



# Conversations

Newsletter for the Converse Family of Consulting Companies

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## Water Resources for the Proposed Ely Energy Center

Converse continues to play a vital role in development of energy resources in the western U.S. The Desert Rock Energy Project in New Mexico was presented in the last issue of Conversations (Summer 2007). Converse is also working with Sierra Pacific Resources (SPR) to develop water resources for a proposed 1,500-megawatt coal fired power facility in White Pine County, Nevada. According to SPR, "The Ely Energy Center will emit only 10% of the emissions that many older plants produce."



3-D rendering of proposed Ely Energy Center generation facility.

The project requires the development of approximately 8,000 acre-feet per year of water resources. Converse's role in the project is to perform extensive hydrogeologic studies to explore the feasibility of groundwater development in White Pine County, which has included:

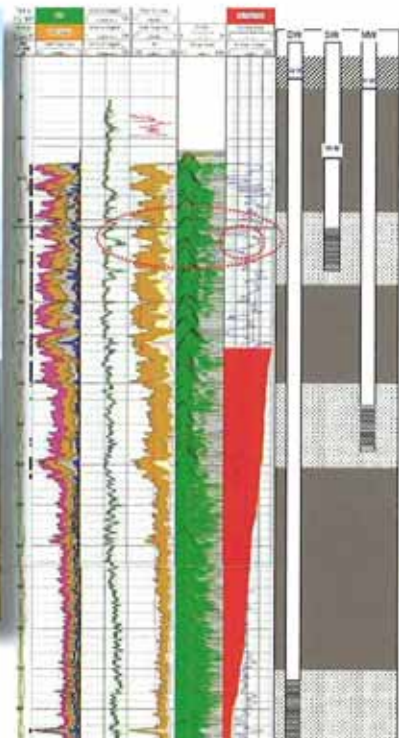
- Development of well specifications for exploratory and production wells.
- Conducting comprehensive aquifer testing and analysis at various locations.
- Water rights review, analysis and permitting support.
- Complex GIS mapping and modeling to support various phases of hydrogeologic investigations.



Precipitation-Elevation based recharge analysis in the northern Steptoe Valley Hydrographic Basin.




Test well drilling in Steptoe Valley (above). Geophysical log and multi-level well completion (right).



Converse has relied upon its staff of talented and experienced engineers, geologists and GIS specialists to perform these hydrogeologic field studies, hydrogeologic analyses and modeling. The majority of this work has been in support of the environmental impact analysis for the proposed development of groundwater resources.

Converse looks forward to continuing support for Sierra Pacific Resources as it moves forward with development of this large and important addition to its portfolio of energy resources in Nevada. For more information about this project, visit Sierra Pacific's project information website located at [www.sierrapacificresources.com/projects/ely](http://www.sierrapacificresources.com/projects/ely).

Headquartered in Nevada, Sierra Pacific Resources is an investor owned corporation that operates Nevada Power Company and Sierra Pacific Power Company which serve over one million customers. Sierra Pacific's roots go back more than 150 years to the California Gold Rush and the discovery of rich silver and gold deposits on the Comstock Lode. 

For more information, contact Jay Dixon, P.E., Senior Engineer in the Las Vegas office at 702-269-8336.

## Converse Assists in Quenching Southern California's Growing Thirst

**S**outhern California is a thirsty place where water is the key to everything. Identifying reliable sources of high quality water and the storage and delivery of the same are high priorities in this region.

The Perris Valley Pipeline is a major water line that will provide substantial water reliability and quality benefits to a significant portion of western Riverside County in Southern California. This project involves the cooperation of many state, regional and local jurisdictions, including three water agencies, two cities, the County of Riverside and Caltrans. Converse Consultants was retained by Black & Veatch to provide geotechnical services on this project.

The first section of the Perris Valley Pipeline consists of 3 miles of 96-inch pipeline from Metropolitan Water District's Henry J. Mills Water Treatment Plant, east along Alessandro Boulevard and then south to Cactus Avenue in the right-of-way paralleling the I-215 Freeway. Eastern Municipal Water District is constructing a separate pump station and 4-foot diameter, 6-mile long water pipeline that will connect its service area to the Perris Valley Pipeline at Cactus Avenue. Initial water deliveries will be made from the Perris Valley Pipeline at a service connection at Cactus Avenue by the end of the summer 2008.




Once the first stage is completed, the pipeline will then be extended a further 3.5 miles where a new pumping station will be constructed by Western Municipal Water District.

Based on our site reconnaissance and review of available documents pertaining to the subsurface condition, it was identified that the design and construction of the project has to overcome several challenges, such as shallow bedrock, groundwater and existing structures.

Trenchless crossings will be required to install the pipe under existing railroad tracks,

the freeway and high volume city streets.

An extensive field investigation program consisting of a seismic refraction survey, drilling and rock coring was conducted. Data obtained from these investigations and laboratory testing was reviewed by the team members.

Construction for the project started in September 2007 and will be completed in August 2008. When completed, the pipeline will enhance the treated water delivery capacity in the Eastern and Western service areas by up to 150 million gallons per day. 

For more information contact Dr. Hashmi Quazi at (909) 796-0544.

## Converse Continues 26 Years of Service to New Jersey Waste Facility

**C**onverse recently provided QC services for the construction of a 17.5-acre Phase III expansion for a project that originally began in 1981, marking a successful 26-year relationship with the Sussex County Municipal Utilities Authority (SCMUA) Solid Waste Facility Landfill.


