# Transborder Management for the Tijuana River Watershed

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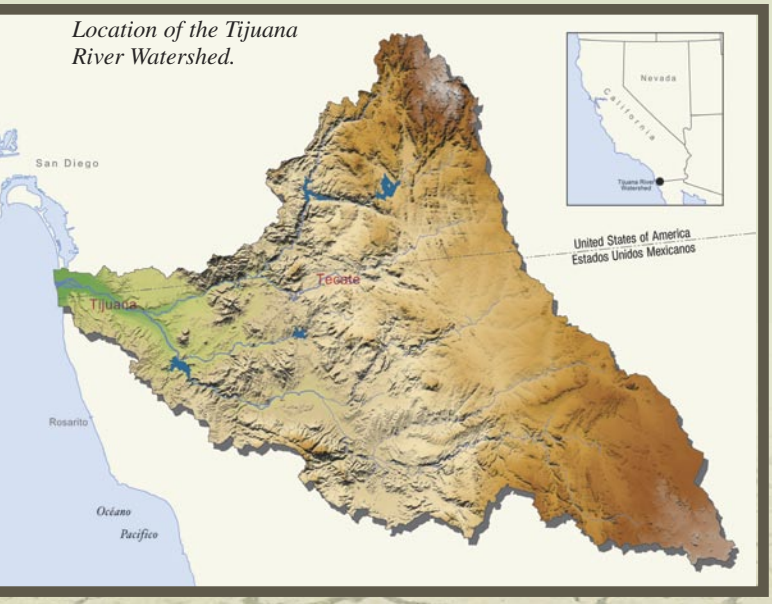
*Moreno Lake in the Tijuana River Watershed.*

The Tijuana River Watershed (TRW) straddles the international border, with one-third in California and two-thirds in Baja California, Mexico. The watershed encompasses some 1,750 square miles. Parts of the watershed are under the jurisdiction of the cities of Imperial Beach and San Diego, the county of San Diego, four tribal reservations in California, and the municipalities of Tijuana, Tecate, and Ensenada in Baja California. With elevations from sea level in the west to over 6,000 feet in the east, the TRW has diverse microclimates, habitats, and species, many of which are threatened or endangered. The dynamic population, economic, and urbanization processes within the watershed have brought significant land cover changes to the TRW, threatening not only biological and hydrological resources, but also the cultural and historic resources of the area. Major problems of the TRW include overexploited and contaminated local groundwater; a growing dependence on imported water; deteriorating surface water quality; erosion and flood dangers; air pollution; lack of open, safe, green areas for urban residents; declining ecosystem health; and an increasing number of threatened and endangered plants and animals.

*Location of the Tijuana River Watershed.*




Not only is the transborder region of the TRW one of the most dynamic in the entire world, but economic asymmetries are great. The legal, administrative, political, and cultural traditions of Mexico and the United States are very different and present many barriers to collaboration across the international boundary. The challenge, then, is how to meet the needs of the growing human population of the watershed, while improving quality of life and sustainable management of natural resources for both sides of the border within the watershed.

These problems can only be properly addressed through collaboration by governments on both sides of the border and the active participation of stakeholders. Mexico has initiated watershed management efforts nationally through the Consejo de Cuencas program. The state of California has mandated watershed management plans, primarily to control nonpoint source pollution. On both sides of the border, university-based researchers and stakeholders from non-governmental organizations (NGOs), the private sector, and local governments are working to improve and protect watersheds. However, formal mechanisms that provide for watershed planning, management, and protection in transborder context are lacking.

