

Abstract

of final paper for the

North American Commission for Environmental Cooperation's
**North American Symposium on Understanding
the Linkages between Trade and Environment**

The Relocation of El Paso's Garment Stonewashing Industry and its Implications for Trade and Environment

by Andrea Abel, National Wildlife Federation, and Travis Philips, The University of Texas at Austin

El Paso, Texas once was considered the denim stonewashing capital of North America. With its abundant, relatively unskilled, and low-wage workforce, El Paso long had attracted labor-intensive industries, especially the apparel industry. With the invention and rise in popularity of stonewashed denim clothing in the late 1980s, El Paso's apparel industry diversified to include stonewashing, a water-intensive activity, as part of the garment finishing process. As the industry scrambled to develop stonewashing technology, some large denim apparel companies implemented vertically integrated "package" operations to include stonewashing, while others contracted with smaller independent operations for finishing work. After the industry's meteoric rise, an exodus of finishers from El Paso took place in the late 1990s, going from a peak of over two dozen facilities in 1993 to only a few garment finishers today. At its peak, the garment finishing industry employed thousands of people and consumed immense quantities of water for stonewashing.

The apparel industry has been undergoing profound changes. Often termed a "sunset industry" in the United States, globalization has made its mark on the industry. Beginning in the 1970s, members of the industry began to look for locations affording a competitive edge, such as the Pacific Rim and Latin America. The advent of the North American Free Trade Agreement (NAFTA) in 1994 put the spotlight on Mexico for an industry already on the move. Among others, the sister cities of Torreón, Coahuila, and Ciudad Lerdo and Gómez Palacios, Durango began to attract more garment finishing operations. Facing increasing price competition, El Paso's garment finishers were eager to reduce costs, particularly labor costs, making relocation to Mexico an attractive option. As finishers left, they relieved pressure on El Paso's water supply. They were often forced to secure their own water supply for their new facilities in Mexico, and provided varying degrees of wastewater pretreatment.

No matter where the stonewashing industry is located, it remains highly water-intensive. As populations grow in North America, competition for water resources increases, particularly in arid regions of the southwestern United States and northern Mexico. During the debate over NAFTA, several observers argued that the agreement would encourage a movement of industry away from the United States-Mexico border and that accompanying infrastructure development would "deconcentrate" industry throughout Mexico, relieving pressure on border environmental resources.

This study examines the expansion and contraction of the stonewashing industry and the environmental impact of the industry in El Paso and its relocation sites. The examination revolves around four hypotheses. First, several factors contributed to the stonewashing firms' decisions to relocate, including rule changes under NAFTA, imposition of water reuse requirements in El Paso, international relocation trends in the apparel industry, and the future availability of water in El Paso. Second, the departure of

the stonewashing industry from El Paso alleviated pressure on border water resources, particularly the Hueco Bolson aquifer. Third, as the industry relocated, it incorporated water saving processes into construction of new facilities. Finally, water saving processes incorporated into new foreign locations constituted a beneficial environmental impact relative to practices previously employed at United States locations. (Not all of these hypotheses were confirmed.) Based on the four hypotheses, the study's goals were to:

- Identify the factors involved in companies' decisions to relocate operations, including specific NAFTA components.
- Analyze the net environmental impact of industry out-migration on water resources in El Paso and in the relocated sites, and if relocation alleviated pressure on border environmental resources.
- Determine what, if any, changes companies made in water use efficiency and discharge practices as they built facilities in their new locations.

Research for the study was carried out from May to September 2000. During this period, interviews were conducted with representatives of three garment finishing operations with stonewashing facilities remaining in El Paso. All three also had sewing or stonewashing facilities in Mexico. Additional interviews were conducted with representatives of the municipal water utility in El Paso, city officials, and state and federal environmental agency representatives. El Paso water consumption records from 1990 to 2000 were analyzed for 27 garment finisher water utility accounts. In addition, regional and federal water officials in Mexico were interviewed. Related literature and research findings provided additional information.