Monterey Peninsula
Water Management District

Proposal for

Integrated Regional Water Management Plan for the Monterey Peninsula, Carmel Bay, and South Monterey Bay

February 28, 2006

RMC *Innovative Solutions for Water and the Environment*

RMC
Water and Environment

Los Angeles
Sacramento
San Francisco
San Jose
Walnut Creek

February 28, 2006

Mr. David Berger
General Manager
Monterey Peninsula Water Management District
5 Harris Court, Bldg. G
Monterey, CA 93942

Dear Dave:

To achieve your goals of obtaining State grant funds and integrating varied plans for surface and groundwater management, the Monterey Peninsula Water Management District must create a final, adopted "functionally equivalent" IRWM Plan that details how local, State, and Federal water management strategies will work together in the Monterey Peninsula, Carmel Bay and South Monterey Bay areas to improve regional water security, protection, and management.

Using the optimum combination of management and communication strategies, ***RMC will provide an adopted Integrated Regional Water Management Plan by December 2006, thereby maximizing the District's ability to receive Prop. 50, Chapter 8 grant funding.***

Our professionals understand how to conceptualize, prepare, and implement integrated regional water management plans that address regulatory requirements, achieve stakeholder agreement, and gain both internal and external financial support. Our team was formed to provide the best possible combination of experience and talent to the Monterey Peninsula Water Management District with a commitment to working closely with District staff on this integrated planning initiative.

As RMC's project manager, I bring 25 years of experience with projects involving integrated water management planning, project funding development, environmental documentation, decision process support, and vulnerability/ reliability analysis. My proposed deputy project manager, Leslie Dumas, also has extensive experience with integrated regional water management planning, water resource planning, groundwater basin investigation and management, conjunctive use, hydrologic routing, and regulatory permitting. Additionally, Lyndel Melton will contribute his in-depth understanding of local and regional water resource management issues.

RMC is excited about this opportunity to work with you. Please call me if you have any questions about our proposal.

Sincerely,
RMC WATER AND ENVIRONMENT, INC.

David L. Richardson, P.E.
Principal

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Section 1

Team Organization and Qualifications

"We appreciate RMC's considerable and dedicated efforts over the years to assist us in meeting our agency water supply and management objectives. This appreciation...extends to the many other members of your firm who support us behind the scenes."

Charles McNiesh
Former General Manager

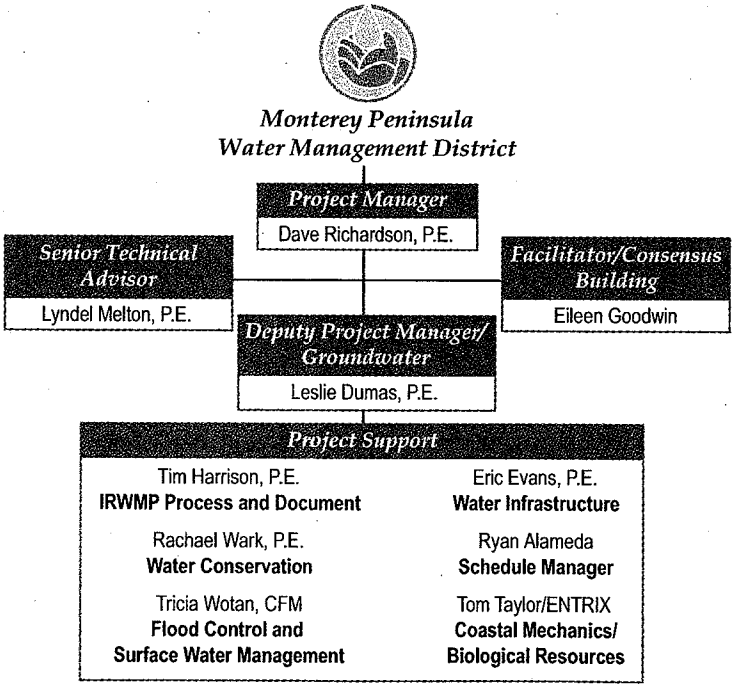
Pajaro Valley Water Management Agency

Experienced Team

Preparation of an Integrated Regional Water Management Plan can best be accomplished with a team that has extensive local knowledge and experience and has successfully completed similar integrated plans involving the technical, regulatory, environmental, institutional, and public issues associated with comparable studies. Each team member shown on our organization chart was chosen for his or her experience, technical expertise, and insight into the challenges that will frame MPWMD's plan. All of RMC's team members proposed for this evaluation work from our Walnut Creek or San Jose offices, and they are available and prepared to meet the milestone dates and deliver an adopted IRWM Plan by December 2006.

RMC has managed and designed projects for a number of clients in Monterey and adjacent counties, including the City of Watsonville, Monterey County Water Resources Agency, and Pajaro Valley Water Management Agency. You can be sure that RMC will be available at any time of day or evening for meetings with your staff and other stakeholders, and for coordination and site visits in-between.

Successfully managing and creating the IRWMP will require the full commitment of a highly experienced, dedicated project management team. Our experience includes stream stewardship/management plans, long-term objectives identification, definition of projects and policies needed to achieve objectives, and development of consensus to maximize opportunities for funding. We have provided similar planning services to San Benito County Water District, North Bay Watershed Association, Pajaro Valley Water Management Agency, Los Angeles County, West Basin Municipal Water District, North Santa Monica Bay Watersheds Group, and many others throughout California.



Streamlined Organizational Structure

To address both the tight schedule as well as the technical breadth of developing the IRWMP for the District, RMC has developed a streamlined organizational structure. Our project manager, Dave Richardson, and deputy project manager, Leslie Dumas together will be responsible for all major deliverables and coordination. RMC has used this streamlined management team model for other planning efforts. For example, using this approach, we delivered planning grant and implementation grant applications, along with a working draft IRWMP, for the West Basin Municipal Utility District in less than three months.

Expert Subconsultants

Our team was formed to provide the best possible combination of experience and talent to Monterey Peninsula Water Management District. We have included specialty resources on our team to provide expert technical assistance.

The descriptions of our key team members and subconsultants provided below, and their resumes included in the Appendix, demonstrate each person's expertise and ability to contribute to the success of the IRWMP.

Dave Richardson, P.E. – Project Manager

Dave has 25 years of engineering experience, specializing in water supply, recycled water, and wastewater projects. Dave's primary experience is in the planning, permitting, and environmental documentation phase of projects. He has managed projects involving master planning, integrated water management planning, project funding development, environmental documentation, decision process support, vulnerability/reliability analysis, design, and construction management services. Representative projects include:

- Regional Wastewater System and Recycled Water System Evaluation, South Placer Wastewater Authority (Roseville)
- Integrated Regional Water Management Plan (Functional Equivalent Document) and Prop 50, Chapter 8 Application, Freeport Regional Water Authority (Sacramento County)
- Integrated Regional Water Management Planning and Implementation Applications for Amador Water Agency, Bay Area Water Agencies, and East Contra Costa County.
- Funding Support for Amador Water Agency (Prop 50, Chapter 7 and Chapter 8).
- Water Management Strategy Development (including Conservation and Recycling), Bay Area Water Agencies Coalition

Leslie Dumas, P.E. – Deputy Project Manager

Leslie is a hydrologist and project manager with 16 years of experience providing hydrogeologic, hydrologic, and engineering consulting for projects throughout the United States. She has managed multi-disciplinary teams on a wide variety of projects, including water resource planning, groundwater basin investigation and management, conjunctive use, hydrologic routing, and regulatory permitting. Leslie has conducted both surface and ground water flow and contaminant transport modeling studies as well as incorporated the results of the modeling into water management strategies. She has also prepared and/or reviewed planning and environmental documentation, including CEQA Initial Studies and Environmental Impact Reports, Urban Water Management Plans, Groundwater Management Plans, and Stormwater Pollution Prevention Plans for various civil projects. Examples of Leslie's experience include:

- Integrated Regional Water Management Plan, Amador Water Agency
- Urban Water Management Plan, City of Modesto and Modesto Irrigation District
- Groundwater Management Plan, Monterey County Water Resources Agency
- East Contra Costa County Phase II Water Supply Study, Contra Costa Water District
- Initial Study, Monterey Regional Water Pollution Control Agency
- Stormwater Pollution Prevention Plans, CalTrans
- East Bay Plain Groundwater Study, East Bay Municipal Utility District
- Groundwater evaluations for private parties in Chico, Marysville, and Willows

Lyndel Melton, P.E. – Senior Technical Advisor

Lyndel has 30 years of experience specializing in civil, environmental and water resources engineering involving the planning and design of water resource management projects. He has an in depth understanding of local and regional water resource management issues in the greater Monterey and Peninsula areas, including surface and groundwater management, seawater intrusion, alternative water availability, environmental and habitat management, and desalination. He is currently working with the Marina Coast Water District on the implementation of a new desalination facility to serve the water need for redevelopment in the former Fort Ord area. Other representative experience includes:

- Contingency Water Supply Program (Plan B), California Public Utilities Commission
- Salinas Valley Water Project and Basin Management Plan, Monterey County Water Resources Agency
- Castroville Seawater Intrusion Project and Basin Management Plan, Monterey County Water Resources Agency
- Basin Management Plan Update for the Pajaro Valley Water Management Agency
- North Monterey County Water Supply Project, Monterey County Water Resources Agency

Eileen Goodwin – Facilitator/Consensus Building

Eileen has 24 years of leadership experience in building consensus and in completing complex projects involving numerous parties on time and within budget. She is principal of Apex Strategies, a company that counsels and assists public agencies and private parties in favorably positioning their projects and programs with the community and the media. Eileen specializes in strategic plans, expenditure and community outreach programs. Eileen recently facilitated a workshop for the Monterey Peninsula Water Management District, providing leadership in a facilitated setting for communication goals and objectives associated with development of added water supply through desalination. She is also working with RMC in coordinating the regional water managers meetings related to urban water supply on the Monterey Peninsula. Eileen's project experience includes:

- Public Vote Outreach for rate increase, Pajaro Valley Water Management Agency
- Workshops for Monterey County Water Resources Agency
- Strategic Plan and Plan Facilitation, Marina Coast Water District
- Strategic Plan, Monterey Peninsula Water Management District

Tim Harrison, P.E. – IRWMP Document and Process

Tim is experienced in grant applications, planning studies, conceptual design, engineering evaluations, final design, construction management, and operations support. Within these project types, Tim has completed supply and demand analyses, hydraulic modeling, project prioritization, CEQA work, public outreach and consensus building. He is also skilled as a GIS analyst and manager, having supported numerous projects either directly or indirectly with spatial data products and analyses. Representative experience includes:

- Urban Water Management Plan 2005, Amador Water Agency
- Proposition 50 Chapter 8 Planning Grant Application, Amador Water Agency
- Intake Position Analysis, Freeport Regional Water Authority
- Pajaro River Watershed Study, Pajaro River Watershed Flood Prevention Authority
- Stream Management Master Plan (SMMP), Zone 7 Water Agency
- Regional Water Recycling Study, North Bay Watershed Association
- Coyote Watershed Stream Stewardship Program, Santa Clara Valley Water District
- Revised Basin Management Plan and Project Implementation, Pajaro Valley Water Management Agency

Rachael Wark, P.E. – Water Conservation

Rachael specializes in regional water management planning, recycled water planning, program management,

water and wastewater studies. She has managed several regional water management projects involving multiple agencies and has worked on integrated regional water management planning activities for the Bay Area Water Agencies Coalition and East County Water Management Association. Representative projects include:

- Water Conservation Study, Bay Area Water Agencies Coalition
- Water Conservation Program Evaluation, Zone 7 Water Agency
- 2005 Urban Water Management Plan, Amador Water Agency
- East Contra Costa Integrated Regional Water Management Plan, East County Water Management Association
- Bay Area IRWMP Proposition 50, Chapter 8 Planning Grant
- Bay Area Water Supply and Water Quality Functional Area Document for the Bay Area IRWMP
- Water Management Elements Study, Bay Area Water Agencies Coalition
- Bay Area Water Quality and Water Supply Reliability Program

Tricia Wotan, CFM – Flood Control and River Management

Tricia Wotan specializes in environmental project planning. She is a Certified Floodplain Manager (CFM) in the State of California. She is skilled in hydraulic model (HEC-RAS) development and flood hazard analysis, FEMA flood zone determinations, water quality monitoring plan development, water quality sampling, hydrologic field measurements, water resources analyses, GIS mapping (ArcView), and water resources research. Her experience includes:

- Pajaro River Watershed Study, Pajaro River Watershed Flood Prevention Authority
- Pajaro River IRWMP (Planning Grant Proposal), San Benito County Water District
- Pajaro River IRWMP (Implementation Grant Proposal), Pajaro Valley Water Management Agency
- Urban Water Management Plan, City of West Sacramento
- Reliability Improvements, South Bay Water Recycling
- Watsonville Area Recycled Water Program, City of Watsonville
- 319(h) Grant, Salinas Valley Public Education and Outreach

Eric Evans, P.E. – Water Infrastructure

Eric has experience in water, watershed, and flood protection projects. He has served as project engineer, hydrologist, and assistant construction manager for clients including the Contra Costa Water District, the Santa Clara Valley Water District, the Monterey County Water Resources Agency, the City of San Jose, and the Pajaro Valley Water Management Agency. He specializes in hydraulic modeling and he is experienced and proficient in many aspects of water-related civil engineering. Representative experience includes:

- Canal Hydraulic Study, Contra Costa Water District
- Flood Protection and Watershed Management Program, Coyote Watershed, Santa Clara Valley Water District
- Revised Basin Management Plan, Pajaro Valley Water Management Agency
- Salinas Valley Water Project and Basin Management Plan, Monterey County Water Resources Agency
- Silver-Thompson Creeks Sediment Removal Project, Santa Clara Valley Water District
- South Bay Mobile Home Park Flood Protection Project, Santa Clara Valley Water District
- Environmental Enhancement Program's Streamflow Augmentation Project, City of San Jose

Ryan Alameda – Schedule Manager

Ryan is a project engineer with experience in project controls, including schedule management, and construction management. He has participated in sewer reconstruction and flood control projects and has proven ability to work cooperatively with client staff and project team members. Ryan's project experience includes:

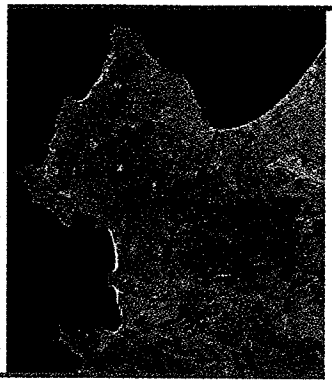
- Coyote Watershed Program, Santa Clara Valley Water District
- Alamo Creek Trunk Sewer Relocation, Dublin San Ramon Services District
- Highway 87 Detour Sanitary Sewer Reconstruction Phase II Project, City of San Jose

- Regional Recycled Water Facility Plan, Water Resources Association of San Benito County c/o San Benito County Water District

Tom Taylor – Coastal Mechanics/Biological Resources

Tom is a fishery scientist with ENTRIX who has over 25 years experience in the effects of water resources projects on aquatic habitat and riverine resources. Project experience includes river and wetland restoration, management and assessment of anadromous fishes and their habitat, assessment of fish passage conditions at culverts and ladders, evaluation of reservoir drawdown operations on aquatic resources, dam and sediment removal affects on anadromous habitat and the assessment of effects of water diversions and transfers on California's Central Valley rivers and on the Delta. Tom has extensive experience on coastal coho salmon and steelhead and California red-legged frogs and also on Central Valley Chinook salmon and steelhead. He has extensive ESA consultation experience on coastal and inland rivers for coho salmon, steelhead and California red-legged frogs. Tom has extensive field experience in California coastal streams from Mendocino County to Santa Barbara County. Project experience includes:

- San Clemente Dam Interim Seisimc Safety Operations, Carmel Valley, California
- Rancho San Carlos Steelhead Habitat Conservation Plan, Carmel, California
- Coordinator, Central California ACWA Steelhead Listing Report, California
- San Clemente Dam on the Carmel River, Seismic Safety EIR/EIS
- Long-term monitoring of Lagunitas Creek coho salmon and steelhead populations

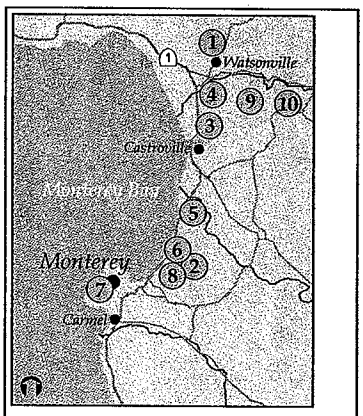


Section 2
Firm Experience

RMC has focused on delivering innovative solutions for water agencies throughout California. Our professionals understand how to conceptualize, prepare, and implement integrated regional water management plans that obtain regulatory clearance, achieve stakeholder agreement, and gain both internal and external financial support. RMC's experience includes planning and implementation of water conservation programs, groundwater development and management, surface water supply development and reliability analysis, and recycled water development. Our approach includes developing criteria for prioritization through facilitated decision workshops with agency staff and stakeholders. And, we evaluate implementation strategies related to cash flow and funding to develop a road map for overcoming traditional hurdles of water related projects.

Our team has a comprehensive understanding of the technical issues associated with water resource management in the greater Monterey Bay area and on the Monterey Peninsula, such as surface and groundwater management, seawater intrusion, supplemental water supply availability, environmental and habitat management, and desalination. In addition to our preparing IRWMP's for the Pajaro and Salinas Watersheds, RMC's local project experience includes the Salinas Valley Water Project, California PUC Plan B Project, North Monterey County studies, Marina Coast Water District Hybrid Water Supply Project, PVWMA Basin Management Plan and implementation, and the Pajaro River Watershed Flood Prevention Authority planning efforts.

