

Submitted to:
California Natural Resources Agency

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RFI Response for

Salton Sea Water Importation Projects

March 9, 2018



Response to Request for Information for Salton Sea Water Importation Projects

Submitted by:

AECOM
2020 L Street, Suite 400
Sacramento, CA 95811

In association with:

DuBose Design Group Inc, El Centro, CA
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Submitted to:

California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

March 9, 2018

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Mr. Bruce Wilcox, Assistant Secretary of Salton Sea Policy
California Natural Resources Agency
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

Subject: AECOM Response to Salton Sea Water Importation Projects

Dear Mr. Wilcox:

The AECOM team, including DuBose Design Group and Energia y Agua de Mexico, is pleased to submit our response to California Department of Natural Resources for the Salton Sea Water Importation Project. We appreciate the opportunity to submit our views and experiences in the form of this response to the Request for Information. As requested, we have attached responses to the RFI with the intent that this information provides you with our depth of experience, participation and delivery of some of the most complex water projects across the globe.

With our local offices throughout the West, and approximately 90,000 employees worldwide, AECOM serves clients in the water infrastructure market both locally and in more than 150 countries worldwide. We are extremely proud to be recognized as the No. 1 firm in the Top 500 Design Firms list published by Engineering News-Record (ENR).

In order to bring a true wealth of real-life experience to our responses for this innovative and forward-thinking projects concept, we have engaged a diverse set of our professionals that include local staff, along with nationally and internationally renowned experts. These professionals include some of the world's best known experts in pipeline and pumping, irrigation storage and reservoir systems, irrigation channel design, water conveyance, pipeline design, environmental restoration, construction and construction management, as well as a host of other disciplines and expertise.



Comprehensive, Diverse and Experienced Team Across all Key Disciplines with Nationwide Coverage

The AECOM team has diverse, experienced personnel across each of the requested key disciplines who are familiar with Salton Sea, and who have worked on all project phases from planning through evaluation, design, construction, operation and maintenance, rehabilitation, modifications, and decommissioning. The AECOM team also provides national and international coverage and has the capacity to complete multiple, concurrent assignments. AECOM has teamed with two local firms with a long history in region; they know the local environment, economy, the water and politics. There is no substitute for experience, and we offer a comprehensive, diverse, experienced team to the California Department of Natural Resources.

Additionally, AECOM support for the Salton Sea Restoration Project dates back 15 years and has included the following services:

- Independent technical review of alternatives presented in the Draft Environmental Impact Statement/Environmental Impact Report
- Geotechnical and civil engineering and seismic review of the conceptual alternatives developed by the U.S. Bureau of Reclamation
- Conceptual level design, cost estimating, and geotechnical investigation for a series of pilot concentrator ponds

Water Infrastructure Engineering and Construction are Core Services at AECOM

AECOM's core services as a full-service design-build-finance-operate-maintain (DBFOM) firm include comprehensive technical and management expertise for water resources, water conveyance, water treatment,

environmental studies and restoration, energy, and facilities design as well as program management, construction and construction management, and financing. Our core capabilities relative to the Salton Sea include the following:

- Program integration services for large, complex programs that include planning, feasibility studies, design, communications, program management and construction management, and coordination with various (sometimes competing) stakeholders.
- Full range of design and construction services including: design, construction, construction management, start-up and testing for water supply, irrigation, pipelines, drainage facilities, and hydraulic structures.
- Integrated water resources services, including the full spectrum of water supply, and water delivery facility design capabilities. AECOM's depth and breadth of experience in irrigation spans the globe and we have worked with the largest irrigation districts in North America.
- **Table 1** presents a representative list of recent projects where AECOM has worked around the world.

AECOM is very excited about the opportunity this RFI represents. We look forward to the opportunity to further explore this important program and the ensuing next steps and schedule. I am personally excited to work on this project because during my 30 years with the U.S. Bureau of Reclamation, I was the Executive Director of the Technical Resources where I had direct involvement in developing Reclamation's 2007 report "Restoration of the Salton Sea". I have a long history working on Colorado River issues, and the Salton Sea in particular.

If you require additional information or if AECOM can provide any further insights, experiences and expertise; please feel to contact me at 720.244.1979 or via email at Michael.Gabaldon@aecom.com.

Sincerely,
AECOM Technical Services, Inc.

Michael Gabaldon, PE
Senior Manager/Strategic Pursuits
DCS Americas, Water Business Line

Table 1: Representative list of recent AECOM projects from around the world

Client	Construction Cost (M)	Right of Way Acquisition	Surveying	Pump Design	Pipe Design	Open Channel Design	Environmental	Reservoir Design	Project Management	Construction Management
Imperial Irrigation District Imperial, CA	\$40	■		■	■				■	■
Integrated Pipeline Project Tarrant Water District	\$595			■	■	■			■	
New Irvington Water Supply San Francisco Public Utilities Commission	\$260			■	■				■	
River Supply Conduit Los Angeles Department of Water and Power	\$120			■	■				■	
Kern County Water Agency Bakersfield, CA	\$70	■	■	■	■	■		■	■	
Hudson River Habitat Restoration Fortune 500 Company	\$2						■			
Habitat Conservation for the Gulf Coast Commercial Developers	\$.05						■			
Elsinore Valley Metropolitan Water District of Southern California	\$5	■	■		■				■	■
Los Angeles DWP, Inyo County, CA	\$32	■			■	■				■
Alberta Environment, Alberta	\$600	■	■	■	■	■		■	■	■
Jemalong Irrigation District Australia	\$75			■	■	■			■	

1. Identification of Project Team

AECOM will be the prime consultant for the Salton Sea Water Importation Projects, will serve as the single point of contact with the California Natural Resources Agency, and will manage the activities of the AECOM team. AECOM will be assisted by two subconsultants: DuBose Design Group and Energia y Agua de Mexico. Overviews of AECOM and its subconsultants follow. Concise qualifications relevant to the Salton Sea Water Importation Projects are provided in Attachments A and B.

AECOM

AECOM is a global provider of professional technical and management support services to a broad range of markets, including water, environment, transportation, facilities, energy, and government.

With approximately 90,000 employees around the world, AECOM is a leader in the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that create, enhance, and sustain the world's built, natural, and social environments. A Fortune 500 company, AECOM serves clients in more than 130 countries, with headquarters in Los Angeles. .

AECOM's Water Business Line helps communities meet the need for sustainable, high-quality water supplies while protecting the natural resources that are integral to the ecological health of the watershed. We help our clients overcome increasingly complex issues involving water shortages, storm water, flooding and climate change to help them develop resilient communities. Through the application of adaptive management principles in the planning and

design process, we integrate science and management, delivering the most targeted solution possible. Our staff analyzes engineering and construction feasibility as well as the regulatory, ecological, social and economic impacts of potential strategies.

Attachment A provides a concise overview of AECOM's qualifications focusing on water importation and ecosystem restoration projects, including Environmental Permitting and Compliance Monitoring, Ecosystem Restoration Program Design and Supervision, Water Supply Protection and Enhancement, Non-point Source Pollution Control Programs, Biological and Chemical Monitoring Programs, Wetland Assessment, Restoration, and Creation, and Public Education Programs.



DUBOSE DESIGN GROUP

DuBose Design Group (DDG) is a successor company to Development Design & Engineering, a 20 year old civil engineering, land planning and development company based in El Centro. DDG brings a long history of experience in the Imperial Valley and a deep understanding of local issues, local agencies and stakeholders. In addition, DDG's experience extends across the border with a regional history of collaboration with agencies and businesses in Baja California and provides liaison services within the Baja California Region.

Attachment B provides a concise overview of DDG's qualifications including project management, innovation planning, political strategy, project planning, CEQA and NEPA consulting and land evaluation site assessment.

ENERGIA Y AGUA DE MEXICO

Energia y Agua de Mexico (EAM) provides energy and water development services for the Mexicali and Imperial valleys. EAM will bring a unique perspective to the Salton Sea Water Importation Projects by focusing on synergies and commonalities that will work for both sides of the border. There is a long history of successful cross border sharing within the agricultural communities of the Mexicali and Imperial Valley

EAM provides services to governmental agencies and private sector clients on both sides of the border in water and wastewater treatment; hydroelectric generation; and solar, biomass and geothermal power development. EAM provides professional services to companies who have commercially ready yet innovative technologies in the energy and water sectors. These are clients who are interested in entering the Mexican market, and in particular Baja California, or have successful applications in Mexico that could be appropriate for Imperial Valley, California.

Attachment C provides an overview of EAM's qualifications.

AECOM'S VISION FOR THE SALTON SEA

AECOM vision is based on an understanding that the key to a successful program has to include bringing relief to the oversubscribed Colorado River with an environmentally and financially sustainable solution over a long horizon. We recognize that the restoration of the Salton Sea will be a large and complex undertaking on the same order as the following:

- The Red Sea Dead Sea Connection
- Central Arizona Project's 336 mile aqueduct
- The CalWater Fix, or
- The Klamath River Dam Removal and Restoration

What the AECOM Team brings to table for the Salton Sea Water Importation project is its unique ability to develop and execute on such an ambitious plan. Our concept for the Salton Sea consists of bringing innovative and new approaches that are turn-key program for the engineering, and environmental consultancy work necessary, as well as a construction and operations for 50 to 100 years.

AECOM is aware that local stakeholders in the Imperial Valley believe that any new fresh sources of water would have a perceived higher value to water purchasers drawing from the Lower Colorado River Basin. As a result, there are two obvious sources of water importation for the Salton Sea: The Sea of Cortez in Mexico, and the Pacific Ocean. We have studied the analyses done by U.S. Bureau of Reclamation, the Salton Sea Authority, the Pacific Institute, and others, and that had concluded that there were insurmountable fatal flaws to a Sea to Sea solution.

AECOM's approach would be to revisit the previous plans and assumptions with the

focus on looking at all of the work that has been done to date, and identify how innovations and new technologies and alternative sources that could shift the balance to make imported water to the Salton Sea financeable. This analysis would include an identification of the costs to make the projects permittable and financeable, and politically viable. A critical component of the AECOM approach will be to seek out technical innovations that will drive down the costs. Another critical component would be to engage the stakeholders in the process to determine if and how agreements could be reached to implement the projects. Following is a brief discussion of potential technical innovations in conveyance and energy.

Conveyance Innovation Opportunities

Conveyance would be one obvious area to look for potential cost savings. concentrate efforts. The routing of the conveyance lines can have the biggest impact on the project's energy demand, so optimizing the routing of the conveyance lines will be critical in reducing costs. Pipeline material costs also impact construction costs. We will evaluate both alternative conveyance routes and new materials and installation methods.

Energy Innovation Opportunities

Innovative approaches to address the energy requirements of the conveyance lines include in-pipe turbines, and other energy recovery equipment. The evaluation of low cost solar and wind projects would also be important considerations to drive down the cost of energy. For example, it may be possible to provide a blended rate of renewable energy sources that contributes to making the project viable.

Wind, solar and hydro resources are all technologies that are applicable and can provide inflation protection against fuel

volatility and risks associated with fossil fuels. For example, it may be possible to reduce the cost of electricity to the project significantly over the previous assumptions that were identified as fatal flaws to a water importation program.

The solar resource for the specific area is excellent. Siting of the solar projects could be co-located to minimize transmission losses and costs. The solar developer community is well established for this region, if it is determined that it is in the best interests of the project to contract for solar energy.

Nearby wind resources are also rated as excellent, and sites are available. The wind developer community is well established for this region, if it is determined that it is in the best interests of the project to contract for wind energy.

