it seeks to solve. We are developing program goals, a new theory of change, strategies, and interventions that reflect the work in which the Strong Local Economies program seeks to invest.

#### **LA County Parks Measure Targeted Community Engagement (2016)**

ELA conducted education and outreach on behalf of the Los Angeles County Regional Parks and Open Space District (LA RPOSD) as Los Angeles County was finalizing the potential parks funding ballot measure, which later became Measure A. ELA conducted briefings with stakeholder engagement to provide environmental organizations across LA County an overview of the funding programs being proposed, greater context and understanding of the proposed measure's equity framework, and stakeholder feedback for the County's consideration.

## Comparable Projects Completed within the Last 5 Years

The following projects highlight Tetra Tech’s experience within the last 5 years on similar projects, representing only a small subset of our extensive relevant experience. Although Tetra Tech has similar company experience, more important is that the individual staff we are committing to this project performed the highlighted projects and have the proven, personal experience relevant to the scope of work. We have also provided a table highlighting the relevant experience from our past and ongoing projects that overlaps with the skill sets needed to develop the Upper Los Angeles River and Tributaries Revitalization Plan.

### Comparable Projects Completed within the Last 5 Years

PROJECT NAME	Knowledge of Los Angeles River and Its Challenges and Constraints	Experience in Low Flow Diversion Modeling and Design	Expertise in Water Quality Monitoring and Regulations	Experience Facilitating Meetings and Coordinating Stakeholders	Experience Developing and Executing Community and Engagement Programs	Experience Creating Project Design Renderings
Lower LA River Revit. Plan Dev.	■	■	■	■	■	■
Los Angeles River Ecosystem Restoration Study	■	■	■			
Los Angeles River Revitalization Master Plan	■	■	■	■	■	■
LA River Urban Orchard Wetlands Park Project	■		■	■	■	■
Compliance Plan Development, Implementation, and Monitoring Support for 14 WMPs and EWMPs	■		■			■

# AB 530 Lower LA River Revitalization Plan Development



Tetra Tech guided the development of a revitalization plan for the Lower Los Angeles River from near 26th street in Vernon to the outlet in Long Beach, a total of river length of 19 miles. The plan was developed in response to California Assembly Bill 530 (AB530), which requires the creation of the Lower Los Angeles River Working Group (Working Group) and the development of a community-based watershed revitalization plan that addresses the unique and diverse needs of the Lower Los Angeles River and the communities.

Tetra Tech was responsible for leading a diverse team of planners, landscape architects, scientists, and community organizers including teaming partners StudioMLA and MIG to develop an innovative plan that is a community-centric, watershed-based revitalization plan. Such an endeavor required seamless integration of two primary elements of this plan: (1) robust community engagement and (2) thorough technical analysis to ensure the implementation viability of the Plan.

To address the myriad interdependent technical challenges, a multi-disciplined team developed and analyzed the impacts of proposed revitalization activities, including river



## CLIENT CONTACT

**Daniel B. Sharp, PE**  
Los Angeles County  
Department of Public  
Works Lower Los Angeles  
River Watershed Section  
626.458.7153

[Dsharp@dpw.lacounty.gov](mailto:Dsharp@dpw.lacounty.gov)

## COST

\$1,527,000  
with additional scope,  
this was closer to \$2.5M

## DATES

May 2016–May 2018



## STAFF

**Oliver Galang, PE, ENV SP,**  
Project Manager

**Jaime Sayre, PhD, PE,**  
Deputy Project Manager

**Ira Artz, PE,**  
Technical Lead

**Chad Helmle, PE,**  
Water Resources Manager

**Brad Wardynski, PE,**  
Water and Environment  
Lead





hydraulics, flood control, water quality, water supply, environment and habitat, active transportation, land use, and others. It was imperative that these technical analyses were designed to serve the Working Group’s objectives by answering key questions, helping to align project ideas with watershed-based planning objectives, and ensuring that project concepts are packaged into multi-benefit bundles that are ideally suited for funding.

To provide a focused strategy to address the multitude of priorities and needs of the river, Tetra Tech guided the Working Group members using a matrix approach through participation in the Plan Element Committees and the geographic-based River Segment Committees. This innovative approach to address the multitude of issues for revitalization created a framework and collaborative environment necessary for developing a consensus approach to watershed-based planning in the LA River.

Ultimately, the Working Group guidance, community input, and use of the technical framework directed Plan development and identified 155 potential multi-benefit projects sites within 1-mile of the river. The process also created several standardized templates to streamline revitalization efforts including multi-use trails, welcoming street-ends and green streets, concrete channel enhancements, and improved and safer bridges and crossings. Additional components of the Plan include:

- a Community Stabilization Toolkit, developed to help prevent displacement due to gentrification;
- a Watershed Education Program, which identifies ways to engage the community about the personal connection between everyday activities (such as driving a car, watering a lawn, picking up pet waste) and watershed and environmental health; and
- a multi-agency governance structure, which will facilitate long-term operations and maintenance of the revitalization projects along the LLAR.

# LA River Ecosystem Restoration Study



The Los Angeles River Ecosystem Restoration Study was a feasibility-phase effort between the Corps of Engineers and the non-federal sponsor, the City of Los Angeles. The study area encompassed the 32 miles of the river that runs through the City, from Canoga Park in the San Fernando Valley through the southern border of downtown Los Angeles. The effort focused on an 11-mile stretch of the river from upstream of the Verdugo Wash confluence to 1st Street, downtown, due to the greater potential for restoration benefits in this area compared to the more space-constrained upstream reach of the river. This study area, called the ARBOR Reach (Area with Restoration Benefits and Opportunities for Revitalization) included both soft bottom/grouted stone sideslopes as well as concrete trapezoidal sections.

The restoration objectives included the following:

- Restore riparian habitat
- Establish habitat connectivity
- Restore aquatic habitat
- Restore more natural hydrologic and hydraulic processes in the alternative reach
- Provide recreation where appropriate

## CLIENT CONTACT

**Kathleen Bergmann**

U.S. Army Corps of  
Engineers, Los Angeles  
District

602.230.6904

## COST

\$1.5 million

## DATES

2010–2015



## STAFF

**Ira Artz, PE,**  
Project Manager



Other objectives that were considerations for success were decreasing peak discharges, improving water quality, and improving infiltration and recharge.

Tetra Tech provided services for the following tasks:

- Plan formulation of alternatives for wetland and habitat restoration
- Design of preliminary and final array of alternatives for ecological enhancement, which included the use of appropriate materials on the channel banks for protection of habitat
- Water quality analysis including location of BMPs
- Development of cost estimates
- Economic analysis, including an incremental cost analysis of various measures, by sub-reach, of the potential channel treatments and habitat types
- Alternatives screening and evaluation

- Environmental analysis and development of EIR/EIS
- Community outreach and meeting facilitation
- GIS analysis
- Development of physical utility report

The ecosystem restoration study is consistent with the City of Los Angeles' Los Angeles River Revitalization Master Plan, approved by City Council in May 2007. While leading the City's consultant team for the master plan, Tetra Tech also provided a portion of the City's in-kind cost-sharing services for the ecosystem restoration feasibility study. These services included calculating the water quality benefits of the project's proposed wetlands, developing graphic vision images, coordinating with the Corps' plan formulation effort, and identifying the economic and social benefits that could accrue to the City from increased development and recreation/health opportunities from the project.



# LA River Revitalization Master Plan

The Los Angeles River Revitalization Master Plan was a milestone achievement for Los Angeles. It coalesced diverse stakeholders to support the revitalization of 32 miles of a concrete-lined channelized river into public green space in the heart of one of America's densest cities.

The plan was prepared as a 20-to-50-year planning document for revitalization of the 32 miles of the river that run through the city, from Canoga Park in the San Fernando Valley through the southern border of downtown Los Angeles. The City of Los Angeles identified the following objectives to guide the revitalization process:

- Establish environmentally sensitive urban design guidelines, land use guidelines, and development guidelines for the River zone that will create economic development opportunities to enhance and improve River-adjacent communities
- Improve the environment, enhance water quality, improve water resources, and improve the River's ecology
- Provide public access to the River.
- Provide significant recreation space and open space, new trails, and improve natural habitat
- Preserve and enhance the flood control features of the River.
- Foster a growth in community awareness and pride for the Los Angeles River

The Tetra Tech team consisted of Tetra Tech and 11 other subconsultants, including teaming partner Studio-MLA. Tetra Tech's responsibility included overall project management for the consulting team, plan formulation, water quality analysis, preparation of the programmatic EIR/EIS, hydraulic and transportation analyses, and website development.

The plan outlines a framework to revitalize the river into a multi-purpose system that restores habitat, connects to park-poor neighborhoods with public greenways, and improves the river's flood capacity and water quality.



## CLIENT CONTACT

**Gary Lee Moore**

City of Los Angeles Bureau  
of Engineering

213.485.4935

## COST

\$4.6 million

## DATES

August 2005–August 2007  
(master plan); additional  
support through contract  
end in 2015



## STAFF

**Ira Artz, PE,**  
Project Manager

**Patti Sexton, PE**  
Project Engineer

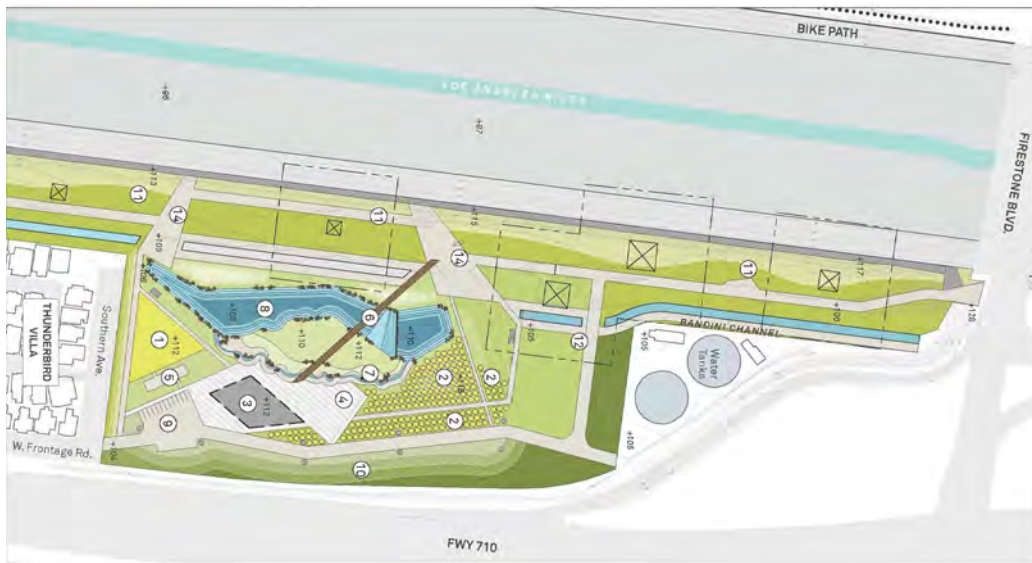




Stakeholder and public outreach was a critical component of this effort, since the master plan recommended governance structures related to zoning and jurisdictional authority, land use changes, and implementation of community amenities. A comprehensive and detailed outreach and analysis process included 18 public meetings and workshops to educate the public on watershed health and sustainability and identify priority issues and opportunity areas. The outreach effort also included individual stakeholder meetings with more than 50 individuals; meetings with neighborhood groups, economic alliance groups, and organized property owners; meetings with City Council, City Planning Department, the Community Redevelopment Agency, the Department of Water and Power, and the City's Board of Public Works; monthly Task Force meetings; and monthly meetings with the Corps of Engineers and Los Angeles County Department of Public Works.