The map to the right presents our team's experience in Monterey County.



1 - Watsonville Recycling Feasibility Study and Design
2 - Salinas Valley Water Project
3 - Salinas Basin IRWMP
4 - North County Water Project
5 - Regional Urban Water Augmentation Project
6 - Review of MCWD Regional Urban Water Augmentation Project
7 - Plan B Project
8 - MCWD Hybrid Water Supply Project
9 - Pajaro Watershed IRWMP
10 - Pajaro Watershed Flood Prevention Authority

The RMC team brings experience in large scale water management programs in California, from planning through implementation, and our team members bring specific knowledge of the watersheds in the greater Monterey Peninsula area. The following project descriptions demonstrate our team's experience with regional integrated and watershed management plans.

Pajaro River Watershed Integrated Regional Water Management Plan
San Benito County Water District, Santa Clara Valley Water District, and Pajaro Valley Water Management Agency

The Pajaro River Watershed Integrated Regional Water Management Plan is a collaborative effort between the San Benito County Water District, Santa Clara Valley Water District, and Pajaro Valley Water Management Agency. The mission of the Pajaro River Watershed Management Collaborative is to preserve the economic and environmental wealth and well-being for the Pajaro River Watershed through watershed stewardship and comprehensive

management of water resources in a practical, cost effective and responsible manner. RMC is currently preparing a watershed-wide integrated regional water management plan for the Pajaro River watershed in Santa Clara, San Benito, Monterey, and Santa Cruz Counties. The plan builds upon the large volumes of existing water resource planning completed by numerous agencies. The purpose of the plan is to provide a road map for the water resource management agencies that are responsible for water management within the Pajaro River watershed.

Integrated Regional Water Management Plan

Salinas Valley

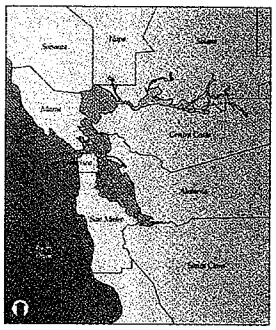
RMC is preparing an Integrated Regional Water Management Plan to address water resource management issues within the Salinas Valley. The regional partners that are participating in the planning process are the Monterey County Water Resources Agency, the Marina Coast Water District, and the Castroville Water District, along with a large group of supporters and stakeholders. The IRWMP is being completed with funding from the EPA. RMC completed a Functionally Equivalent Plan for submittal for a Proposition 50, Chapter 8 Implementation Grant Application, and RMC is currently in the process of taking the Functionally Equivalent Plan and completing a full IRWMP.

The Salinas Valley IRWMP effort is a joint effort that address the wide range of water resource management issues within the Salinas Valley, including seawater intrusion, groundwater management, surface water supply, recycled water supply, environmental enhancement, habitat management, and flood protection in order to secure and improve the quality of the region's water supplies.

Integrated Water Management Planning for the Bay Area Region

Bay Area Water Agencies Coalition (BAWAC)

BAWAC, comprising major water agencies and associations in the Bay Area, joined with North Bay Water Agencies to develop the water supply and quality section of an Integrated Water Management Plan. RMC led the development of the plan's water supply and water quality sections. The plan demonstrates the degree to which Bay Area water planning is comprehensive and integrates with other water management strategies, including water recycling, watershed management, flood control and stormwater management, and stream/habitat stewardship. This document is serving as a basis for Proposition 50, Chapter 8 funding for Bay Area region-wide projects including a regional conservation program and regional interties. It is a cornerstone for an overall Bay Area Integrated Regional Water Management Plan being developed in 2006. Agencies and associations involved include: Alameda County Water District, Bay Area Water Supply and Conservation Agency, Contra Costa Water District, East Bay Municipal Utility District, Marin Municipal Water District, City of Napa, San Francisco Public Utilities Commission, Santa Clara Valley Water District, Zone 7 Water Agency, Solano County Water Agency and Sonoma County Water Agency.



RMC has just been awarded the preparation of an overall IRWMP for the entire San Francisco Bay Area across all four functional areas—water supply, wastewater/recycled water, flood protection/stormwater management, and habitat protection/ecosystem management. That plan will be completed by December 2006.

Integrated Regional Water Management Plan
Los Angeles County

RMC is part of a consultant team that is preparing an Integrated Regional Water Management Plan (IRWMP) for greater Los Angeles County. Los Angeles County, with 10.2-million residents, is the largest county in the country with over 2,000 square miles being covered by the project. Areas currently included in the Plan are the Santa Monica Bay Watersheds; the Ballona Creek and Dominguez Watersheds; and the San Gabriel and Los Angeles River Watersheds. The Plan is a joint effort among the West and Central Basin Municipal Water Districts, the Los Angeles County Flood Control District, the City of Los Angeles, the Watershed Conservation Authority, the Santa Monica Bay Restoration Authority, and more than 50 other agencies, municipalities, and stakeholder groups.

The integrated Plan will address 1) water supply, conservation, and recycling, 2) water quality, 3) habitat protection and restoration, 4) wetland restoration, 5) flood management, and 6) recreation and public access. The team's approach targets multiple funding opportunities beyond Chapter 8, including a 2008 countywide funding measure as well as federal funding.

Integrated Regional Water Management Plan
Amador Water Agency

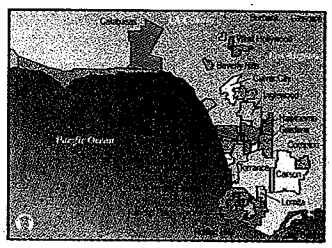
For Amador Water Agency and several other local entities, RMC is developing an Integrated Regional Water Management Plan covering the Mokelumne River and watersheds in parts of Calaveras and San Joaquin counties, and all of Amador County. The objectives of the plan are to foster coordination, collaboration and communication among regional and local agencies responsible for water-related issues; to achieve greater efficiencies; and to build public support for vital projects. The Integrated Regional Water Management Plan is being completed with a grant under Proposition 50. It supplements an Urban Water Management Plan completed by RMC about two months earlier. The plan will help the agency and 30 regional stakeholders qualify for some of the $220 million in capital funding available from the state. Participants in the plan include the East Bay Municipal Utilities District, Calaveras County Water Department, Amador Regional Sanitation Authority, Sutter Creek, Jackson, Ione and Amador County.

Integrated Regional Water Management Plan for Sacramento County
FRWA, SCWA and EBMUD

RMC prepared of a Functionally Equivalent Planning Document (FED) of an Integrated Regional Water Management Plan for Sacramento County south of the American River. The Regional Water Management Group responsible for preparing the FED is the Central and South Sacramento County Regional Water Partnership (CSSCRWP). CSSCRWP members include the Freeport Regional Water Authority (FRWA), Sacramento County Water Agency (SCWA), and East Bay Municipal Utility District (EBMUD), the County of Sacramento, Sacramento Area Flood Control Agency, and The Nature Conservancy.

Integrated Regional Water Management Plan

West Basin Municipal Water District

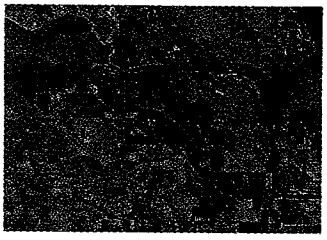


West Basin Municipal Water District is a member agency of Metropolitan Water District and wholesales imported water to cities, mutual water companies, investor-owned utilities, and private companies in southwest Los Angeles County. West Basin's service area uses 220,000 acre-feet of water annually and has been a leader in water conservation, water recycling, and desalination. Under contract with the West Basin Municipal Water District, RMC worked with agencies and stakeholders in the Los Angeles County South Bay Region to identify, prioritize, and integrate water supply reliability and water quality improvement projects as part of an integrated water supply planning process and to submit planning and implementation grant applications under Proposition 50, Chapter 8. RMC prepared a $500,000 planning grant application under Proposition 50, Chapter 8 with West Basin MWD acting as the lead agency for 40 to 50 stakeholders and other water agencies. RMC then prepared a draft integrated regional water management plan and $50 million implementation grant application under Proposition 50, Chapter 8. The implementation grant would fund a collection of water supply reliability, and water quality projects consistent with the integrated regional water management plan.

Integrated Regional Water Management Plan for East Contra Costa

East County Water Management Association

RMC developed a functionally equivalent Integrated Regional Water Management Plan and implementation grant funding application materials for the East County Water Management Association, which includes 11 water agencies, wastewater agencies, flood control districts and watershed groups within the eastern portion of Contra Costa County. This document is being developed in accordance with Proposition 50, Chapter 8 guidelines in an effort to secure funding for water management projects within the region. RMC established a system for evaluating and prioritizing projects proposed within the Region, and documented the broad range of current and potential future water management and environmental efforts in East Contra Costa County.



RMC also coordinated with the California Department of Water Resources and State Water Resources Control Board to prepare the Functionally Equivalent Document.

Integrated Regional Water Management Plan and Implementation Proposal

North Santa Monica Bay Watersheds Integrated Regional Water Management Group and City of Malibu

Under contract with the City of Malibu, RMC worked with agencies and stakeholders in the North Santa Monica Bay Region which straddles the Los Angeles County and Ventura County line. In less than four months, RMC was able to help the Region's stakeholders to identify, prioritize, and integrate water supply reliability and water quality improvement projects as part of an integrated water supply planning process. Critical to the success of this effort was RMC's ability to get up to speed quickly on regional issues and information, work one-on-one with most stakeholders in addition to leading stakeholder workshops, and keep stakeholder focused on those efforts most valuable to the application. These efforts culminated in RMC preparing a draft Integrated Regional Water Management Plan as well as planning grant application and implementation grant application for Proposition 50, Chapter 8 funding.

Monterey Peninsula Water Supply, Plan B

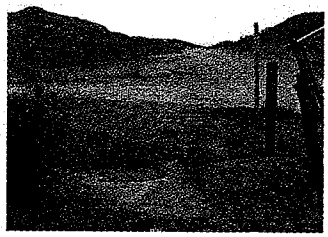
California Public Utilities Commission

The California-American Water Company (Cal-Am), which provides water service to the Monterey Peninsula, applied to the California Public Utilities Commission (CPUC) to construct and operate a dam and reservoir on the Carmel River. This was done in response to the State Water Resources Control Board Decision 95-10 that stated Cal-Am is not legally entitled to 10,730 AFY of water it is currently diverting from the river. Substantial controversy surrounded the proposed dam and reservoir project. Assembly Bill 1182 required the CPUC to develop a long-term water supply contingency plan (Plan B) as an alternative.

RMC served as the engineer for facilities development for the Plan B project. The Plan B team evaluated different approaches to resolving the 10,730 AFY water shortage, including additional water rights strategies, water conservation and reclamation, desalination, and aquifer storage and recovery (ASR). RMC was responsible for developing an implementation strategy for a desalination facility and an ASR project. The development process for the Plan B project entailed the development of specific objectives and criteria, identifying and analyzing potential water components, and assembling alternative strategies that would be evaluated and selected according to their engineering and operations, economic, logistical, and environmental characteristics.

Hybrid Water Supply Project

Marina Coast Water District



RMC is providing preliminary design and program management services to provide water supply for the redevelopment of the former Fort Ord military installation which is being converted to civilian use. The Marina Coast Water District was contracted by Fort Ord Reuse Authority to meet the potable and non-potable water needs for the 45-square-mile, 28,000-acre-facility. Based on projected water needs and in order to maximize recycled water use, the project consists of two components: 1,500 AFY of recycled water distribution infrastructure, and a 1,500 AFY desalinated water facility. As program manager, RMC is responsible for keeping the project on schedule to supply water in FY 2008-09. Our responsibilities include:

- Identifying the need for interagency agreements between the recycled water provider and MCWD
- Conducting a facilities ownership and operations analysis and developing a recommended facility sharing plan
- Evaluating and refining project scope, goals, and objectives
- Reviewing existing environmental documentation
- Reviewing permit needs and initiating dialogue with permitting agencies
- Reviewing customer base for recycled water
- Overseeing the remaining environmental consulting services

Salinas Valley Water Project

Monterey County Water Resources Agency

RMC served as the program/project manager for the Salinas Valley Water Project. The project addressed the existing seawater intrusion into the fresh groundwater basin and long-term water supply issues for the northern Salinas Valley. The long-term water supply needs of the Salinas Valley are in excess 500,000 acre-feet per year. Overdraft conditions in the groundwater basin have led to a decline in the groundwater levels, resulting in seawater intruding into the freshwater aquifers. RMC's work included:

- Identifying, evaluating and developing several water treatment, storage and distribution alternatives for the agricultural, municipal and industrial water users of the Salinas Valley.
- Evaluating membrane treatment and aquifer storage and recovery options for diverted Salinas River water.
- Evaluating the use of aquifer storage and recovery for storage for winter production of recycled water. The stored recycled water would then be used during the summer irrigation season.
- Evaluating Salinas River operations to maintain minimum in-stream flows necessary to support steelhead fish migration.
- Providing technical support and coordination of project permits, including permits with the State Water Resources Control Board, the Regional Water Quality Control Board, the State Department of Fish & Game, the US Fish & Wildlife Service, the US Army Corps of Engineers, and the National Oceanic and Atmospheric Administration (NOAA Fisheries).
- Conducting a Stakeholder process to identify benefits and allocate costs in a manner consistent with Proposition 218, which requires costs be allocated proportional to the benefits received. This process resulted in 85% voter approval of the land-based project assessments.

Revised Basin Management Plan and Project Implementation

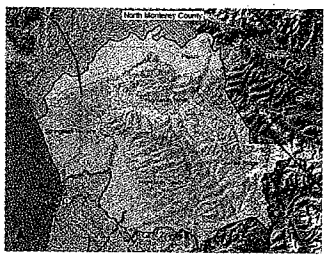
Pajaro Valley Water Management Agency

RMC is serving as program manager for the Pajaro Valley Water Management Agency (PVWMA) Revised Basin Management Plan and Project Implementation. This project is focused on developing supplemental water supplies for the Pajaro Valley. The Pajaro Valley has relied primarily on groundwater to meet its agricultural and urban water demands. The demands have exceeded the safe yield of the basin, leading to groundwater overdraft and seawater intrusion. RMC evaluated alternative water supplies including the use of recycled water, local surface supplies and imported water supplies. We also provided preliminary evaluation of the Pajaro/Sunny Mesa desalination project.

RMC managed the successful preparation of the Environmental Impact Report and Environmental Impact Statement. The project includes environmental assessment of impacts to in-stream beneficial uses, including migration and spawning grounds for steelhead fisheries. RMC prepared a funding application package that has secured nearly $30 million in project funding from the Department of Water Resources. As the project moves into its implementation phase, we are providing technical support and permit negotiations with agencies having jurisdiction in the Monterey Bay area, including the California Coastal Commission, Central Coast Regional Water Quality Control Board, California Department of Health Services, State Water Resources Control Board, the US Army Corps of Engineers, NOAA Fisheries and the US Fish and Wildlife Service.

North Monterey County Study

Monterey County Water Resources Agency



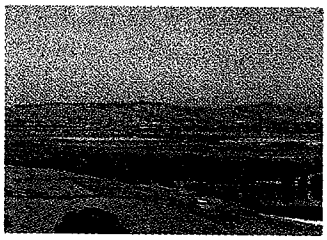
This study addressed the water resource issues facing North Monterey County (North County), an area of approximately 54,000 acres comprised of residential, agricultural and native vegetation areas. MCWRA retained RMC to interact with the North Monterey County Ad Hoc Committee and to determine alternative solutions that would stop current and future groundwater overdraft, seawater intrusion, and water quality problems for the area. The work examined existing land and water use within the area, and refined and recommended alternatives for further consideration. The study provided a sound technical basis for defining water supply issues and identifying alternatives to

provide adequate water supply, and provided a basis for initiating detailed project studies. The work also developed an approach for the required engineering analyses, environmental review, public involvement, and evaluation of financing of identified options.

Regional Recycled Water Facility Plan

Water Resources Association of San Benito County

Water recycling is the keystone of San Benito County Water District's (SBCWD) and Water Resources Association's (WRA) water management strategy. The District's Groundwater Management Plan Update has identified a series of projects that will help to address overall water quality and quantity issues in the County. Water recycling provides the most effective avenue for urban and agricultural interests to work together in a mutually beneficial fashion. The goal of this planning effort is to develop a regional project that meets the needs and objectives of both the urban and agricultural stakeholders and is feasible from a financial, institutional, and regulatory perspective. RMC assisted the SBCWD in obtaining grant funding from the State Water Resources Control Board for development of a Facility Plan identifying a recommended alternative. The two-phase project included 1) a Feasibility Study evaluating the potential markets, economic viability and benefits of a recycled water and 2) a Facility Plan detailing the recommended alternative from the Feasibility Study.



Section 3
Approach and Scope of Work

"I was very impressed with how RMC has shown initiative, creativity in problem solving, ownership of the issues, and a commitment in providing value to the work product."

