

Lake Mead Water Intake Underwater Blasting EA

Q&S recently completed an underwater blasting environmental assessment in support of a high visibility water supply project. At Lake Mead National Recreation Area (LMNRA), the Southern Nevada Water Authority (SNWA) is installing a third water supply intake for the Las Vegas metropolitan area. The project is needed to supplement the community's water supply and to protect against the loss of existing capability should lake levels fall below 1,050 feet above mean sea level (AMSL). Water levels in Lake Mead have receded during the recent drought, and long-term projections of Colorado River flows indicate a continued decline in lake water levels

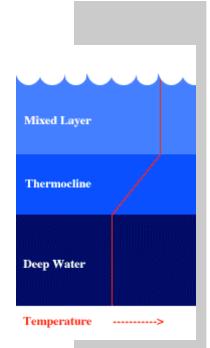
A new intake structure and an intake tunnel beneath the lake has been approved by SNWA. The intake structure will be a single level, horizontallyconfigured intake with an opening at 860 feet AMSL (about 300 feet below the current lake level). Excavation of the new intake structure pit will require controlled underwater rock demolition with explosive shaped charges.

Q&S Engineering, Inc. (Q&S) has been retained complete an underwater blasting environmental assessment for this work. This was a high visibility

project. An endangered species of fish (razorback sucker) was identified at Lake Mead and the blasting permit requirements were very stringent.



Q&S prepared a report that assessed the effect of the blasting on water quality and biological receptors, a technical appraisal of explosive effects, designation of blast safe zones, and a discussion of mitigation measures to minimize potential effects. The blast modeling and assessment included a consideration of waterborne waves' peak pressure and impulse values, particle velocity, shock energy and radiation, bubble pulsation, and potential damping effects of natural physical phenomena such as the thermal gradient of the water column. Based on the preliminary findings of the Q&S assessment, blasting for the water intake structure was determined viable from an environmental perspective.



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2008 CALMENTOR AWARD

Q&S Engineering and URS Corp. were the recipients of the "2008 Outstanding Performance Award" presented by CALTRANS District 11, SANDAG, SBC District 11, and ACEC California. The selection of Q&S for this award provides added value for small business contracting opportunities with CALTRANS and SANDAG.

Initiated by Governor Schwarzenegger via Executive Order S-11-06, the program was designed to encourage and support small businesses through voluntary partnerships with mid-size and larger



firms. Specifically, the program aims to increase the participation of small Architectural and Engineering (A&E) firms in public transportation projects in the San Diego region.

In order to ensure success, Caltrans and SANDAG partnered with the American Council of Engineering Companies (ACEC) – San Diego Chapter, and the Caltrans, District 11 Small Business Council (D-11 SBC). A Steering Committee consisting of representatives from Caltrans, ACEC and the D-11 SBC, selected Q&S for the award.

"We are very thrilled with the program and the relationship that we developed with our Mentor" said Conrad Leslie, President of Q&S Engineering. "We are very grateful for the opportunity that CALTRANS provided and the recognition that we received. Special thanks go out to Sunnie House, URS Corp. Infrastructure Vice President; Leo Handfelt, URS Corp. Principal Geotechnical Engineer, and Ed Sternagle, Sulivan International Group Vice President for all of their relentless encouragement. They all helped take Q&S Engineering to the next level".

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SOCAL Range Essential Fish Habitat Assessment

Q&S recently completed the EFH Assessment for the U.S. Navy SOCAL Range Environmental Impact Statement (EIS). The SOCAL Range Complex is a 120,000 square nautical mile area that includes four southern California Channel Islands. This EFH was one of the most wide-ranging and complex assessments prepared under the new fish habitat conservation requirements for Federal Agencies.

The Sustainable Fisheries Act (SFA) established a new habitat conservation tool: the Essential Fish Habitat (EFH) mandate. The SFA requires that EFH be identified and mapped for each species covered under Fishery Management Plans. An Essential Fish Habitat Assessment, required for actions and activities in coastal waters with potential impacts to EFH, includes a description of the proposed action, an analysis of the effects of the action on EFH, and proposed mitigation, if applicable.

"This was a challenging project requiring a broad array of analytical and descriptive tools to depict the regional ecological setting and assess potential impacts of Navy activities", said Dr. Wolfson, Q&S Engineering Principal Scientist. "The Essential Fish Habitat Assessment concluded that adverse effects on EFH would not occur, and, given the proposed mitigation, Range operations would not significantly contribute to cumulative impacts. Q&S looks forward to helping our clients with similar, comprehensive ecological impact evaluations."