As this project moved into implementation, led by the City's River Project Office within the Bureau of Engineering, a 3-tiered governance structure was developed as recommended by the Revitalization Master Plan. It consists of (1) the joint powers River Authority for governance of the River right-of-way, (2) the entrepreneurial River Revitalization Corporation tasked with implementing the Plan through public/private land development and project management, and (3) the philanthropic River Foundation tasked with raising funds to support the ongoing revitalization of the River. Tetra Tech was contracted to provide implementation support, including coordination for the governance structure, design work on proposed projects, and grant applications.

# LA River Urban Orchard Wetlands Park Project



Tetra Tech and Studio-MLA (lead) are developing a site along the Los Angeles River in the City of South Gate consisting of 20 acres of post-industrial land. The site will be developed into the centerpiece of a community-driven revitalization effort. Anchored by an urban orchard with trees chosen, tended, and harvested by the local community, the site will transform into a multi-benefit park, including green infrastructure and recreational features.

The project also explored the naturalization options for the concrete Bandini Channel that runs through the Northern Planning Area, as well as opportunities to clean, infiltrate, and reuse stormwater onsite.

The project is being approached in three phases based on available funding and the Preliminary Concept Plan:

- Phase 1: 7 acres currently funded for implementation; part of the Northern Planning Area
- Phase 2: remaining 11.7 acres of the Northern Planning Area
- Phase 3: Southern Planning Area (approximately 11.3 acres)

As the City is faced with continued regulatory pressures to improve water quality, Tetra Tech is designing the Urban Orchard Project with the use of innovative BMP optimization tools to seamlessly integrate a cutting-edge and innovative water quality management system. Tetra Tech's unique design approach includes routing wet- and dry-weather flows into green infrastructure features as a proven technique for reducing pollutant loads, while incorporating natural treatment systems for a more creative and sustainable design.

## CLIENT CONTACT

**Robin Mark**

Trust for Public Lands

323.223.0441

[Robin.Mark@tpl.org](mailto:Robin.Mark@tpl.org);

**Clint Herrera, PE**

City of South Gate

323.563.9582

## COST

\$750,000

## DATES

November 2017–present



## STAFF

**Oliver Galang, PE, ENV SP,**  
Water Resources Project  
Manager

**Jaime Sayre, PhD, PE,**  
Deputy Project Manager

**Brad Wardynski, PE,**  
Water Resources Lead



MRCA  
Attachment  
September 14, 2018  
Agenda Item IV



OVERALL PLAN

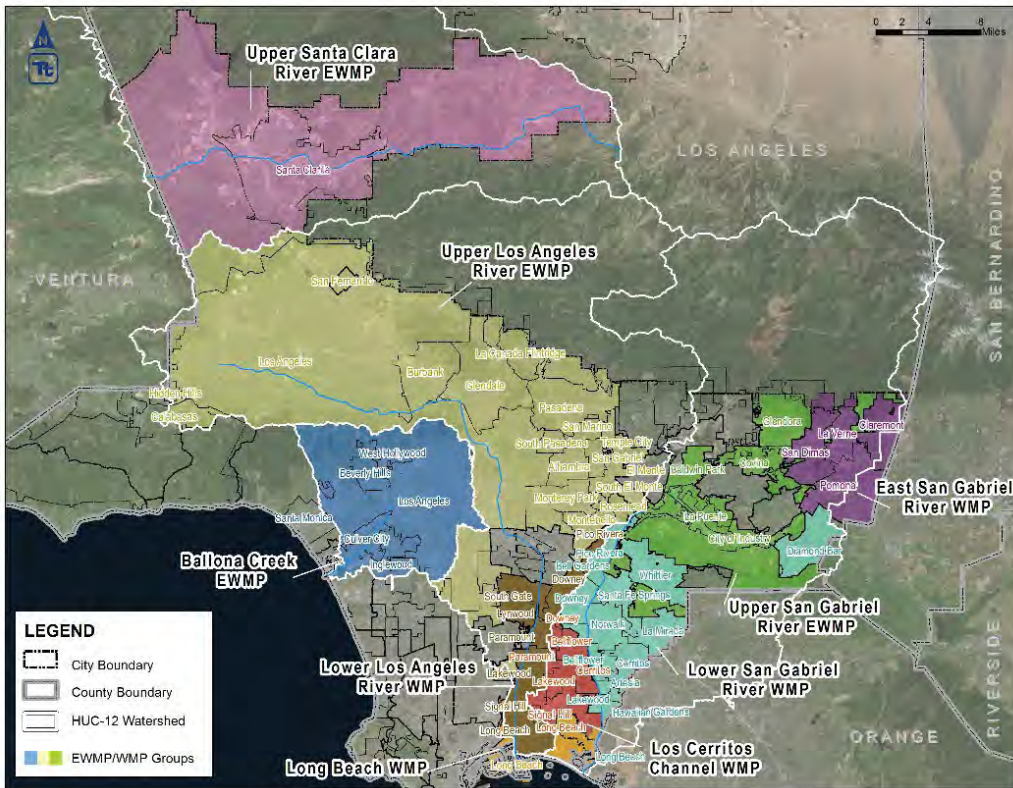


PHASE 1 & 2 ENLARGEMENT

**LEGEND**

- ① Community Garden  
30,000 S.F. Community Gardening Space And Support Building
- ② Orchard  
200+ Fruit Tree Orchard
- ③ Potential Community Building Site  
10,000 S.F. Footprint For A Community Building
- ④ Natural Play 'Orchard'  
Ages 2-12 Play Area Using Natural Components Located In An Orchard-like Setting
- ⑤ Picnic Grove  
Picnic Area surrounded by a tree grove for Community And School Programs
- ⑥ Bridge Overlook  
A bridge over the water to view the Wetland and beyond
- ⑦ Stream Habitat  
A constructed natural stream habitat for wildlife
- ⑧ Constructed Wetland  
A constructed stormwater wetland used to treat diverted water from landscape channels and store irrigation water for the orchard
- ⑨ Parking Lot  
Car and bus parking for site visitors
- ⑩ Tree Screen Buffer  
Tree massing selected to filter pollution and store carbon while providing framed views into the park
- ⑪ Passive Trails / Exercise Loop  
Walking trails with exercise equipment at various stages along the decomposed granite pathways
- ⑫ Native Plant Educational Loop  
Winding decomposed granite pathways along native plant habitats with educational signage and gathering areas
- ⑬ Confluence Overlook  
Elevated viewing landscape with educational signage at the confluence vista
- ⑭ Sculptural Art Location  
Areas dedicated for showcasing local sculptors and environmental artists

# Compliance Plan Development, Implementation, and Monitoring Support for 14 Watershed Management Programs (WMPs) and Enhanced Watershed Management Programs (EWMPs)



Tetra Tech played a key technical role in development of five WMPs and four EWMPs supporting 59 jurisdictions across greater Los Angeles County. The EWMPs provide a collaborative and prescriptive strategy for compliance with multiple TMDLs while also identifying opportunities for enhanced, interagency projects promoting water quality improvement, water supply augmentation, and community services and co-benefits. Tetra Tech led an interdisciplinary team to complete the following tasks:

- compilation, analysis, and georeferencing of all reported existing and planned BMPs throughout the watersheds
- desktop screening and field investigations to identify and realistically characterize project opportunities
- modeling, optimization, and prioritization of the potential network of institutional, regional, and green infrastructure projects to strategically and efficiently prioritizing thousands of candidate projects

## CLIENT CONTACT

Various

Contact for Upper LA EWMP:

**Vijay Desai**

City of Los Angeles

213.473.7763

[vijay.desai@lacity.org](mailto:vijay.desai@lacity.org)  
 (as subcontractor to Black & Veatch)

## COST

\$2 million  
 (plan development)

\$3.7 million  
 (implementation support)

\$1.7 million  
 (monitoring support)

## DATES

August 2013–present



## STAFF

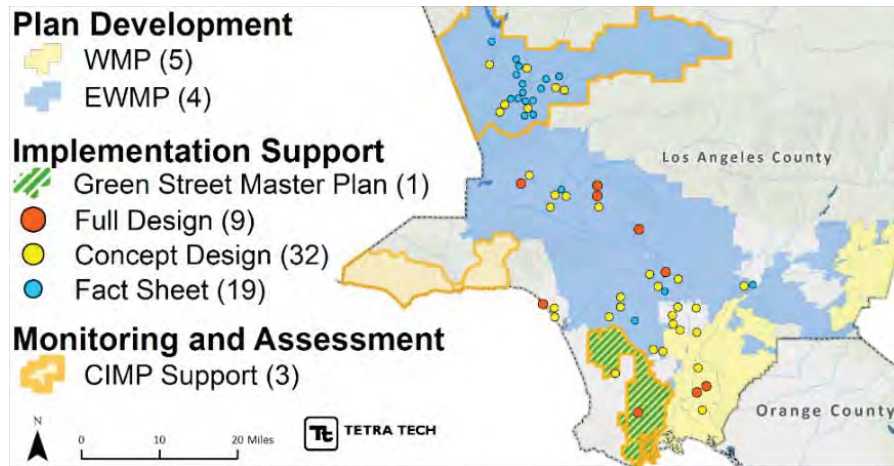
**Chad Helmle, PE,**  
 Project Manager

**Merrill Taylor, PE,**  
 Modeler and Design Engineer

**John Stein,** GIS Analyst

**Brad Wardynski, PE,**  
 Engineer





- conceptual design of recommended multi-benefit regional stormwater projects, including options for local water supply augmentation through capture and use
- targeted project scheduling to meet specific compliance milestones
- development of life-cycle cost estimates for program implementation

Upon completion of WMPs and EWMPs, Tetra Tech was awarded projects to lead implementation or monitoring of the plans in 12 watersheds, including monitoring support in 3 watersheds, 1 watershed-wide green street master plan, and feasibility/design support services for more than 40 WMP/EWMP-related projects.