The Imperial Valley is rich in geothermal resources that could also play an important role in providing for methods and means to drive down costs, and leverage assets and resources unique to the Salton Sea.

In addition to technical innovations, the successful implementation of the Salton Sea Water Importation Projects will require a comprehensive stakeholder strategy and a strategy to involve Mexico, if it is determined that it is politically viable to engage the Mexican government. AECOM's vision includes the development of each of these strategies.

Stakeholder Strategy

AECOM has a team of professionals who have a deep and intimate knowledge and relations with the stakeholders in the region. AECOM has expertise and resources required to develop and sustain the efforts to bring together and then sustain a connection with a wide variety of stakeholders that would be every bit as complex as the CalWater Fix, the Klamath and other large water and restoration infrastructure projects. The AECOM lead for this project is Michael Gabaldon, retired senior executive with over 30 years of experience with the U.S. Bureau of Reclamation. He served in a variety of technical, operational, managerial, and executive positions with Reclamation. His experience includes 12 years as the Director of Technical Resources where he had direct involvement in developing Reclamation's 2007 Report "*Restoration of the Salton Sea*". That report outlined several options for the Salton Sea. He has a long history in dealing with complex water issues relating to the Colorado River Basin and has extensive experience in building consensus among groups with conflicting interests.

A key element of the stakeholder strategy would be to include the development of a plan that would promote economic development and resulting potential revenue streams to fund the Salton Sea Water Importation Project.

Salton Sea Water Importation Projects Stakeholders
INTERNATIONAL
UNESCO-Biosphere Reserve Program
Conservation International
Greenpeace
U.S. FEDERAL
Bureau of Reclamation, Department of Interior
US EPA, Region 9
International Boundary & Water Commission, U.S. State Department
CALIFORNIA, STATE OF
Natural Resources Agency
Department of Water Resources
California Air Resources Board
LOCAL GOVERNMENT AGENCIES
Salton Sea Authority
Imperial Irrigation District
Torrez Martinez Indian Tribe
Imperial County
Imperial County Air Pollution Control District
Riverside County
Coachella Valley Water District
South Coast Air Quality Management District
San Diego County
San Diego County Water Authority
CALIFORNIA LOCAL AGENCIES
Pacific Institute, Public Policy Institute of California
Sierra Club, Natural Resource Defense Council, Audubon Society, Desert Wildlife Unlimited, Ducks Unlimited
Academic: Scripps, University of Redlands, University of California, Irvine, University of California San Diego, San Diego State University, Imperial Valley College
Imperial Valley Comite Civico del Valle (CCV)
MEXICO
Federal, CILA, SEMAR
ConAGUA, SEMARNAT
STATE OF BAJA CALIFORNIA & STATE OF SONORA
Municipalities, Mexicali, San Felipe, Puerto Penasco
Industry & Agriculture
Ejidos
Cucapa Tribe
Mexican Environmental Groups: ProNatura
Fisherman Association of San Felipe, B.C.
Fisherman Association of Sonora, Puerto Penasco
Academic, Mexican
UABC, Institute for Oceanographic Research, Ensenada
CETYS
CICESE, Center for Scientific Research and Higher Education
Instituto de Colegio de Frontera
University of Baja California, Ensenada
Mexico's National Autonomous University (UNAM)

U.S. ECONOMIC DEVELOPMENT

Growth and economic development on the US side could help to drive the tax base of the region. For example, on the U.S. side, the State of California has authorized an Enhanced Infrastructure District (EID) as a means to fund large scale infrastructure development for regions. The Salton Sea communities, including Imperial County and Riverside County, and the Imperial Irrigation District have been investigating the potential to develop an EID.

The Salton Sea Restoration and Renewable Energy Initiative (SSRRI) has been developed by the Imperial Irrigation District and Imperial County. The concept is to utilize the Salton Sea's exposed lakebed to serve a dual purpose: producing renewable energy while doubling as groundcover to mitigate air emissions. Under legislation enacted in 2013, planning and implementing projects at the sea will be driven locally by the Salton Sea Authority, with support from the State of California. The Initiative will first focus on developing up to 1,700 megawatts of new geothermal energy at the Sea – enough to power more than one million homes. Not only is there more geothermal generating capacity in the Imperial Valley than anywhere else in the U.S., but geothermal energy can be produced with minimal impact on landscape and habitat. It also provides a steady, reliable source of energy to the state electricity grid that is not subject to weather or seasonal fluctuations.

RESIDENTIAL AND RECREATIONAL DEVELOPMENT AT THE SALTON SEA

There are multiple plans to develop recreational areas and housing at the Salton Sea, once the elevation of the sea is stabilized and there is certainty about where the shoreline will be. The Salton Sea in the 1960s had more visitors than Yosemite National Park. If some or any of these plans

could be implemented it would enhance the economic health of the region that could, in part fund, Water Importation Projects.

MEXICO STRATEGY

If it is determined that it is politically viable to engage the Mexican government in participating in a Water Importation Project, there would be the need to negotiate benefits to the Mexican stakeholders. While AECOM will review the Sea to Sea plans that have been submitted, it will also look at other alternatives that will provide relief for demands on the Colorado River while meeting the Salton Sea restoration objectives, with a sustainable financing plan.

AECOM also has the expertise to work with the Mexican stakeholders to develop projects and programs that would support the project. This support would include technical, economic and financing plans that would be a part of the overall funding of the project.

Mexico established the Gulf of California and Colorado River Delta Biosphere Reserve under the Man and Biosphere Reserve Programme developed by UNESCO. The Gulf of California Biosphere Reserve boundaries are defined as the core area, the buffer zone and the transition area. It is assumed that activities relating to the Water Importation Project, if it is deemed appropriate to pursue with Mexico at the Sea of Cortez. For example, it is assumed the intake structure would be located in the transition area, which UNESCO has defined as "the part of the reserve where the greatest activity is allowed, fostering economic and human development that is socio-culturally and ecologically sustainable."

<http://www.unesco.org/mabdb/br/brdir/directory/biores.asp?code=MEX+10&mode=all>

AECOM proposes to evaluate the potential to promote economic development activities in Mexico that would benefit the local population and Mexican stakeholders in general. One example might be to develop, in cooperation with Mexican stakeholders, the methods and means to ensure socially responsible and environmentally sustainable investments in the Sea of Cortez. The Mexican government is seeking projects and programs that will restore the fisheries of the Sea of Cortez.

Most notably, the Mexican government is seeking ways to protect the Totoaba and Vaquita, a critically endangered porpoise endemic to the Sea of Cortez. Perhaps there could be a way to develop a program that would meet the objectives of the Mexican government relative to its fisheries.

San Felipe and Puerto Penasco are two areas that have been targeted for large scale resort development. However, both areas are suffering from the degraded fisheries as well as water shortages, and other infrastructure unmet needs.

AECOM would prepare a matrix of the cost savings potential and make recommendations about what efforts could accelerate technical readiness levels for identified innovations in order to drive down the cost of the system, and delivered water.

AECOM would also prepare a matrix of environmental and economic benefits and incentives that could be developed in cooperation with stakeholders

.

3. Planning and Design Process of Project

WHAT THE AECOM TEAM WILL DO

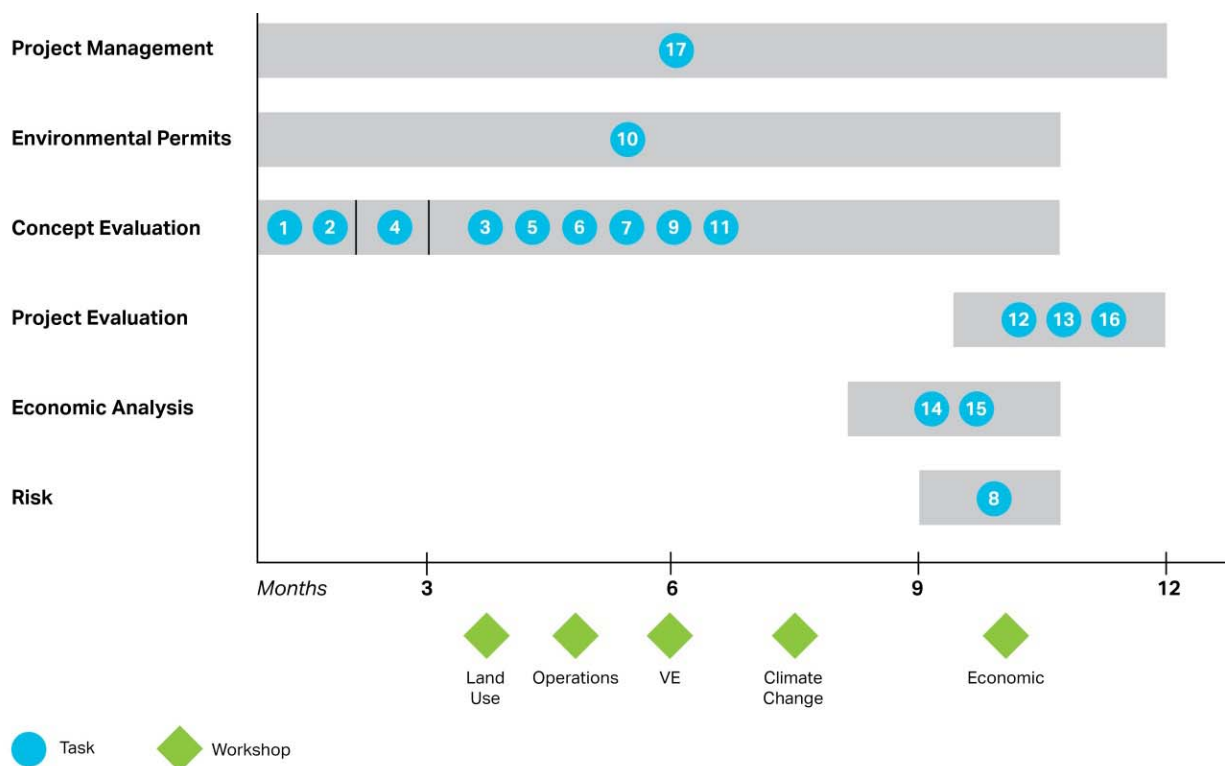
It will conduct a feasibility-level conceptual analysis of water importation projects at the Salton Sea referenced in the SSMP.

How the AECOM Team will do: The AECOM Team will scope out the tasks in collaboration with the California Natural Resources Agency to address the priorities of all stakeholders.

For each alternative, the scope of work will typically consist of the following tasks and shows AECOM is working this project from start to finish:

Figure 2 is a conceptual project road map, a high-level guide to how individual tasks could be integrated into one coherent whole. It provides team members and

Figure 2: Conceptual Project Roadmap



- Task 1 Review Relevant Information
- Task 2 Project Definition & Scoping with Stakeholder Workshops
- Task 3 Water Quantity/Quality Evaluation
- Task 4 Preliminary Geotechnical Investigation
- Task 5 Conveyance Pipeline Alignment Evaluation
- Task 6 Conveyance Pipeline Materials Evaluation
- Task 7 Project Energy Requirements and Energy Sources
- Task 8 Risk Evaluation and Mitigation

- Task 9 Flood Control/Climate Change Impacts
- Task 10 Environmental Impacts and Permitting
- Task 11 Land Use/Sustainability Impacts
- Task 12 Cross Border Government Coordination and Planning
- Task 13 Project Schedule
- Task 14 Pro Forma Economic Evaluation
- Task 15 Cost Estimates & Financing Plan
- Task 16 Project Execution & Debriefing Stakeholder Workshops
- Task 17 Project Management

stakeholders with the overall context within which their more specific priorities are outlined; this helps facilitate collaboration and establishes realistic expectations. Our road map also provides a realistic sense of which tasks are in the forefront and which in the background at any given time.