Samuel Laraño, P.E.
Manager, Special Projects

San Francisco Public Utilities Commission

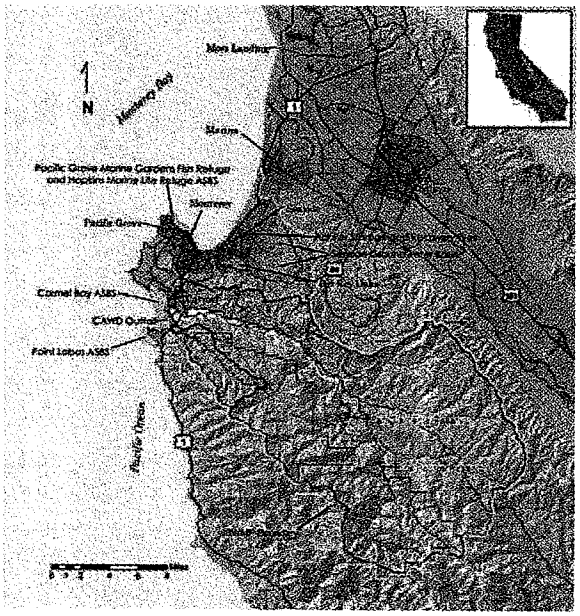
Monterey Peninsula Water Management District (District) and their planning partners are faced with the challenging task of completing and adopting an Integrated Regional Water Management Plan (IRWMP) for an area with diverse water management goals by December 2006. In doing so, the District will create the opportunity to gain access to millions of dollars in Proposition (Prop.) 50, Chapter 8 implementation grant funding.

To achieve its goals of obtaining State grant funds and integrating varied plans for surface and groundwater management, the District must create a final, adopted "functionally equivalent" IRWMP that details — in a single comprehensive document — how local, State, and Federal water management strategies will work together in the Monterey Peninsula, Carmel Bay and South Monterey Bay areas to improve regional water reliability, protection, and management.

After reviewing the Request for Proposal, and through discussions with District staff, RMC has developed an approach that addresses three key project issues:

- The IRWMP Must Integrate Projects From a Diverse Group of Stakeholders.
- The IRWMP Must be Adopted by Multiple Agencies by December 2006 in Order to Qualify for Prop. 50, Chapter 8 Grant Funding.
- District Priorities Must Dovetail with State and Federal Priorities in Order to Secure Maximum Grant Funding.

Using the optimum combination of management and communication strategies, RMC will provide an adopted Integrated Regional Water Management Plan by December 2006, thereby maximizing the District's ability to get Prop. 50, Chater 8 grant funding.



The IRWMP must integrate projects from a diverse group of stakeholders.

The IRWMP Must Integrate Projects from a Diverse Group of Stakeholders. The regional stakeholder group for the Monterey Peninsula, Carmel Bay, and South Monterey Bay Integrated Regional Water Management Plan contains a diverse set of entities including cities, water and wastewater agencies, and environmental groups. Each organization comes to the table with its own set of issues, priorities and projects. Additionally, several projects to be included in the IRWMP are under planning concurrent to the Plan preparation, and the status of these projects must be communicated and incorporated into the draft Plan in a timely manner to achieve the December 2006 adoption date.

A Proven Facilitator, Eileen Goodwin, will gain consensus among the stakeholders. RMC will use Eileen Goodwin of Apex Strategies to aid in gaining consensus among the Plan's stakeholders. Eileen has 24 years of leadership experience in building consensus on complex projects involving numerous parties. She facilitated a workshop for the District, providing leadership in a facilitated setting for communicating goals and objectives and reaching

consensus. Eileen worked with RMC in coordinating the regional water managers meetings related to urban water supply on the Monterey Peninsula.

Technology Expedites Information Sharing. As part of the IRWMP project, RMC will establish a secured project-specific website for sharing data and documents. The password-secured website will allow project team members and stakeholders to electronically post and/or retrieve information from a secured location, minimizing the volume of postal and e-mail generated and allowing for the timely sharing of large documents and files. Additionally, as a means of minimizing project costs yet allowing for real-time discussions and decision–making, RMC will lead remote meetings via conference calls and webcasts to streamline communications and promote the timely sharing of information, reducing the amount of time necessary for Plan review and ensuring timely completion and adoption of the IRWMP

> *"Consistent high quality deliverables and excellent strategies to meet program/ project goals...excellent working with other firms and multiple district departments."*
>
> *Eileen Fanelli*
> *Senior Engineering Planner*
>
> *East Bay Municipal Utility District*

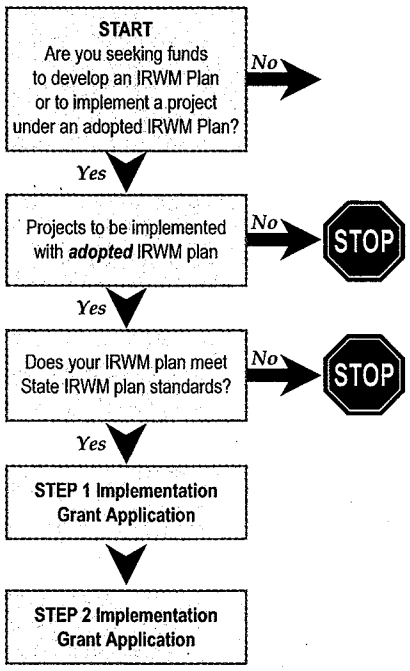
The IRWMP Must Be Adopted By Multiple Agencies by December 2006 in Order to Qualify for Prop. 50, Chapter 8 Grant Funding. As shown in the State's IRWM Grant Program Flowchart, an adopted IRWMP is required to apply for a Prop 50, Chapter. 8 Implementation Grant. Quite simply, the District and their stakeholders must have an adopted plan by the end of 2006 in order to qualify for a Prop. 50 Implementation Grant.

An Independent Schedule Manager assures timely project completion. Anticipating a tight schedule with multiple tasks occurring concurrently, RMC will staff an independent schedule manager, Ryan Alameda, whose sole task will be to track the project schedule, aid task managers in troubleshooting to prevent completion delays, interact with stakeholder designated points-of-contact for information collection, and act as a single conduit of schedule information for the project manager to streamline intra-team communications. Ryan successfully worked in a similar fashion for the Coyote Creek Watershed Program, helping the program manager develop and complete fast track projects within the program's first year and keeping this $294 million flood protection program on schedule.

Accelerated CEQA Compliance minimizes schedule conflicts. The State requires that an adopted IRWMP include the required CEQA documentation before a grant agreement can be executed. However, CEQA documentation can often take more than a year to complete. To meet the tight time schedule of this project, RMC will use the same accelerated CEQA compliance process that we have successfully implemented on other projects. In this process, State guidelines for implementation of CEQA are invoked to allow for consideration of environmental factors in the IRWM plan, but to defer completion of CEQA documentation (e.g., Environmental Impact Report, Negative Declaration) until the implementation stages of the projects.

District Priorities Must Dovetail With State and Federal Priorities In Order To Secure Maximum Grant Funding. In order to be successful in obtaining grant funding, the adopted IRWMP must be consistent with the State's IRWM standards and must dovetail with the State's priorities for the Prop. 50, Chapter 8 grant program. Reflecting the State's

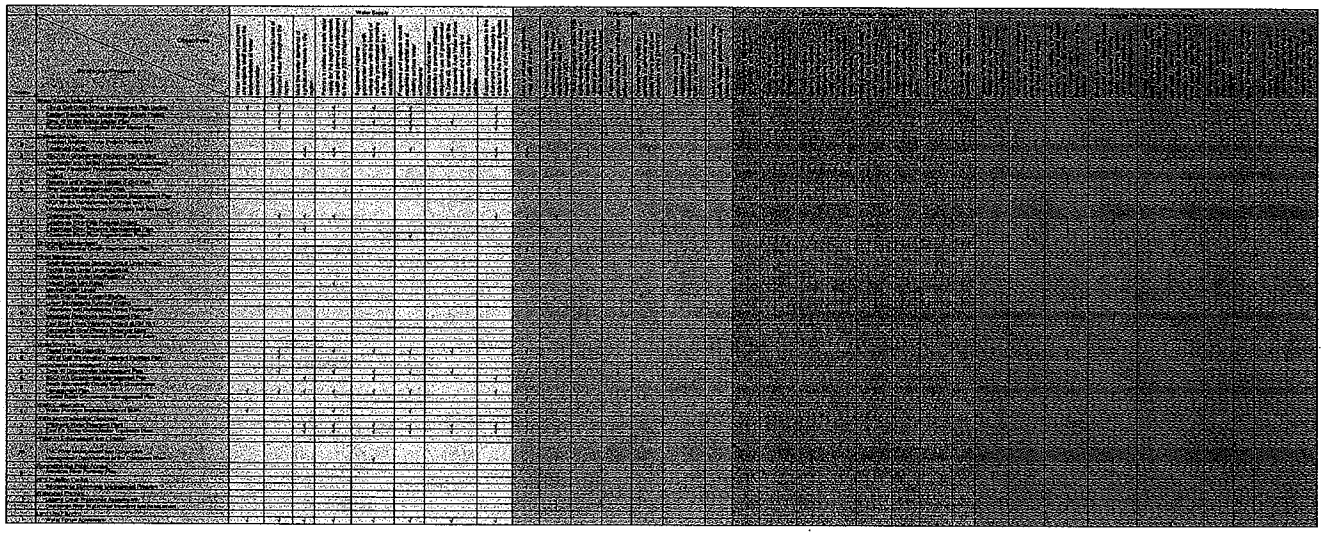
State IRWM Implementation Grant Process



desires for regional planning within the District's priorities will maximize the ability of the District to achieve implementation grant funding.

Integration matrix will align District projects to reflect Statewide goals to Maximize Benefits. RMC will ensure that the District's projects incorporate the State's goals and priorities through the use of an Integration Matrix. Application of this tool has proven successful in other RMC projects by plainly defining areas of overlap, identifying projects whose synergy better meets the State's goals, and succinctly illustrating how the District's projects aid the State in achieving their goals. The integration matrix used by RMC in their IRWMP for the Pajaro River Watershed Group clearly illustrated to both the State and the region's stakeholders why key projects were selected for funding in their Prop. 50, Chapter 8 application, leading to full grant funding and uncontested implementation of the selected projects.

RMC's project approach, as defined above, and scope of work will allow MPWMD and its partners to complete their IRWMP in a timely manner and to produce a document that will optimize the potential for receiving grant funding.



The integration matrix presents what Statewide Goals and Priorities are achieved by a project.

Scope of Work

The scope of work presented in the February 7, 2006 Request for Proposals (RFP) represents only a portion of the overall scope of work to be incorporated into the IRWMP. In order to address the RFP scope of work in a streamlined yet comprehensive manner to meet the required deadline, the required proposal components were grouped into six tasks based on component objective and deliverable. Each task will be managed by a task manager responsible for reporting directly to the independent schedule manager and the deputy project manager.

RMC understands that the IRWMP tasks to be completed may change during the course of the document preparation. RMC's approach to the scope of work described below is adaptable and can easily be adjusted to evolving conditions and circumstances (e.g., formation and implementation of the Seaside Basin Watermaster) in the region.

Task	IRWMP Task & Description
1	**Project Management & QA/QC**
2	**IRWM Plan - FED**
	1.0 Prepare Functionally Equivalent IRWMP
	1.1 Initial Review/editing/feedback for Sections 2.0 thru 14.0
	1.2 Prepare Executive Summary
	5.13.3 Categorical Plans
	6.0 Prioritization of projects within region
	7.0 Project Implementation
	8.0 Analysis of Impacts and Benefits
3	**Infrastructure & Ecosystems**
	2.4 Major Water Infrastructure
4	**Water Conservation**
	4.3.3 Evaluate Water Conservation Efforts
5	**Surface Water**
	4.4.1 Update Carmel River Management Plan
	4.7.3 Evaluate sandbar mgt options at Carmel River Lagoon
	5.5 Flood and Erosion
	5.5.4 Canyon del Rey Creek Drainage
6	**Groundwater**
	4.5.5 Seaside Groundwater Basin

Task 1 – Project Management and Coordination

Dave Richardson, RMC's project manager, will lead the project team. Dave will be assisted by Leslie Dumas, who will serve as the primary liaison for tasks that involve multiple parties, such as MPWMD staff and Region stakeholder interface, subtask coordinator communications, and technical issues. Additionally, Ryan Alameda will act as an independent schedule manager for the project, interfacing with Dave, Leslie, and all internal and external task leaders to ensure successful schedule completion.

RMC will employ the same approach that produced a successful FE IRWMP for the Salinas Valley.

Project management subtasks include project coordination, monitoring budget and progress, and meeting facilitation for both the kickoff meeting and subsequent IRWM Plan stakeholder meetings. Dave and Leslie will work closely with on-site project staff and MPWMD's project manager to ensure prompt and responsive coordination and communication.

Task 2 – IRWM Plan Functionally Equivalent Document

RMC will prepare a functionally equivalent document that will concisely present the culmination of efforts put forth during this project, as well as outside efforts, for use by regional stakeholders and the State. The document will be structured in an easy-to-read format that can be readily updated to incorporate future planning endeavors. The Functionally Equivalent Integrated Regional Water Management Plan (FE IRWMP) will document the Region's goals and objectives, priorities, and potential projects. This document will reflect both the goals and objectives of the District and their stakeholders, but also those of the State as identified in their Prop. 50, Chapter 8 program. Projects documented in the IRWMP will include those investigated as part of this proposal (and discussed below), but also projects being conducted concurrent to the FE IRWMP preparation.

RMC will review Sections 2.0 through 14.0 of the draft IRWMP currently completed for conformation with State IRWMP standards and provide feedback to the District. In preparation of the Draft FE IRWMP, RMC will:

- Identify existing plans and strategies that may be suitable for inclusion in the FE IRWMP, including a list and summaries of these plans.
- Prepare an executive summary as part of the Draft FE IRWMP.
- Review and compare the goals, objectives, and strategies as discussed in documents to be included in the FE IRWMP.
- Review the current prioritization process for ranking projects and provide recommendations for modifications/additions to the program.
- Complete a feasibility matrix evaluating the cost effectiveness, constraints, impacts, and environmental benefits of projects to be included in the FE IRWMP.
- Highlight long-term problems and issues within the Region.
- Develop a standard project proposal/information sheet to be used to collect project information.
- Establish a standardized format and requirements for documenting the agency(ies) responsible for a project, the project's performance goals and performance measures, and its monitoring schedule to determine if the project is meeting its performance measures.
- Maintain a database of all projects to be included in the FE IRWMP, including, but not limited to, all information previously described.
- Conduct an impact analysis of the FE IRWMP elements and strategies for inclusion in the Draft document.
- Provide information and insight into funding mechanisms and options for project implementation.

The success of this project depends on stakeholder participation and buy-in. As part of the FE IRWMP preparation process, RMC will hold a two onsite stakeholder workshops to gain consensus on the Region's IRWMP goals and objectives and project prioritization process, and to present the results of the prioritization, including a recommended list of prioritized projects (with project summaries, budget, and schedule) and recommendations for long-term stakeholder coordination. Additional meetings may be held remotely via conference calls and web conferencing. Documents to be included in the FE IRWMP will be scanned and provided to the District in .pdf form suitable to uploading to the District's website or to a project FTP site or other password-protected server.

Task 3 – Infrastructure and Ecosystems

RMC will conduct a survey of stakeholders in the Region to collect data on major water infrastructure, including capacity, condition, life expectancy, maintenance requirements, and upgrade and/or replacement costs. The survey results will be compiled into an electronic database to be submitted to the District. Additionally, copies of infrastructure as-built plans will be collected (in electronic format where possible) in order to provide a design database to accompany the information database previously mentioned. Finally, a technical memorandum will accompany the database to document its format and present an estimate of the total quantity of water being moved via the Region's infrastructure.

The results of Task 3 will be combined with other current activities for presentation in the IRWMP. Examples of these on-going components include the Pacific Grove and Carmel Bay ASBS Alternatives Analysis and the feasibility study to eliminate stormwater discharges to the Pacific Grove and Carmel Bay ASBS.

Task 4 – Water Conservation

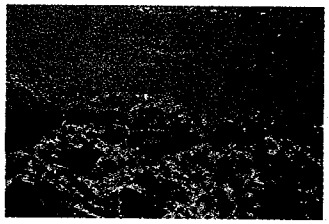
RMC will assist the District in evaluating its water conservation efforts and provide a document detailing the conclusions and recommendations for possible future water conservation programs. Specifically, under this task, RMC will conduct a review of the existing water conservation and rebate programs in order to document the effectiveness of these programs in reducing water demands. Using a cost/benefit ratio and integrating other variables to be considered in implementing these programs, RMC will prioritize potential retrofit programs and develop a technical memorandum outlining the District's current water conservation program; proposing modifications and/or additions to the District's existing water conservation program, including recommendations for implementation methods; and identifying potential problems that may be encountered during the implementation of any additional conservation components.

Task 5 –Surface Water

RMC, along with its subcontractor ENTRIX, will concurrently complete several subtasks under Task 5. These subtasks are:

Subtask 5.1: Update Carmel River Management Plan
Subtask 5.2: Evaluate barrier beach management options at the Carmel River lagoon
Subtask 5.3: Identify flood and erosion-prone areas
Subtask 5.4: Evaluate Canyon del Rey Creek Drainage

Under **Subtask 5.1**, the RMC team will review the original Carmel River Management Plan, as well as more recent documents such as the Carmel River Watershed Assessment and Action Plan, and prepare a technical memorandum documenting the historical implementation of the Carmel River Plan and recent restoration and mitigation activities that have occurred along the river, and provide an evaluation of the effectiveness of the plan in meeting its original goals and objectives. The memorandum will also describe physical and biological constraints to restoration activities that have been attempted, and provide a list of recommended restoration techniques for future activities on the Carmel River. Finally, the Carmel River Management Plan will be revised to incorporate the updated Regional General Permit for the Carmel River as well as new information on threatened/endangered species in the corridor, watershed management and BMPs for restoration activities within the corridor.