Through these projects, Tetra Tech has led design and construction support for the first projects directly resulting from the WMP/EWMPs and has worked closely with regulators to negotiate regulatory milestone extension and to leverage innovative technology through the adaptive management process. Tetra Tech is also currently leading Coordinated Integrated Monitoring Plan (CIMP) execution for two watershed management groups and was hired to revise the CIMP for a third group.

### 3.2.2 Bioretention and Biofiltration (Green Infrastructure BMP)

Bioretention and biofiltration are vegetated BMPs designed to capture and filter stormwater runoff through a soil layer. Following filtration, treated runoff infiltrates underlying soils (bioretention), or, if the subgrade has poor permeability, exits through an underdrain to the downstream conveyance network (biofiltration). Vegetation can enhance biological treatment processes.

BMP Performance Functions		Design Variations	
Infiltration	Low to High gradient with a circle icon	Several design variations include: <ul style="list-style-type: none"> <li>• <b>Bioretention:</b> shallow, depressed, vegetated basins with permeable soil media. Runoff temporarily ponds on the surface before filtering through the soil. Bioretention does not include underdrains.</li> <li>• <b>Biofiltration:</b> bioretention areas with underdrains. Infiltration is considered incidental, although substantial infiltration can occur in some unlined systems.</li> </ul>	
Storage	Low to High gradient with a circle icon		
WQ Treatment	Low to High gradient with a circle icon		
⊗ = Bioretention    ○ = Biofiltration (unlined)		<b>Typical Design Components</b> Figure 3-6 presents a typical design and highlights potential design variations:	

Figure 3-6. Typical distributed bioretention and biofiltration schematic showing underdrain option (arrows indicate water pathways).

**Fact sheets were composed to summarize alternative control measure options for jurisdictions and stakeholders.**

## Past Client Information

The following table provides a summary of past clients of Tetra Tech’s Pasadena office from the last 5 years. Following the table are project summaries that provide samples of the services performed, including the scope and costs for a subset of the projects identified here. No actions have been taken against the professional on any of these projects.

### Client References for Similar Services Provided by Tetra Tech within the Last 5 Years

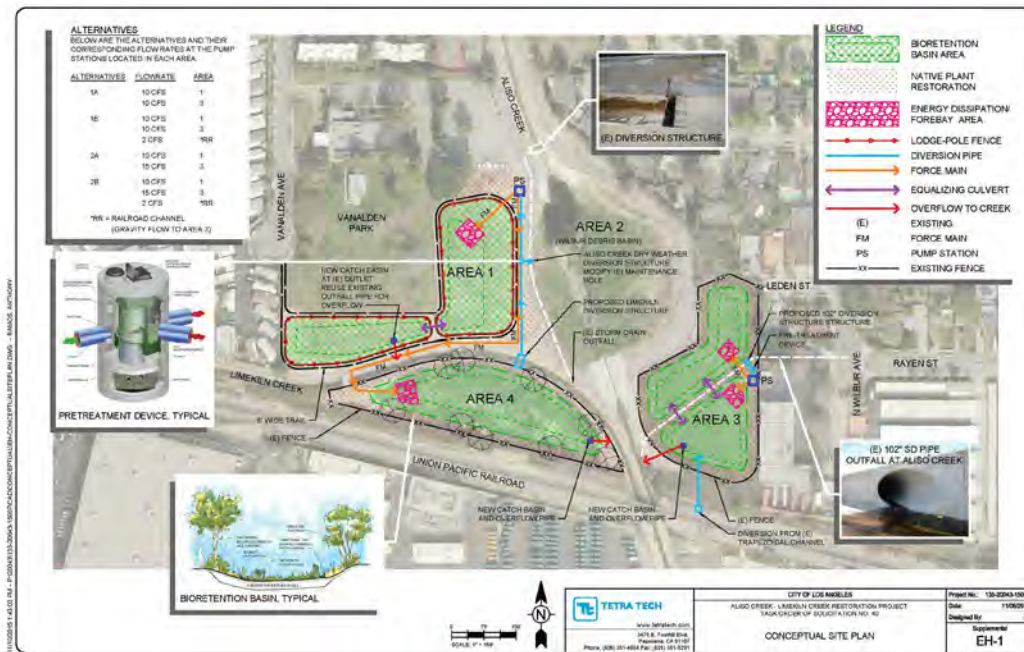
CLIENT CONTACT NAME, PHONE, EMAIL	KEY HIGHLIGHTS OF CLIENT RELATIONSHIP	CHANGE ORDERS AND REASON FOR CHANGE
<p><b>Los Angeles County Department of Public Works, Alhambra, CA:</b> Daniel B. Sharp, PE, Los Angeles County Department of Public Works, Lower Los Angeles River Watershed Section, 626.458.7153, <a href="mailto:Dsharp@dpw.lacounty.gov">Dsharp@dpw.lacounty.gov</a></p>	<p>Project Manager for AB 530 Lower Los Angeles River Revitalization Plan Development</p> <p>Time-constrained projects requires close coordination with the LA County Flood Control District, Rivers and Mountains Conservancy, and Assembly Speaker Anthony Rendon</p>	<p>Additional meetings as requested by the client</p>
<p><b>City of Lakewood, CA:</b> Lisa Rapp, Director of Public Works, 562.866.9771 x2500, <a href="mailto:lrapp@lakewoodcity.org">lrapp@lakewoodcity.org</a></p>	<p>City Project Manager for Bolivar Park and Mayfair Park Water Capture Projects</p> <p>Caltrans-funded projects through the Cooperative Implementation Agreement</p> <p>Time-constrained projects require close coordination with the LA County Flood Control District</p>	<p>Additional design for expanded irrigation as requested by the client</p> <p>Additional design for community center drainage as requested by the client</p>
<p><b>Sanitation Districts of Los Angeles County:</b> Kristen Ruffel, Tech Services/Water Quality Manager, 562.908.4288 x2826, <a href="mailto:kruffell@lacsdc.org">kruffell@lacsdc.org</a></p>	<p>Project Lead for the Carson Carriage Crest Park Stormwater Capture Project</p> <p>Coordinator for stormwater and sanitary sewer discharge by municipal clients per AB 485</p> <p>Time-constrained project</p>	<p>Additional Project Details as requested by the client:</p> <ul style="list-style-type: none"> <li>• Real-Time Controls analysis</li> <li>• Water Quality Alternatives Analysis</li> <li>• Expanded BMP size design effort</li> </ul>
<p><b>City of Santa Monica, CA:</b> Selim Eren, Project Manager, 310.458.2200, <a href="mailto:Selim.Eren@smgov.net">Selim.Eren@smgov.net</a></p>	<p>Project Manager for the State-funded CBI Project at the Pier and Pico-Kenter Watersheds</p> <p>Time-constrained project that Tetra Tech accelerated delivery</p>	<p>Additional Project Details as requested by the client:</p> <ul style="list-style-type: none"> <li>• Real-Time Controls design and configuration</li> <li>• Additional Geotechnical support services</li> </ul>
<p><b>City of Commerce, CA:</b> Gina Nila, Stormwater Program Manager, 323.722.4805 x2839, <a href="mailto:GinaN@ci.commerce.ca.us">GinaN@ci.commerce.ca.us</a></p>	<p>Project Manager for the Gateway Cities Watershed Authority</p> <p>Developed five individual stormwater concepts for the LA River Watershed</p>	<p>No change orders were requested</p>
<p><b>City of Los Angeles, Bureau of Sanitation:</b> Vivian Marquez, Environmental Supervisor, Watershed Protection Division, 213.485.3928, <a href="mailto:Vivian.Marquez@lacity.org">Vivian.Marquez@lacity.org</a></p>	<p>Design-Build project to meet implementation deadlines for the City's 25 automated sampling stations required under the Coordinated Integrated Monitoring Programs</p>	<p>No change orders requested, managing budget to accommodate client/project needs</p>



MRCA  
Attachment  
September 14, 2018  
Agenda Item IV



# Aliso Creek – Limekiln Creek Restoration Project



The Aliso Creek – Limekiln Creek Restoration Project, located adjacent to the Los Angeles River, is an important part of the City of Los Angeles’ overall efforts through the Proposition O Bond Program to improve water quality and reduce pollutant loads that are currently being conveyed to the rivers, lakes, and oceans within the greater Los Angeles area. The project will also be designed to achieve a Platinum Envision Rating and represents a major opportunity for the City to continue to set the standard for ecosystem services and social benefits by the “restorative” objectives of the Envision certification program. The benefits of this project, and of all of the Proposition O projects, include water quality and other multiple benefits to the neighborhood by enhancing a specifically built flood control facility into a multifunction green infrastructure facility.

The City of Los Angeles selected Tetra Tech to provide pre-design and design services for the Aliso Creek – Limekiln Creek Restoration Project. The project is located at the confluence of the concrete lined Aliso and Limekiln Creek flood channels, which merge together in the southern portion of the project site, with a total project area of approximately 11.8 acres.

As the City is faced with continued regulatory pressures to improve water quality, Tetra Tech is designing the Aliso – Limekiln Creek Project by implementing innovative BMP optimization tools to seamlessly integrate a cutting-edge water quality management system. Tetra Tech’s unique design approach includes routing wet- and dry-weather flows into green infrastructure features as a proven technique for reducing pollutant loads.

## CLIENT CONTACT

**Andy Flores**

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Bureau of Engineering

213.485.4496

[andy.flores@lacity.org](mailto:andy.flores@lacity.org)

## COST

\$752,009 (Design)

\$7,652,000  
(Construction Est.)

## DATES

August 2015–present



## STAFF

**Chad Helmle, PE,**  
Water Quality Lead

**Oliver Galang, PE,**  
Water Resources Lead

**Jason Wright, PE,** Design

**Merrill Taylor, PE,**  
Design and Modeling

**Michelle Bates,** Biologist

**Chung-Chen Yen, PhD,**  
Hydrology/Hydraulics



The project improvements involve constructing several stormwater BMPs intended to divert, capture, filter and use on-site and off-site runoff from the creeks to reduce contamination in Aliso Creek, Limekiln Creek, and the Los Angeles River. The proposed BMPs include low flow channel diversions, pre-screening treatment devices, stormwater pump stations, bioswales, vegetated detention/retention basins, the restoration of upland and riparian habitats, and BMP educational signage. A passive trail system is included to expand the existing park facilities.