The roadmap assumes a 12-month study duration. Scope of work tasks are categorized into six major groups: project management, concept evaluation, environmental and permitting, risk analysis, economic analysis and project execution.

As shown on the project roadmap, our approach is based on a strong emphasis on workshop collaboration to create synergy between all team members.

AECOM would conduct 3-5 scoping workshops on the U.S. side and 3-5 scoping workshops on the Mexican side with stakeholders. **The AECOM Team would also conduct 3-5 Workshops in both the US and Mexican at the end of the study to debrief stakeholders on the findings of the feasibility study.**

AECOM would also conduct value engineering (VE) sessions on the innovations, solutions and alternative solutions selected for further consideration.

The Benefits of this Approach

The AECOM Team will to provide a matrix of the options and alternatives. It will provide an evaluation of the options based on technical and economic viability, and their ability to meeting the objectives of the program. The AECOM team will identify gaps and not-previously considered options that could be evaluated against the existing options, including the No-Action Alternative. Furthermore, the AECOM team understands that the success of project execution must include a financing plan that is sustainable.

4. Cost Projection

AECOM's construction consulting expertise includes cost-management services across project life cycles to reduce client risk, improve value and deliver positive outcomes in all sectors of the built environment.

We align ourselves around client sectors to provide industry-relevant advice and specialized expertise. Our integrated approach creates custom-made client teams that bring together technical delivery experts, strategists and other in-house specialists. We work together to achieve viable developments that capture client objectives through value-driven and efficient designs. Costs are controlled through rigorous change management and risk-management processes and reporting.

As one of the largest cost management consultancies, AECOM cost estimators have access to unprecedented cost data on projects across contexts and sectors. Based on that intelligence and analysis, we've developed industry-leading benchmarking data sets on a global basis. Along with our extensive experience and specialist knowledge of end markets and building types, we can provide more accurate advice on the cost implications of client requirements.

For the Salton Sea Water Importation Project, AECOM chief cost estimators will be assigned to develop planning-level cost estimates of various conceptual alternatives. They will leverage our extensive database of large, complex water infrastructure projects. They will be assisted by DDG and EMA, both of which will bring localized cost estimating expertise.

5. Plan for Funding of Proposed Project

Generally there is acknowledgment by the engineering community that it is technically possible to import water to the Salton Sea from the Sea of Cortez or the Pacific Ocean. The AECOM Team recognizes that there are technical, political and permitting challenges that are significant barriers to implementation. The AECOM Team is also committed to exploring alternatives to the "Sea to Sea" solutions that would be potentially more cost effective and sustainably finance-able. A big challenge for any solution for the Salton Sea has to be a sustainable and affordable financing plan. The AECOM Team will bring the necessary resources to develop a financing plan that can meet the goals and objectives for the Salton Sea. The AECOM Team will draw upon the expertise gained from other large water infrastructure of this scope and scale. For example, the AECOM Team would propose a close review of the Red Sea Dead Sea project in order to guide the financing plan for the Salton Sea.

Following are potential funding options to be considered.

5.1 DESCRIBE HOW THE LANNING, DESIGN AND CONSTRUCTION IMPLEMENTATION OF THE PROJECT WILL BE FUNDED.

It is assumed that the various stages of development of this project would involve different types of funding depending upon the stage of development, the potential revenue streams. It is also assumed that funding may come from the public sector, the private sector and not-for-profit or non-governmental organizations (NGOs) that would match up with each entities resources, objectives and parameters.

In 2003, the state of California assumed responsibility for the restoration of the Salton Sea, if restoration were determined to be feasible. Now, experts who have studied the Salton Sea – both environmental groups and academia – all believe that it is possible to restore the Salton Sea by making it smaller but sustainable. The state of California has the chance to redeem its promise to the people of the Imperial and Coachella valleys, to be their partner in a coordinated and collaborative program that will enhance their quality of life while restoring the natural environment and combatting climate change.

Salton Sea Restoration and Renewable Energy Initiative

<http://www.iid.com/energy/salton-sea-initiative>

Projects sited on exposed lakebed will serve a dual purpose: producing renewable energy while doubling as groundcover to mitigate air emissions. Under legislation enacted in 2013, planning and implementing projects at the sea will be driven locally by the Salton Sea Authority, with support from the State of California.

The Initiative will first focus on developing up to 1,700 megawatts of new geothermal energy at the Sea – enough to power more than one million homes. Not only is there more geothermal generating capacity in the Imperial Valley than anywhere else in the U.S., but geothermal energy can be produced with minimal impact on landscape and habitat. It also provides a steady, reliable source of energy to the state electricity grid that is not subject to weather or seasonal fluctuations.

The State of California has established Enhanced Infrastructure Districts

<http://www.eifdistricts.com> under SB628 and AB313.

It may be possible to create a binational Enhanced Infrastructure Finance District (EIFD) as a partial method and means to fund the development, construction and operation of the proposed Salton Sea Water Import Project.

Environmental Impact Bonds

An investigation undertaken by Encourage Capital and Squire Patton Boggs, in collaboration with the Walton Family Foundation, identified potential impact investments that could be successfully deployed to finance water resource solutions, generate related environmental benefits, and create a financial return. AECOM believes that the groundwork laid out in this report provides a method and means to analyze potential tools to address a variety of complex challenges. These tools could be adapted to address the issues relating to water importation for the Salton Sea. Some examples include the following:

Forest Health Environmental Impact Bond

Invest in pay-for-performance vehicle to reduce the risk of wildfires and increase watershed yield via forest thinning, with investors repaid through savings in fire suppression cost and avoided water risk.

- AECOM recommends evaluating this type of investment vehicle that could be adapted for the Salton Sea whereby investments in biofuel crop plantations on the Salton Sea exposed Playa, whereby the investors would be repaid through sale of harvested crops from the plantation. The technical details relating to the biofuel crops concept has been studied extensively in Imperial

County. Perhaps the project could be re-labeled: "Bio-Fuel Crop Plantation Environmental Impact Bonds." Another examples would be the recent ExxonMobil announcement regarding its investment in an algae biofuels facility at the Salton Sea. This project reportedly has the potential to cover perhaps 50 square miles of the exposed playa of the Salton Sea and generation significant economic activity for the region.

Riparian Restoration Environmental Impact Bond

Investing in a pay-for-performance vehicle to improve the ecosystem health and increase watershed yield through invasive species removal and riparian restoration.

- AECOM recommends evaluating this type of investment that could be adapted for the Salton Sea whereby investments would fund a conveyance line, rather than riparian corridor restoration. Perhaps the project could be re-labeled: "Sea to Sea Conveyance Environmental Impact Bonds." The investors would be repaid by governmental agencies responsible for the restoration of the Salton Sea, or other sources of revenues that could be based on increased tax base with resulting increase in economic development from the area.

Green Bond with Sustainability Conditions

Providing low-cost financing for municipal water infrastructure tied to environmental and sustainability conditions.

- AECOM recommends evaluating this type of investment that could be adapted for the Salton Sea. The investors would be repaid by governmental agencies or other sources of revenues including new sources of revenues based on increased

tax base with increase in resulting economic development for the region.

Water Funder Initiative

Excerpts from the Water Funder Initiative: The Water Funder Initiative (WFI) [www.waterfunder.org] has developed a "blueprint for funders interested in working on water in the West – and beyond." Its focus is the Lower Colorado River Basin. The foundations that are participating in the Water Funder Initiative include: S.D. Bechtel, Jr. Foundation, The Cynthia and George Mitchel Foundation, Walton Family Foundation, Energy Foundation, Pisces Foundation, Water Foundation, The William and Flora Hewlett Foundation, and the Rockefeller Foundation. The SSMP makes a reference to WFI committing \$10 million to the restoration of the Salton Sea.

The Water Funder Initiative's vision is to employ powerful, coordinated philanthropic action to shift the trajectory toward sustainable management in which:

- Clean water supplies are available for people and nature
- Freshwater ecosystems are recovering
- Cities, agriculture, rural communities, and industry continue to thrive by proactively managing the water supply

Projects considered for funding must achieve two goals:

1. Bring basins into balance for people and nature. Projects that use existing supplies more carefully so that, over the long term, no more water is consumed than is available and our supplies support vibrant ecosystems, communities, and economies.
2. Strengthen resilience of water systems in a 21st century climate. Extremes are becoming the norm as the planet warms,

and many of climate change's impacts will manifest through the hydrological cycle. Water projects are needed that are flexible and resilient enough to cope with times of water stress and mitigate risks to water users.

The WFI has determined that conditions are ripe in the Lower Colorado River Basin to advance the goals of balance and resilience at scale. It has identified the near-term window of opportunity in the Lower Colorado that has arisen from several factors: A 15-year drought; a confluence of deadlines in 2017 that can be leveraged to build political will for change.

AECOM proposes to become engaged with WFI to determine how they might be able to fit into the Salton Sea Water Importation Planning and Implementation program.

International Funding Institutions (IFI)

In addition, there are multiple entities that could participate in the funding of a proposed water import project relating to the Salton Sea. It is proposed that an appropriate approach would be similar to the Dead Sea to Red Sea project that is presently on-going right now and funded by the World Bank, and others.

<http://www.waterworld.com/articles/wwi/print/volume-28/issue-6/technology-case-studies/water-provision/green-light-for-red-dead-sea-pipeline-project.html>

http://siteresources.worldbank.org/EXTRED/SEADEADSEA/Resources/5174616-1416839444345/SoA-FINAL_March_2014.pdf

For portions of the project that are on the Mexican side, it is assumed that international development funding entities would be available.

Development Banks include but are not limited to:

World Bank (WB)

<http://www.worldbank.org/en/what-we-do>

The World Bank provides funding for development projects via traditional loans, interest-free credits, and grants.

International Finance Corporation (IFC)

http://www.ifc.org/wps/wcm/connect/corp_ext_content/ifc_external_corporate_site/home

Provides investment, advice, and asset management offerings.

International Bank for Reconstruction and Development (IBRD)

<http://www.worldbank.org/en/who-we-are/ibrd>

Provides loans, guarantees risk management products and advisory services

Inter-American Development Bank (IDB)

<https://www.iadb.org/en>

IDB is a leading provider of development financing to Latin America and the Caribbean. It is a source of loans, grants and guarantees to sovereign and private sector clients.

Inter-American Investment Corporation (IIC)

<http://www.iic.org/en>

The Inter-American Investment Corporation (IIC), a member of the IDB Group, is a multilateral organization based in Washington, D.C., that is committed to the development of Latin America and the Caribbean through the private sector.

As part of its mission, the IIC supports the private sector and state-owned enterprises

through financing in the form of loans, equity investments, and guarantees. The IIC also partners with clients to provide advisory and training services. In January 2016, the IDB Group consolidated its private sector operations in the IIC to better serve the region, clients and partners, and to maximize its development impact. The consolidated IIC offers the full array of private sector products and services previously offered across the IDB Group.

International Development Association (IDA)

<http://ida.worldbank.org/about/what-ida>

IDA provides loans ("credits") and grants for programs that boost economic growth, reduce inequalities, and improve people's living conditions. IDA can lend monies on concessional terms, meaning that IDA credits have a zero or very low interest charge and repayments are stretched over 25 to 40 years, including a 5- to 10-year grace period. IDA also provides grants to countries at risk of debt distress.