Dr. Arthur Wolfson joined the Q&S team back in 2007. He brings over 30 years of experience in marine ecology. Dr. Wolfson served as Principal Investigator of a study of Cortes and Tanner Banks off San Diego, California, a pioneering investigation of the ecology of outer continental shelf seamounts. He has led oil spill clean-up studies in San Francisco Bay and environmental impact studies of offshore oil and gas developments in southern California. Dr. Wolfson has performed endangered species consultations and essential fish habitat assessments covering marine mammals, birds, sea turtles, fishes, and, invertebrates. He is the foremost authority on beneficial uses of the ocean in southern California. His expertise includes:

- ◆ Data Analysis and Presentation
- ◆ Scientific and Technical Writing
- Environmental Impact Analysis
- ◆ Beneficial Use Assessment
- Mitigation and Restoration
- ◆ Endangered Species Consultation
- ◆ Agency Interaction and Permitting
- Administration and Management



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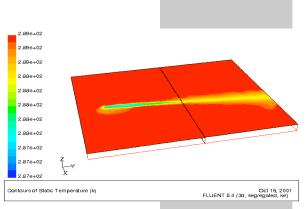


Water Quality

Designing outfalls and diffusers to achieve optimal water quality requires physical oceanographic surveys and engineering studies. Q&S Engineering specializes in conducting these studies, including characterizing the receiving water environment, determining mixing patterns and dilution scenarios, evaluating alternative discharge locations and designs, and simulating the discharge impact for various receiving water conditions. Descriptive physical and chemical parameters may include currents, tidal variations, temperature, salinity,

density, stratification, depths and bottom profiles, substrate characteristics, and other relevant receiving water features. Depending on regulatory requirements, Q&S can also characterize the affected biological environment by measuring dissolved oxygen (DO), biochemical oxygen demand (BOD), ammonia, hydrogen sulfide, nutrients such as nitrogen and phosphorus, oil and grease, total suspended solids (TSS), whole effluent or bulk sediment toxicity, and the concentration and distribution of bioaccumulating contaminants in water and sediments. Q&S can also perform environmental impact analyses and documentation, risk assessments or other special studies that may be required by regulatory authorities.

Dr. Steve Shaner recently joined the Q&S Engineering group in 2008 and oversees water related projects. Dr. Shaner brings over 25 five years of experience. He is a biologist and ecologist, who has worked extensively within NEPA, eco-risk assessments, and NPDES water quality criteria and permitting. He also has a background in marine biological and oceanographic research, planning, monitoring, habitat, and special studies work as well, ranging from original research to standard planning and permitting projects.



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<u>Q&S Engineering creates JV with Service</u> Disabled Veterans Business

Q&S Engineering created a joint venture with The LeBaugh Group, a Service Disabled Veteran Business Enterprise (SDVBE). The QS LeBaugh JV combines the solid multi disciplinary resumes of both firms in order to provide added value to large federal prime contractors and pursue additional SDVBE contracting opportunities.

QS LEBAUGH JV

The LeBaugh Group, Inc. (LeBaugh) was founded in 2006 by Mr. Chris LeBaugh. Mr. LeBaugh joined the Marines in December of 1965. He was wounded in action in June 1967, losing his leg as a result of wounds received in battle. He received a Silver Star for his bravery in battle and for saving the lives of fellow marines after having been severely wounded. Mr. LeBaugh also received the Purple Heart for being wounded in combat. He returned home to begin his recovery and was discharged in March 1968. Mr. LeBaugh then continued his career as a professional pilot which he held for 33 years. After retiring from commercial flying he began to pursue his ultimate dream of making a difference through the protection of the earth, nature, and most importantly, the environment, by founding the LeBaugh Group. The LeBaugh Group specializes in engineering, planning, and construction services.

Q&S Engineering (Q&S) was founded in 1999 by Conrad Leslie, REA. Mr. Leslie previously served as Vice President of an ENR Magazine "TOP 100" engineering firm where he served as Deputy Program Manager on Navy CLEAN, and managed multiple Navy contract task orders (CTOs). Q&S specializes in environmental, oceanographic, and marine investigations. Q&S has a proven track record of meeting quality, schedule and budgetary requirements on federal contracts. Q&S has experience within the NAVFAC SW footprint and is committed to providing added value in every project. Federal contracts include:

- NAVFAC SW Multi Media Environmental
- NAVFAC SW Environmental Planning
- NAVFAC SW EMAC
- USACE HTRW
- NAVFAC SW TAP
- NAVFAC Atlantic TAP





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