The goal of the project is to significantly reduce the pollutant loads, as well as transform a specifically built flood control facility into a multi-function green infrastructure facility.

The project also included a wetlands delineation, general biological survey, development of a planting palette and plan for habitat restoration, and design considerations to avoid and minimize impacts to sensitive habitats was performed.

# Bolivar Park Stormwater Capture Project



As a major step towards implementing the Los Cerritos Watershed Management Plan, the City of Lakewood is implementing what is considered the first “smart regional stormwater BMP.” The project consists of an air-inflated rubber dam diversion system to re-direct all urban runoff and stormwater runoff from the Del Amo channel through a pre-treatment system to remove trash, debris, and sediment. A pump station and drainage pipeline will convey the water into a large, buried multi-chambered storage/infiltration facility. The stormwater collected in the underground reservoir will be treated and used to irrigate the park’s landscaped areas. Weather conditions and the facility will be monitored through a secured cloud-based system.

Tetra Tech developed the Preliminary Engineering Design Report in 3 months and Full Design and Bid Documents in 8 months. Tetra Tech coordinated this project to acquire a LACFCD permit and use of their adjacent property, and all of the regulatory permits including the Corps of Engineers, Los Angeles Regional Water Quality Control Board, California Department of Fish and Game, and Los Angeles County Public Health. We also provided design support services during construction of the facility.

This project is funded through a cooperative implementation agreement between the City of Lakewood and Caltrans. Tetra Tech provided support to ensure this project met

## CLIENT CONTACT

**Lisa Rapp**

City of Lakewood Public Works

562.866.9771 ext. 2500

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## COST

\$1.13 million (design)

\$9 million (construction)

## DATES

September 2015–  
February 2018



## STAFF

**Oliver Galang, PE, ENV SP,**  
Project Manager

**Chad Helmle, PE,**  
Water Resources Leader

**Brad Wardynski, PE,**  
Water Quality Advisor

**Merrill Taylor, PE,**  
Water Quality Lead



all critical funding milestones and stayed within the City's project budget. The project not only helps the City comply with the metals Total Maximum Daily Loads (TMDLs), as presented in the Los Cerritos Channel Watershed Management Program, but also provides additional community and environmental benefits, such as revitalized park infrastructure and augmentation of local water supplies. As one of the first cities to receive stormwater funding to support Caltrans with stormwater compliance units, the success of this project will be a model for other agencies to follow.

Tetra Tech and the project team have been awarded the following accolades for this project:

- 2016 Environmental Business Journal Award for Innovative Technology
- City of Lakewood 2016 External Service Provider of the Year
- ASCE Civil Engineering Magazine February 2017 Stormwater News

“ The project team from Tetra Tech has been a delight to work with. They have been on time, delivered on their promises, they have done everything we have asked them to do. I'd have to say that Tetra Tech is one of the best consultants that I've worked with in recent memory. ”

—Lisa Rapp, Public Works Director, City of Lakewood, California



# Carson Water Capture Project at Carriage Crest Park



Carriage Crest Park was identified in the Dominguez Channel Watershed Management Group EWMP as a high priority site for a regional stormwater capture project due to its proximity to two large storm drains with a total drainage area exceeding 1,100 acres. This area discharges into Wilmington Drain which subsequently discharges into Machado Lake. The overarching objective of the project is to improve the quality of Machado Lake by eliminating dry-weather runoff and reducing wet-weather pollutant loading.

The City of Carson entered into a Cooperative Implementation Agreement (CIA) with Caltrans to fund the Carson Water Capture Project at Carriage Crest Park. The City of Carson entered into a subsequent agreement with the Sanitation Districts of Los Angeles County (LACSD) to manage the \$13.6 million project.

Tetra Tech developed the preliminary engineering design report, which included the analysis and developed innovative water use and treatment scenarios including (1) diversion to the sanitary sewer for treatment at the adjacent Joint Water Pollutant Control Plant (JWPCP), (2) onsite non-potable use to offset potable water demand, and (3) onsite filtration using a subsurface filter media bed. Tetra Tech has also prepared the detailed design drawings, cost estimates, and specifications for early procurement of the

## CLIENT CONTACT

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Los Angeles County

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## COST

\$1 million

## DATES

September 2016–ongoing



## STAFF

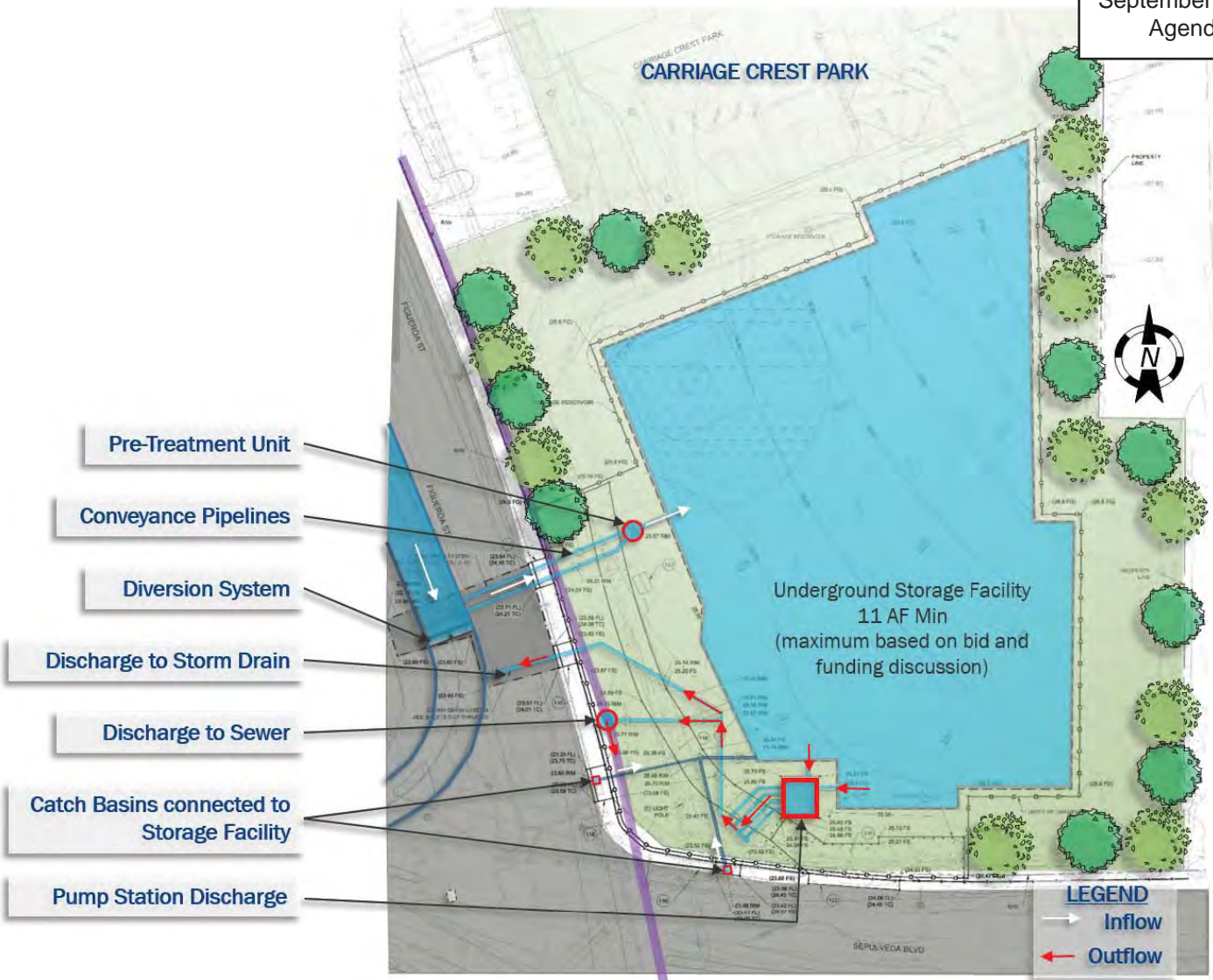
**Oliver Galang, PE, ENV SP,**  
Project Manager

**Chad Helmle, PE,**  
Water Quality Manager

**Merrill Taylor, PE,**  
Water Quality Analysis

**Brad Wardynski, PE,**  
Water Resources Lead





pre-cast structures package and for the construction of the regional stormwater BMP facility. The project consists of the following components.

- Storm drain diversion at a rate of 43 cubic feet per second (cfs)
- 13.4 acre-feet of subsurface storage under the existing ballfields
- Pump station to discharge to the sanitary sewer at a maximum rate of 34 cfs when capacity is available

# LA River Upper Reach 2 WMP Feasibility Study



Watershed Management Area (WMA), consisting of the Los Angeles County Flood Control District (LACFCD) and the Cities of Bell, Bell Gardens, Commerce, Cudahy, Huntington Park, Maywood and Vernon, is a highly urbanized 14,216-acre watershed. The LAR UR2 WMA cities lie exclusively within the Los Angeles River Watershed and each agency discharges to Reach 2 of the Los Angeles River. Reach 2 is a concrete-lined river channel with year-round flows comprised primarily of treated wastewater. The Cities of Bell Gardens and Commerce also drain southeast to the normally dry concrete-lined Rio Hondo tributary channel.

The LAR UR2 Reasonable Assurance Analysis (RAA) and Watershed Management Program (WMP) identified six regional BMP projects, estimated to cost a total of \$210 million, and an additional \$90 million in residential and commercial LID street renovations that may need to be implemented, over the next two decades, to achieve MS4 permit numeric limits.

The LAR UR2 RAA and WMP identified six regional BMP projects, estimated to cost a total of \$210 million, and an additional \$90 million in residential and commercial LID street renovations that may need to be implemented, over the next two decades, to achieve Permit numeric limits. Tetra Tech conducted a feasibility study for the six structural regional BMP projects to address the water quality limits as set forth in the WMP. The six projects locations are 1) John Anson Ford Park, Bell Gardens; 2) Randolph Street Green Rail Trail, Huntington Park, Maywood, and Bell; 3) LADWP Transmission

## CLIENT CONTACT

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City of Commerce

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[ginan@ci.commerce.ca.us](mailto:ginan@ci.commerce.ca.us)

## COST

\$360,000

## DATES

June 2016–April 2017



## STAFF

**Oliver Galang, PE, ENV SP,**  
Project Manager

**Chad Helmle, PE,**  
Water Resources Manager

**Brad Wardynski, PE,**  
Technical Advisor

Easement, Vernon; 4) Rosewood Park, Commerce; 5) Lugo Park, Cudahy; and 6) Salt Lake Park, Huntington Park.