RMC will optimize the use of Tom Taylor's extensive knowledge of the Carmel River.

Under **Subtask 5.2**, the RMC team will conduct a topographic and bathymetric survey of the Carmel River Lagoon in order to develop a rating curve, relating Lagoon storage volume with water elevation. The resulting rating curve will be include in a report to the District summarizing a review of the Lagoon's seasonal hydrodynamics and describing factors controlling water surface elevation.

Under **Subtask 5.3**, RMC will use existing flood insurance maps, land use planning maps, and aerial photographs to identify areas within the Region that may be used to convey or detain floodwaters or through restoration, may add flood- or erosion-control benefits and/or enhance wetland and riparian habitats. These potential project areas, as identified by the document review, will be presented to the District in a GIS-compatible map and may be incorporated into the IRWM Plan project descriptions.

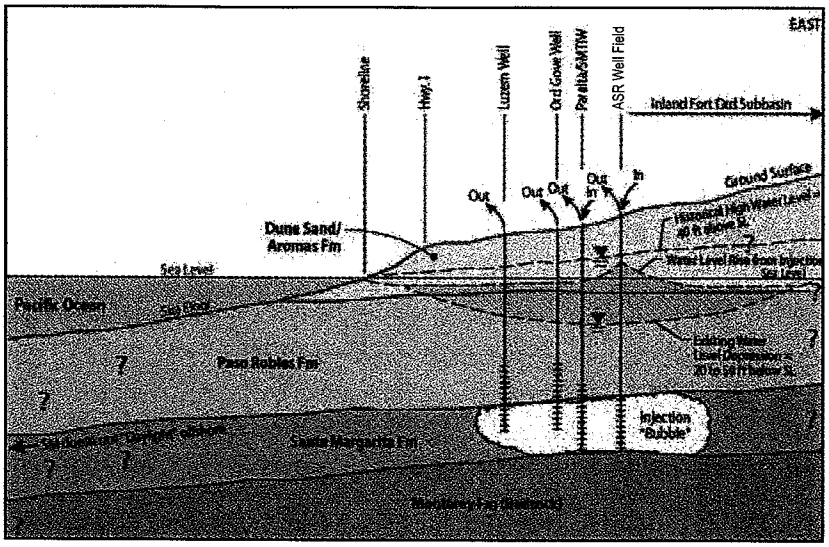
Finally, under **Subtask 5.4**, RMC will conduct a survey of Canyon del Rey Creek to identify areas of constriction, erosion and/or other impediments to flow. A technical memorandum will be prepared summarizing these possible problem locations along with recommendations for drainage improvements and methods for bank stabilization and silt

control. The memorandum will also contain a GIS-compatible map summary of these 'problem' locations.

As with Tasks 3 and 6, the results of Task 5 will be combined with other related projects, such as the Carmel River watershed Wetlands enhancement and creation component, for discussion in the FE IRWMP.

Task 6 – Groundwater

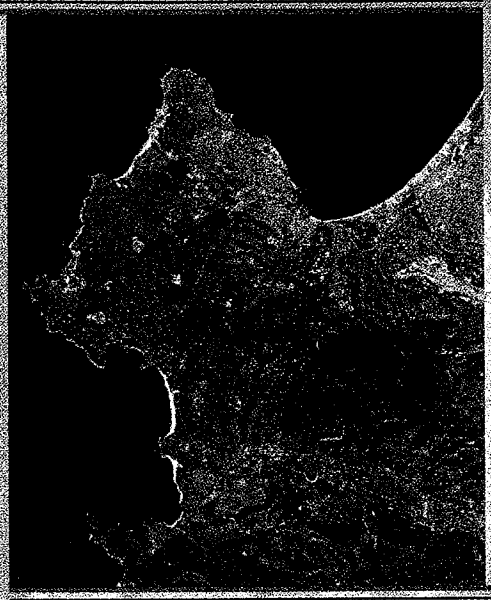
As required by the District, RMC will review the Principles and Procedures as presented in the Seaside Basin Adjudication Tentative Decision, and will prepare a Seaside Basin Monitoring and Management Plan (or assist the designated Watermaster in doing so). This document will be consistent with criteria established in the Tentative Decision, and will meld work conducted to date on the Seaside Groundwater Basin Management Plan, as appropriate. The Plan will also be coordinated other Seaside Basin components currently being conducted, including the Seaside aquifer storage and recovery project.



The Seaside Basin is a critical element to the water resource managment picture for the Monterey Peninsula.

Section 4
Schedule

Task	Description	2006											
		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	**Project Management & QA/QC**												
2	**IRMW Plan Functionally Equivalent Document**												
	1.0 Prepare Functionally Equivalent IRWMP												
	1.1 Initial Review/editing/feedback for Sections 2.0 thru 14.0												
	1.2 Prepare Executive Summary												
	5.13.3 Categorical Plans												
	6.0 Prioritization of projects within region												
	7.0 Project Implementation												
	7.2 Describe Performance Measures												
	8.0 Analysis of Impacts and Benefits												
3	**Infrastructure and Ecosystems**												
	2.4 Major Water Infrastructure												
4	**Water Conservation**												
	4.3.3 Evaluate Water Conservation Efforts												
5	**Surface Water**												
	4.4.1 Update Carmel River Management Plan												
	4.7.3 Evaluate sandbar mgt options at Carmel River Lagoon												
	5.5 Flood and Erosion-prone Areas												
	5.5.4 Canyon del Rey Creek Drainage												
6	**Groundwater**												
	4.5.5 Seaside Groundwater Basin												
	Circulate Administrative Draft of IRWMP												
	Comments on Draft due												
	Complete Final Draft of IRWMP												
	Review of IRWMP for CEQA Compliance												
	Formal Adoption of IRWMP												

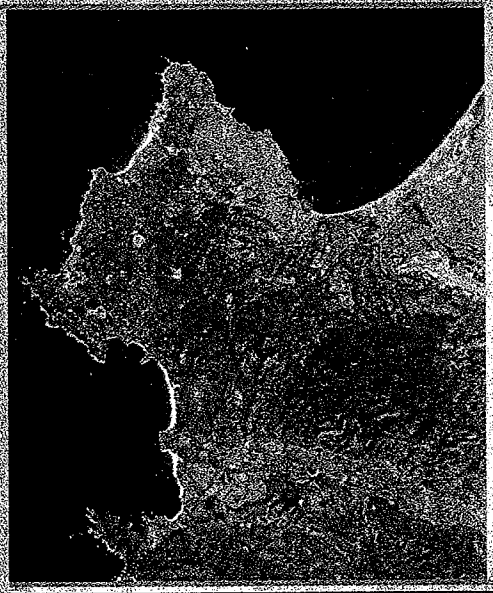


Section 5

Estimated Costs

RMC Estimated Costs
Functionally Equivalent Integrated Regional Water Management Plan for
Monterey Peninsula, Carmel Bay and South Monterey Bay

Task	Description	Principal II (@$195/hr)		PM II (@$185/hr)		PE III (@$155/hr)		Graphic (@$115/hr)		Accting (@$115/hr)		Admin (@$110/hr)		Subs	SUBTOTAL	TOTAL
		Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost	Hours	Cost			
1	**Project Management & QA/QC**	8	$1,560	40	$7,400		$0		$0	8	$920		$0		$9,880	**$9,880**
2	**IRMW Plan Functionally Equivalent Document**															
	1.0 Prepare Functionally Equivalent IRWMP	6	$1,170	8	$1,480	16	$2,480	4	$460		$0		$0		$5,590	
	1.1 Initial Review/editing/feedback for Sections 2.0 thru 14.0	2	$390	6	$1,110	20	$3,100		$0		$0		$0		$4,600	
	1.2 Prepare Executive Summary	1	$195	4	$740	12	$1,860	2	$230		$0		$0		$3,025	
	5.13.3 Categorical Plans		$0	1	$185	30	$4,650		$0		$0	10	$1,100		$5,935	
	6.0 Prioritization of projects within region	12	$2,340	30	$5,550	40	$6,200	2	$230		$0		$0		$14,320	
	7.0 Project Implementation	12	$2,340	30	$5,550	40	$6,200	4	$460		$0		$0		$14,550	
	7.2 Describe Performance Measures	3	$585	16	$2,960		$0		$0		$0		$0		$3,545	
	8.0 Analysis of Impacts and Benefits	1	$195	10	$1,850	40	$6,200		$0		$0		$0		$8,245	**$59,810**
3	**Infrastructure and Ecosystems**															
	2.4 Major Water Infrastructure	1	$195	1	$185	12	$1,860		$0		$0	10	$1,100		$3,340	**$3,340**
4	**Water Conservation**															
	4.3.3 Evaluate Water Conservation Efforts	2	$390	61	$11,285	16	$2,480		$0		$0		$0		$14,155	**$14,155**
5	**Surface Water**															
	4.4.1 Update Carmel River Management Plan	2	$390	14	$2,590	40	$6,200		$0		$0		$0		$9,180	
	4.7.3 Evaluate sandbar mgt options at Carmel River Lagoon	4	$780	40	$7,400	40	$6,200		$0		$0		$0	$12,000	$26,380	
	5.5 Flood and Erosion-prone Areas		$0	4	$740	20	$3,100	4	$460		$0		$0		$4,300	
	5.5.4 Canyon del Rey Creek Drainage		$0	2	$370	20	$3,100	2	$230		$0		$0		$3,700	**$43,560**
6	**Groundwater**															
	4.5.5 Seaside Groundwater Basin	12	$2,340	60	$11,100		$0	20	$2,300		$0		$0		$15,740	**$15,740**
TOTAL		66	$12,870	327	$60,495	346	$53,630	38	$4,370	8	$920	20	$2,200	$12,000	$146,485	**$146,485**



Appendix

Dave Richardson, P.E.

Title
Principal

Education
M.B.A., Stanford Graduate School of Business, 1985
M.S., Civil Engineering, Stanford University, 1981
B.S., Civil Engineering, Stanford University, 1980

Registration
Registered California Civil Engineer, 1983

Experience
25 years

Affiliations
Dave is on the Board of Directors of the Watereuse Research Foundation, a worldwide research organization pioneering research for recycled water and desalination applications.

Summary

Dave Richardson specializes in water supply, recycled water, wastewater and power development projects. Dave has served as a technical advisor and mentor to project teams providing a broad range of engineering services, including master planning, integrated water management planning, project funding development, environmental documentation, decision process support, vulnerability/reliability analysis, design, and construction management services. In this role, he provides technical guidance and oversight to ensure that RMC's projects are technically sound and that client needs are met.

Dave's primary experience is in the planning, permitting, and environmental documentation phase of projects. He has worked on over 30 California projects involving regulatory issues, decision processes, wastewater planning, alternatives analysis, and policy assessment.

Relevant Experience

Regional Wastewater System and Recycled Water System Evaluation, South Placer Wastewater Authority

Project Manager. Managing evaluation of the wastewater collection, treatment, recycling and disposal system which serves the South Placer Region. Activities include evaluating existing and proposed land uses, determining unit flow factors to evaluate capacity requirements for both the trunk sewers and wastewater treatment plants, evaluating the existing trunk sewer system and modeling an expanded trunk sewer system, and determining the wastewater treatment plant expansion requirements. The master plan update will also evaluate recycled water opportunities and wastewater disposal strategies for the service area, and develop a strategy for complying with the California Environmental Quality Act (CEQA).

Funding Support for Amador Water Agency

Project Manager. Led the application for grant funds under Proposition 50, Chapter 7 Water Use Efficiency for the Amador Water Agency's Pipeline Project to replace a leaking canal. Substantial raw water savings were documented and project ranked 3rd of 18 funding requests among "agricultural implementation projects". Full funding will be determined after administrative funding process is complete. Also led preparation of Planning Grant Application on behalf of Amador/Mokelumne Integrated Regional Water Management Group, under Proposition 50, Chapter 8. Project would develop an Integrated Regional Water Management Plan for the Upper Mokelumne River Watershed and the lower Mokelumne River downstream from Camanche Reservoir to Lodi. Funding request is pending with State Department of Water Resources.

Integrated Water Management Planning for the Bay Area Region, Bay Area Water Agencies Coalition
Principal. BAWAC, comprising major water agencies and associations in the Bay Area (ACWD, CCWD, EBMUD, SFPUC, SCVWD, Zone 7 Water Agency, and the newly formed Bay Area Water Supply and Conservation Association), have joined with North Bay Water Agencies to develop the water supply and quality section of an Integrated Water Management Plan. RMC is leading the development of the Plan's water and water quality sections. The Plan will ultimately be used to demonstrate the degree to which Bay Area water planning is comprehensive and integrates with other water management strategies, including water recycling, watershed management, flood control and stormwater management, and stream/habitat stewardship.

East Contra Costa Integrated Regional Water Management Plan, East County Water Management Association
Principal. RMC managed the development of a functionally equivalent Integrated Regional Water Management Plan and implementation grant funding application materials for the East County Water Management Association, which includes 11 water agencies, wastewater agencies, flood control districts and watershed groups within the eastern portion of Contra Costa County. This document is being developed in accordance with Proposition 50, Chapter 8 guidelines in an effort to secure funding for water management projects within the region.

Water Management Strategy, Bay Area Water Agencies Coalition (BAWAC)
Project Manager. Managed water management strategy communication documents (water conservation and other "soft path" strategies, including desalination of seawater and Bay water) for the Bay Area Water Agencies Coalition (BAWAC). The purpose of this two-part project was to (1) provide an overview of historic and active water conservation efforts undertaking by the BAWAC members, document the progress made to date in terms of per capita water use trends, estimates of conservation-related water savings, and comparisons with other metropolitan service areas (MSAs); and outline future activities to increase water conservation in the Bay Area and (2) accomplish the same for water recycling, desalination, groundwater conjunctive use and banking, water transfers, and advanced treatment.

Urban Water Management Plan, City of Lodi
Principal. Updated the City of Lodi' Urban Water Management Plan. RMC developed an aggressive schedule for completing the UWMP before the end of the year by conducting data collection and draft report writing in parallel, and by submitting an early draft to DWR staff for a "completeness review."

Freeport Regional Water Project, Freeport Regional Water Authority
Principal. The Freeport Regional Water Authority is a Joint Powers Authority comprised of the Sacramento County Water Agency, EBMUD, and the City of Sacramento. RMC is currently working as part of the program management team. This $590-million regional water

supply program will provide up to 85 mgd of surface water to be used in conjunction with groundwater to help meet future water supply needs in the central Sacramento County area. It will also provide a 100 mgd dry year water supply to EBMUD customers to supplement aggressive water conservation and recycling programs and reduce the potential for severe water rationing and associated economic losses and hardships during drought periods.

Water Supply Pipeline Design Project, Pajaro Valley Water Management Agency
Project Director. Directed an environmental and design services project that included planning, design, and environmental documentation for a water importation pipeline and irrigation distribution system from the Bureau of Reclamation's San Felipe Project to the Watsonville area.

Northern San Joaquin Valley Recycled Water Project, City of Modesto
Task Leader. Responsible for working with the City of Modesto in coordinating the project with neighboring cities and communities to explore the possibility of a regional reclamation plant to reduce agency sewer treatment and disposal costs, simplify permitting, and optimize the use of recycled water. As a result of the successful stakeholder outreach effort led by RMC, this project has identified feasible methods of regional recycling and is being carried forward by the client for implementation.

Geysers Recharge Project, City of Santa Rosa
Project Director. Directed the design and construction of the Geysers Recharge Project for the City of Santa Rosa's Utilities Department and the Subregional Water Reclamation System. This project is a 40-mile recycled water pipeline ranging in size from 48 inches to 30 inches in diameter to convey Santa Rosa advanced treated wastewater to the Geysers for steamfield injection.

Recycled Water Supply Master Plan, Alameda County Water District and Union Sanitary District
Project Manager. Managed the development of water reclamation projects in the joint service area of the two districts. The project included a market assessment of potential demand for and willingness to use reclaimed water; development of an implementation framework; an engineering evaluation of size, locations, and costs of pipeline, treatment and storage facilities; and a financial analysis to identify potential funding sources. Potential uses for wastewater include landscape irrigation and use in industrial processes. The master plan will contribute to more effective facility planning.

Review of Alternatives Analysis, Marina Coast Water District Regional Urban Water Augmentation Project
Cost Estimator. Review of the Alternatives Analysis completed by another consultant for the Marina Coast Water District Regional Urban Water Augmentation Project. The project involved the construction of a distribution system to supply tertiary treated recycled water for use

within the Marina Coast Water District (MCWD) service area. RMC's review focused on how the recycled water alternatives were evaluated as compared to the other alternatives. The three recycled water projects included 1500 AFY desalination, 2400 AFY desalination with ASR storage, and 2400 AFY desalination with Armstrong Ranch storage. Also evaluated the preliminary construction cost estimate provided by the consultant as compared to estimates provided in a 1996 report and to identified areas where the costs differed significantly.

Comprehensive Master Plan for the Subregional Water Reclamation System, City of Santa Rosa

Project Director. Under Dave's direction, a team of engineers, scientists, and several universities and other consulting firms prepared a comprehensive master plan for the Santa Rosa Subregional Water Reclamation System. The master plan addressed the sources of wastewater and its constituents of concern, the required treatment for the wastewater, the maximum feasible reuse of the reclaimed wastewater, and the disposal of the unused remainder. Reuse and disposal options considered include landscape and agricultural irrigation, wetland restoration and creation, streamflow enhancement and discharge, estuarine enhancement, and bay and ocean discharge.