The Development Bank of Latin America (CAF)

<https://www.caf.com/en/about-caf/what-we-do/>

CAF can provide, loans, financial consultancy, partial guarantees, guarantees and collaterals, structured financings, stock ownership, treasury services, credit lines, technical cooperation.

<https://www.kfw.de/KfW-Group/>

North American Development Bank (NADBank)

<http://www.nadb.org>

NADBank is authorized to provide financing, technical assistance to support the development and implementation of infrastructure projects that help preserve,

protect, and enhance the border region in order to advance the well-being of the people of the United States and Mexico.

United States Agency for International Development (USAID)
<https://www.usaid.gov>

USAID's efforts in water resources management focus on sustaining watersheds and aquatic ecosystem services as the foundation for sustainable development. The Agency explores opportunities to restore and protect natural systems while using science to inform decision-making and helping to strengthen governance frameworks.

United States Trade Development Agency (USTDA)
<https://www.ustda.gov>

USTDA can provide feasibility study funding for projects that are located in Mexico, but provide export opportunities for US goods and services.

Multilateral Investment Guarantee Agency (MIGA)
<https://www.miga.org/who-we-are>

The mission of MIGA is to promote foreign direct investment (FDI) into developing countries to help support economic growth, reduce poverty, and improve people's lives.

Overseas Private Investment Corporation (OPIC)
<https://www.opic.gov>

OPIC provides financial products, such as loans and guaranties; political risk insurance; and support for investment funds, all of which help American businesses expand into emerging markets. By mobilizing private capital to help solve critical development challenges, OPIC advances U.S. foreign policy, and catalyzes revenues, jobs and growth opportunities both at home and abroad.

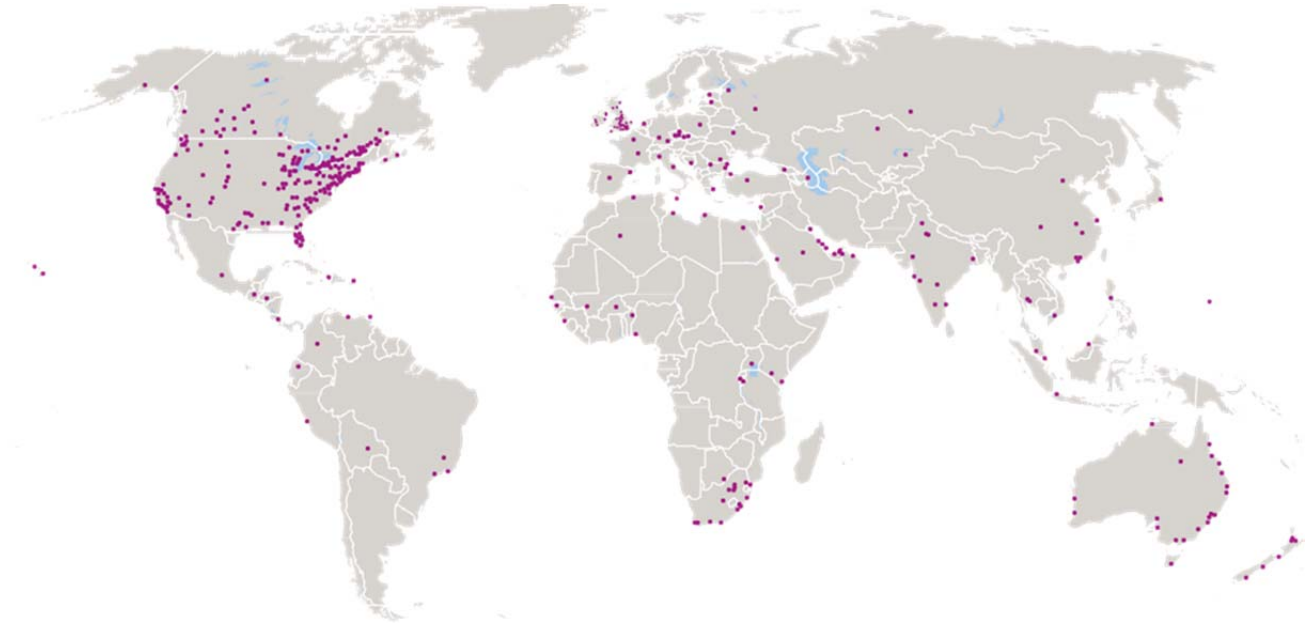
Export-Import Bank of the United States (EXIM)
<https://www.exim.gov>

EXIM provides trade financing solutions – including export credit insurance, working capital guarantees, and guarantees of commercial loans to foreign buyers – to empower exporters of U.S. goods and services.

5.2 RESPONSIBLE PARTIES FOR THE OPERATIONS AND MAINTENANCE OF THE PROJECT AND ESTIMATED ANNUAL COSTS

Included in our evaluation of alternative concepts for the Salton Sea Water Importation Projects, we will develop an operations plan, including a management structure and estimated operation and maintenance costs.

Attachment A – AECOM Qualifications



Ecosystem Restoration Services

- Environmental Permitting and Compliance Monitoring
- Feasibility Studies of Lakes and Watersheds
- Ecosystem Restoration Program Design and Supervision
- Water Supply Protection and Enhancement
- Stormwater Evaluation and Management
- Non-point Source Pollution Control Programs
- Biological and Chemical Monitoring Programs
- Wetland Assessment, Restoration, and Creation
- Public Education Programs

ABOUT AECOM

AECOM is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation and technical excellence in delivering solutions that create, enhance and sustain the world's built, natural and social environments. A Fortune 500 company, AECOM serves clients in approximately 125 countries and has annual revenue in excess of \$7.7 billion. More information on AECOM and its services can be found at www.aecom.com.

AECOM'S GLOBAL ENVIRONMENTAL PRACTICE

We understand the value of the natural environment and the need to minimize impacts from society and industry. As one



of the world's leading consultancies, AECOM's 5000 talented environmental professionals have a long history of providing solutions for private and public clients around the world. We offer a complete range of EHS services delivered by talented, responsive environmental professionals who are closer to our clients' sites and facilities and possess knowledge of local and regional requirements.

Our commitment to you as a client has strengthened as we harness the capabilities of AECOM around the world. Our global team of environmental management professionals is ready to meet your needs and provide service that exceed your expectations and ensure your projects' success.

AECOM's Environmental practice has been a leader in the field of ecosystem restoration for over a decade, and is recognized as a global leader in sustainable water and natural resources solutions and services. Our excellence in this field has facilitated our assisting private and public-sector clients to protect valuable ecosystems and comply with a litany of federal, regional, and state regulations. Ecological restoration and related wetland consulting services is a primary technical

discipline and service line for AECOM. Our senior restoration scientists and engineers are on the forefront of complex ecological restoration projects, and have provided input into national and regional restoration regulatory and mitigation frameworks. AECOM has not only permitted and designed ecological restoration projects of all sizes but has provided construction and/or construction management services on literally dozens of ecological restoration and wetlands remediation projects.

Pollution, construction, habitat and hydrologic modification, watershed development and other human-related activities have resulted in the loss and degradation of coastal, aquatic, and terrestrial ecosystems. AECOM understands the ecological and public benefits of restoring degraded ecosystems, the regulatory driving forces that require restoration, and the advantages of applying restoration as a mitigation measure for proposed construction, dredging, and other projects resulting in a net positive environmental effect. Moreover, ecosystem restoration is highly cost-efficient for our clients, as money is often available for restoration projects through government matching funds, government in-kind

participation, and NGO and other corporate partnerships.

AECOM provides unmatched ecosystem restoration capabilities and experience. We apply innovative strategies to construct, enhance and restore impaired ecosystems. To perform restoration projects, AECOM provides a staff of hundreds of aquatic, wetland, and terrestrial ecologists; wildlife scientists; specialists in threatened and endangered species; surface water and groundwater hydrologists; hydraulic engineers; geologists; and design engineers including nationally and regionally-recognized technical experts. The broad skill mix that we offer allows us to cost-effectively design and perform large and small projects.

AECOM offers a full range of ecosystem restoration services for aquatic water bodies, wetlands, shorelines and river banks, and terrestrial habitats and wildlife.

ENVIRONMENTAL STEWARDSHIP AND COMMITMENT TO RESTORATION

AECOM views environmental stewardship as the bringing together of cultural, business, and scientific interests to fulfill our role in conserving and enhancing the animals, plants, and natural communities that are the world's environmental resources. Environmental stewardship is an important component of good corporate



citizenship. We develop sustainable, economical, and respected environmental stewardship programs for our client's operations, customers, and employees.

	Habitat Improvement	Habitat Creation	T&E Species Mitigation	Invasive Species Control	Migration Enhancement	Shoreline/Bank Stabilization	Water Quality Restoration	Sediment/Soil Remediation	Pollutant Source Control	Hydrologic Improvement
Freshwater Wetlands	●	●	●	●	●	●	●	●	●	●
Rivers & Streams	●	●	●	●	●	●	●	●	●	●
Lakes	●	●	●	●	●	●	●	●	●	●
Salt/Coastal Marshes	●	●	●	●	●	●	●	●	●	●
Estuaries & Coastal Waters	●	●	●	●	●	●	●	●	●	●
Terrestrial/Upland Habitats	●	●	●	●	●	●	●	●	●	●

AECOM's ecosystem restoration practice helps clients implement effective environmental stewardship and sustainability programs.

AECOM is committed to the protection and restoration of wetlands, freshwater aquatic, coastal, and terrestrial ecosystems. We actively support organizations such as the Nature Conservancy and Donald Bren School of Environmental Science & Management. AECOM also took a leadership role in the founding of the Coastal America Corporate Wetlands Restoration Partnership (CWRP), a public-private coalition focused on protecting, enhancing and restoring wetlands and other aquatic habitats. AECOM continues active involvement in both the CWRP National Advisory Council and several state CWRP chapters and activities in New York, New Jersey, California, Texas, Massachusetts, Connecticut, Rhode Island, Maine, and Alaska.

Coastal Habitats

Development activities have led to a net loss of wetlands in the U.S. A change in

policy to “no net loss” of wetlands within the past several years has resulted in the encouragement of wetlands restoration, construction and banking, and mitigation against further wetland losses.

AECOM’s large nationally renowned wetland services staff includes over 10 senior Professional Wetland Scientists (PWS) and USACE-Certified Wetland Delineators. Many of our senior PWSs are national and regional wetland experts who have published and presented extensively on wetlands delineation, remote sensing, regulatory policy, functional assessment, mitigation and restoration. Our staff has provided wetland services since the inception of the Clean Water Act, and has completed more than 10,000 wetlands projects including hundreds of restoration, construction, and mitigation projects involving:

- Enhancement of ecological functions and values

AECOM has performed hundreds of wetlands restoration, construction and mitigation projects.



- Wildlife habitat improvement
- Endangered species mitigation
- Improvement of hydrologic balance and hydroperiod
- Created or enhanced wetlands for pollutant removal
- Invasive species control

AECOM emphasizes a wetlands restoration process that identifies objectives, and key structural and functional goals from the outset to facilitate effective planning and design. We have prepared restoration plans for projects involving wetlands impacts related to development, infrastructure, maintenance or remediation purposes. Our full range of services include project scoping and regulatory negotiation, hydrologic regime assessment, conceptual design, final design engineering and modeling, specification development, planting and soils plan development and monitoring. To support these projects, AECOM uses and maintains a wide variety of engineering, graphical, modeling, and GIS-based tools.