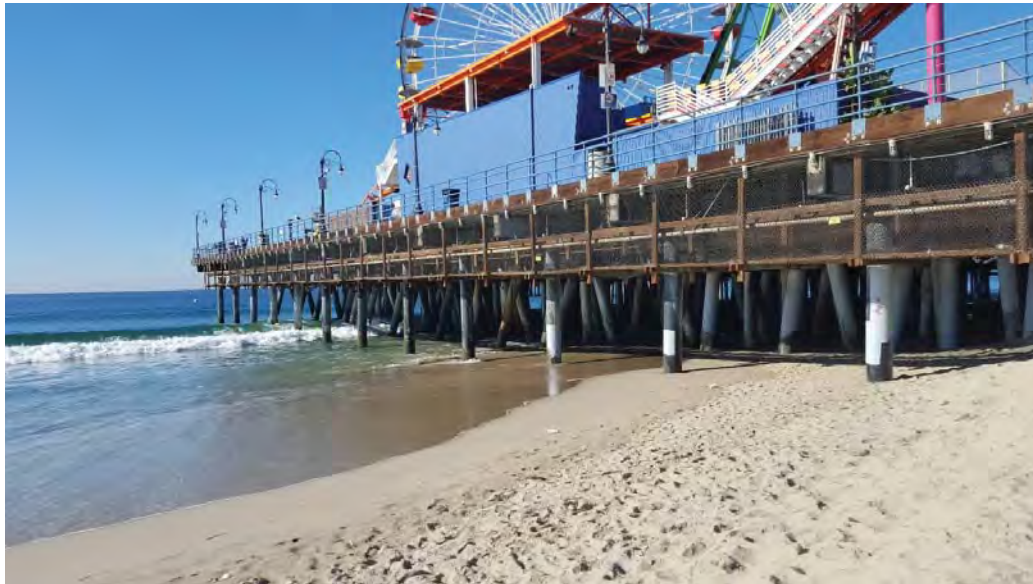
Tetra Tech also developed 10% designs for the structural regional BMP projects to address the water quality limits as set forth in the WMP. Through a collaborative effort with the LAR UR2 WMA cities, Tetra Tech developed site-specific project concepts that balanced diversion rates, available project areas, and costs to provide solutions that allow the cities to achieve their shared pollutant load reduction targets. The Feasibility Study addressed project suitability with respect to each site's implementation and operations. The implementation components include expected design flows, water quality, potential for infiltration, identification of major components and equipment, and basic site plans. The study also included

estimates for operations and maintenance needs and costs, as well as monitoring plans, for each of the proposed sites.

Through the course of the feasibility study, the optimal project designs for the regional structural projects, their associated performance, and costs are detailed. The combined performance of the final proposed regional structural BMP configurations, evaluated using a "state of the science" modeling approach, is predicted to meet and exceed the WMP's pollutant reduction compliance targets, while minimizing footprint sizes and, therefore, substantially reducing the estimated costs for compliance. The optimization analysis resulted in an implementation cost reduction from a \$210 million program to a \$92 million program.



# Santa Monica Clean Beaches Initiative Project at the Pier and Pico-Kenter Watersheds



Tetra Tech designed the Clean Beaches Initiative Project for the Pier and Pico-Kenter Drainage Basins. This project, on behalf of the City of Santa Monica, is a major effort to improve beach water quality from storm water runoff and increase the City's drought resiliency. Wet-weather flows would be treated and diverted from the Pier watershed to the Santa Monica Urban Runoff Recycling Facility (SMURRF) or the sanitary sewer. This project proposes storm drain diversion and runoff storage systems at two separate storm drain outfalls.



At the Santa Monica Pier storm drain, the project components consist of a flow diversion structure to direct stormwater and urban runoff from the 106-acre Pier watershed into a subsurface facility beneath the Deauville parking lot site. The subsurface storage facility will have a storage capacity of 1.6 million gallons. The stored water within the

## CLIENT CONTACT

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Santa Monica Public Works Civil Engineering Department

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## COST

\$560,000 (design and construction support)

\$8 million (construction)

## DATES

July 2016—ongoing



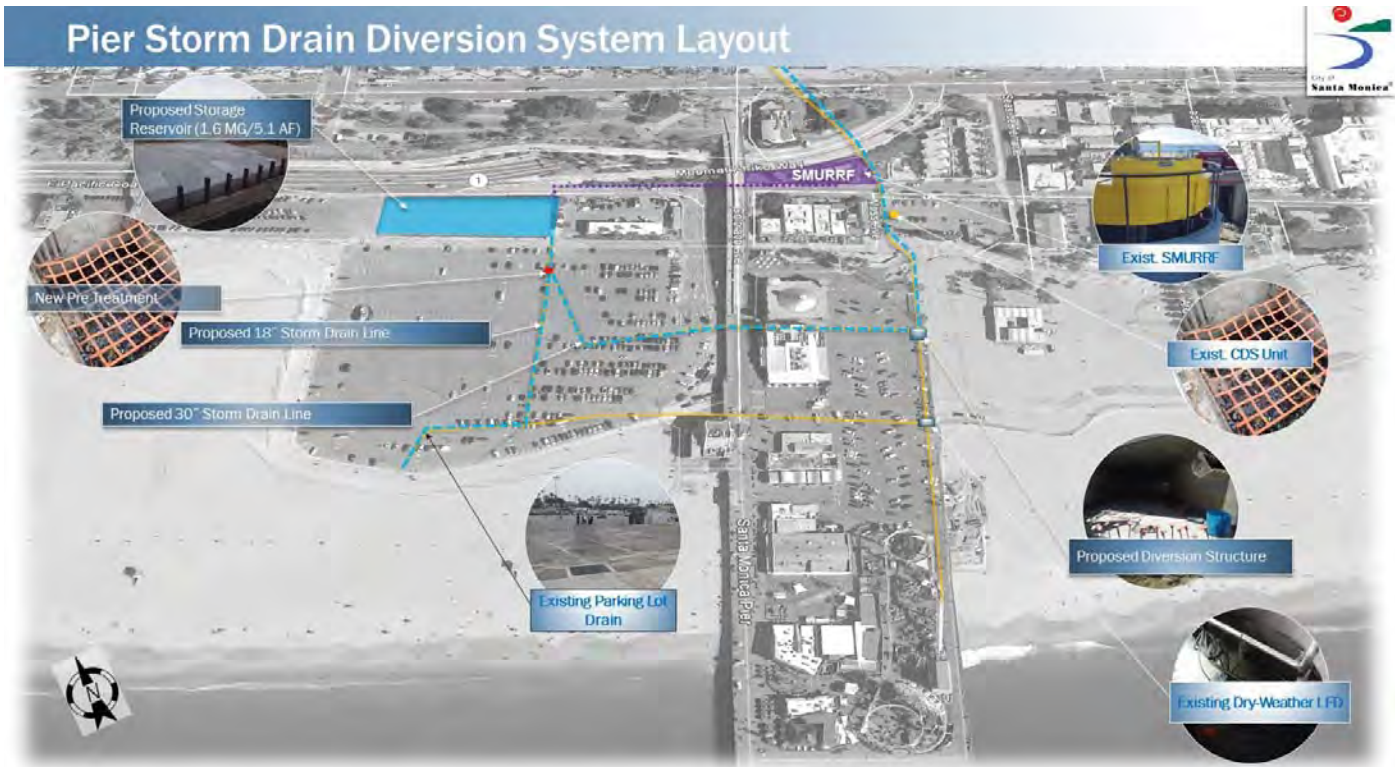
## STAFF

**Oliver Galang, PE, ENV SP,**  
Project Manager

**Chad Helmle, PE,**  
Water Quality Manager

**Merrill Taylor, PE,**  
Water Quality Analysis





facility would be pumped to SMURRF and distributed for non-potable uses or the sanitary sewer. Additionally, the Deauville site will be improved with a new parking lot that will be consistent with the City’s Zoning and Municipal Code, which may require parking lot lighting, permeable pavement, and landscaping.

At the Pico-Kenter storm drain, the project components consist of a diversion structure to divert 80,000 gallons of the “first flush” stormwater runoff for treatment at

SMURRF and distributed for non-potable uses. A portable pump will also be provided to drain the post-storm event pond that forms downstream of the outfall at the beach.

The total cost for design and construction of the regional project is estimated at \$8 million. This project is funded by the State Water Resources Control Board (SWRCB) Proposition 40 Clean Beaches Program, with a local match from the City Clean Beaches and Oceans Parcel Tax Fund.

## Firm's Litigation History in the Last 5 years

Tetra Tech, Inc. is subject to certain claims and lawsuits typically filed against the engineering and consulting professions, primarily alleging professional errors or omissions. Tetra Tech carries professional liability insurance, subject to certain deductibles and policy limits against such claims. Tetra Tech believes that the resolution of these claims will not have a material effect on our financial position or results of operations.

However, due to recent public attention, the Proposer is providing the following information in the interest of full transparency. Consistent with Tetra Tech policy, Tetra Tech has completed this section for the Tetra Tech organization, Tetra Tech, Inc., that is submitting the Proposal and for the team that will be performing the work. Tetra Tech has over 30 subsidiaries with a combined 17,000 employees.

We would like to note that one of Tetra Tech's subsidiaries, Tetra Tech EC, Inc. (TtEC) is being investigated by the U.S. Navy regarding sampling activities at Hunters Point Naval Shipyard (HPNS). The TtEC subsidiary is not associated with the current proposal, and none of their staff will be involved in the Tetra Tech's work on the Mountains Recreation and Conservation Authority (MRCA) contract.

The HPNS project was performed by TtEC for the remediation of the site under contract to the U.S. Navy. In 2012 TtEC became aware that some samples collected did not appear representative of the soils in the sampling area at HPNS. TtEC immediately investigated the issue, re-sampled the locations in question at its own expense, and instituted corrective actions. After a thorough investigation by the Nuclear Regulatory Commission (NRC), no restriction, suspension or qualification of any license, certification, or registration occurred, and TtEC's NRC Radioactive Material License remains in effect.

Two former employees of TtEC admitted to falsifying sample collection data at HPNS in 2012 and recently were sentenced by the federal courts. Tetra Tech is fully supportive of the actions taken by the Department of Justice against the two individuals. We have zero tolerance for violations of established protocols and procedures on any project site.







