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Case Study

HDPE PIPE CHOSEN FOR LEAK-FREE JOINTS

WL PLASTICS COMPLETES LARGEST SALINITY CONTROL PROJECT IN THE COLORADO RIVER BASIN.

THE PROJECT: Huntington-Cleveland Irrigation Company (HCIC) of Huntington Utah provides irrigation, industrial and municipal water to Emery County Utah by way of open canals and waterways. As water moves through these canals it picks up salt and other contaminants, ultimately carrying them to the Colorado River Basin. HCIC was awarded a salinity grant under the American Recovery and Reinvestment Act of 2009 that allows HCIC to enclose the North Ditch Canal using HDPE pipe to eliminate contamination from high salinity soils in the canal. Speaking for the US Bureau of Reclamation, Interior Secretary Ken Salazar said, "This project will control salt at its source to prevent it from entering the Colorado River System."

It is estimated that this project will eliminate 161,000 tons of salt annually from entering the Colorado River System. The effect of salinity in the Colorado River Basin is a major concern for the United States and Mexico. Salinity affects agricultural, municipal, and industrial water users. High salt concentration from the Colorado River deposited on farmer's fields affects crop growth, and increases municipal and industrial water treatment costs. Salinity damages in 2004 in the Colorado River Basin totaled more than $300 million dollars. Larry Perkins, Project Manager for J-U-B Engineering said, "When finished, this will be the largest salinity control project of its kind in the entire Colorado River Basin."

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THE SPECIFICATIONS: HCIC contracted J-U-B Engineering of Orem Utah to design and manage the project that when finished will have over 145 miles of pressure rated HDPE pipelines. By replacing open canals that have been in use since the 1800's, HCIC was able to increase maximum flows from 270 CFS in the old canal system to 360 CFS in the new HDPE piping system. WL Plastics in Cedar City Utah manufactured HDPE pipe from 12" through 54" including 9000 feet of 26", 5500 feet of 28", 11000 feet of 42", 6000 feet of 48", and 17000 feet of 54". To identify the system as irrigation water, WL Plastics extruded purple stripes into the pipe OD. Nielson's Construction of Huntington Utah was contracted for HDPE pipeline construction and ISCO Industries of South Jordan Utah provided fitting and fusion machines for HDPE pipe joining. HDPE pipe was chosen for this project primarily for its leak-free heat fusion joints. The enclosed HDPE piping system protects fresh water from high salinity canal soils, and prevents water loss through evaporation and seepage into canal soil. HCIC shareholders will see increased fresh water delivery, and the Colorado River Basin will see reduced salinity migration. "I don't think we could have done this project without HDPE pipe" stated Larry Perkins, Project Manager for J-U-B Engineering. Water delivery will increase from 25% to 75%. Before this project only one fourth of the water sent down the canal could be utilized for growing crops. When the project is completed, water loss from evaporation and seepage will be reduced by 150%.