With the majority of the U.S. population located within 50 miles of the coast, stress on the coastal ecosystem has resulted in a loss or degradation of coastal marshes, benthic habitat such as eelgrass beds, and beach systems. Our capabilities and experience in restoring all components on the coastal ecosystem include:

- Coastal marsh restoration and construction
- Tidal gate design
- Coastal benthic habitat – eelgrass restoration
- Coastal water quality restoration
- Beach nourishment and dune restoration
- Artificial reef design

Coastal marshes are a critical part of the marine ecosystem providing habitat and a nursery area for numerous marine species as well as flood storage and protection. AECOM's range of services for salt marshes include monitoring, evaluation of habitat function and value, assessment of invasive species impacts, coastal hydrodynamics



assessment, modeling of tidal flushing and salinity gradients, prediction of flooding potential and abatement, and development of enhancement and restoration methods. Our scientists integrate an understanding of salt marsh ecology with tools such as GIS and digital terrain and tidal hydrodynamic models to restore and protect coastal wetland systems.

One of our specialties for coastal marsh restoration is the design and installation of tidegates which are used to restore coastal systems with roadway and causeway culverts that have caused tidal restrictions and prevented tidal natural cycling, thus altering the hydrology and habitat of coastal marshes. Our tidegate designs consider the need for free tidal flows during normal tidal cycling, while preventing inundation by extreme high tides and storm surges. Tidegate design requires detailed computer analysis of hydraulic operation under dynamically changing headwater and tailwater elevations, encompassing the simulation of both normal tidal cycles and storm events.

Pollution, sediment deposition, and construction activities have resulted in the degradation of the quality of coastal waters and a loss of important coastal benthic habitat such as submerged aquatic vegetation (SAV) beds. AECOM's staff includes recognized benthic scientists led out of our Marine and Coastal Center in Woods Hole, MA including the current President of the New England Estuarine Research Society. We evaluate the density and diversity of benthic biota, habitat function and value, and the effects of stressors on benthic biota. AECOM's benthic staff has performed eelgrass assessments and habitat management studies in Nantucket Harbor, MA and along the shore of Cape Cod, MA studies as well as benthic assessment studies throughout the world.

AECOM's capabilities include the restoration of the quality of coastal waters from stressors such as pollutant discharges, oil spills, and contaminated sediments. For these projects, we provide a range of services including the installation of long-term water quality monitoring



instrumentation; focused water and sediment quality surveys; hydrodynamic, water quality, and sediment transport modeling; assessment of water sediment quality impacts on marine biota; and the development of contaminated sediment remediation measures and pollutant discharge limits that are protective of marine life. Our experience includes a wide range of inorganic and organic water quality parameters and types of pollutant sources.

Storm-induced beach erosion and loss of dune habitat are important concerns associated with beach systems. AECOM has expertise in predicting coastal flooding and shoreline dynamics. Our staff provides capabilities and experience in coastal geomorphology, beach nourishment, and dune restoration for restoring beach systems. We have performed existing conditions analyses and resource delineations of coastal beach systems; wave diffraction, refraction, height and runup studies and modeling; longshore sediment transport and shoreline dynamics modeling; and dune and bank stabilization assessment and design.

Freshwater Aquatic Habitats – Rivers, Streams and Lakes

AECOM has performed hundreds of lake and other aquatic restoration projects.

Freshwater aquatic systems such as rivers, streams, lakes, and ponds have been impacted by numerous stressors, including water and sediment pollution, habitat and hydrologic modification, and invasive and exotic species. AECOM has performed hundreds of projects and is a nationally recognized leader in the assessment and restoration of lake and ponds. Our staff includes Certified Lake Managers and the current President of the North American Lake Management Society (NALMS). Several of our lake restoration projects have received NALMS Achievement awards. AECOM also has substantial experience in restoring rivers and streams, including habitat restoration and watershed-based Total Maximum Daily Load (TMDL) restoration studies of over 50 river systems. Watershed management is typically an important component of our aquatic system restoration projects.

AECOM's staff includes fisheries scientists, benthic macroinvertebrate specialists, limnologists, riparian community experts, terrestrial and wetland ecologists, civil and environmental engineers and water



chemistry specialists. The level of multi-disciplinary expertise and experience in aquatic restoration possessed by AECOM staff allows us to design and implement successful restoration programs involving a combination of the following aquatic restoration techniques and watershed management components including:

- Assessment and mitigation of water quality and ecological impacts associated with discharges and non-point source runoff.
- Nutrient/eutrophication assessment and control including plankton, periphyton and benthic investigations for source specific identification.
- Agricultural and industrial management strategies and land use planning for pollutant source reduction and water quality improvement.
- Assessment, design, implementation and monitoring of sediment dredging programs for sediment quality and habitat restoration.
- Stream habitat enhancement featuring boulders, shading, plunge pools, riffles and runs.
- Exotic and invasive species control using mechanical weed harvesting, chemical applications, and bottom weed barriers.
- Design and installation of aeration systems to improve oxygen levels for fisheries and suppress the growth of nuisance algae.
- Selection of optimum vegetation for freshwater edge habitat, emphasizing indigenous species that provide a wide range of ecosystem functions.
- Streambank and slope stabilization and wildlife enhancement projects including substrate design.
- Riparian buffer zone design and management to protect streambanks and reduce pollutant runoff into rivers.

STAFF

	Years of Experience	Wetlands	Freshwater Aquatic Habitat	Watershed Management	Coastal Habitat	Terrestrial/Upland Habitat	Habitat Improvement	Habitat Creation	T&E Species Mitigation	Invasive Species Control	Treatment Wetlands	Environmental Permitting	Water Quality Restoration	Sediment/Soil Remediation	Pollutant Source Control	Hydrologic Assessment
Christine Archer	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Kathryn Barnicle, PWS	24	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Rollin Daggett	35	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Matt Devin	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
R. Scott Egan, CPSS	21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Gary Epp, M.Sc., Ph.D.	28	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Vic Frankenthaler	27	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
William Gorham, Ph.D.	28	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Jim Herberich	24	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Tom Keough	14	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Dennis Lowry, PWS	31	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
James Mansky	30	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Justin Mosquera, CSP	12	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Nancy Palmstrom	25	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Stuart Paulus, Ph.D.	36	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Terry Ramborger, CPSS, CWS	21	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Ken Redinger, PWS	16	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
John Rollino	17	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Donald Schall	40	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Frank Smolenski	36	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Carl Tammi, PWS	23	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Kris vanNaerssen	10	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

PROJECTS

HUDSON RIVER HABITAT RESTORATION

Project Results

Restored 8 acres of submerged aquatic vegetation beds, using a new process that improved safety and planting efficiencies

Client

Fortune 500 Company

Location

New York, USA

Contract Value

\$2MM

Years

2010

Project Overview

AECOM developed a targeted and efficient approach for habitat restoration in the Hudson River to support the largest dredging project ever undertaken in United States history, a Superfund project that will remediate 1.3 million pounds of PCBs in the river streambed. In this highly visible project, AECOM prepared work plans, planted more than 100,000 submerged and floating aquatic plants over 8 acres, and constructed 0.5 acres of native riverine fringe wetlands.

Client Benefits

- Innovative subaquatic planting system enhanced project safety and efficiency
- Use of locally harvested native plant sources minimized introduction of invasive species and optimized quality of transplanted materials
- Excellent safety performance—12,530 hours of accident-free work, with 450 hours underwater

Work Performed

AECOM recently completed a large Hudson River habitat restoration project associated with remedial site closure of a major polychlorinated biphenyl (PCB) site. The project restored submerged aquatic vegetation (SAV) habitats and riverine fringing habitats with an innovative and focused revegetation program along portions of the river. The project team installed native species of plants following remedial dredging, in close coordination with the site Remediation Manager and U.S. Environmental Protection Agency (USEPA)/New York State Department of Environmental Conservation (NYSDEC) approvals. Planting was conducted in multiple reaches of the Upper Hudson River in the vicinity of Ft Edward, NY during the summer of 2010.

Prior to mobilizing to the site, AECOM prepared and submitted a series of work plans for review by the client and



EPA/NYSDEC. The work plans detailed each stage of the project: how native plant species would be sourced, transported to and maintained at the site; how they would be planted from a floating planting platform in the Hudson River; and how the plants would be monitored. Similar work plans were prepared for the riverine fringe wetland (RFW) planting process.

To enhance the safety and efficiency of the SAV planting process, AECOM developed a new planting system using an adjustable planting platform that allowed precision planting in both narrow and wider stretches of the river, as well as the efficient delivery of SAV to commercial divers. Pilot testing of the planting platform in Fall 2009 permitted a series of improvements for anchoring the barge and communication between the divers and their on-platform dive tenders. More than 450 hours of underwater work was completed.

The SAV planting was conducted when Hudson River flows were below 10,000 cfs and weather conditions permitted unobstructed navigation of the Hudson River. Three native species (wild celery, water lily, and American pondweed) were used to revegetate the river. Wild celery was harvested locally from a Hudson River feeder canal. SAV planting units were assembled on-site and staged temporarily

in holding tanks with circulating river water. All SAV plants were installed by commercial divers on two foot centers in depths of 2-8 feet of water. Divers were in constant audio contact with their dive tenders on the planting platform and select divers were instrumented with underwater video cameras to document planting activities. Vegetation planted in water depths less than 2 feet were planted by hand via shoreline access.

The RFW planting and seeding focused on 3 separate areas totaling approximately 0.5 acres. Species planted in RFW areas included: great burweed, white water lily, wild rice, pickerelweed, and broad-leaved arrowhead, as well as a multi-species native wetland seed mix.

AECOM implemented a periodic monitoring and maintenance program for both SAV and RFW, to document growth, remove any invasive exotics, and to replace RFW plants that did not survive or incurred excess herbivory. In addition, an extensive quality assurance and control system verified the quality of plant material, planting processes, and plant growth. The project team prepared daily, weekly, and bi-weekly logs (including underwater video logs) to document safety activities, site personnel and equipment, on-water permits, planting locations, number and type of plants

installed, and future planned activities.



SAN JACINTO SALT MARSH RESTORATION

Project Results

Restoration of more than 200 acres of tidal marsh habitat and the prevention of future marsh subsidence and erosion

Client

Duke Energy

Location

Texas, USA

Contract Value

\$50K

Project Overview

AECOM worked in partnership with Duke Energy to lead a tidal marsh restoration program at the 1,200-acre San Jacinto Battleground State Historic Site, one of the most popular tourist sites in Texas. The project was conducted under the sponsorship of the Texas Corporate Wetlands Restoration Partnership (CWRP), a private-public partnership dedicated to restoring degraded wetlands, rivers, and fish and wildlife habitat in Texas. AECOM and Duke Energy recruited other companies and federal and state agencies to participate in the restoration program.

Client Benefits

- Restoration of 200 acres of coastal marsh habitat
- Significant recreational opportunities established
- Project awarded the 2004 Coastal America Partnership Award

Work Performed

The San Jacinto site features a diversity of native wildlife and coastal habitats, including a coastal marsh. Pumping of groundwater near the site had previously led to ground subsidence and conversion of the marsh to open water.

AECOM's work included restoration of more than 200 acres of tidal marsh habitat and implementation of measures that will prevent future marsh subsidence and erosion. In addition, work included restoration of upland terrestrial habitat, including prairie grasses and trees, and development of a 3-mile interpretive trail with a boardwalk, observation decks, kiosk exhibits, outdoor classroom, and an educational and outreach program. Observation decks and outdoor classrooms constructed along the new interpretive trail provide vantage points for wildlife watching and educational opportunities.