# Proposed Budget and Fees

## Scope of Services

### Upper Los Angeles River and Tributaries Revitalization Plan Development

The performance of tasks under this scope will require flexibility and strong organization to achieve outcomes that address the California Assembly Bill 466 (AB 466) requirements for the development of a watershed and community-based Revitalization Plan for the Upper Los Angeles River and its tributaries. As part of AB 466, a Working Group of 23 representatives was appointed by the Secretary of the Natural Resources Agency. The Working Group will create a Revitalization Plan for the Upper LA River, Tujunga Wash, Pacoima Wash, Verdugo Wash, and any other tributary waterway that the Working Group determines relevant.

Tetra Tech will work with the Mountains Recreation Conservation Authority (MRCA), the Santa Monica Mountains Conservancy (SMMC) Assemblyman Bocanegra's Office, and the Working Group to guide the effort by helping to shape achievable goals and objectives, providing facts and analysis to inform decision making, and developing project concepts that meet the needs of the Revitalization Plan. The following initial tasks outline Tetra Tech's approach to accomplishing this work.

### Scope of Services

The performance of tasks under this scope will require flexibility and strong organization to achieve outcomes that address the need for an Upper Los Angeles River and Its Tributaries Revitalization Plan (the Revitalization Plan) that can be embraced by stakeholders throughout the upper LA River. The Working Group and stakeholder

meetings should be viewed by participants as an open process where the SMMC and the MRCA will listen, and where participants can influence/shape the project direction. Tetra Tech will work with the SMMC, the MRCA, and the Working Group participants to direct/organize the effort by helping to shape achievable goals and objectives, to provide facts and analyses to inform decision making, and to developing project concepts that meet the needs of the Plan.

The following tasks outline Tetra Tech's approach to accomplishing this work.

### Part 1. Required Project Processes

#### ***Task 100. Project Management, Meeting Coordination and Facilitation***

The Tetra Tech Project Manager will work closely with the MRCA to ensure that the project objectives and schedule are met. The Tetra Tech Project Manager will be responsible for the following activities under this task.

##### **100.1 Project Management**

Tetra Tech is committed to ensuring that the MRCA is fully informed of all project-related activities and progress. This will be achieved through regular project communication that will allow the MRCA Project Manager to measure the actual vs. plan work progress.

Tetra Tech's Project Manager will be responsible for overall project management. Tetra Tech will develop and maintain a project schedule, review and monitor the project



budget, and coordinate the project controls. The schedule will be consistent with the schedule commitments for development of the revitalization plan for this project. The schedule will serve as a planning tool and will be updated monthly to measure actual progress.

#### ■ **Deliverables**

- Project Schedule and Monthly Updates (submitted electronically)

#### ■ **Assumptions**

- A preliminary project schedule will be prepared and will be updated on a monthly basis.
- Project controls and management are assumed for a 16-month duration.

## **100.2 Meeting Coordination/Facilitation**

The Upper Los Angeles River and Tributaries Working Group (Working Group) is comprised of 23 stakeholders from various agencies and organizations throughout the project area. While the Working Group is staffed by the MRCA, this task is intended to provide support for the workshops to help the group focus and provide direction on key elements of the planning process in order to develop the strategy, objectives and viewpoints of various agency representatives for the revitalization of the Upper Los Angeles River and its tributaries.

### ***Working Group Meetings***

The Tetra Tech team will work collaboratively with the MRCA to plan, prepare, and facilitate up to 16 Working Group Meetings. The Tetra Tech team will conduct WG planning meetings prior to each Working Group Meeting to discuss the objectives, key issues, strategy, and structure for the Working Group Meetings. The discussion will include logistics, coordination, agenda, and any background materials to be used or presented at the meeting.

#### ***Working Group Planning Meetings***

The Tetra Tech team will meet with the MRCA staff prior to each Working Group Workshop to discuss the objectives, key issues, strategy, and structure for the workshop with the Working Group. The discussion will include logistics, coordination, agenda, and any background materials to be used or presented at the meeting.

### ***Working Group Meetings***

The Tetra Tech Team will attend and facilitate the Working Group Meetings. The SMMC and the MRCA will be responsible for chairing the Working Group Meetings, while the Tetra Tech team will be responsible for facilitating the workshop to develop a collaborative environment to discuss the goals, objectives, and potential vision for the Upper LA River and its tributaries. The Tetra Tech team has budgeted meeting facilitation, attendance, and preparation of the meeting materials for up to sixteen (16) Working Group workshops.

#### ***Working Group Meeting Summary***

The Tetra Tech Team will prepare a Working meeting summary for the MRCA and for use at each Working Group Planning Meeting.

#### ■ **Deliverables**

- Working Group Planning Meeting agenda, materials, and action items (16)
- Working Group Meeting agenda and meeting materials (16)
- Working Group Meeting Summaries (16)

#### ■ **Assumptions**

- The Working Group Meetings will be chaired by the MRCA.
- The Working Group Meeting is anticipated to occur over a duration of 4 hours each, the workshop component of the meeting is anticipated to last up to a maximum of 3 hours each.
- The Tetra Tech Team will meet with the Project Planning Team to prepare for each upcoming Working Group Meeting. Some key Team members will attend this meeting in-person; however, the Tetra Tech Project Manager will also provide conference call access for additional team members.

### ***Technical Committee Meetings***

The Upper Los Angeles River and Tributaries Working Group (Working Group) will form three (3) committees to help guide and create the Revitalization Plan. During

the weeks between the each Working Group meeting, the committees will meet to advance the vision and further develop the Revitalization Plan.

### ***Technical Committee Meeting Preparation***

The Tetra Tech team will prepare committee meeting materials, including agendas and presentations, and provide these to the MRCA staff prior to each committee meeting. Tetra Tech staff will be available to address any comments or questions the MRCA may have regarding the meeting materials.

### ***Technical Committee Meetings***

The Tetra Tech Team will attend and facilitate the committee meetings. The Tetra Tech team has budgeted to facilitate, attend, and prepare the meeting materials for up to 48 committee meetings (3 committees, 16 meetings each).

### ***Project Coordination Meetings***

The Tetra Tech Project Manager will arrange for a weekly conference call with the MRCA Project Manager and key project team leaders to review the project schedule and discuss the progress of the project. We have budgeted for weekly project coordination conference call meetings with a 30-minute duration.

### ***Community Meetings***

The AB 466 requires that the Revitalization Plan be a community-driven plan for the Upper Los Angeles River and Tributaries. Therefore, as part of the outreach and engagement, the Tetra Tech team will facilitate a minimum of nine (9) dedicated community meetings to gather public input. Three (3) sets of each type of meeting (kickoff meetings, information gathering and concept development, and concept review and comment) will be held in three (3) locations. The Working Group and Project Planning Team will determine the locations of the community meetings.

### ***Tours, Field Trips, and Site Visits***

As part of the introduction to the Upper LA River and Tributaries area focusing on important site developments or interesting sites that could be critically important to the area. Up to three (3) tours or site visits will be scheduled

with the Working Group, stakeholders, and interested community members. Each tour is anticipated to be conducted over a 4-hour duration.

### ***Task 101. Public Communication***

#### **101.1 Develop Community Engagement Plan**

The Project Team (Tetra Tech, MRCA, SMMC), with oversight from the Working Group, will develop an effective Community Engagement Plan that will incorporate public participation and input to the Plan. The approach will consist of neighborhood-based stakeholders, participatory planning and design efforts, stakeholders, project partners, preparing exhibits large enough for display purposes, and community meetings.

The Community Engagement Plan will include proposed outreach activities, identify key stakeholder groups, integrate online resources, surveys, and the roles of the NGOs and other partners. The Community Engagement Plan will integrate the proposed nine (9) community meetings stated under Task 100.2 above.

#### **101.2 Interactive Website**

##### ***Interactive Website Development***

The Tetra Tech Team will develop a website to host detailed project information, documentation, meeting information, and contact lists. The website should enable the community visitors to the site to get an overview, contribute to interactive communications, and access to upcoming meetings, activities, as well as record data, reports, and other documents.

The website will feature the following components.

- Basic information about the Upper Los Angeles River and Its Tributaries
- Post Links to other governmental websites
- Organize the Upper Los Angeles River and Tributaries by Planning Segments
- Organized by Plan Elements (Community Economics, Community Engagement, Public Realm, Implementation, Water and Environment)
- Meetings and Outreach Sessions Schedule

### ***Provide Updates for Website Content***

The content of the website will be continually updated throughout the course of the project to keep pace with project achievements and strategically solicit community engagement at critical project stages. Tetra Tech team staff will lead the efforts to provide the website content including calendar items, documents/imagery, and similar tasks. Updates will occur approximately bi-weekly, but also on an as-needed basis.

### **101.3 Watershed Education Toolkit**

Tetra Tech will develop a watershed education toolkit that will be incorporated into the Community Meetings. The development of the toolkit will be coordinated with the MRCA. The intent of the Watershed Education Toolkit is to provide activities that will be and integrated into the community outreach events and implemented by NGOs or other entities.

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## **Part 2. Developing the Revitalization Plan**

### ***Task 200. Guiding Principles and Framework***

The primary objective of AB 466 is to facilitate the development of a community-centric, watershed-based revitalization plan. Such an endeavor requires seamless integration of two primary elements of this plan: (1) robust community engagement (as outlined in Task 3) and (2) thorough technical analysis to ensure the implementation viability of the Plan. The scope of work presented in Part 2 outlines the strategy to provide technical support to the Working Group as the Plan takes shape, beginning with opportunity and constraint analyses and ultimately progressing to project or programmatic theme concepts. To address the myriad interdependent technical challenges associated with planning the revitalization of the Upper Los Angeles River and Its Tributaries, a multi-disciplined team of technical experts has been assembled. Team members have been specifically selected to be capable of analyzing the impacts of proposed revitalization activities relative to a wide range of key technical areas, including river hydraulics, flood control, water quality, water supply, environment and habitat, active transportation, land use, and others. It is imperative that these technical analyses are designed to serve the Working Group's objectives by answering key questions,

helping to align project ideas with watershed-based planning objectives, and ensuring that project concepts are packaged into multi-benefit bundles that are ideally suited for funding.

Task 200 endeavors to (1) establish baseline conditions against which all future revitalization recommendations can be measured, (2) evaluate opportunities and constraints for revitalization activities, (3) establish multi-benefit project evaluation criteria, and (4) Identify areas well-suited for multi-benefit projects.