Organizational Study and Benchmarking Review, San Francisco Bay Area,

Project Manager. Project manager and lead consultant for an organizational study and benchmarking review conducted for a confidential client in the San Francisco Bay Area. The project consisted of evaluating the organizational, operational, and engineering impacts of the consolidation of a water and wastewater utility. The consolidation study, conducted by another consultant, included a benchmarking analysis to assess how these utilities, and the consolidated utility, would compare to others in the state relative to provision of services and the costs of service. Dave managed a parallel study and assisted the client with input to the water and wastewater utilities to ensure an objective analysis of the costs and benefits. The scope of the study included an organizational structure and staffing analysis, utility benchmarking, engineering and maintenance contracting/consolidation, and political and customer service implications.

Leslie Dumas, P.E.

Title

Project Manager

Education

Multiple Subject - Clear Teaching Credential, St. Mary's College of Education, 1999

M.S., Civil Engineering, University of California at Berkeley (magna cum laude), 1986

B.S., Civil Engineering, Virginia Polytechnic Institute and State University (cum laude), 1985

Registration

Professional Engineer, California, 43897

Environmental Assessor, California, REA-04515

Certified Groundwater Professional, 490

Experience

19 years

Affiliations

Contra Costa Watershed Forum, Member of Education Subcommittee

City of Lafayette Creek Committee, Former Appointee

Groundwater Resources Association of California, Former Vice-President and Treasurer

American Society of Civil Engineers, Member

National Groundwater Association, Association of Groundwater Scientists and Engineers, Member

Summary

Leslie Dumas is a hydrologist and project manager with experience providing hydrogeologic, hydrologic, environmental and scientific consultation for projects throughout the United States. She has managed multi-disciplinary teams on a wide variety of projects, including water resources planning, groundwater investigation, modeling, and resource planning, environmental permitting, stormwater runoff planning, and the investigation and clean-up of hazardous waste sites. Leslie has conducted groundwater flow and transport modeling as well as hydrologic routing models. She has also prepared and/or reviewed planning and environmental documentation, including CEQA Initial Studies and Environmental Impact Reports, Urban Water Management Plans, Groundwater Management Plans, and Stormwater Pollution Prevention Plans for various civil projects

Relevant Experience

Integrated Regional Water Management Plan, Amador Water Agency

Project Engineer: Worked with broad group of stakeholders (including water agencies, water district, county, irrigation district, and several local cities) in preparing an Integrated Regional Water Management Plan (IRWMP) for Amador County and the Mokelumne and Calaveras River watersheds. Prepared and developed consensus for IRWMP goals and objectives and project prioritization process and developed methodology for collection and management of project data.

Urban Water Management Plan, City of Modesto and Modesto Irrigation District

Project Manager: Led project team in preparing the 2005 Urban Water Management Plan for the City of Modesto and Modesto Irrigation District.

Development of Regulatory Protocol for Incidental Environment Reuse of Title 22 Recycled Water, East Bay Municipal Utility District and WateReuse Foundation

Project Manager: Led research project to install and monitoring a pilot package membrane bioreactor (MBR) wastewater treatment plant at EBMUD's Pardee Administration Center. Using data collected both before and during the pilot study, developed a framework for decision making to streamline permitting of packaged MBR plants. Worked with an extensive Project Advisory Committee and Technical Advisory Committee that included members from both State and Federal regulatory agencies as well as industry leaders in recycled water use.

Initial Study, Monterey Regional Water Pollution Control Agency
Project Manager: Prepared draft Initial Study for modifications to the Salinas Valley Reclamation Plant for expanded reclaimed water production.

Initial Study, City of Lancaster
Team Member: Prepared sections of the draft Initial Study for the City of Lancaster for installation of a reclaimed water pipeline.

Phase II East County Water Supply Management Study
Task Manager: Evaluated potential for groundwater supplies and conjunctive use in eastern Contra Costa County. Prepared appropriate sections for study report.

East Bay Plain Groundwater Study, East Bay Municipal Utility District
Civil Engineer. Supported project team in the evaluation of the East Bay Plain portion of the San Francisco Bay coastal margin for potential aquifer storage and recovery. Conducted document review and analysis to support aquifer storage evaluation.

Conceptual Stormwater Pollution Prevention Plans, Caltrans
Task Manager. Prepared four Conceptual Stormwater Pollution Prevention Plans (CSWPPP) for the seismic retrofit of the Richmond-San Rafael Bridge. Coordinated CSWPPP and proposed water quality mitigation measures with Caltrans. Served as lead consultant in the development of guidelines for mitigation water quality impacts from the seismic retrofit of five of the Bay Area toll bridges.

Guidance Document on Expedited Cleanup of Former Manufactured Gas Plant Sites, U.S. Environmental Protection Agency
Project Manager: Developed a program to expedite the investigation and cleanup of former manufactured gas plant sites for local utility. Used this program to lead a multi-site, multi-agency team of consultants and agencies in preparing a guidance document for the U.S. Environmental Protection Agency on expediting the cleanup of former manufactured gas plant sites in the United States.

Deck Drainage Design for Richmond-San Rafael Bridge, Caltrans
Task Manager. Managed deck drainage design for new concrete trestle structure of the Richmond-San Rafael Bridge. This section is being replaced as part of the large Bay Area Toll Bridge Seismic Retrofit Program. Design challenges included minimal longitudinal and cross-slopes, the need to use standard Caltrans structure designs, multiple rotations in deck slope, and no or minimal shoulders.

Stormwater NPDES Compliance, Local Public University
Litigation Support. Provided environmental litigation support to a local public university for a case involving Stormwater NPDES compliance. Reviewed permits and existing SWPPP documents, revised and updated SWPPPs for several of the university's facilities, and provided expert opinion documents in support of the university's case.

Environmental Support, City of South San Francisco and Caltrans
Civil Engineer. Provided on-going environmental support to the City of South San Francisco and Caltrans for the Oyster Point, Bayshore Boulevard Realignment and Southbound U.S. 101 Hook Ramps Projects. Support includes soil characterization and classification, hazardous materials disposal classification, and permit compliance.

Remedial Investigations/Feasibility Studies, Manufactured Gas Sites
Project Manager. Managed remedial investigations/feasibility studies (RI/FSs) at three former manufactured gas plant sites in Chico, Willows, and Marysville, California. Work included extensive negotiations with the regulatory agencies, development of innovative methods to streamline the RI/FS process, and development of the field investigations scopes to be conducted at the three sites. One streamlined work plan and RI report was prepared for all three sites. The FS was prepared using a high performance team format in conjunction with two state regulatory agencies. Key aspects of the streamlined FS included management of uncertainty, reaching agreement on issues by consensus, using decision analysis in the selection of the preferred remedial alternative(s), and including input on construction management of remediation early in the FS process.

Pumping Tests, Northern California Superfund Site
Civil Engineer. Coordinated and analyzed multiple pumping tests for a Superfund site. Evaluated soil and water quality test results for the same site. Compiled hydrologic, meteorologic, and soil data on the region, and estimated 100-year and Probable Maximum Precipitation floodplains for streams near the site. Was significantly involved in the application of a three-dimensional, finite-difference study for the site. Inputs into the model included estimation of stream flows, and evapotranspiration and infiltration resulting from precipitation and irrigation in the modeled area.

Environmental Engineering (E2) Academy, San Ramon Valley High School
Program Coordinator. Lead team of teachers, administrators and counselors in the development of the E2 Academy at San Ramon Valley High School. Responsibilities included preparing proposal for and managing a $262,000 Specialized Secondary Program grant from the California Department of Education, writing and managing grants worth over $20,000 during a five-year period, developing curriculum for two new science courses, and coordinating the integration of curriculum and staff development for the E2 Academy team of teachers and administrators.

Lyndel W. Melton, P.E.

Title
Principal

Education
M.S., Environmental Engineering, Stanford University
B.S., Civil Engineering, University of the Pacific

Registration
Professional Civil Engineer, California, #27169, 1976

Experience
30 years

Affiliations
American Academy of Environmental Engineers
American Public Works Association
American Society of Civil Engineers
American Water Works Association
Water Environment Federation

Summary

Lyndel Melton specializes in civil, environmental and water resources engineering involving the planning and design of water resource management projects. These projects include water supply, flood protection, water and wastewater treatment, and recycled water facilities. His career has been focused primarily in California, with extensive experience in planning, permitting, and implementation of municipal projects. Lyndel has significant experience managing institutional interface among regional entities.

Relevant Experience

Hybrid Water Supply Project, Marina Coast Water District

Principal-in-Charge. Overseeing preliminary design and program management services to provide water supply for the redevelopment of the former Fort Ord military installation which is being converted to civilian use. The Marina Coast Water District was contracted by Fort Ord Reuse Authority to meet the potable and non-potable water needs for the 45-square-mile, 28,000-acre-facility. Based on projected water needs and to maximize recycled water use, the project consists of two components: 1,500 AFY of recycled water distribution infrastructure, and a 1,500 AFY desalinated water facility.

Contingency Water Supply Program (Plan B), California Public Utilities Commission

Engineering Project Manager. Managed the engineering development associated with Plan B as a part of the California Public Utility Commission's responsibility under AB 1182 (Keeley). This project identified an alternative to the proposed Carmel River dam and reservoir project. The Plan B project is comprised of several water supply components, including desalination, aquifer storage and recovery of excess Carmel River winter flow in the Seaside basin aquifer, and recycled water usage for irrigation.

Salinas Valley Water Project and Basin Management Plan, Monterey County Water Resources Agency

Project Manager. The Salinas Valley Water Project (SVWP) addresses the water supply imbalance in the greater Salinas Valley. The project includes modifications of the spillway at Nacimiento Dam, a new diversion facility in the Salinas River, and reoperation of the reservoir/river system. In addition, the plan addresses future needs of the Salinas Valley, including increased levels of water conservation and identification of additional urban water needs. Lyndel's work has included assistance in two water rights processes, support and coordination of an EIR/EIS preparation, Section 7 consultation with NOAA fisheries, and other permit processes. Lyndel was also involved in the public process that resulted in wide public support for the project.

North Monterey County Water Supply Project, Monterey County Water Resources Agency
Project Manager. Managed initiation of scoping activities for the North Monterey County Water Supply Project. His primary role in this project was to facilitate monthly meetings of the North Monterey County Ad Hoc Committee. The purpose of the discussions was to allow the committee to reach agreement on a definition of the North County water supply problem, select a series of alternative projects that could address the defined problem, and define an approach to evaluating the identified alternatives and reaching agreement on a recommended project. This project is on hold until an additional funding source is identified.

Revised Basin Management Plan, Pajaro Valley Water Management Agency
Project Manager and Principal-in-Charge. The Revised Basin Management Plan addresses basin overdraft and resulting seawater intrusion problems caused by groundwater pumping in the valley, and recommends supply options to meet existing and future water supply needs. The plan recommendations include development of in-basin surface and recycled water supplies, importation of Central Valley Project (CVP) supplies, increased levels of water conservation, and both in-basin and out-of-basin water banking. Lyndel's work has involved two water rights processes, including obtaining a modification to the CVP Place of Use to include the Pajaro Valley. He developed strategies and coordinated three separate EIR documents, a federal EIS prepared under the Bureau of Reclamation, Section 7 consultation with NOAA Fisheries and USFWS, Corps 404 (including 404(b)(1) alternatives analysis) and 401 permit processes, and obtaining a California DFG Stream Alteration Agreement. The project includes extensive coordination with the California DWR and obtaining water agreements to provide an annual supply to the Environmental Water Account.

Lyndel was deeply involved in a public process that resulted in passage of Measure N, a ballot measure that provides the basis for implementation of the $156 million Revised Basin Management Plan project.

Proposition 218 Engineers Report, Salinas Valley Water Project, Monterey County Water Resources Agency
Project Manager. Managed preparation of a Proposition 218 Engineer's Report and provided support to the Ad Hoc Cost Allocation Committee for the project. The Cost Allocation Committee provided a definition for evaluation of water supply and flood protection benefits received from ongoing project operations and from the proposed projects. These benefit definitions were then used for the 218 process which resulted in an 85% voter approval.

Castroville Seawater Intrusion Project, Monterey County Water Resources Agency
Project Manager. The Castroville Seawater Intrusion Project is one of the largest reclamation/irrigation projects in California, and serves to reduce groundwater pumping to decrease seawater intrusion into the Salinas Basin groundwater aquifer. The project included preliminary and final design of 40 miles of recycled water distribution system to serve approximately 12,000

acres of prime agricultural land in the northern Salinas Valley. Lyndel was responsible for preparing the preliminary and final design documents and for obtaining necessary permits, including Corps 404, Coastal Development, and Regional Board permits.

2005 Urban Water Management Plan, City of Waterford
Principal-in-Charge. Waterford is in the process of annexing and planning for the development of approximately 1,460 acres of undeveloped land that will add an additional 15,000 people to its population. RMC managed the first Urban Water Management Plan for the newly formed City of Waterford Water Department. Tasks include conducting supply and demand analyses, assessing water quality, and developing a water shortage contingency plan and management measures in keeping with 2005 UWMP requirements.

2005 Urban Water Management Plan, City of Modesto
Project Manager. Managed preparation of Modesto's 2005 UWMP. In addition to meeting the requirements of the Urban Water Management Planning Act, the city desired a functional document that supports water supply assessments, water supply verification, and General Plan updates. Challenges facing the city include surface and groundwater quality; wastewater disposal capacity, treatment and infrastructure; regulatory requirements, and stakeholder issues.

2005 Urban Water Management Plan, City of Lodi
Principal-in-Charge. RMC is completing the City of Lodi's 2005 UWMP update. Water demands for the city are expected to more than double between 2005 and 2040, and the groundwater table has been dropping. The city desires a functional document to support the General Plan update, as well as future water management planning studies, including a reclaimed water master plan and an integrated water resource plan.

Groundwater Demineralization Project, Zone 7 Water Agency
Project Manager. Managed the implementation of the groundwater demineralization project which includes preliminary and final design of 10-mgd of reverse osmosis facilities to remove salt from extracted groundwater. The project includes significant institutional interface between regional interests to ensure the support necessary for project implementation.

Coyote Watershed Program, Santa Clara Valley Water District
Program Manager. The Coyote Watershed Program consists of over $200 million in flood protection projects on five separate waterways in eastern Santa Clara County. The Santa Clara Valley Water District is developing flood protection projects for the creeks within the Coyote Watershed, providing a wide range of benefits, from flood protection to stream enhancement to providing community recreational facilities. The program also included development of the Coyote Watershed Stream Stewardship Plan, a plan that guides development and management of areas that drain into the creeks within the watershed. Working with the watershed manager and the District's senior project manager, Lyndel was responsible for development of the overall program and served as program manager until 2002.

EILEEN GOODWIN

Principal
Apex Strategies
(831) 460-1530

EDUCATION

Certificate in Finance; University of California, Santa Cruz; 1998
Masters of Science, Political Communication; University of Chicago; 1982
Bachelor of Arts, Double Major With Honors; Claremont Men's College, 1981

AFFILIATIONS AND AWARDS

Peer Reviewer for Published Research, Mineta Transportation Institute San Jose State University, on-going
Member, California Transportation Foundation Board, 1998
Chair, Valley Transportation Authority Technical Advisory Committee, 1996
Chair, Capital Improvement Program Committee, Valley Transportation Authority, 1995
Member, Self-Help Counties Coalition, on-going
Grand Award, Metropolitan Transportation Commission, 1995
Excellence in Transportation, Caltrans, 1995
California Transportation Foundation, Outstanding Project, 1995
California Transportation Foundation, Special Award, 1991
Silver Anvil, Finalist, Public Relations Society of America, 1995
Woman of the Year, Women's Transportation Seminar, 1994
Outstanding Business Woman, American Business Women's Association, 1993
Award of Merit, Metropolitan Transportation Commission, 1991
Silver Winner-Excellence in Design, International Astrid Award, 1991

SUMMARY OF EXPERIENCE

Ms. Goodwin has over twenty-three years of leadership experience in building consensus and in completing complex projects involving numerous parties on time and within budget. As Executive Director of the Santa Clara County Traffic Authority, Ms. Goodwin successfully delivered the $1.2 billion Measure A Highway Improvement Program including building 18 miles of new Highway 85 and widening Highways 101 and 237.

Since completing the mission of the Traffic Authority, Ms. Goodwin has been Principal of Apex Strategies, counseling and assisting public agencies and private parties in favorably positioning their projects and programs with the community and the media. Strategic Plans, Expenditure Plans and community outreach programs for transportation, water and land use issues are her specialty. Ms. Goodwin is recognized state-wide and nationally as an expert and innovator in the field of community participation, strategic planning and sales tax programs. Her 24 years of professional experience include political campaign management, marketing, and organization and government management.

Tim Harrison, P.E.

Title
Project Engineer

Education
M.Eng., Civil and Environmental Engineering, Massachusetts Institute of Technology, 2001

S.B., Environmental Engineering and Sciences, Massachusetts Institute of Technology, 2000

Registration
Registered Professional Engineer, California, #C 65582, 2003

Experience
5 years

Summary

Tim Harrison is a registered Civil Engineer with project experience in grant applications, planning studies, conceptual design, engineering evaluations, final design, construction management, and operations support. Within these project types, Tim has completed supply and demand analyses, hydraulic modeling, project prioritization, CEQA work, public outreach and consensus building.