The various investigations Converse conducted include a county-wide Landfill Siting Study for SCMUA in accordance with the then newly-enacted New Jersey Department of Environmental Protection (NJDEP) requirements for new Sanitary Landfill locations. Ninety-one sites were delineated for preliminary study. These sites were rated and ranked by the application of a set of geotechnical siting criteria. The chosen site was subject to a detailed investigation to confirm the site's acceptability. Converse coordinated the site selection and preliminary design applications with the NJDEP. Through the process, Converse had continued interfaced with the NJDEP, SCMUA, the Sussex County Freeholders, and the public at regularly scheduled open meetings.

Converse also prepared a Preliminary Environmental Impact Statement (PEIS) for the 238-acre landfill site, which initially included a 51-acre landfill footprint, ancillary facilities, and provisions for a resource recovery plant. The PEIS was reviewed and approved by the NJDEP.

Converse then prepared a Final Environmental and Health Impact Statement (FEHIS) and a Landfill Design Application for the project. The work included a health risk assessment study; a groundwater modeling program; and permit applications including discharge to groundwater, surface water and industrial discharge of leachate. Also included in the project was an application for stream relocation and the construction of a new dam to create a stormwater detention basin.



Converse prepared the construction plans and specifications for this modern lined landfill, consisting of a compacted clay liner, with an integrated leachate collection and pumping system. Converse also provided Construction Management and Quality Control Observation services, and certified the construction of the initial landfill cell to the NJDEP. In addition, Converse performed a slope stability analysis for vertical and horizontal expansion of the existing Phase II landfill.

The recent QC services included a full-time resident project representative during site preparation and construction of the liner system, laboratory and field testing of soils, and on-site testing of HDPE destructive seam samples. The expansion began in July 2006 and was completed in September 2007. The new cell is scheduled to begin accepting municipal solid waste in the summer of 2008. 

For more information contact Dr. Golam Kabir at (973) 605-5200.

## Arizona Growth Spurt Raises Dust Control Concerns

**M**aricopa County, Arizona experienced tremendous growth in recent years. Phoenix, Scottsdale, Tempe, Mesa, Glendale and other smaller cities make up the metropolitan area located within the County. The influx of residents, businesses, off-road vehicles, new subdivisions, access roads and the lack of funding for paving County-owned roads have contributed to local air quality issues.

Maricopa County did not meet National Ambient Air Quality Standards (NAAQS) for Particulate Matter known as PM-10 (less than 10 microns) by the end of 2006. Therefore, the County is required by the US Environmental Protection Agency (USEPA) to reduce dust emissions in the metropolitan area by 5% annually until compliance with NAAQS is achieved. Federal transportation dollars could be delayed or withheld if the County cannot meet the requirements.

PM-10 is made up of airborne particles such as soot, dust, and smoke that have a diameter of 10 microns or less vary in composition. In comparison, a human hair ranges in size from 60 to 80 microns. The concern with PM-10 is the availability of particles to be inhaled deep into the lungs where the body cannot expel them. This can result in acute breathing and respiratory problems and long-term cardiovascular disease. Sensitive populations include the elderly, children, and those with compromised heart and lung conditions.

The Maricopa County Air Quality Department regulates development and construction projects that contribute a portion of fugitive PM-10 emissions. Inspectors canvas the Valley visiting projects that have obtained Dust Control permits through the County. When a violation of the regulations is found, the company is issued a Notice of Violation. The company then goes through the County's enforcement process to determine the monetary penalty associated with the violation. The statutory maximum penalty can be \$10,000 per day per violation.

Converse's Phoenix office has been providing dust control services and enforcement assistance to clients subject to the County regulations since the office opened in 2006. Converse provides client consultation on site inspections to maintain and correct compliance issues, training to project employees and subcontractors, responding to Notices of Violation, and supporting clients throughout the enforcement proceedings. One challenge facing companies will be the requirement to test on site soils, document the findings, and select a dust palliative or suppressant that meets the standards for stabilization. Converse provides testing services both on site and at our in-house laboratory to assess appropriate suppressant application. ☎

For more information, contact Merry Ellen Boom at (480) 296-0266.

## Elko's Point at Ruby View Underway

**C**onverse's Elko office is providing services at The Point at Ruby View, a 20-acre subdivision consisting of approximately 29 homes overlooking the Ruby View golf course. Our services include a geotechnical investigation and special inspection services during the grading and underground utilities portion of this project. The next phase of construction will include the sidewalk, curb and gutter installation, and subgrade material for the asphalt. Converse's services for this phase will include compaction testing, sampling of aggregate base, concrete and asphalt as well as providing engineering oversight. ☎

For more information, contact Kathi Brandmueller at (775) 753-6266.



Installation of a sewer manhole.

## New Resort Community for Reno

**S**ummit Ridge is a new residential community surrounded by the "Resort Course" at Genoa Lakes Golf Club and Resort. Located at the eastern foothills of the Sierra Nevada mountain range, near the first settlement in Nevada, it is a community comprised of 251 lots. Converse's Reno office provided the geotechnical engineering, Storm Water Pollution Prevention Plan (SWPPP), special inspection, full time observation of grading activities and soils compaction during the design and construction phases of this project. We also provided a detailed seismic analysis of the site and executed a fault trenching study during the design phase.

The major geotechnical challenges on this project were slope stability and shallow groundwater. Several miles of subsurface drains were installed to dewater most of the site. Some of the lots required a soil stabilizing pad consisting of fabric, crushed rock and geo-grid.

Converse's technical expertise resulted in a successful project that served the needs of the client, solved the geotechnical and geologic challenges of the site and prevented storm water runoff violations. ☎

For more information, contact Mike Glass at (775) 856-3833.