### **200.1 Establish Baseline Conditions**

Building upon the findings of the document review performed by the MRCA, the Tetra Tech team will assemble, refine, or update technical tools and information necessary to establish baseline conditions against which future modifications to the river corridor might be evaluated. While this baseline analysis will draw heavily from existing tool and documents, it is necessary to organize and refine the tools such that they will be useful for evaluating proposed projects in the context of critical watershed functions. The tools will quantify baseline watershed conditions such as water surface elevations during flooding, active transportation connectivity, water balance, water supply dynamics, and water quality conditions, among others. These models and tools must be prepped in order to be suitable for subsequent evaluations that will quantify impacts of projects.

### **200.2 Support Development of Plan Element Goals, Objectives, and Framework**

Through the Working Group workshops, the River Revitalization Plan Elements will be established. These broad categories will outline the key areas of focus, much work remains to ensure that these plan elements can be materially addressed with projects and programs in the river corridor. This task will require engagement with each of the Plan Element Committees by various Tetra Tech team members in order to evaluate Plan Element Committees' viewpoints and objectives as they relate to opportunities throughout the river corridor. Through an iterative process where the committees' objectives are repeatedly compared against opportunities in the river corridor by the Tetra Tech team members, the Plan Element Committees

will refine their goals, objectives, and guiding principles for revitalization. In addition, each of these committees will discuss the driving issues and challenges related to the Plan Elements and well as preliminary ideas and opportunities that could be universally applied along the river corridor. The goals and objectives established in this framework will ultimately be used to guide the assembly of multi-objective project concepts. The outcome of this effort will be summarized into a sub-section of the Opportunities Analysis Memorandum.

### **200.3 Identify Opportunities for Enhancement and Revitalization**

Based on the guiding principles of the Plan Element Committees, the Tetra Tech team will support the Working Group to identify the full range of modifications and best management practice ideas in order to restore, enhance, and revitalize the existing LA River infrastructure along each river segment. The Tetra Tech team to work with Working Group experts to provide the necessary technical analyses to assist the group with developing an understanding of the feasibility of the opportunity, level of complexity associated with the opportunity, and the degree of potential benefit that could be expected across a range of technically relevant areas. It is expected that this process will be iterative, with the committee updating opportunities based upon the Tetra Tech team's technical feedback and vice versa. The outcome of this effort will be summarized into a sub-section of the Opportunities Analysis Memorandum.

### **200.4 Evaluate Existing Physical Constraints**

The Tetra Tech team will evaluate and map all known physical constraints to enhancements within the Upper Los Angeles River including but not limited to property ownership, infrastructure, easements, topography, existing land use, maintenance requirements, and/or historic features. Tetra Tech will utilize interactive tools such as Google Earth, GIS, and scale maps to facilitate the Working Group assessment of opportunities along the Upper LA River Corridor. The outcome of this effort will be summarized into a sub-section of the Opportunities Analysis Memorandum.

### **200.5 Develop Evaluation Criteria for all Future Revitalization Work of the Upper Los Angeles River and Tributaries**

Tetra Tech will assist the Committees with the development of the evaluation and prioritization criteria that will be applied in the evaluation of opportunities. The establishment and articulation of the criteria will also be a key element of the community engagement program. The preliminary evaluation criteria will also be presented at the Working Group meeting to confirm the priorities and method of assessment. The outcome of this effort will be summarized into a sub-section of the Opportunities Analysis Memorandum.

### **200.6 Characterize Broad Categories of Multi-Benefit Opportunities**

The Working Group will be provided with the materials and tools necessary in order to evaluate and map all potential opportunity areas that may allow for river enhancement opportunities, the development of trails, the expansion or creation of open spaces and parkland, opportunities for recreation, opportunities to use river renewal to reestablish habitats or historic conditions, and opportunities for siting new community, cultural, educational or similar institutions as catalysts to other reinvestment.

### **200.7 Develop Guiding Principles Framework Document**

The Tetra Tech Team will compile, summarize, and record the Constraints, Opportunities, and Implementation planning efforts into a comprehensive Guiding Principles Framework Document technical memorandum as a cumulative result of the work with the Committees provided as part of Task 200. Beyond simply collating the findings from previous subtasks together, this task will integrate all findings into a cohesive set of guiding principles that will act as the foundation for the subsequent steps. This will require de-conflicting priorities where necessary and reframing findings from previous steps to fit the new comprehensive narrative.

#### **■ Deliverables**

- Baseline Conditions Technical Memo
- Goals/Objectives/Framework Section of the Guiding Principles and Framework Technical Memorandum



- Draft and Final Guiding Principles and Framework Technical Memorandum

### ■ **Assumptions**

- All deliverables provided for Task 200 will be provided in draft form. Comments and revisions will be incorporated into the Guiding Principles and Framework

## **Task 201. Inventory and Gap Analysis**

The Tetra Tech Team will compile the information for the Upper LA River and Tributaries to inventory the existing conditions, previous and existing planning efforts. Subsequently, a data gap analysis will be conducted that will identify additional opportunity areas to provide a comprehensive approach towards revitalization.

### **201.1 Planning Area Data Inventory**

#### **Biophysical Data**

The team will compile relevant GIS data and analysis that includes the biophysical data considering the watershed and subwatershed details, channel design and engineering, river hydraulic flows, water quality, runoff and permeability, geomorphology, groundwater basins, topology, historic and contemporary ecology, significant biological areas, and habitat connectivity.

#### **Sociocultural Data**

The team will also consider the available GIS data related to demographics, disadvantaged communities, environmentally contaminated areas, park provision, parks, planned park and river revitalization projects, land use, jobs and density, roads, public transportation, pedestrian and bicycle routes, community hubs, utility corridors.

#### **Relevant Literature Review**

The Los Angeles River Watershed has been the subject of numerous planning efforts over the years.

Those existing efforts include:

- Common Ground – From the Mountains to the Sea, 2001
- Los Angeles River Master Plan, Los Angeles County Department of Public Works, June 1996

- Los Angeles River Revitalization Master Plan, City of Los Angeles, April 2007
- Los Angeles River Ecosystem Restoration Integrated Feasibility Report, US Army Corps of Engineers Los Angeles District, September 2013
- Pacoima Wash Vision Plan, 2011
- Cal Poly Pomona Pacoima Wash Greenway Master Plan, 2004
- Enhanced Watershed Management Program for the Upper Los Angeles River Watershed, 2016
- Integrated Regional Water Management Plan, Upper LA River Subregional Report Plan, 2014
- Water Supply and Habitat Resiliency for a Future Los Angeles River, 2016
- Los Angeles Sustainable Water Project: Los Angeles River Watershed, 2017
- Los Angeles Countywide Comprehensive Parks and Recreation Needs Assessment, 2016
- Tujunga-Pacoima Watershed Plan, 2008
- National Park Service Rim of the Valley Corridor Special Resource Study, 2016
- Arroyo Seco Watershed Restoration Feasibility Study, 2002
- The Los Angeles River Urban Wildlife Refuge Report, 2005
- Lower Los Angeles River Revitalization Plan, Los Angeles County Department of Public Works, February 2018

#### **Identification and Analysis of Project Gap Areas**

Tetra Tech will review the planning efforts and documents provided by the MRCA and prepare a technical memorandum that summarizes the relevance of each plan as it relates to the Upper LA River and Tributaries Revitalization Plan. The technical memorandum will include a summary of all projects included in these existing plans and will assess the potential for integration of these projects might be integrated into or delineated from the revitalization planning effort. The technical memorandum

will include maps to show the extent of the various planning efforts and locations of each project.

## **Task 202. Project Concepts**

While Task 200 establishes the guiding principles, prepares baseline information/tools, and outlines the opportunities and limitations offered with the watershed, Task 202 will refine opportunity selection and begin the development of specific multi-benefit project (or program) concepts. The scope of these proposed projects will be outlined and their costs and benefits summarized to facilitate project/program-level decisions that will ultimately be built into the final plan as part of Task 206.

### **202.1 Stakeholder-based Project Opportunities**

Based on the gap areas, direction and guidance from the Working Group, Technical Committees, and Stakeholders, Tetra Tech will identify and compile a preliminary list and description of the proposed project opportunities. The listing will be reviewed with the MRCA staff and project team to determine which opportunities would require a more detailed assessment. An initial list of up to 12 project opportunity site areas will be developed. Up to 6 projects or programs will be selected for early conceptual development.

### **202.2 Project Concept Development**

The Tetra Tech Team will prepare conceptual level documents and provide preliminary details that describe the recommended Upper Los Angeles River and Tributaries Alternatives. Conceptual materials and renderings will be developed for each identified river segment. A conceptual planning level map will also be developed along the Upper LA River and its tributaries, which highlights key plan elements.

#### **■ Deliverables**

- Project Gap Opportunities List, map, and description matrix table
- Project Opportunities Evaluation and Prioritization, and Alternatives Recommendation Technical Memorandum.
- Presentation Materials for the Alternatives Recommendation to the Working Group.

- Draft and Final Summary of Project Concepts

#### **■ Assumptions**

- No more than 12 individual projects or programs, with the intent that no more than six projects or programs will ultimately be selected for the final Plan.
- The level of detail of analysis will be dependent upon the sophistication of the tools available and will be scaled to the available budget.
- The project concepts will consist of an overall map, and map of the three river segments. Highlights of up to 6 locations will be identified for development.
- Draft project concepts will include a single overall key map, map of each of the three river segments, and 6 focus areas will be identified along the river corridor.

## **Task 203 Implementation**

### **203.1 Project Opportunities Evaluation and Prioritization**

Tetra Tech will use the tools created as part of Task 200 to conduct a technical evaluation of project opportunities for economic, environmental, and social impacts as well as feasibility of implementation. The project evaluation and prioritization criteria generated by the Working Group Committees will be applied to assist with screening opportunities. New project opportunities will be categorized based on spatial relationships to include Supervisorial District, city jurisdictions, subwatershed area, etc. This information will be used as the basis for a distributed approach for selecting opportunities throughout the project area.

### **203.2 Alternatives Recommendation**

This task consists of the prioritized opportunities and discussion of Alternatives/Opportunities with the Working Group. The nature of these alternatives will be derived from the Working Group, Working Group Committees, and community and stakeholder responses. The Alternatives will be evaluated based on the Plan Element Framework and crafted to demonstrate the potential outcome and impact of the proposed interventions along the river segments.

### 203.3 Implementation Activities

This task involves the identification of required permits, approvals, or policy changes required for successful implementation of the recommended project concepts. Tetra Tech will also identify relevant funding sources to finance the implementation of the Final Plan that are long-term and sustainable. In addition, future planning efforts will be discussed for full implementation as well as to further the Watershed Education Programs.