Tim is also skilled as a GIS analyst and manager, having supported numerous projects either directly or indirectly with spatial data products and analyses. He is able to convert CAD data to a format more compatible with commercial water, sewer, and stormwater hydraulics models. Once the data is available for use in the models, Tim continues to provide GIS support for model importing of the datasets. He also has experience digitizing segments of hardcopy data and georeferencing entire sheets. He has performed demand and land use analysis in both vector and raster formats. Tim is comfortable using datasets from multiple sources at a time having regularly used data from multiple federal, state, county, local, and personal sources. Finally, as the company GIS lead, he is also familiar with making GIS tools and products accessible to new users.

Relevant Experience

Urban Water Management Plan 2005, Amador Water Agency (AWA)

Project Manager. Responsible for completing AWA's 2005 UWMP on an accelerated schedule to allow the agency to be eligible for award of an IRWMP planning grant. Tim and his team collected and developed water supplies and demands through 2030 as well as information about wastewater and recycled water potential, and water shortage contingencies. Through coordination with DWR staff, RMC was able to address all of the State requirements and at the same time create a document the agency can use to document water management facts and plans for their service area.

Wet Weather Modeling, Livermore Amador Valley Water Management Agency

Lead Engineer. LAVWMA is a JPA whose member agencies are the cities of Livermore and Pleasanton and Dublin San Ramon Services District. LAVWMA had previously developed a wet weather model for their collection and conveyance system but had not been able to use it. The JPA member agencies were interested in how the conveyance system would handle alternate growth and use scenarios. Tim was able to study the model, outline its assumptions, and identify the steps for its use. Once these preliminary efforts were completed, multiple scenarios were developed to answer LAVWMA's questions about growth and participation in the LAVWMA system.

Proposition 50 Chapter 8 Planning Grant Application, Amador Water Agency

Lead Engineer. Amador Water Agency was interested in taking part in the Integrated Regional Water Management Plan (IRWMP) program sponsored by the DWR and SWRCB. Tim authored and submitted the grant application on behalf of AWA. The application included the definition of the IRWMP region, documentation of existing conditions within the region, and development of the framework of the IRWMP. The application scored well and AWA will receive the $145,500 that was requested in the grant application.

Intake Position Analysis, Freeport Regional Water Authority

Project Engineer. Freeport Regional Water Authority is constructing an intake pump station on the Sacramento River to provide water to help meet future water needs in SCWA service area and reduce the need for severe water rationing in the EBMUD service area. To respond to public inquiries about placement of the intake facility, RMC, as part of the FRWA team, analyzed multiple locations of the facility. Tim was the lead author of the study that considered multiple impacts including flooding, navigation, water quality, sedimentation, erosion, and constructability. The successful analysis allowed FRWA member agencies and the City and public of Sacramento to come to consensus on a technically feasible solution that met applicable regulations and still addressed the public's concerns and requests.

Pajaro River Watershed Study Phase 4, Pajaro River Watershed Flood Prevention Authority

Project Engineer/Deputy Project Manager. Phase 4 of the study consisted of four parts: addressing public comments on the IS/ND of the Soap Lake Floodplain Preservation Project; an assessment of current flood forecasting abilities, development of tools to assist with flood forecasting, and recommendations to improve flood forecasting; sediment modeling for the Pajaro River and San Benito River; and a fisheries study of a lake within the Soap Lake floodplain. Tim was the lead author of the implementation strategy for the Soap Lake Project. This report addressed several comments from the public and was included as an appendix in the IS/ND for the Project. Tim managed the development of four technical memoranda associated with the flood forecasting task. He was also responsible for coordination with and review of subconsultants' work on the sediment models and fisheries study.

Operations Support , Pajaro Valley Water Management Agency

Tim provided operations support for several months to PVWMA. While on-call in this roll, he recommended and implemented pipe column replacement with an alternate material to avoid aggressive corrosion and reduce costs. Tim provided inspection services for this effort as well as repair of a burst pipeline. Responsibilities also included SCADA use and interpretation and coordination of pump repair.

Pajaro River Watershed Study Phase 3, Pajaro River Watershed Flood Prevention Authority

Project Engineer/Deputy Project Manager. Phase 3 of the study consisted of orthoimagery generation, hydraulic modeling of a complex floodplain, and CEQA documentation of the preferred project coming out of the Phase 2 work. Tim coordinated with the aerial vendor to determine appropriate coverage areas, imagery resolution, and contour intervals that would be required for the modeling. Tim was the lead modeler for the floodplain mapping. The 9,000 acre floodplain included numerous railroad and road crossings and several significant confluences. A beta-version of HEC-GeoRAS was used to transfer topographic and surface information into HEC-RAS and also to generate the floodplains in a post-processing module. Tim assisted with the Initial Study/Negative Declaration for the Soap Lake Floodplain Preservation Project. The Soap Lake Project involves maintaining current land use to preserve the area as a natural detention basin.

Stream Management Master Plan (SMMP), Zone 7 Water Agency

Project Engineer. The SMMP will develop a program of recommended projects and policies to address not only flood control and channel maintenance issues, but also water supply, water quality, habitat/environment, and recreation issues as they related to the streams and arroyos in Zone 7's service area. Tim served as a project engineer for Phase 1 of the SMMP. He helped facilitate stakeholder workshops, participated in the development of multi-disciplinary projects, led GIS analysis activities for SMMP projects, and managed production of project description tables and schematics for the SMMP Interim Report.

Pajaro River Watershed Study Phase 2, Pajaro River Watershed Flood Prevention Authority

Project Engineer. Phase 2 of the study applied the knowledge gained and tools developed in Phase 1 of the study to developing a number of flood control projects for the downstream reaches of the Pajaro River. A whole watershed approach was utilized and both upstream (storage) and downstream (conveyance) flood control methods were considered and developed. Conceptual level cost estimates were developed for each individual projects. Those projects that did not provide protection against a 100-year flood were combined with other projects to increase the level of protection. All combinations of individual and grouped projects underwent a fatal flaw analysis to yield only those projects or project groups considered most feasible. Tim continued his rolls in the project as budget and schedule controller and lead author of the final report. He was also the lead author for the technical memoranda developed in this phase of work and involved in all aspects of the project conceptualization and development. Coordination with a parallel flood control project developed by the U.S. Army Corps of Engineers was a significant aspect of this work as well.

Regional Water Recycling Study, North Bay Watershed Association (NBWA)

Project Engineer. The study allows the 15 member agencies of the NBWA to coordinate their desire to use recycled water on a watershed level, rather than depend on political boundaries. Tim was responsible for the recycled water market assessment and identification of recycled water uses and their associated water quality requirements. This involved researching available literature, interviews, and some GIS analysis.

Pajaro River Watershed Study Phase 1, Pajaro River Watershed Flood Prevention Authority

Project Engineer. Phase 1 of the study is dedicated to determining the cause of flooding in the lower reaches of the Pajaro River through hydrologic and sediment modeling. As the task manager for land use and GIS, Tim gathered a great deal of information including land use, soil classifications, and other physical data to produce a functional GIS to coordinate data from agencies at the local, state, and federal level. He developed and implemented methods to simulate future, historical, and altered land uses. Tim was the budget and schedule controller for this phase of work and was also the technical editor for all data and reports generated in the study. In addition, he helped to develop the quality assurance project plan and was the primary author of the Phase 1 Report.

Coyote Watershed Stream Stewardship Program, Santa Clara Valley Water District

Project Engineer. Assisted in the development of the Coyote Watershed Stream Stewardship Program, including development of the preliminary project prioritization. After determining criteria weights, Tim used Criterium Decision Plus to rank the projects in order to maximize the value gained in the watershed.

Rachael Wark, P.E.

Title
Senior Project Manager

Education
M.S., Environmental Engineering, University of California at Berkeley, 1999

B.S., Civil Engineering, University of Miami, 1998

Registration
Registered Civil Engineer, CA, #63872, 2002

Experience
7 years

Summary

Rachael Wark has a Master of Science Degree in Environmental Engineering and specializes in regional water management planning, recycled water planning, program management, water/wastewater studies and environmental compliance/permitting.

Relevant Experience

Water Conservation Study, Bay Area Water Agencies Coalition
Project Engineer. Rachael completed a water conservation study on behalf of the Bay Area Water Agencies Coalition (BAWAC), which is comprised of seven major water agencies in the Bay Area. This effort involved collection, aggregation and analysis of population, water use, and water conservation data from the BAWAC water agencies. The purpose of this project was to provide an overview of historical and active water conservation efforts undertaken by the BAWAC members, document the progress made to date in terms of per capita water use trends, estimate conservation-related water savings, compare with other metropolitan service areas (MSAs), and outline future activities to increase water conservation.

Water Conservation Program Evaluation, Zone 7 Water Agency
Project Engineer. Rachael conducted an evaluation of Zone 7 Water Agency's (Zone 7) water conservation program. The purpose of this study was to (1) summarize Zone 7's water management operations, supply, and demand under differing hydrologic conditions; (2) describe Zone 7's existing water conservation program and evaluate it with respect to regulatory compliance, water savings, and cost-effectiveness; (3) identify and evaluate new measures that could augment the current conservation program; and (4) present recommendations.

2005 Urban Water Management Plan, Amador Water Agency
Project Manager. Rachael worked on the 2005 Urban Water Management Plan for Amador Water Agency. This effort involved updating the previous UWMP to comply with 2005 requirements including additional discussion and analysis of the groundwater basin, more detail on historic and projected water use, and new information on other opportunities available to diversify the agency's water supply portfolio.

East Contra Costa Integrated Regional Water Management Plan, East County Water Management Association
Project Manager. Rachael managed the development of a functionally equivalent Integrated Regional Water Management Plan and implementation grant funding application materials for the East County Water Management Association, which includes 11 water agencies, wastewater agencies, flood control districts and watershed groups within

the eastern portion of Contra Costa County. This document is being developed in accordance with Proposition 50, Chapter 8 guidelines in an effort to secure funding for water management projects within the region.

Bay Area IRWMP Proposition 50, Chapter 8 Planning Grant
Project Manager. Rachael oversaw the development of Proposition 50, Chapter 8 Planning Grant materials for the Bay Area Integrated Regional Water Management Plan. Zone 7 Water Agency served as the lead agency on behalf of several Bay Area water management planning agencies. This $387,000 planning grant application included a detailed description of the Bay Area region and the need for a regional planning document that integrates all functional areas of water management (e.g., water supply, water quality, wastewater, flood control, habitat enhancement and protection, etc). It included a detailed work plan with scope items, budget and schedule for completing an overall Integrated Regional Water Management Plan for the Bay Area.

Bay Area Water Supply & Water Quality Functional Area Document for the Bay Area IRWMP
Project Manager. Rachael managed and developed the Water Supply & Water Quality functional area document of the Bay Area Integrated Regional Water Management Plan on behalf of 11 major water agencies representing all nine counties of the Bay Area including: Alameda County Water District, Bay Area Water Supply & Conservation Agency, Contra Costa Water District, East Bay Municipal Utility District, Marin Municipal Water District, City of Napa, San Francisco Public Utilities Commission, Santa Clara Valley Water District, Zone 7 Water Agency, Solano County Water Agency and Sonoma County Water Agency. This document identifies the water quality and water supply challenges faced by Bay Area water agencies, and defines the comprehensive water management strategies for addressing those challenges. This document is serving as a basis for Proposition 50, Chapter 8 funding for Bay Area region-wide projects including a regional conservation program and regional interties. It will be a cornerstone in an overall Bay Area Integrated Regional Water Management Plan that will be developed in 2006.

Water Management Elements Study, Bay Area Water Agencies Coalition
Project Manager. Rachael managed an Innovative Water Management Elements Study for 11 major water agencies in the Bay Area including: Alameda County Water District, Bay Area Water Supply & Conservation Agency, Contra Costa Water District, East Bay Municipal Utility District, Marin Municipal Water District, City of Napa, San Francisco Public Utilities Commission, Santa Clara Valley Water District, Zone 7 Water Agency, Solano County Water Agency and Sonoma County Water Agency. This study involves the collection and consolidation of water management information for the water agencies to document each agency's comprehensive strategy for meeting the needs of its current and future customers: (1) Manage demand through

continued advancement of water conservation; (2) Protect the quality and reliability of existing supplies; and (3) Further improve supply reliability through the implementation of innovative water management measures (e.g., recycled water; desalination, groundwater banking/conjunctive use; water transfers; etc).

Bay Area Water Quality & Water Supply Reliability Program
Project Engineer. Rachael worked on the Bay Area Water Quality & Water Supply Reliability Program, a CALFED program aimed at identifying regional opportunities to improve water quality and water supply reliability for Bay Area water agencies. This project involved development of a regional project concept to maximize water conservation activities in the bay Area and development of detailed project information data sheets on future recycled water projects that could potentially benefit multiple water agencies if implemented.

Recycled Water Facilities Plan, City of Pittsburg
Project Manager. Rachael managed a recycled water facilities plan and Proposition 50, Chapter 7 grant application for Delta Diablo Sanitation District (DDSD) and the City of Pittsburg. This effort involved an assessment of the recycled water market within the City of Pittsburg, development and evaluation of recycled water alternatives, and completion of environmental documentation for the recommended alternative, which includes delivery of recycled water to a municipal golf course and other irrigation customers. The DDSD Board of Directors officially adopted a Resolution of Commendation for Rachael recognizing her outstanding work on the master plan. Through her leadership, the facilities plan and mitigated negative declaration were completed in three months. This effort enabled DDSD and the City of Pittsburg to secure $1,000,000 in Proposition 50 Funding for implementation.

Recycled Water Facilities Plan, City of Antioch
Project Manager. Rachael is currently managing the development of a recycled water facilities plan for Delta Diablo Sanitation District (DDSD) and the City of Antioch. This effort, which is being funded by a $150,000 Proposition 50, Chapter 7 Recycled Water planning grant that Rachael helped to secure, involves assessment of the recycled water market within the City of Antioch, development and evaluation of alternatives, and preparation of a Recycled Water Facilities Plan to document the findings.

Recycled Water Master Plan, San Francisco Public Utilities Commission
Project Engineer. Rachael is currently working on the development of a recycled water master plan for the San Francisco Public Utilities Commission. Responsibilities include refinement of recycled water market assessment, evaluation of future downtown development demands and feasibility of using recycled water at SFO, and development of an implementation plan for future recycled water program activities.

Bay Area Regional Water Recycling Program (BARWRP)
Project Manager. Rachael served as Project Manager for the next phase of BARWRP. This phase of the BARWRP program involved identification of future activities, including updating of recycled water activities in the Bay Area, documenting reasons why projects identified in the 1999 BARWRP Master Plan did or did not move forward, and identifying measures to overcome institutional and economic obstacles for additional recycled water efforts.

Pajaro River Watershed Study, Pajaro River Watershed Flood Prevention Authority
Project Engineer. Rachael prepared a Quality Assurance Project Plan (QAPP) for the Pajaro River Watershed Study outlining the appropriate quality assurance procedures, quality control requirements and other technical activities that will be implemented as part of the watershed study.

Stream Management Master Plan, Zone 7 Water Agency
Project Engineer. Rachael participated in a Stream Management Master Plan that will develop a program of recommended projects and policies to address not only flood control and channel maintenance issues, but also water supply, mining and reclamation, water quality, habitat/ environment, and recreation issues as they relate to the streams and arroyos in Zone 7's service area.

Tricia Wotan, CFM

Title
Project Planner

Education
B. S. Watershed Science, Minor in Geology, Colorado State University, Fort Collins, CO

Registration
Certified Floodplain Manager, State of California
CFM No. US-03-00891, Association of State Floodplain Managers

Affiliations
Association of Floodplain Managers
Floodplain Management Association (California)

Experience
6 years

Summary

Tricia Wotan specializes in environmental project planning. She is a Certified Floodplain Manager (CFM) in the State of California. She is skilled in hydraulic model (HEC-RAS) development and flood hazard analysis; FEMA flood zone determinations; water quality monitoring plan development; water quality sampling; hydrologic field measurements; water resources analyses; GIS mapping (ArcView); and water resources research.

Relevant Experience

Pajaro River Watershed Study, Pajaro River Watershed Flood Prevention Authority

Project Planner. For Phases 3 and 4, performed HEC-RAS modeling of Upper Pajaro River. Also researched:

- Researched existing Automated Local Evaluation in Real Time (ALERT) systems within the Pajaro River watershed and produced ALERT technical memorandum
- Evaluated validity of rating curve for existing USGS gauge site on San Benito River and produced findings technical memorandum
- Identified possible funding mechanisms for the Soap Lake Floodplain Protection Project and produced funding opportunities technical memorandum

Pajaro River Watershed Study, Soap Lake Initial Study/Negative Declaration, Pajaro River Watershed Flood Prevention Authority

Project Planner. Assisted with Floodplain Management section of CEQA document.

Import Pipeline, Pajaro Valley Water Management Agency

Project Planner. Aided in plan/spec/detail review and compilation and prepared letter to growers and other correspondence.

Pajaro River IRWMP (Planning Proposal), San Benito County Water District

Project Planner. As part of a team, prepared IRWMP planning grant proposal submitted to the SWRCB/DWR. Activities included client and partner coordination, communication, technical/report writing, technical analysis, plan formulation, schedule and cost development.

Pajaro River IRWMP (Implementation Proposal), Pajaro Valley Water Management Agency

Project Planner. As part of a team, prepared IRWMP implementation grant proposal submitted to the SWRCB/DWR (includes client and partner coordination, communication, technical/report writing, tech analysis, plan formulation, schedule and cost development, etc.)