STILL RIVER HABITAT RESTORATION

Project Results

Dramatic improvements to the ecological habitat of several reaches of the river by river bank stabilization and identification and implementation of storm water management improvements

Client

City of Danbury

Location

Connecticut, USA

Contract Value

\$50K

Project Overview

AECOM conducted the Still River Restoration Project to improve conditions along the Still River, which had experienced flooding and erosion along developed reaches in the City of Danbury, Connecticut. AECOM incorporated bioengineered measures to enhance fisheries habitat, including development of a demonstration project to stabilize and enhance wildlife along a reach of river bank by placing a tree trunk/root wad revetment treatment. The project resulted in dramatic improvements in the ecological habitat of several reaches of the river.

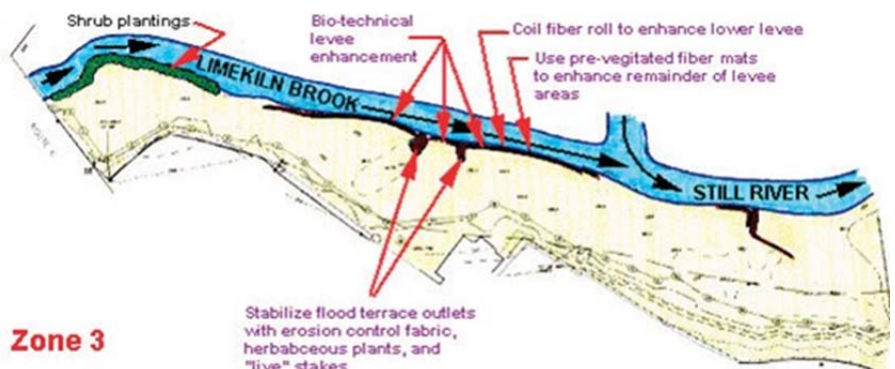
Client Benefits

- Riverine aquatic habitat restoration
- Aquatic biology impairment assessment
- River bank bioengineering stabilization
- Stormwater management and treatment

Work Performed

AECOM provided conceptual design development and review, final design development, and preparation of construction documents, and permit application documentation. Specific tasks included:

- Identification of appropriate stabilization areas.
- Development of alternative stabilization measures.
- Design of "storm water treatment zones", in which runoff from piped and non- point source discharges can be treated prior to discharge to the Still River, and where wildlife habitat can be enhanced.
- Used bio-technical materials, such as coir-fiber fascines and other erosion control products, together with wetland plantings, to enhance storm water retention. Once retained, storm water was treated in depression areas through settling, vegetative filtration, and nutrient uptake.
- Regulatory permitting support.
- Provision of advisory services during the installation of the improvements.



WATER QUALITY RESTORATION IN ASSABET RIVER WATERSHED

Project Results

Technically defensible study featuring extensive public consultations positioned the client to achieve water quality goals for the river

Client

State Agency

Location

Massachusetts, USA

Contract Value

\$250K

Project Overview

AECOM conducted a major Watershed/Total Maximum Daily Load (TMDL) project focused on the restoration of the Assabet River's water quality. The project was undertaken due to frequent occurrences of low dissolved oxygen (DO) concentration and the presence of nuisance aquatic vegetation during the summer from excess nutrient loading. AECOM designed and conducted an extensive field program to assess water quality impairment, applied a hydrologic and water quality modeling application to support the study, evaluated nutrient load reduction alternatives to meet water quality goals, and collaborated with stakeholders as part of an extensive public consultation process.



Client Benefits

- Extensive public consultation and collaboration with stakeholders resulted in successful process focused on solving watershed problems
- Water quality model accepted by state regulatory agency and used to evaluate nutrient load reduction alternatives
- Technically-defensible load reduction program achieved water quality goals while minimizing client costs
- Rapid evaluation of over 30 load reduction scenarios facilitated a successful outcome in a desirable timeframe

Work Performed

AECOM designed and conducted an extensive field program to quantify dynamic nutrient loadings from point and non-point sources, and applied hydrologic and water quality modeling applications to predict dynamic in-stream water quality to enable evaluation of management plans. As part of the project, AECOM:

- Designed and performed a field assessment featuring wet- and dry-weather loading surveys, sediment nutrient flux surveys, dye studies, and biomass surveys.

- Calibrated and applied the Hydrological Simulation Program - FORTTRAN (HSPF) water quality model to dynamically simulate flow, DO concentration, nutrients, biomass and other parameters throughout the watershed/river.
- Applied the water quality model to evaluate more than 30 alternative nutrient point and non-point source load reduction scenarios to achieve river water quality goals.
- Conducted more than 20 public meetings, collaborated with a diverse group of stakeholders, and provided compelling results focused on solving watershed problems.

accepted by state regulatory personnel and applied to evaluate alternative allocation scenarios. Alternative nutrient load reduction alternatives considered include reduction of POTW effluent loadings, implementation of BMPs for non- point sources, and the removal of dams.

AECOM coordinated with interested parties to identify and evaluate TMDL allocation and management alternatives designed to meet the river's water quality goals. The Assabet River TMDL water quality model was



LAKE WACO WATERSHED/ WATER QUALITY RESTORATION

Project Results

Water quality enhancement and improvements to lake and adjoining river that serves as a potable water supply

Client

Local and Federal Agencies

Location

Texas, USA

Contract Value

\$400K

Years

2006–Present

Client Benefits

- Compliance with the TMDL for an adjoining river
- Improved quality of raw water used as a potable supply source
- Problem-solving approaches and experience with controversial issues led to development of reasonable goals and solutions

Work Performed

AECOM's work expanded on an existing TMDL and provided a management plan for long-term and interim enhancement of water quality. The \$2M project was funded by municipal and federal (EPA and USACE) agencies, and conducted in cooperation with a municipality and a university.

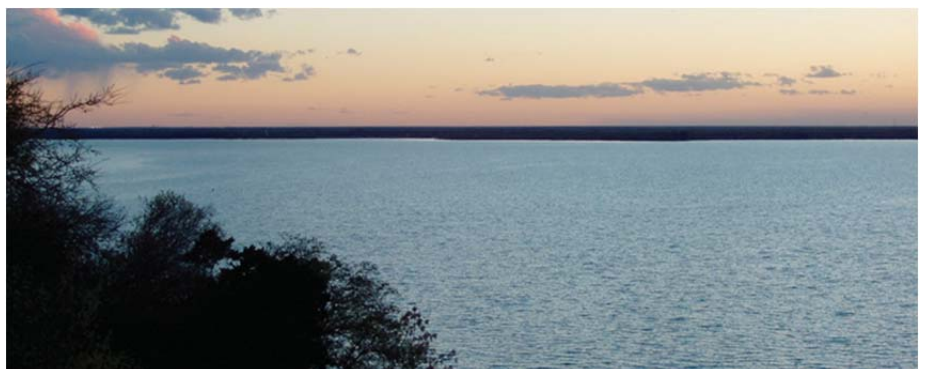
Project Overview

AECOM led a team that conducted a Lake and Watershed Total Maximum Daily Load (TMDL) Study, which included a water quality and aquatic biology impairment assessment, a determination of sediment nutrient loading, and development of point source and agricultural NPS load reduction alternatives.

Implementation of the management plan will achieve compliance with the TMDL for an adjoining river used as a potable supply source.

The lake has a large watershed and shallow morphometry. Nutrient inputs from dairy farms, wastewater discharges, and widespread runoff from urban and rangeland areas cause dramatic and undesirable changes in water quality. These nutrients lead to algal outbreaks that further degrade water quality.

Management of sources in the watershed has been highly contentious, and AECOM used its knowledge of lake and watershed management, experience with water supplies, and problem-solving approach to complex water management issues to focus



on developing reasonable goals and effective solutions.

The AECOM team carried out multiple specific investigations, including:

- Documentation of the history of lake limnology.
- Assessment of lake nutrient inputs and internal recycling.
- Review of past TMDL efforts.
- Collection of field data, including in situ nutrient data.
- Evaluation of watershed inputs and the processing of those inputs as water and loads move through the lake.
- Development of a management plan.
- Coordination of efforts among all parties.

The effort resulted in a comprehensive plan that will guide future reservoir and watershed management. Implementation of the management plan will achieve compliance with the TMDL for the adjoining North Bosque River and improve the quality of raw water used as a potable supply source.



CONSTRUCTED WETLAND TREATMENT FOR NITRATE REMOVAL

Project Results

Feasibility study and conceptual design for constructed wetland treatment of high nitrate levels

Client

Steel Processing Plant

Location

Indiana, USA

Contract Value

\$10K

Years

2005

Project Overview

AECOM conducted a feasibility study and prepared an innovative conceptual design for a constructed treatment wetland system to remove very high concentrations of nitrate from process wastewater at a steel processing plant.

Client Benefits

- Reduced the costs associated with traditional treatment methods such as off-site treatment removal
- Integrated a sustainable solution to a costly byproduct of manufacturing
- Strengthened regulatory agency's perception of commercial processing plant

- Enabled opportunities for grant funding for innovative environmentally friendly approach

Work Performed

A client's use of nitric acid during its pickling process resulted in excess nitrate loadings. To remedy this, a kinetic modeling equilibrium study was performed to determine aqueous nitrate biosorption by wetland herbaceous growth. The conceptual modeling design used first-order rate (K) equations with design guidance for aqueous nitrate.

AECOM's analysis including plotting % nitrate reduction vs. area while considering hydraulic residence time and hydraulic loading rate. The system was sized to handle significant nitrate quantities: 1.5 mgd and nitrate-nitrogen concentrations approaching 1000 mg/l.

Based on its findings, AECOM prepared a conceptual design for a Subsurface- Flow (SSF) wetland to receive gravity flow prior to discharge to a major waterway. We demonstrated that up to 90% removal would be realistic given land-use and cost factors. AECOM also evaluated other concerns, including:

- High levels of TDS
- Carbon additions to promote denitrification
- Sulfate interactions
- Phosphorous additions



72-INCH SIMPSON STUART WATER TRANSMISSION MAIN IMPROVEMENTS

Project Results

Prime for pre-engineering activities, preliminary engineering design services, Preliminary Design Report, and emergency repairs/response

Client

Dallas Water Utilities

Location

Texas, USA

Contract Value

\$850K

Years

2011 – 2013

Erosion along the banks of the Trinity River and Five Mile Creek was close to the Simpson Stuart Water Transmission Main, which was at risk of failure due to lack of cover.

Constructed in 1960, the 12-mile-long, 72-inch-diameter water transmission main provides water to the southern Dallas Water Utilities (DWU) service area. AECOM evaluated and designed alternatives for repair or replacement of the alignment. Several options were evaluated to protect the pipeline and to minimize impact to the surrounding community. Options varied from pipe relocation to bank stabilization. An electromagnetic (EM) inspection was performed. Only six joint locations were found to be distressed, indicating the line was in good condition, and, making the pipe replacement option less desirable. AECOM also completed a geotechnical investigation, including drilling borings ranging from 50 to 90 feet at eight locations.

The team also performed cathodic protection and extensive potholing, utility investigation, and traffic control mitigation services.

Using the results of the soils investigation, cost analysis, EM results, and long-term client interests, bank stabilization in the form of rock anchors and gabions was ultimately recommended. This cost-effective approach was estimated to save over \$13M in construction costs as compared to replacement of the pipeline.

Relevance

DWU benefited from a short construction period with minimal interruption to the operation of the 72-inch-diameter transmission main.



The EM technology allowed DWU to confirm, on site, that the correct pipe segments had been located. This turnaround was critical to help minimize pipeline shutdowns.

