

Border Water Quality Research Matrix and Bibliography

Introduction

The ATR Institute (ATRI) has culled various sources from print and electronic media to gather information and research results pertinent to addressing transportation-related environmental issues along the U.S.-Mexico border. The result is a new repository called **BRITE** that contains **Border Region Information on Transportation and the Environment**. This repository is being developed in stages. In 1998 ATRI presented the first segment on air quality. The researchers posted an on-line matrix identifying documents, reports and studies concerning air quality and transportation in the border environment (www.unm.edu/~atr). Additionally, the document, **Border Air Quality Research Matrix and Bibliography**, which is an annotated bibliography with abstracts for all of the items listed in the on-line matrix, was produced. In March 1999 the researchers updated the matrix and the annotated bibliography. The current document is the continuation of the **BRITE** project and focuses on water.

BRITE is being created in segments and is an on-going project. **BRITE** will never be “complete” because new information is constantly being added to the repository. ATRI has created segments on air quality, land use, water quality, habitat, and is generating a cross-referencing system to allow users to identify resources that address multiple environmental issues.

This collection of sources and information is not exhaustive, but does reflect a thorough review of available literature. Items were selected for inclusion based upon research location (proximity to the border), applicability to transportation concerns, and relevance to policy development. There are numerous sources included here that are not border specific, but provide valuable information on a more general level that is quite likely relevant to transportation and the border environment.

For ease in organizing, matrix entries are divided into five institutional categories: federal government, state government, environmental assessments, academic, and other. Some of the literature summarized overlaps categories. The government agencies often fund the academic research, for example. The category determination was made based primarily upon the source of the information. For example, if the EPA published the document, it is categorized as a federal source, even if another organization actually conducted the research. Within each of these categories, the individual documents are listed by sub-organization if applicable.

All of the documents reviewed have been assigned an identification code that corresponds to the Code column in the matrix. The matrix is intended to help researchers identify studies that they may want to access. This document includes the matrix, sorted by code, as well as summaries of each item in the matrix.

Some of the documents reviewed are bibliographies, compendia, or other forms of compiled information. To ensure accuracy in referencing, these compilations are treated as the primary source and are given an identification code. Any pertinent studies or publications discussed within the compilation are listed as sub-sources in the text version, but are not given a separate identification code. For example, the Federal Railroad Administration has published an excellent bibliography on environmental externalities related to transportation. This bibliography is given an identification code and is included in the matrix. Some of the individual publications highlighted in the bibliography are summarized in the text document as sub-sources, but are not given unique identification codes in the matrix.

As the **BRITE** project has expanded, the ATR Institute has opted to utilize Access database software to house the project. In the Air Quality section, all of the data was kept in a Word document. Now, with

five hundred documents representing four major categories, the system of keeping the information in Word became outdated. The Access database could not work with the earlier code system. In the Air Quality report, codes were given first to a document by its category (F = federal government; S = state government; A = academic; etc.) and then a number was assigned to it. Therefore in the Air Quality report, there is an F10, an S10, an A10, etc. With the Access database, the numbering is standardized. There is only one of each number, and the code is also then assigned to it.

Reading the Border Water Quality Research Matrix

For ease in using the matrix as a quick reference, each entry includes abbreviated information about the document or study. Following are the descriptions for each of the matrix data points.

Code	This is the identification code which corresponds to the item's source categorization.
	F Federal government
	S State Government
	E Environmental Assessment
	A Academic
	O Other
Cat 1	Each matrix entry is categorized according to its primary focus. Following are the various categories and their characterization.
	Model Project or effort focused on developing, assessing or modifying models and/or modeling tools
	Source Project gathered information on specific contaminants and/or specific emission sources or assessment tools
	Social Effort focused on policy issues and/or collaboration and coordination among various entities
	EA Specific environmental assessments for projects in the New Mexico border region
	Wetlands Projects or research focused on wetland areas or issues.
	Restoration Information concerning restoration of water source or bodies
	Shipping Efforts focused upon shipping industry or the effects of the shipping industry.
	Conservation Research or information on the conservation of water sources/bodies.
	Erosion Work center on erosion or sedimentation issues.
Cat 2	This column provides more specific information on the project's focus. The key words used should be self-explanatory.
Date	This is the year in which the research began, or the year that a document was published.

Location This column provides the primary area assessed by the research or project. Following are the place abbreviations used.

EP	El Paso, TX
CJ	Ciudad Juarez, Chihuahua
SP	Sunland Park, NM
SD	San Diego, CA
AZ	Arizona
TX	Texas
NM	New Mexico
CA	California
MX	Mexico
Border	Research is applicable to overall border region
General	Not border specific, but pertaining to border states along with other states.

Source This section lists the organization responsible for the document or study. Following are the full names of the acronyms used.

ACEEE	American Council for an Energy-Efficient Economy
ASU	Arizona State University
CALTRANS	California Department of Transportation
CARB	California Air Resources Board
CEC	Commission for Environmental Cooperation
CNIE	Committee for the National Institute for the Environment
CSU	Colorado State University
DOT	Department of Transportation
DRI	Desert Research Institute
EPA	Environmental Protection Agency
FRA	Federal Railroad Administration
ITESM	Instituto Tecnológico y de Estudios Superiores de Monterrey
JAC	Joint Advisory Committee on Paso del Norte Air Quality
LANL	Los Alamos National Laboratory
NCHRP	National Cooperative Highway Research Program
NCSU	North Carolina State University
NCVECS	National Center for Vehicle Emissions Control and Safety
NGA	National Governor's Association
NMAQB	New Mexico Air Quality Bureau
NMIMT	New Mexico Institute of Mining and Technology
NMSHTD	New Mexico State Highway and Transportation Department
NMSU	New Mexico State University
NRDC	National Resources Defense Council
PIRG	Public Interest Research Group
PnD	Paseo del Norte
SCAQMD	Southcoast Air Quality Management District
SDSU	San Diego State University

STPP	Surface Transportation Policy Project
TAMU	Texas A&M University
TGLO	Texas General Land Office
TNRCC	Texas Natural Resource Conservation Commission
TRB	Transportation Research Board
TRIP	Transboundary Resource Inventory Program
UD	University of Denver
UU	University of Utah
USDA	Department of Agriculture
UTEP	University of Texas at El Paso
WGA	Western Governors' Association

Journal names are abbreviated.

Other references are consulting firms.

Investigator For those projects that identified principal investigator (s), they are listed by last name.

Highlights Provides a one-line summary of the project's focus or results.