#### ***Task 204. Upper Los Angeles River and Its Tributaries Revitalization Plan***

##### **204.1 Prepare the Draft and Final Upper Los Angeles River and Tributaries Revitalization Plan**

Tetra Tech will compile the Committees technical documents and develop alternatives to prepare the Draft Upper Los Angeles River and Tributaries Revitalization Plan (Revitalization Plan). While Tetra Tech will draw heavily upon previous deliverables to develop a draft Upper LA River and Tributaries Revitalization Plan for submittal to the MRCA and review by the Working Group, the bulk of the work associated with this task will involve integrating all design concepts into a singular plan and prepare a narrative that describes how this plan achieves the stated objectives of the Working Group.

The Final Revitalization Plan will outline the planning process, clearly articulate the goals and objectives, document

the project selection criteria, feature the selected project alternatives, and offer a discussion about programmatic needs to support the implementation of the Plan.

Tetra Tech will present the Draft Revitalization Plan at the Working Group Meeting. This will be an opportunity to solicit input from the Working Group members, verify that the recommendations and plan elements are consistent with the principles developed, and seek agreement that the plan will be embraced by the local community leaders and the community as part of the process for finalizing the Draft Revitalization Plan.

Following receipt of a single consolidated set of comments from the Project Planning Team, the Working Group members, Tetra Tech will finalize the Upper Los Angeles River and Tributaries Revitalization Plan document.

##### ■ **Deliverables**

- Draft and Final Upper Los Angeles River and Tributaries Revitalization Plan

##### ■ **Assumptions**

- The Draft and Final Upper Los Angeles River and Tributaries Revitalization Plan will consist of up to 6 hard copies for the Project Planning Team. An electronic file will be available for download on either the Interactive Project Website or on a Tetra Tech Sharepoint download site.

## Approach to Revitalization for the Upper Los Angeles River and Tributaries Revitalization Plan Development

Tetra Tech understands that the AB 466 did not include funding for this effort. It is our understanding that there is limited budget for such a critical effort to develop a revitalization plan for the Upper Los Angeles River. Our team will make every effort to work collaboratively with the Mountains Recreation Conservation Authority to maximize the available budget and provide technical assistance with identifying and seeking additional funding.

The Tetra Tech Team will make every effort to work collaboratively with the MRCA to develop a strategy that meets the AB 466 requirements for the Revitalization Plan for the Upper Los Angeles River.

### Option 1. Phased Approach for Revitalization

The first approach is to implement a multiple phased approach for the development of the revitalization plan. The Tetra Tech Team will provide technical assistance to support the MRCA with securing additional funding partners for this plan.

As a result, a phased approach could be used to advance the plan development, while allowing the MRCA to continue to progress the plan development as follows.

### Option 2. Focused Approach Through Scope Modifications and Cost Reductions

We have reviewed the Scope of Services and determined areas that could be considered to reduce the level of effort for this project. The following are suggested cost savings.

#### 1. Meeting Coordination/Facilitation

- a. Working Group Meetings. Working Group Meetings could be conducted on a less frequent basis to every two months. This provides the Project Planning Team (MRCA and Consultant Team) sufficient time to plan more focused outcomes for each Working Group

Meetings and maximizes the quality of each meeting while being cognizant of the Working Group members' commitment to this process.

- b. Committee Meetings. Committee Meetings could also be conducted on a bi-monthly basis to allow the project planning team to create more focused content, discussion, and recommendations. The committee meetings would stagger the Working Group Meetings to facilitate committee progress updates. In addition, Committees could be consolidated as follows.

- i. Community Economics, Equity, and Implementation (8 Meetings)
- ii. Public Realm, Water, and the Environment (8 Meetings)
- iii. River and Tributaries Site Opportunities (6 Meetings)

- c. Community Meetings. Community Meetings could be reduced from 9 to 6 dedicated community meetings as follows.

- i. Phase I. Information Gathering/Concept Development (3 Locations)
- i. Phase II. Review of Concepts (3 Locations)

- d. Tours/Fieldtrips/Site Visits. The 3 Field Events would be accomplished during 2 Committee Meetings for the River and Tributaries Meetings. These site visits could accomplish opportunity identification and example project types.

## 2. Guiding Principles and Framework

Tetra Tech could use the Guiding Principles developed for the Lower LA River Revitalization Plan for evaluation by the Upper LA River Working Group. This would establish consistency between both plans and create a foundation for prioritization of multiple opportunities.



MRCA  
Attachment  
September 14, 2018  
Agenda Item IV







PROJECT SCHEDULE FOR AB 466 UPPER LOS ANGELES RIVER AND TRIBUTARIES REVITALIZATION PLAN DEVELOPMENT

TASK NAME	DUR	START	FINISH	%	FLOAT	Predecessors	Resource Names
Upper LA River and Tributaries Revitalization Plan Management	392 d	Mon 7/2/18	Tue 12/31/19	0%	0 d		
Project Management	0 d	Mon 7/2/18	Mon 7/2/18	0%	0 d		
Project Management	0 d	Mon 7/2/18	Mon 7/2/18	0%	0 d		
Project Management	395 d	Mon 7/2/18	Fri 1/3/20	0%	0 d 3		
Project Management	395 d	Mon 7/2/18	Fri 1/3/20	0%	0 d		
Project Management and Controls	392 d	Mon 7/2/18	Tue 12/31/19	0%	3 d		
Coordinate and Facilitate Meetings	395 d	Mon 7/2/18	Fri 1/3/20	0%	0 d		
Working Group Workshops	395 d	Mon 7/2/18	Fri 1/3/20	0%	0 d		
Committee Meetings	341 d	Tue 7/24/18	Tue 11/12/19	0%	38 d		
Committee 1	336 d	Tue 7/24/18	Tue 11/5/19	0%	43 d		
Committee 2	338 d	Thu 7/26/18	Thu 11/7/19	0%	41 d		
Committee 3	336 d	Tue 7/31/18	Tue 11/12/19	0%	38 d		
Community Meetings	188 d	Mon 7/16/18	Wed 4/3/19	0%	197 d		
Tours, Field Trips, Site Visits	19 d	Mon 7/16/18	Thu 8/9/18	0%	366 d		
Public Communication	390 d	Mon 7/2/18	Fri 12/27/19	0%	5 d		
Develop Community Engagement Plan	65 d	Mon 7/16/18	Fri 10/12/18	0%	320 d		
Community Engagement Plan	30 d	Mon 7/16/18	Fri 8/24/18	0%	15 d 3FS+10 d		
Community Engagement Plan	10 d	Mon 8/13/18	Fri 8/24/18	0%	15 d 96SS+5 d		
Community Engagement Plan Review	10 d	Mon 9/17/18	Fri 9/28/18	0%	0 d 97		
Community Engagement Plan	10 d	Mon 10/1/18	Fri 10/12/18	0%	320 d 98		
Interactive Project Website Support	390 d	Mon 7/2/18	Fri 12/27/19	0%	5 d		
Interactive Project Website (Interim)	390 d	Mon 7/2/18	Fri 12/27/19	0%	5 d		
Open House and Full Websites	40 d	Mon 7/2/18	Fri 8/24/18	0%	0 d		
Development of Website Content	350 d	Mon 8/27/18	Fri 12/27/19	0%	5 d 102		
Updates for Website Content	350 d	Mon 8/27/18	Fri 12/27/19	0%	5 d 102		
Website Mapping and Survey Tool	90 d	Mon 8/27/18	Fri 12/28/18	0%	265 d 102		
Develop Watershed Education Toolkit	90 d	Mon 8/27/18	Fri 12/28/18	0%	265 d 3FS+40 d		
Develop the Revitalization Plan	395 d	Mon 7/2/18	Fri 1/3/20	0%	0 d		
Developing Principles and Framework	185 d	Mon 7/2/18	Fri 3/15/19	0%	195 d		
Establish Baseline Conditions	100 d	Mon 7/2/18	Fri 11/16/18	0%	0 d 3		
Develop the Plan Element Goals and Objectives	80 d	Mon 7/30/18	Fri 11/16/18	0%	0 d 3FS+20 d		
Identify Opportunities for Enhancement and Revitalization	50 d	Mon 9/10/18	Fri 11/16/18	0%	0 d 109SS+50 d		
Identify Existing Physical Constraints	50 d	Mon 9/24/18	Fri 11/30/18	0%	0 d 111SS+10 d		
Develop Evaluation Criteria for all Future Revitalization Work of the Angeles River and Tributaries	25 d	Mon 12/3/18	Fri 1/4/19	0%	0 d 112		
Characterize Broad Categories of Multi-Benefit Opportunities	25 d	Mon 12/10/18	Fri 1/11/19	0%	0 d 113SS+5 d		
Develop Guiding Principles Framework Document	45 d	Mon 1/14/19	Fri 3/15/19	0%	210 d 114		
Inventory and Gap Analysis	55 d	Mon 7/16/18	Fri 9/28/18	0%	93 d		
Developing Area Data Inventory	55 d	Mon 7/16/18	Fri 9/28/18	0%	0 d 3FS+10 d		
Project Concepts	80 d	Mon 10/1/18	Fri 1/18/19	0%	93 d		
Stakeholder-Based Project Opportunities	40 d	Mon 10/1/18	Fri 11/23/18	0%	0 d 117		
Project Concept Development	40 d	Mon 11/26/18	Fri 1/18/19	0%	0 d 119		
Implementation	120 d	Mon 11/19/18	Fri 5/3/19	0%	154 d		
Project Opportunities Evaluation and Prioritization	20 d	Tue 2/12/19	Mon 3/11/19	0%	0 d 120FS+16 d		
Stakeholder Recommendation	20 d	Tue 3/12/19	Mon 4/8/19	0%	0 d 122		
Implementation Activities	120 d	Mon 11/19/18	Fri 5/3/19	0%	175 d 110		
Upper LA River and Tributaries Revitalization Plan	194 d	Tue 4/9/19	Fri 1/3/20	0%	0 d		
Upper LA River and Tributaries Revitalization Plan (Draft)	63 d	Tue 4/9/19	Thu 7/4/19	0%	0 d 89,114,122,123		
Upper LA River and Tributaries Revitalization Plan (Draft Final)	20 d	Fri 7/5/19	Thu 8/1/19	0%	0 d 126		
Upper LA River and Tributaries Revitalization Plan (Final)	18 d	Fri 8/2/19	Tue 8/27/19	0%	93 d 127		
Plan Complete	0 d	Fri 1/3/20	Fri 1/3/20	0%	0 d 7,94		