LAKE TAWAKONI PIPELINE REPAIRS

Project Results

Pre-engineering activities, preliminary engineering design services, Preliminary Design Report, final design

Client

Dallas Water Utilities

Location

Texas, USA

Contract Value

\$2M

Years

2004

DWU was in great need of rehabilitating their pipeline system in the long-term to facilitate a more reliable water supply for Dallas' dense population.

AECOM was responsible for the planning and design of approximately 32 miles of 120- and 96-inch-diameter water transmission mains, as well as the repair and replacement of 6,440 feet of 84-inch diameter. The project also included the construction contract bid and award, material procurement, and construction phase services to facilitate the repair of 322, 20-foot-diameter segments located at 83 sites along the 15-mile-long pipeline. This fast-track project had a three month schedule to fully operate the pipeline before the summer peak. Design services consisted of review and evaluation of inspection data, cathodic protection, aerial and ground surveying, and preparation of contract bid documents.

Relevance

Successful large diameter repairs that will help meet long-term reliable supply of water to the most heavily populated areas of Dallas County.



AECOM completed the fast-track repair and replacement of the Lake Tawakoni 84-inch-diameter main on time and within budget.

ETIWANDA PIPELINE LINING ANALYSIS

Project Results

Forensic study and pre-engineering activities

Client

Metropolitan Water District of Southern California

Location

California, USA

Contract Value

\$220K (study only)

Years

2008 - 2010

When the Etiwanda pipeline failed in 2008, Metropolitan hired AECOM to evaluate and perform a forensic study of potential repair methods for the damaged mortar lining.

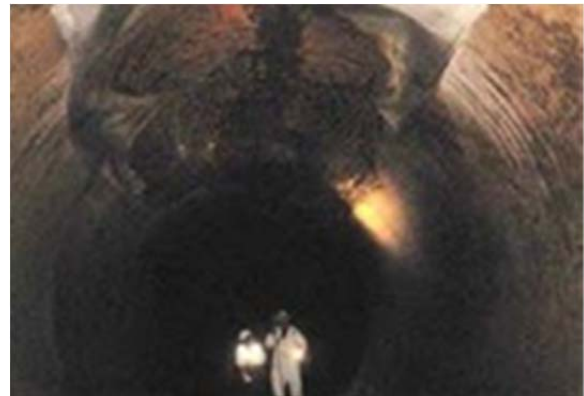
The 12-foot-diameter Etiwanda Pipeline mortar lining had fallen off or was delaminated from the pipeline's interior surface. Loss of the mortar lining exposed the pipeline to accelerated levels of corrosion and to eventual leakage. The welded steel pipeline, approximately 6.4 miles long, conveys State Water Project flows from the Department of Water Resources' Devils Canyon facility via the Rialto Pipeline to The Etiwanda Hydroelectric Plant, which generates as much as \$8.3M in annual revenue under peak flow conditions.

During a December 2008 shutdown, it was discovered that approximately 245 locations of the Etiwanda Pipeline North's lining was damaged, which is highly unusual and attributed to factors such as: high pressures, fluctuating pressures, and long

periods of dry pipe. AECOM completed a forensic study to determine the specific causes of mortar loss, engineering analysis, and development of repair options, such as epoxy and polyurethane lining, and preliminary construction cost opinion.

Relevance

Demonstrated ability to complete large diameter pipeline evaluation for Metropolitan that ultimately helped to enhance the reliability of your water distribution systems.



Nearly 10 years ago, Andrew Romer inspected and evaluated Metropolitan's Etiwanda Pipeline failure. Andrew, and our other leaders, are committed to continue working with Metropolitan to assess and develop rehabilitation alternatives that extend the longevity of your pipelines.

INTEGRATED PIPELINE (IPL) PROJECT

Project Results

Program manager responsible for design standards development, preliminary design, final design, and construction bid packaging

Client

Tarrant Regional Water District

Location

Texas, USA

Contract Value

\$15M

Years

2009 - Present

Recognizing the need for more economic and reliable, long-term water supply, TRWD and DWU initiated the IPL project.

As program manager, AECOM led the development of the large diameter pipeline standards and directed the preliminary and final design for the \$2.3B IPL. The system is being constructed to provide necessary redundancy to an existing pipeline. The IPL consists of approximately 145 miles of 84- to 108-inch diameter pipeline, a 5-mile 120-inch diameter tunnel, large-diameter in-line isolation valves, six 100-350 MGD pump stations, and a 450 MG balancing reservoir. AECOM managed approximately 30 preliminary design and final design contracts and 20 construction contracts through an aggressive schedule.

The IPL project mirrors the scope of work and complexity of Metropolitan's Feeder Program.

Relevance

Working on one of Texas' largest water supply projects has positioned AECOM with the lessons learned and technical insight to facilitate cost-effective delivery of rehabilitation.



Value engineering reviews completed by AECOM resulted in an estimated savings of more than \$380M for the client. Cost-saving recommendations were provided specific to materials selection, pipeline routing, tunneling design, pump station configuration, and the development of alternative and local suppliers.

NEW IRVINGTON WATER SUPPLY TUNNEL

Project Results

Engineering design lead (legacy URS) responsible for preliminary and final design. Program construction manager.

Client

San Francisco Public Utilities District

Location

California, USA

Contract Value

\$4.3M (engineering)

\$11.1M (construction manager)

Years

2006 - 2015

Increased demand and limited opportunity for shut down and repair of the existing Irvington Tunnel led SFPUC to consider the development of a new water supply tunnel as part of its Water Supply Improvement Program.

AECOM performed preliminary and final design of the 3.5-mile-long, 8.5-foot-diameter New Irvington Tunnel and pipeline connections, AECOM (legacy URS) worked with geotechnical investigations for the infrastructure. We designed connections from the tunnel to a total of five, 57- to 96-inch-diameter transmission mains, including. The alternatives analysis was challenging because the pipelines are located on a steep hillside near residences and the aging pipes were constructed with relatively fragile materials, such as. AECOM designed a complex series of connections and new butterfly valves (up to 102-inch-diameter) that allowed the system to remain in service during construction. AECOM also completed potholing and utility investigation

services in the urban area to support the preliminary design and design packages developed by our team.

Relevance

To eliminate shutdowns, AECOM designed a complex series of connections and new butterfly valves (up to 102-inch-diameter) that allowed the system to remain in service during construction.



Under a separate contract (before acquiring URS), AECOM served as Program Construction Manager for the entire \$4.8B Water System Improvement Program.

RIVER SUPPLY CONDUIT (RSC) UPPER REACH UNITS 5 AND 6

Project Results

Lead design firm

Client

Los Angeles Department of Water and Power

Location

California, USA

Contract Value

\$1M

Years

2008 – 2012, 2015 - 2018

To meet the State's DDW minimum pressure mandate, the LADWP retained AECOM to complete the design for the rehabilitation of RSC Upper Reach Units 5 and 6 on an expedited schedule.

Built in the 1940s, the conduit transports a large volume of water from the Van Norman Complex to reservoirs and transmission systems located in central Los Angeles. The 10-man team designed the replacement of the 3-mile-long concrete pipeline with a 78-inch-diameter steel pipeline at the 30 percent design phase, and provided a complete, biddable project. Unit 5 is approximately 3,900 feet long, of which approximately 3,700 feet is tunneled. Unit 6 is 12,000 feet long. AECOM also performed cathodic protection and designed 78-inch butterfly valves and valve vaults.

The cement mortar-lined and dielectric coated welded steel pipeline was installed utilizing both tunneling and open-cut

construction. The pipeline route traverses heavily traveled Los Angeles streets, and requires working around extensive existing utilities.

AECOM also assisted with public outreach, including working closely with the Laurel Grove Neighborhood Association, an affluent community in North Hollywood, to brief homeowners on the upcoming project and process.

Relevance

Overseeing this complex, heavily trafficked, pipeline design rehabilitation project in downtown Los Angeles, AECOM deliberately located tunnel shafts away from residential driveways. AECOM successfully maintained home owner access and reduced traffic impacts.



RSC involved an extensive utilities investigation and coordination with multiple City departments responsible for approvals and permitting. To accommodate LABOS, a portion of the pipe alignment was adjusted to avoid a potential conflict with a future, planned storm drain.

Attachment B – DuBose Design Group Qualifications



1065 W. State Street
El Centro, CA 92243
(760) 353-8110

Statement of Qualifications



Contact Information

1065 West State St.
El Centro, CA - 92243
(760) 353-8110

“Innovative & Integrated Development & Design Solutions”

STATEMENT OF QUALIFICATIONS

EXECUTIVE SUMMARY

DuBose Design Group, Inc. (DDG) prides itself on connecting with client’s needs and goals, by strategically assembling an expert team which encompasses all disciplines in order to bring project into fruition efficiently. Founder and President Tom DuBose of DuBose Design Group, Inc. offers a plethora of experience in economic development through responsible, strategic and efficient design. DuBose Design Group appreciates innovation and is the Counties leading firm which dives into complex permitting and first time projects paving the way for new permitting precedents in Imperial County, California.

DDG is the successor to Development Design & Engineering which has serviced the Imperial County for 20 years in the disciplines of civil engineering, land planning, surveying and permitting. DDG along with the other successor companies will continue to provide an expert team which includes services ranging from mapping, surveying and civil engineering. In addition to our historical experience, DDG is proud to be the first locally based firm offering landscape architecture services, overdue for Imperial County.

DDGs client are as diverse as the services we provide. Our services include all aspects of development including public, private, and investor owned utility scale renewable energy projects (solar, wind, hydro, energy storage, geothermal, biomass & biofuel). As well as commercial, industrial, residential clients.

With the home office of DDG planted squarely in the middle of the business sector in Imperial county, our location allows the firm to provide excellent permitting and political strategy when dealing with local agencies and stakeholders. And allows our clients some whose primary offices are outside of the area a hometown presence. DDG’s vision goes beyond the boundaries of our County and the Border of our country due to our regional history of collaboration with agencies and businesses in Baja California. DDG is able to offer these services with the inclusion of a staff associate who provides liaison services within the Baja California Region.

EXPERIENCE

DDG has a team of highly experienced professionals who have made Imperial County their concentration of practice and expertise. DDG offers a wide array of additional services; from planning and development to land surveying and design. Performing these other services has enabled DDG to make many contacts in the Imperial Valley. Having a good relationship with all the local agencies involved will ensure any issue will be resolved quickly. Our foundation of service is based on customer relationships. The customer's objectives are our objectives. Devoted to the Imperial County, Our DDG professional's have a vested interest in improving the quality of life for those living in the Imperial Valley. DuBose Design Group prides itself on capturing local talent and recruitment, offering internships to those fulfilling their educational aspirations in improving the Imperial County.

SERVICES

- Project Management
- Project Coordination with Successor Companies of DD&E (Mapping, Surveying, & Civil Engineering)
- Innovation Planning
- Landscape Architecture
- SB610- Water Supply Assessment
- Airport Land Use Compatibility Plan Analysis
- Technical Graphics for CEQA and NEPA Documents
- Project Planning
- Political Strategy
- Project Planning
- CEQA & NEPA Consulting
- Land Evaluation Site Assessment (LESA Modeling)
- Environmental Study Peer Review
- Code Violation Clean Up & Processing

PROJECTS

Controlled Thermal Resources- Entitlement of Exploration Wells

Project Date: 2016-Present



Photo Credit: A. Leon – 2016

Summary of Project: Provided project entitlement services, project coordination, project planning and project management services through the CEQA/entitlement process through construction for Controlled Thermal Resources (CTR). CTR is an innovative geothermal company which anticipates being located on the playa of the Salton Sea, the first geothermal plant ever to do so in the Imperial Valley using the Salton Sea’s vast resources in the California Known Geothermal Resource Area (KGRA) of the Imperial Valley. DDG, guided the applicant through the complex planning and discretionary process due to the innovative project and its sensitive location of which DDG experts navigated through. DDG is currently working on the coordination of engineering efforts to make this project a reality using experts of the region to do so.

