



RESPECTING THE ENVIRONMENT

BY BRENT G. ARNOLD, SR/WA AND AND KERN RIVER PROJECT TEAM

The Kern River Gas Transmission Company pipeline system is a vital artery that brings natural gas into California, Nevada and Utah. The Kern River pipeline extends from the oil and gas-producing fields in southwestern Wyoming through Utah and Nevada to the San Joaquin Valley near Bakersfield, Calif. With 1.7 billion cubic feet per day, the pipeline has enough energy provide electricity for 10 million homes.

A pipeline expansion project, which went into service on May 1, 2003, more than doubled the amount of natural gas transported on the Kern River system. The project included the construction of three new compressor stations, the installation of additional compression and modifications at six existing facilities, and a second natural gas pipeline that was placed in the approximately 717-mile right of way adjacent to the existing pipeline.

Kern River made every effort to minimize the impact of the project on the environment and landowners along the existing right of way. Kern River worked closely with local municipalities and state agencies to ensure the project reflected the communities' interests and needs.



Doing Our Part for the Desert Tortoise

The desert tortoise is a timid reptile that has been federally listed in the United States as a threatened species. Found in the southwest portion of North America, the tortoise relies on the delicate desert ecosystem for its existence. When Kern River began preparing for the 2003 Expansion Project, detailed plans were enacted to avoid any impact on this creature and to minimize impacts to its habitat. Handbooks, including detailed training and instructions on how to avoid impacts to the desert tortoise, were developed for all individuals working on the project. Tortoise habitat in the pipeline construction path was identified, and employees working in these areas were given

additional training to address specific responsibilities related to the desert tortoise. These carefully planned environmental provisions were a success; the pipeline expansion was completed with no significant impact to the tortoise or its habitat and compensation funds provided by Kern River were utilized for multi-species recovery efforts in the states in which it operates.

"The Kern River expansion has been built without significant impact to the environment. At every step of the way, from design to build to clean-up, you worked to protect the environment," says Kenny C. Guinn, governor of Nevada. "I understand and appreciate Kern River's efforts to develop plans to protect and preserve the native animals and vegetation, air and water quality, and cultural and historical sites. On behalf of the people of Nevada, thank you for caring about our state."

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Cultural resource site data recovery adjacent to right of way.

Preserving Cultural Resources

As a part of Kern River's environmental commitment through its 2003 Expansion Project, the company retained three consulting firms to ensure protection of cultural resources along the pipeline corridor. Through field inventories and a review of archives, nearly 650 cultural sites were identified in the four-state area of the pipeline route. Of those sites, 25 in Wyoming, 163 in Utah, four in Nevada and 26 in California were determined to be significant and eligible for the National Register of Historic Places. These sites were representative of a variety of property types from Native American resource processing and campsites to wagon roads. To ensure the preservation of these areas, Kern River pursued both traditional and innovative approaches to the archaeological mitigation.

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the history of the states through which the pipeline runs. The expansion also allowed the company to utilize new methods and strategies, offering as much insight into the past as actual excavations. Since excavations were previously conducted at each eligible site during the original pipeline construction in 1991, the goal of the effort was to build upon existing information. Detailed analyses of previous work were conducted to identify those sites with the greatest potential for data recovery. At chosen sites, excavations were conducted outside of the pipeline corridor to fully capture the characteristics of the entire site. In addition to conventional excavations, a number of innovative mitigation techniques were employed, ranging from thermoluminescence dating, which looks at the light emitted from heated minerals to determine age, to the development of a Geographic Information System database and historic context for linear features such as canals. In addition, a process called obsidian hydration was conducted, which analyzed the absorption of water on exposed surfaces of lava glass.

The cultural resource mitigation activities began in August 2002 and should be completed in spring 2005. The result of this work will not only be a great contribution to the history of the four states involved, but a demonstration of the value both excavation and nonexcavation techniques have as effective mitigation strategies. Although only 33 archaeological sites were subjected to conventional excavation, impacts to each site along the route eligible for the National Register

Restoring Native Vegetation

of Historic Places were mitigated through other strategies. The company is committed to completing the project in an environmentally responsible manner. One of several environmental aspects associated with this significant project was a plant salvage program. During a four-month period, two environmental contractors and nearly 100 workers and inspectors flagged and transplanted more than 100,000 species of unique desert vegetation

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– Michael O. Leavitt
EPA administrator and former Utah governor

prior to pipeline construction. Since regeneration of these plants could require 50 years or more, a large-scale transplant effort was selected to be the best option for restoring the area impacted by the pipeline construction. Kern River also collected and stored yucca and succulents including cacti and agaves growing in the desert tortoise habitat. Reseeding efforts included plants that are part of the desert tortoise diet. The salvaged vegetation was stored in temporary nurseries and then replanted in the right of way as part of the overall restoration. To make sure this effort is as successful as the plant relocation, the company will monitor the plants for six years.

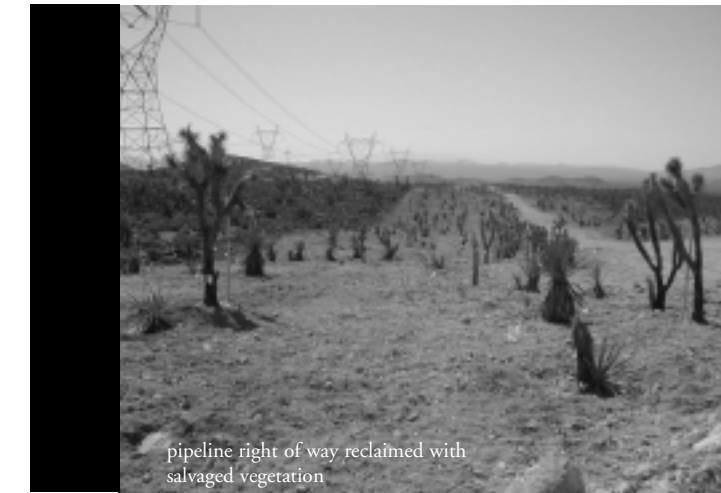
“It is a pleasure for me to congratulate the Kern River team on the completion of the 2003 Expansion Project. There's a lot to celebrate with the completion of this project, and I'm pleased to know that the construction was completed without any major impact on the environment and without major disruption to the landowners along the right of way,” says Michael O. Leavitt, former Utah governor and current EPA administrator. “Kern River has set a standard for environmental compliance and for positive landowner relationships not only in Utah, but along their entire system. So, thank you for respecting the land and for respecting the people.”

Revegetation Efforts Praised

BLM Project Manager Jerry Crockford complimented the company's revegetation efforts on the 2003 Expansion Project in a recent memo to Kern River's Land & Environment Department.

Crockford recently inspected an area of the right of way south of the Goodsprings Compressor Station in southern Nevada. “I realize this is much less than scientific and covers a very small area, but it indicates to me (to date) there is a very good survival rate on the transplanted succulents,” he wrote in the memo.

Based on Crockford's calculations, 75 percent of the yuccas and Joshua trees transplanted during the reclamation are surviving. He also noted all of the other succulents, such as barrel cacti, survived the transplantation.



pipeline right of way reclaimed with salvaged vegetation

The company was environmentally conscious in restoring the ecosystems. Overall it has been pleased with its revegetation efforts in the 2003 Expansion Project.

For additional information on Kern River and their environmental efforts, visit www.kernrivergas.com. Kern River is a subsidiary of MidAmerican Energy Holdings Company. ❖

The information in this article is a compilation of efforts of the Kern River 2003 Expansion Project Team.

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