Feather River Floodplain Research and Tracking
Project Planner. Researched Feather River floodplain issues and client property floodplain location. Tracked project progress of federal, state, and local agency and Reclamation District projects and issues regarding setback levees in the area. Prepared technical memorandum on findings.

Urban Water Management Plan, City of West Sacramento
Project Planner. Wrote Chapter 8, Wastewater and Recycled Water, per State guidelines.

San Juan Valley Surface Drainage Study
Project Planner. Coordinated work, produced progress reports, review budget, prepare amendments/contract agreements

Reliability Improvement, South Bay Water Recycling
Project Planner. Developed multiple environmental regulatory permit applications for City, State, and Federal entities.

Recycled Water Irrigation, City of Lathrop
Project Planner. Participated in development of draft O&M guide for recycled water irrigation for City of Lathrop.

Watsonville Area Recycled Water Program, City of Watsonville
Project Planner. Researched stormwater potential and advised regarding floodplain management issues for proposed facilities. Planned, organized, and coordinated tour (for city, county, state, and federal agency participants) of proposed recycled water facilities at existing Watsonville plant and coastal distribution area.

Lower Colorado River Realignment, Hydraulic and Sediment Analyses, U. S. Army Corps of Engineers (USACE), International Boundary Waters Commission (IBWC)
Environmental Scientist. Built HEC-RAS models to investigate the hydraulics and sedimentation through the limitrophe section of the Lower Colorado River flowing between Arizona and Mexico. The purpose of the project was to establish the most feasible alignment of the river for both countries based on existing and proposed conditions and alignments. This process involved building the specifics of Morelos Dam into the model using Mexican as-built plans and inserting the proposed pilot channel into each cross section for the various alternatives. After building the models, specific design flows were run through each alignment and the hydraulics and water surface elevations were investigated. Working as a team with a senior engineer, Tricia summarized the results and developed a report, which was submitted to the USACE & IBWC.

Tres Rios Del Norte (TRDN) Feasibility Study, U. S. Army Corps of Engineers, County of Pima, City of Tucson, and Town of Marana
GIS Technician. Provided technical mapping for an 18-mile stretch of the Santa Cruz River near Tucson, Arizona. This work involved an iterative process of building, and rebuilding, the GIS database which mapped 10 restoration alternative scenarios and other general maps as

needed. Data obtained from the GIS were used to create and calculate water budgets and temporal vegetative trends. All technical maps were provided to project sponsors for a succession of meetings over one year. For each iteration, revisions were made and alternatives were remapped for sponsor and public review. The TRDN effort involved working closely with all agencies to meet the GIS needs of each within the project scope. Tricia was awarded two certificates of achievement for her work on TRDN.

Aliso Creek 13225 Directive, Water Quality Investigations, County of Orange

Environmental Scientist. Assisted the County of Orange Public Facilities and Resources Department in developing water quality information for their Regional Water Quality Board quarterly progress reports. Work on this project included field reconnaissance and photographic documentation of drainage channels and stormdrains, water quality monitoring site selection, development of fate and transport monitoring plans, data compilation and analyses, technical memorandum writing, and the development of a water quality source identification presentation and workshop.

Floodplain Analysis and Surface Water Technical Support, Various Clients

Environmental Scientist. Tricia provided technical surface water hydrology and hydraulic support to senior engineering staff on projects of all size and scope. This work involved building hydrologic and hydraulic models (utilizing HECRAS and other modeling programs), watershed delineations, researching existing data, compiling and analyzing available information, using Flood Insurance Rate Maps (FIRMs) to prepare exhibits and documentation for LOMR/CLOMR applications, using GIS for watershed plan formulation, creating technical presentations for senior staff, providing photographic reconnaissance of watersheds for various projects, and performing technical writing and revision.

319(h) Grant, Salinas Valley Public Education and Outreach

Hydrologic Technician. As hydrologic technician with the Monterey County Water Resources Agency (MCWRA), Tricia developed water education programs for Monterey County elementary school students and participated in the education of 1,300 students. She also co-coordinated the 2002 Irrigation and Nutrient Management Conference held in Salinas, California, for the agricultural grower, research, private consulting, regulatory, governmental, and academic communities. Tricia also compiled irrigation and nutrient management survey data submitted by Salinas Valley growers to quantify baseline nitrogen application practices within the watershed. The data resulted in report published by the MCWRA in late 2002. She also maintained a schedule of meetings and developed agendas for the Nitrate Technical and Agricultural Advisory Committees with regard to nitrate water quality issues within the Salinas Valley.

Eric Evans, P.E.

Title
Project Engineer

Education
B.S., Environmental Resources (Civil) Engineering, Humboldt State University

Registration
Registered Civil Engineer, #C65056, California

Summary

Eric has experience in water, watershed, and flood protection projects. He has served as project engineer, hydrologist, and assistant construction manager for clients including the Contra Costa Water District, the Santa Clara Valley Water District, the Monterey County Water Resources Agency, the City of San Jose, and the Pajaro Valley Water Management Agency. He specializes in hydraulic modeling and he is experienced and proficient in many aspects of water-related civil engineering. He is currently serving as project engineer for the San Juan Force Main Evaluation for the City of Belmont.

Relevant Experience

Flood Protection and Watershed Management Program, Coyote Watershed, Santa Clara Valley Water District

Project Engineer. The district's program for flood protection in the Coyote Watershed, located in the East Flood Control Zone, includes improvements valued at $200 million. Eric's primary duties include project and program management support for the Berryessa Creek Levees Project, the Lower Silver Creek Watershed Project, and the Upper Penitencia Creek Bypass Project. He provides hydrological and hydraulic support for all projects undertaken by the Coyote Creek Watershed Program in addition to technical review of non-District projects that take place on District-owned streams.

Eric is also implementing a reconnaissance study of Calera Creek, a tributary stream to Berryessa Creek. The reconnaissance study entails procurement and evaluation of information pertinent to the maintenance of the stream with regard to sediment transport and flood protection. He is currently using the computer simulation program HEC-RAS to evaluate and test different possible methods of preventing Calera Creek from overflowing its banks and flooding a significant portion of the City of Milpitas.

Revised Basin Management Plan, Pajaro Valley Water Management Agency

Hydrologist. This plan addresses basin overdraft and resultant seawater intrusion problem of the Pajaro Valley. Eric's duties on this project included the acquisition and processing of historical streamflow and rainfall data for the development of watershed-specific rainfall/runoff relations. This information was used in the evaluation and study of potential water supplies from streams for which there was little historical data.

Salinas Valley Water Project and Basin Management Plan, Monterey County Water Resources Agency

Hydrologist and Hydraulic Modeler. The Salinas Valley Water Project (SVWP) addresses the water supply imbalance in the greater Salinas

Valley. Existing pumping has caused an overdraft condition that has resulted in seawater intruding into the groundwater aquifer. The centerpiece of the SVWP is an in-stream diversion structure in the Salinas River. The SVWP also includes modification of the spillway and operating rule curve of Nacimiento Reservoir. The reservoir modifications will provide additional water for in-stream recharge as well as providing flows to allow diversion of Salinas River water to the existing Castroville Seawater Intrusion Project facilities. In addition, the plan addresses future needs of the Salinas Valley, including increased levels of water conservation and identification of additional urban water needs. Eric performed hydrologic analyses including the evaluation of the response of Nacimiento Reservoir to flood events that take place while the reservoir is operated with a new rule curve and enlarged spillway. Hydraulic analyses also included water surface profile computations of the Salinas River when under the influence of water released from Nacimiento Reservoir under the proposed operating condition and spillway configuration. Eric used HEC-2 / HEC-RAS for the hydraulic modeling.

Silver-Thompson Creeks Sediment Removal Project, Santa Clara Valley Water District

Project Manager and Project Engineer. This two-stage project resulted in the removal of 70,000 cubic yards of sediment from a major creek system in San Jose. Eric supported the design and construction of Stage One and managed the design, advertising, awarding, and construction of Stage Two. During both stages, he coordinated with environmental regulatory agencies, land owners, City of San Jose staff, and utility companies to successfully resolve their concerns. The project, which restored 100-year flood protection to the adjacent areas, was completed on time and under budget.

South Bay Mobile Home Park Flood Protection Project, Santa Clara Valley Water District

Assistant Construction Manager. This project involved the fast-track design of a floodwall to protect homes adjacent to Coyote Creek from the 100-year flood for the Santa Clara Valley Water District. The project involved securing right-of-way from Union Pacific Railroad and private landowners, utility coordination, design of an architecturally treated wall, and significant community outreach. Through the outreach efforts, the SCVWD was able to acquire the right of way at no cost and on an accelerated schedule. Eric's responsibilities included field inspections and the processing of requests for information and submittals.

Environmental Enhancement Program's Streamflow Augmentation Project, City of San Jose

Project Engineer. This pilot project entails the introduction of dechlorinated recycled water to a stream during summer low-flow conditions to encourage the spawning of steelhead trout and the enhancement of the riparian environment. Eric's primary responsibility on the project was to study the feasibility of back-up water supplies in

the area of the project site in the event of an interruption of the recycled water supply and the potential consequent stranding of aquatic species that may have become dependent upon the augmented streamflow.

Flood Prevention Study, Camp Pendleton,U.S. Marine Corps
Assistant Project Engineer. Eric specialized in the preparation of model input files and interpretation of model results for this flood prevention study. He performed similar duties for a conjunctive use management plan of surface water and groundwater resources of the Gila River Basin for the Apache Native American Reservation and nearby municipalities in Arizona. Eric was also responsible for research and data acquisition for an expert testimony report in a water quality litigation case between a major southern California city and a smaller downstream community.

Canal Hydraulic Study Project in Contra Costa County, Contra Costa Water District
Project Engineer and Hydraulic Modeler. This project entailed the analysis and update of the CCWD's HEC-RAS model of the Contra Costa Canal system. Numerous changes in the operational conditions of the canal had taken place since a similar analysis was performed using HEC-2 in 1997. These changes include adjusted projected demands, completion of capacity improvements to the canal, increased size of the Multi-Purpose Pipeline (MPP), and future treated water service agreements with the Cities of Antioch and Brentwood. Eric assisted in field measurements and performed the majority of the HEC-RAS model runs and updates which accounted for the newly defined future demand scenarios and degraded condition of the canal's aged concrete lining. As a result of this endeavor, the CCWD was provided with a user-friendly post-performance analysis tool that can be used to determine the timing and need for raw water capacity improvements under various planning scenarios.

Ryan Alameda

Role
Civil Engineer

Education
B.S., BioResource and Agricultural Engineering, California Polytechnic State University, San Luis Obispo, June 2003

Experience
3 years

Affiliations
ASCE

Summary

Ryan Alameda is a project engineer with expericence in project controls and construction management. He has participated in sewer reconstruction and flood control projects and has proven ability to work cooperatively with client staff and project team members.

Relevant Experience

Highway 87 Detour Sanitary Sewer Reconstruction Phase II Project, City of San Jose

Project Engineer. RMC is working on this sewer reconstruction project which involves designing and constructing twin sanitary sewer siphons under Highway 87 and Guadalupe River between highway 17 and Hedding Avenue. RMC's work for the project consisted of designing the new sewer siphons, finalizing the plans and specifications, and providing services during construction. Ryan is responsible for construction administration including reviewing submittals, requests for information and change orders and handling construction issues as they come up during construction.

Coyote Creek Watershed Flood Protection Program, Santa Clara Valley Water District

Project Engineer. RMC is managing this $294 million flood protection program for the Coyote Watershed, located in the East Flood Control Zone.

Ryan's involvement has included managing the budget and schedules, preparing monthly reports on the program's overall status, as well as project specific status. He works directly with the program manager, the senior project manager, and the deputy operating officer in the development of operation budgets and project resource projections for both program staff and SCVWD staff. Ryan is also involved in managing the program, as well as the various consultants' contracts being managed by the program.

Alamo Creek Trunk Sewer Relocation, Dublin San Ramon Services District

Project Engineer. Assisting with design services and engineering services during construction for the Alamo Creek Trunk Sewer Relocation project. The project will install approximately 1,000 feet of 39-inch sanitary sewer in central Dublin to replace an existing pipeline. Engineering services include pipeline routing and design, sewer siphon design, surveying, geotechnical services, permitting, and construction document preparation.

Pajaro River Watershed Groundwater Desalination Project, San Benito County Water District

Project Engineerr. Participating in the Feasibility Study investigating sustainability and benefits of RO desalting of high salinity groundwater

in the San Juan Sub-unit. Well location, water quality analyses, comparison of state-of-the-art RO membranes, and coordinating pilot testing being conducted by Stanford Research Center. Brine management options include deep well injection, conditioning to render acceptable for bay discharge, and zero liquid discharge (ZLD) options. Sustainability of saline plume is being investigated.

Irrigation Training and Research Center, San Luis Obispo
Assistant Engineer. Ryan worked on irrigation related projects and designs which originated from different parts of the country and world.

ENTRIX
ENVIRONMENTAL CONSULTANTS

Thomas L. Taylor

Fisheries Biologist

Discipline/Specialty

- Fishery biology
- Aquatic habitat
- Restoration planning/design
- Fish passage
- Dam removal
- Water diversion/transfers
- ESA consultation
- EIR/EIS
- Monitoring and assessment

Education

- M.S., Aquatic Ecology
  University of California at Davis, 1978
- B.A., Biology
  California State University at Fresno, 1970

Continuing Education and Certifications

- Certified Fisheries Scientist
  American Fisheries Society
  No. 1911

Professional Affiliations

- American Fisheries Society
- Society for Conservation Biology
- American Institute of Biological Sciences
- Society for Ecological Restoration

Summary of Qualifications

Mr. Taylor is a fishery scientist with over 25 years experience in the effects of water resources projects on aquatic habitat and riverine resources. Project experience includes river and wetland restoration, management and assessment of anadromous fishes and their habitat, assessment of fish passage conditions at culverts and ladders, evaluation of reservoir drawdown operations on aquatic resources, dam and sediment removal affects on anadromous habitat and the assessment of effects of water diversions and transfers on California's Central Valley rivers and on the Delta. Mr. Taylor's has extensive experience on coastal coho salmon and steelhead and California red-legged frogs and also on Central Valley Chinook salmon and steelhead. His has extensive ESA consultation experience on coastal and inland rivers for coho salmon, steelhead and California red-legged frogs. He also lead many resource impact evaluations and alternative analyses for aquatic resources and fishery impacts on EIR/EIS projects addressing issues such as for fish passage improvements and dam repair and removal projects. He has also conducted aquatic habitat assessments and population monitoring on a watershed basis. Other relevant experience includes preparing Biological Assessments for Section 7 actions on coastal streams and prepared sections of a multi-species HCP being prepared under Section 10 of the ESA.

Mr. Taylor has extensive field experience in the Sacramento-San Joaquin Delta, San Francisco Bay, the Clear Lake Basin, in California coastal streams from Mendocino County to Santa Barbara County and in Sierra Nevada streams especially in the Lake Tahoe Basin. He has conducted evaluations of the effects of inflow; outflow and water export projects on Delta-dependent fisheries, such as Chinook salmon, steelhead, Delta smelt, striped bass, and other species. He works closely with geomorphologists and others to understand channel processes supporting aquatic habitats in riverine systems. He has worked closely with hydrologists and modelers to understand the hydraulic conditions in the South and Central Delta channels and inflowing rivers. He has also worked closely with hydrologists and geomorphologists on Central California coastal streams.

Project Experience

Restoration Projects

Sunset Stables Restoration and Resource Management Plan - South Lake Tahoe, California

Mr. Taylor is the Project Manager for the Sunset Stables RRMP Project. Sunset Stables is a former horse-riding ranch acquired by the California Tahoe Conservancy (CTC) and is in need of restoration and a long-term management plan. The site includes over 750 acres of mountain meadow and forested upland habitat along about 2.6 miles of the Upper Truckee River. Channel incision has dried the meadow and degraded aquatic habitat. Wildlife use,

surface runoff from surrounding urban areas, wildfire protection and recreation on the project site also need to be addressed in the RRMP. The project has compiled materials to describe existing conditions and recommended to additional studies to fill the data gapes. Historic conditions have been defined, restoration alternatives will be developed and taken through an alternatives analysis and incorporated into the EIR/EIS for the RRMP. The restoration process is being directed by the planning team that has defined the goals and objective of the project and will interact with a Technical Advisory Group to assist in selecting or refining the methods used to restore and manage the project into the future. The project actions will address restoring appropriate geomorphology and river function, aquatic habitat, meadow habitats and forests and wildlife resources in the project area. Other issues that will also be addressed include improvement of water quality, reduction of erosion and recreation. The project will be coordinated with restoration projects along the Upper Truckee River up and downstream of Sunset Stables.

Interim Restoration of Rush and Lee Vining Creeks - Mono County, California

Mr. Taylor managed the interim restoration planning and restoration monitoring of aquatic habitat and fish populations for Rush and Lee Vining Creeks. Restoration planning included an evaluation of historic conditions and comparison to pre-restoration condition of the channel morphology, flow regime, riparian vegetation, and aquatic habitat. Restoration actions included restoring streamflow to long-desiccated channels, reconnecting side channels in Lee Vining Creek, the creation of pool and riffle habitats, installation of large woody debris and addition of spawning gravel to restored reaches of Rush and Lee Vining creeks. Restoration success was documented through monitoring and evaluating attributes important to stream function including stream channel condition, growth of riparian vegetation, aquatic habitat conditions, and fish populations. The fish population monitoring included monitoring brown trout spawning use of treatment and control reaches and a quantitative spring and fall fish population survey at 58 sites in the two streams.