PROJECTS

Southern Power- 255 MGWT Energy Storage Project at Campo Verde
Project Date: 2016

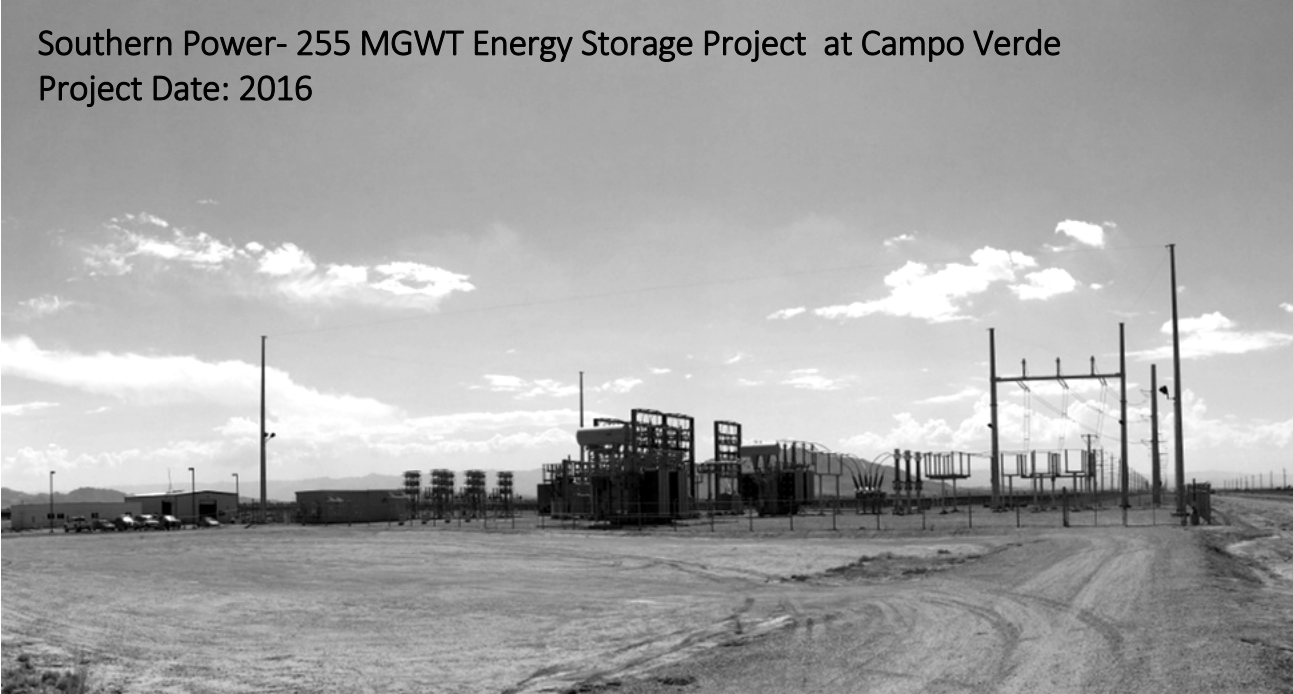


Photo Credit: M. Harmon, 2016

Summary of Project: Provided project entitlement services, project coordination, project planning and project management services through the supplement Environmental Impact Report (EIR) CEQA/entitlement process. Southern Power developed what is permitted as one of the largest energy storage sites of the United States with a storing capacity of 255 Megawatts in power. This innovative projects anticipates storing solar energy that is harvested in Imperial Valley and disbursing the energy via the Sunrise Power Link. DDG, guided the applicant through the complex planning and discretionary process due to the innovative project

Projects

Mesquite Lake Energy Park: Research & Development Pilot Program Campus
Project Date: 2018 – Present



Photo Credit: M. Harmon, 2016

Summary of Project: Proving project entitlement services, project coordination, project planning and project management services through the CEQA/entitlement process. Mesquite Lake Energy Park anticipates developing a “Research & Development Pilot Program Campus of technology innovators needing land to test the viability of their technology. The expected goal is to prove the innovative concepts and also help in facilitating the technical economic diversity of the Imperial County. DDG, is currently guiding the applicant through the complex planning and discretionary process.

Attachment C - Energia y Agua de Mexico Qualifications



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jaggiagr@gmail.com

Statement of Qualifications 2018

**“Innovative & Integrated Development & Design Solutions for the Mexicali and Imperial Valleys
focusing on sustainable energy and water solutions”**

STATEMENT OF QUALIFICATIONS

EXECUTIVE SUMMARY

Energia y Agua de Mexico (EAM) prides itself on connecting with client's needs and goals, by strategically assembling expert teams which encompasses multiple disciplines to bring projects and solutions to fruition efficiently. President and co-founder, Jose Alberto Garcia Guerrero, along with Tom DuBose and Sandra Walker of DuBose Design Group, Inc. of El Centro, CA have teamed together to form EAM. Their concept is to serve clients on both sides of the California – Baja California border, with a focus on sustainable energy and water solutions for the Mexicali-Imperial Valley. The co-founders have extensive experience in the renewable energy and water sectors, economic development and industrial recruiting. EAM serves both government entities as well as the private sectors in both the US and Mexico.

EAM provides professional services to companies who have commercially ready yet innovative technologies that have competitive technical, environmental and economic advantages. EAM clients are interested in entering the Mexican market, or have successful applications in Mexico that could be appropriate for Imperial County, CA.

EAM's thesis is that there are a lot of synergies and commonalities that will work for both sides of the border. Some solutions are best first demonstrated in the US that could be readily transferred to the Mexican side. And then there are some solutions that would be best located in Mexicali, and then transferred to the US.

EAM's services include all aspects of development including public, private, and investor owned utility scale renewable energy projects including solar, wind, hydro, energy storage, geothermal, biomass & biofuel plants and projects.

With the home office of EAM in Mexicali, and a satellite office in El Centro, CA our locations allows the firm to provide excellent permitting and political strategy when dealing with local agencies and stakeholders. And allows our clients some whose primary offices are outside of the area a hometown presence. EAM's vision goes beyond the boundaries of Mexicali and extends to Mexico City, and the border region. EAM is able to offer these services with staff associates who can provide liaison services for the California Region.

EXPERIENCE

EAM has a team of highly experienced professionals who have made the region their focus, offering a wide array of services, including market surveys, project and technology assessments, and development planning. Having a good relationship with all the local agencies involved will ensure any issue will be resolved quickly. Our foundation of service is based on client and customer relationships. EAM's professionals have a vested interest in improving the quality of life for those living in the Mexicali and Imperial Valley. EAM prides itself on capturing local talent and recruitment, offering internships to those fulfilling their educational aspirations in improving the two valleys.

SERVICES

- Project Management
- Project Coordination
- Innovation Planning
- Technology Assessments
- Permitting Consulting
- Site Assessments
- Energy Assessments
- Water Assessments
- Strategic Planning
- Political Strategy

TEAM MEMBER PROFILES

Jose Alberto Garcia Guerrero

Garcia is a successful business and political executive from Mexicali, B.C. Mexico. As former deputy mayor of Mexicali, capitol of Baja California, with a population of 1 million inhabitants, he has a deep understanding of local, state and federal governments, as well as regulations and business climates in in Mexicali and Mexico City. As a retired veterinarian, Garcia also has extensive ties to the agricultural communities in the State of Baja and Sonora as well as the federal government in Mexico City.

Presidente Energía y Agua de Mexico, S. R.L. de C.V., Mexicali, BC, MEXICO

Dr. Garcia is president of EAM, a professional consulting services and development company based in Mexicali, BC serving the energy, water and agriculture sectors for governments and private sector clients on both sides of the CA-Baja California border.

Presidente, Oceanus Energía y Agua de México, S.A. de C.V.

Vice President, LATAM, Oceanus Power & Water, LLC.

Oceanus is a seawater pumped storage hydro and desalination project developer with a focus on northwestern Mexico and US Desert Southwest. Garcia is responsible for managing the development of Oceanus projects in Mexico.

Director of Special Projects for Mexico, DuBose Design Group

DuBose Design Group Inc. (DDG) the successor company to Development Design & Engineering, Inc., El Centro, CA, a civil engineer, land planning, surveying and permitting firm based in El Centro, CA. DDG clients include many of the renewable energy project developers working in the Imperial Valley of California, including utility scale solar, wind, geothermal and biomass. Dr. Garcia serves as the liaison for DDG clients potentially wanting to replicate development efforts across the border in Mexico.

Tom DuBose

DuBose serves a key role as an economic development leader in the Imperial Valley. DuBose provides client interface and liaison work with government agencies and private sector to advance proposed projects in the Imperial Valley needing planning and permitting and regulatory compliance including serving the renewable energy developers in the Imperial Valley. Extensive experience in presenting and managing complex projects to regulators and political decision makers. Manage and direct the planning and drafting of subdivision maps, tentative maps, final maps, and improvement plans for large utility scale renewable energy development projects.

President of DuBose Design Group Inc. (DDG)

DDG is a successor to Development Design & Engineering (DDE) a civil engineering, land planning, surveying and permitting firm based in El Centro, CA. DGD clients include many of the renewable energy project developers working in the Imperial Valley of California, including utility scale solar, wind, geothermal, energy storage and biomass. Imperial Valley of California has one of the largest concentrations of utility scale renewable energy in the US. DuBose has had a role to play in more than half of those projects already constructed and operating. He continues to have a significant role in the development of new utility scale renewable energy projects on going.

Partner in Energia y Agua de Mexico, S. R.L. de C.V., Mexicali, BC, MEXICO

EAM is a professional consulting services and development company based in Mexicali, BC serving the energy and water sectors for governments and private sector clients on both sides of the CA-Baja California border.

Co-Founder of Oceanus Power & Water, LLC.

Oceanus is a seawater pumped storage hydro and desalination project developer with a focus on northwest Mexico and the US Desert Southwest.

Other Relevant Activities

Past Chairman of the Imperial Valley Economic Development Corporation, El Centro, CA

Board member of Cali-Baja Bi-national Megaregion

Past Board member and chair, Imperial County Air Pollution Control District Appeal Board

Past Board member and chair of the Brawley Union High School District

Sandra Walker

Walker has more than 30 years of experience in the renewable energy and water resource sectors. Her focus now is in the water energy nexus issues in California. She has extensive experience in strategic planning, project and program management in the water, energy and storage space. Walker also has extensive experience in technology and commercial readiness evaluations, business and product development for new and emerging technologies in clean tech. She has worked in the community development venture capital world where there are multiple objectives: financial return on investment, along with social and environmental benefits.

Chief Operating Officer and Managing Director, Oceanus Power & Water, LLC., Palo Alto, CA

Oceanus is a seawater pumped storage hydro and desalination project developer with a focus on northwestern Mexico and the U.S. Desert Southwest.

Partner, Energia y Agua de Mexico, S. R.L. de C.V., Mexicali, BC, MEXICO

EAM is a professional consulting services and development company based in Mexicali, BC serving the energy and water sectors for governments and private sector clients on both sides of the CA-Baja California border.

Director of Special Projects, DuBose Design Group (DDG)

DDG is the successor to Development Design & Engineering, a civil engineering, land planning, surveying and permitting firm based in El Centro, CA. DDG clients include many of the renewable energy project developers working in the Imperial Valley of California, including utility scale solar, wind, energy storage, geothermal and biomass.