## A History of Collaboration

Researchers at San Diego State University (SDSU) and their partners at the Mexican institutions of the Universidad Autónoma de Baja California (UABC) and El Colegio de la Frontera Norte (COLEF) have been systematically studying the watershed for nearly twenty years. One early effort included a binational and multidisciplinary study of the state of the basin's environment that included socioeconomic analysis as well as physical science studies and was supported by the Ford Foundation. Another developed a transborder geographic information system (GIS) that harmonized U.S. and Mexican data on vegetation, land use, transportation, population, and hydrology to produce a unified view of the binational basin. The GIS effort was supported in its early phases by funding from the National Oceanic and Atmospheric Administration. Products of these and other projects include a planning atlas of the urban interface between Tijuana and San Diego, a multidisciplinary book on the Tecate region, an atlas for the entire watershed, and a large poster of the watershed.

A central goal of these efforts was to support development of unified management strategies for the entire basin in order to improve the quantity and quality of water and protect and enhance ecosystem health, thereby improving quality of life for human residents of the TRW. The opportunity to advance these goals came through grant funds from voter

approval of Proposition 13, a California initiative to support development of watershed management plans in order to reduce nonpoint source pollution in California's coastal watersheds.

In 2002, San Diego State University, in partnership with San Diego County and the Regional Water Quality Control Board, received funding from the Proposition 13 program. First a research team was formed with participants from SDSU, UABC, and COLEF. The Binational Watershed Advisory Committee (BWAC) was subsequently established with a wide range of stakeholders, including public and private sector representatives, NGOs, tribal representatives, academics, and members of the community from both sides of the border.

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## Developing a Vision

BWAC decided that since no international legal framework existed for a binational watershed management plan for the TRW, the effort would proceed with development of a "vision"—a description of present realities and ideal future scenarios for the watershed. The research team developed a project Web site and identified key data sources and gaps. This facilitated the identification of critical resource areas in the watershed and provided background material to present to the community in a series of stakeholder workshops. Two such workshops were held in the upper watershed in the United States and Mexico, two in Tijuana, and one in the lower watershed at Imperial Beach, California. The meetings convened diverse stakeholders with varying experiences and perspectives. In Tecate in the upper watershed, for example, stakeholders included some twenty tribal members, representatives of the local sand miners, members of the cattlemen's association, urban planners from Tecate, and members of local NGOs. At the workshops, the participants identified goals and recommended actions for the TRW.

From this research and community input, the research team created a draft vision document, which was circulated widely, generating comments that were incorporated into a subsequent revision. This document is now available in English and Spanish versions on the TRW website. Project participants view this not only as a guide for actions to improve the quality of the watershed, but also as a living document that will evolve over time.

A key concern identified in the process of creating the vision document was the identification of mechanisms for formal and ongoing transborder collaborations that could effectively address basic planning and management concerns of the watershed. Accordingly, researchers from SDSU, UABC, and COLEF worked with the local U.S. and Mexican consuls general, representatives of the International Boundary and Water Commission (Mexican and U.S. sections), the California Water Resources Board, Baja California's General Directorate of Ecology, Mexico's National Water Commission, and the U.S. EPA to create a technical committee to identify specific coordinated actions to be undertaken by these agencies in the watershed. Convened under the authority of the Border Liaison Mechanism (see sidebar below), the technical group is now meeting regularly.

TRW project participants, including the BWAC and the research team, are working closely with the technical committee. It is hoped that coordinated transborder actions recommended by the technical committee and its members will eventually promote development of a permanent binational mechanism for management of the watershed.

*Visit the TRW website at trw.sdsu.edu. Contact Paul Ganster, director of SDSU's Institute for Regional Studies of the Californias and chair of the Good Neighbor Environmental Board, at pganster@mail.sdsu.edu.*

The Border Liaison Mechanism (BLM) is a bilateral mechanism that enables the consuls of Mexico and the United States in the border cities to convene state, local, and federal agency representatives and others from both sides of the border to formally discuss matters of mutual interest. Established in 1993, the BLMs have been effective in addressing a range of border issues including ports of entry security, public health, immigration, public safety coordination, natural resources, and the environment. The BLM in the San Diego-Tijuana region has worked for years on transborder water issues, including shared water infrastructure and water resource management.