Restoration of Pescadero Marsh

Mr. Taylor was the project manager for a multi-year restoration project at Pescadero Marsh that included the assessment of historic conditions, mapping of wetland topography, assessment of hydrology and recent sedimentation, and evaluation of water quality and biological resources as input to the development of a wetland enhancement plan. The plan addressed listed and sensitive species including the San Francisco garter snake, the western pond turtle, California red-legged frog, steelhead, tidewater goby and the salt marsh yellow-throat. Successful implementation of the plan required direct involvement with the local farming community, as well as addressing the concerns of local interests regarding land management, flooding issues, and channel maintenance.

Restoration of Gaviota Wetlands

Mr. Taylor was the project manager for the preparation of a wetland restoration plan as mitigation for the development of a campground at Gaviota State Park in Santa Barbara County, California. The wetland restoration plan included an assessment of historic changes, a wetland delineation, biological surveys, evaluation of impacts to several sensitive aquatic or wetland dependent species and integration with a nearby campground rehabilitation project. The project included informal consultation with permitting agencies for several of the sensitive species.

Fish Passage

Daguerre Point Dam Fish Passage Improvement - Lower Yuba River, California

Several potential solutions to improve fish passage at Daguerre Point Dam on the Lower Yuba River were evaluated Fish Passage Improvement Project. The dam is a 300-foot wide, 28-foot high structure constructed in 1906 on the Lower Yuba River to retain mining debris. The dam site is also used as a diversion point for three irrigation districts. Upstream passage of adult steelhead and Chinook salmon has long been an issue at the dam as is the potential for injury and predation on downstream migrating smolts as they pass over the dam and into the plunge pool. Options for addressing fish passage were examined through the a CEQA/NEPA process that included public scoping, stakeholder meetings and alternatives development. Alternatives ranged from improving the existing fish ladders to dam removal. The stakeholder group identified project objectives and actively identified and helped to refine alternatives. Studies were conducted to determine how improving passage may affect habitat in the river for salmon and steelhead, how dam modifications may affect sediment delivery, and affected the potential for flooding to downstream locations. The project worked closely with NOAA Fisheries, the USFWS, CDFG other regulatory agencies and academicians. The project was funded through the Planning and Local Assistance Branch of the Department of Water Resources for the Daguerre Point Dam that is jointly operated by DWR and the Army Corps of Engineers.

Derby Dam Fish Passage - Lower Truckee River, Nevada

Mr. Taylor prepared an EA for the installation of a fish passage facility at Derby Dam on the Truckee River for the Bureau of Reclamation. The dam had no fish passage facilities and a need was identified to provide passage for cui-ui sucker and Lahontan cutthroat trout, both listed species. Several fish passage alternatives were reviewed including several ladder designs and locations and a natural channel. The natural channel was selected primarily on the basis of the needs of the Cui-ui suckers. Passage at this dam was necessary once it was clear that Cui-ui suckers from Lake Pyramid were passing downstream dams to gain access to historic spawning habitat in the Truckee River. The EA evaluated various options of fish passage and examined the consequences of listed species spawning upstream as it related to water diversions upstream and at Derby Dam. The water diversion at Derby Dam also required screening to avoid entraining the spawn of those fish that passed the dam.

Angora Creek Fish Passage - South Lake Tahoe, California

Mr. Taylor evaluated fish passage using the FishXing 2.0 program through culverts beneath Lake Tahoe Boulevard for the El Dorado County Department of Transportation. A site assessment included evaluation of the culvert condition and the collection of basin information as input to the FishXing program. Potential species using the culvert include both spring and fall spawning fish that would need to pass through the culvert during high flows (spring) and low flows (fall). The FishXing program indicated that depth of flow limited fall spawning fish species and velocities limited spring spawning fish species. Passage into and through the 40-foot long culvert was evaluated for several native minnows and suckers based upon criteria established for surrogate species. Passage was also evaluated for mountain whitefish and juveniles and adult rainbow and brown trout.

Pilarctios Creek - San Francisco Peninsula, California

Mr. Taylor evaluated aquatic habitat and steelhead populations up and downstream of historic Stone Dam on Pilarcitos Creek, a coastal stream in San Mateo County, California. Steelhead can access the creek up to near

the base of Stone Dam and NOAA Fisheries recommended fish passage at the dam or dam removal. The project evaluated habitat conditions in the channel upstream and downstream of the dam and also evaluated the effect of diversion at the dam on downstream habitat. Fish passage would allow steelhead to access about 2 miles of rearing habitat. Fish passage at the dam would need to consider current and future potential operation of the water supply system. The study also attempted to evaluate habitat conditions in the channel downstream of the dam to flows.

Alameda Creek Fish Passage - Sunol, California

Mr. Taylor evaluated fish passage conditions through an altered 1.5 mile long reach of Alameda Creek through a part of the Sunol Valley undergoing active aggragate mining. The channel was relocated in the 1970s to allow for digging of mining pits outside the active channel, but within alluvial gravels and cobbles in the Sunol Valley. An effort is afoot to restore the steelhead run in Alameda Creek and channel flow losses to groundwater and the quarry pits was poorly understood. Focused studies were undertaken to quantify the amount of flow required to maintain a surface connection from Upper Alameda Creek to the lower river through the quarry reach. Surface flow conditions were evaluated though the use of multiple temporary recording gaging sites using pressure transducers installed through the study reach and then cross checked with a nearby USGS gaging station. Surface water elevations at each site were calibrated by taking physical measurements of depths and velocities along a transect at each site at multiple flows to establish surface water elevation/flow relationships that were then applied to the logged data. Published criteria for passage of adult steelhead were used to evaluate passage conditions at critical riffles. Evaluation of downstream juvenile passage conditions was evaluated using assumed criteria. Initial brief flow study established general channel losses along the project reach. A second flow study evaluated depth of flow and velocities at critical riffles through the study reach. A third flow study was conducted after substantial recharge of the area from a very wet winter and sustained releases from upstream reservoirs to document conditions following a wet winter. The evaluation showed that similar flow losses occur during wet or dry conditions because most of the flow is lost to the quarries and recharge no longer occurs. Quarry operations are an important consideration for future management of the affected reach.

Dam Repair/Removal

Benbow Dam Repair

A Biological Assessment was prepared for a dam repair project on Benbow Dam on the South Fork Eel River. California Department of Parks and Recreation identified a need to repair eroded areas of Benbow Dam to maintain the integrity of the dam and seasonal flashboards installed in the South Fork Eel River at the town of Benbow. The dam repair was relatively straight forward, requiring pouring concrete to fill eroded dam material and recover exposed re-bar in the two spillway bays in the base of the dam. The project evaluated different approaches to repair each spillway bay in sequence while diverting the river upstream into each spillway bay. Project timing was based upon river hydrology. A Section 7 consultation occurred through the requirement for an US Army Corps of Engineers permit for the project. The Section 7 consultation addressed two listed fish, steelhead and coho salmon and addressed disturbance impacts to potential spotted owl, marbled murrlet and bald eagle habitat in the canyon near the dam site.

San Clemente Dam Interim Seisimc Safety Operations- Carmel Valley, California

Mr. Taylor is working with the owner of the dam and the regulatory agencies to develop an approach to address seismic problems with San Clemente Dam that will incorporate dam safety, endangered species, and watershed health. The 80-year-old dam is seismically unsafe and the reservoir full of sediment. Several options are being considered to address dam safety ranging from removal of the dam and the sediment to strengthening the dam and keeping the sediment in place. The river supports two listed aquatic species including the California red-legged frog and steelhead. Both species use the river system and occur at the project site. Steelhead migrate up and down the river past the dam. In the interim, the reservoir has been lowered ten feet during the dry season to reduce seismic loading on the dam. Mr. Taylor had a key role is structuring the drawdown and in recommending protective actions for steelhead. He also was instrumental in developing the monitoring program to document the drawdown process.

Dam Removal Feasibility - Alameda County, California

Mr. Taylor participated on a team consisting of geomorphologists, hydrologists and engineers, fisheries biologists and botanists in conducting a feasibility study for removal of two dams in Niles Canyon on Alameda Creek. The team assessed existing bed conditions, sediment accumulation, riparian resources and aquatic habitat behind both dams. Longitudinal profiles and cross sections were established through each dam to document channel slope and cross sections and bulk sediment samples were collected and analyzed. Estimates were made of sediment stored behind each dam. A HEC RAS model was run at each dam site for existing and new channel configurations. Assessments were made of the impacts of sediment released and channel adjustments on aquatic habitat for fish and on riparian resources up and downstream of each dam and inundation zone. The report was reviewed in a workshop attended by the client and an interagency group that consisted of regulatory agencies, other water districts, a downstream flood control district and NGO's. The project has since moved into an EIR process and is slated for implementation in the summer of 2006.

Water Diversions/Transfers

Long-term Water Contracts (Bureau of Reclamation)

Mr. Taylor prepared EAs for the re-issuance of Long-Term Water Contracts through the Bureau of Reclamation for the Friant and Cross Valley Canal Units of the Central Valley Project. The EA examined changes to the water use relative to existing contracts, and any changes in water use that may have resulted from re-operation from the sources at Millerton Lake and the Delta. The EA examined the consequences for the San Joaquin River downstream of Friant Dam and affects on the Delta resulting from any change in storage and delivery timing resulting from increased water rates.

Vernalis Adaptive Management Plan (San Francisco Public Utilities Commission)

Mr. Taylor has provided professional services to the City and County of San Francisco for biological support on their interests in the Bay-Delta Process and as a member of the San Joaquin River Group Authority. Mr. Taylor was an active participant on developing and providing peer review for the Vernalis Adaptive Management Plan. He participated on interagency meetings to address the study design and interacted with agencies to determine the best methods to use hatchery salmon in the study. Mr. Taylor participated in the development of the Newman-Rice model, and assisted in the compilation of some of the data sets used in early version of the model. He participated in numerous workshops at the request of the client, and prepared documents and issues papers on topics ranging from fish hatcheries to fish outmigration studies. Mr. Taylor is also an integral team member of biologists working to develop and implement monitoring of the effectiveness

of the 1995 Water Quality Control Plan. He is also participating on this group to respond to issues during the third triennial review of the 1995 WQCP.

Water Transfer Across the Delta (Sacramento Valley Water Users)

Mr. Taylor worked for attorneys representing the Sacramento Valley Water Users to develop testimony in response to a water rights challenge before the State Water Resources Control Board addressing the effects on fisheries from water transfers from the Sacramento Basin to the areas in the south Delta. He prepared expert witness testimony on the effects of water transfers across the Delta on Delta smelt using biological data and hydrodynamic models including DSM2 and the Particle Tracking Model (PTM). The models and biological data were used to assess individual channel flow characteristics in regard to flow direction and magnitude that affected habitat use of native Delta fishes and related how population changes are associated with water development in the Sacramento-San Joaquin Delta. His prepared testimony reviewed the change in distribution and abundance of the different life stages of Delta smelt and related changes to altered hydraulic conditions in the Delta.

ESA Consultations

Rancho San Carlos

Rancho San Carlos Steelhead Habitat Conservation Plan - Carmel, CA

Mr. Taylor has prepared the steelhead component of an HCP covering 20,000 acres and five separate streams within the project area. Steelhead habitat assessments were conducted on five stream systems within the Santa Lucia Preserve, a private preserve associated with a development at Rancho San Carlos near Carmel. Steelhead HCP elements include mitigation and monitoring components worked out in consultation with NOAA fisheries staff, the client, and an HCP attorney. Mitigation elements were based upon anticipated impacts of the project to steelhead and steelhead habitat. Monitoring plans were developed for the five streams to address habitat elements directly relevant to steelhead that could be affected by the project.

Mt. Herman Conference Center

Mr. Taylor conducted an informal consultation with NOAA Fisheries to address potential impact from development of the Mt. Hermon Association Camp and Conference Centers water supply project on listed coho salmon and Central California Coastal steelhead trout. The Mount Hermon Project area is situated in the San Lorenzo River watershed of the Santa Cruz Mountains, California. The project consists of three-phased new construction and/or replacement of facilities over a 15 to 20 year period. Mr. Taylor evaluated effects on the water supply system and made recommnedations to the Conference Center to minimize the projects effect on streamflows and temperature. Informal consultation occurred with NOAA Fisheries and there was concurrence from NOAA that impacts of the project would not adversly affect listed speices in the watershed avoiding preparation of a Biological Assessment and issuance of a Biological Opinion for coho salmon and steelhead for the project.

San Clemente Dam Annual Drawdown

Coordinator, Central California ACWA Steelhead Listing Report, California

Mr. Taylor played a key role as the Central California Coastal Coordinator for ACWA's response to the proposed listing of steelhead in California. He organized experts knowledgeable about steelhead resources along the Central Coast, oversaw an intensive examination of resource agency file materials and reviewed planting records for streams of interest to water agencies. Mr. Taylor's efforts represented the combined

interest of water agencies located along the central coast. The materials were compiled, reviewed and analyzed into a report to be included with similar reports from the entire California coast.

EIR/EIS

San Clemente Dam Seismic Safety EIR/EIS

Mr. Taylor prepared the Aquatic Resources Section of the DRAFT EIR/EIS for the Seismic Retrofit for San Clemente Dam on the Carmel River. The EIREIS evaluated the proposed project and three alternatives that included dam notching with partial sediment removal, dam removal with complete sediment removal and dam removal with river rerouting and partial sediment removal. Relative effects of the various options were evaluated in regard to steelhead and California red-legged frogs use of the river and project area and considerations in regard to sedimentation and effects on the riparian system in the Carmel River in the vicinity of San Clemente Dam.

Mr. Taylor has helped to develop and evaluate options to address the seismic safety and address fish passage at San Clemente Dam on the Carmel River. The 1921 thin-arch concrete dam has been identified as seismically unsafe by the Division of Safety of Dams, Department of Water Resources. Mr. Taylor has assisted the California American Water Company, owner of the dam in developing interim operations to comply with the DSOD order to lower the reservoir while protecting the listed steelhead in the Carmel River. Mr. Taylor worked closely with DSOD, NOAA Fisheries, the Army Corps of Engineers, the California Department of Fish and Game and California-American Water Company in developing draw down criteria and in monitoring and reporting on the draw down activities. Mr. Taylor will also be preparing the fisheries analysis for the EIS/EIR to address seismic safety at San Clemente Dam. Alternatives include strengthening the existing dam, removing the dam or lower the crest elevation of the dam.

Sunset Stables Restoration and Resource Management Plan EIR/EIS

Mr. Taylor is the project manager for the development of a Restoration and Resource Management Plan for the 350 acre Sunset Stables area along the Upper Truckee River in the Lake Tahoe Basin, California. The project involves developing an Existing Conditions report, identifying data gaps then designing and conducting studies to fill the data gaps that will lead into the development of restoration alternatives for the project. The project is addressing multiple habitats including forested uplands, meadow, wet meadow, willow riparian and aquatic habitat. The restoration and management plan will also need to consider human recreation amd cultural resources in the area and any influence that the local beaver population may have on stream channel restoration actions and revegetation. Water quality and aquatic habitat considerations are also being addressed in the plan objectives. The project involves both the U.S. Forest Service and the California Department of Parks and Recreation that are adjacent landowners. Channel function has been impaired through the site by encroachment from the South Lake Tahoe Airport, confinement from road crossings and is further constrained by sewer lines that are closely paralleling the river.

Monitoring and Assessment

Long-term monitoring of Lagunitas Creek coho salmon and steelhead populations

Mr. Taylor managed a multi-year habitat-based monitoring program for coho salmon and steelhead in Lagunitas Creek. The monitoring was designed to evaluate how summer stream flow conditions and aquatic habitat influenced populations of the juvenile coho salmon (federally threatened Central California Coast Coho ESU) and steelhead (federally threatened Central California Coastal ESU). The sampling program was

designed to provide data that was compatible with a long-term data set spanning over 20 years to provide for evaluation of time trends in population changes. Annual monitoring reports were produced describing the status of coho salmon and steelhead in the study area and comparing levels to historic population estimates.

Assessment of Aquatic Habitat and Resources for the SFPUC

Mr. Taylor managed a survey of the aquatic resources of six Bay-Area reservoirs and their watersheds for the City and County of San Francisco. The surveys were designed to provide an assessment of the reservoir and stream fish population in the City's watershed lands and to provide information on fish species, distribution, an index of fish population size, establish surface water quality and assess reservoir sediments. Rainbow trout tissues were collected for protein and genetic analyses. Six reservoirs ranging in size of 97,000 AF to about 2,000 AF were sampled using a combination of gill nets, a boat-mounted electrofisher, seining and angling. Tributary streams were sampled using backpack electrofishers and observation techniques. The genetic and protein analysis was subcontracted through a reputable university. The project included data analysis and the preparation of reports.

Aquatic habitat mapping and assessment in Santa Clara Valley streams

Mr. Taylor managed a habitat mapping effort for the Santa Clara Valley Water District documenting habitat conditions in over 60 miles of stream channel within the District's jurisdiction. The project included the training, quality assurance checks and logistical management of 5 habitat-typing crews as well as managing multiple sub-consultants. The scope of work was developed in cooperation with representatives from regulatory agencies, non-governmental organizations and academia, as well as managers from the Santa Clara Valley Water District and their consultant through the Fish and Aquatic Habitat Collaborative Evaluation (FAHCE) process. In spite of a tight schedule and budget, the project was completed successfully.