

The Lower Rio Grande/Rio Bravo Water Quality Initiative Pilot Project

Introduction

Binational efforts to improve water and wastewater infrastructure along the U.S./Mexico border have resulted in marked improvements in water quality in the Rio Grande. However, there are areas where continued efforts are needed. In particular, the portion of the river from the Falcon International Reservoir to the reach where the river enters the Gulf of Mexico (hereafter termed the Lower Rio Grande/Rio Bravo) has experienced persistently high bacteria levels.

Binational water quality planning efforts can be an effective tool in controlling the effects of growth and development on transboundary water resources. In addition to enhancing and improving the effectiveness of existing unilateral efforts to improve water quality, by focusing and coordinating those efforts, binational water quality planning can reduce the cost of water quality management and increase the level of protection of the resource through increased collaboration of stakeholders on both sides of the border.

This document describes a binational effort to improve and protect water quality in the Lower Rio Grande/Río Bravo, which currently experiences bacteria levels that have, at times, been higher than recommended for approved water uses of the river. The effort, the Lower Rio Grande/Rio Bravo Water Quality Initiative (LRGWQI), is intended to serve as a pilot project to develop the binational mechanisms necessary to improve water quality throughout the Rio Grande/Río Bravo.

Goals and Objectives

The Mexican partner agencies (International Boundary and Water Commission, Mexican Section (CILA), the Mexican National Water Commission (CONAGUA), and the Tamaulipas State Water Commission (CEAT)) and the U.S. partner agencies (International Boundary and Water Commission, U. S. Section (USIBWC), the U.S. Environmental Protection Agency (USEPA) and the Texas Commission on Environmental Quality (TCEQ)) agree that the goals and objectives of the LRGWQI pilot project should be to restore, protect, and improve the water quality in the Lower Rio Grande/Río Bravo. Additional efforts could include a survey to identify sources of salinity in Lower Rio Grande/Río Bravo. Specific water quality targets are to be agreed-upon through a binational consultation and deliberation processes conducted under the auspices of the IBWC, U.S. and Mexico.

Scope

The focus of the LRGWQI pilot project is on water quality management in the Lower Rio Grande/Río Bravo. This effort is a pilot project and the Lower Rio Grande/Río Bravo is a good starting point; success here may serve as a model for other segments along the river.

Technical Approach

The set of technical tasks for the LRGWQI project includes:

1. Historical data review
2. Identification of data gaps

3. Data collection
4. Data analysis and modeling

The analysis is to include point and steady-state nonpoint sources of pollution. The first phase of analysis will focus on characterizing and modeling water quality under steady state conditions. The technical work associated with the LRGWQI should be conducted through cooperation between Mexico and the United States.

Identifying Feasible Options to Improve Water Quality

A goal of this initiative is to identify potential feasible pollution prevention and control options (the options) that will result in the restoration, conservation, and improvement of the water quality in the Lower Rio Grande/Río Bravo through a facilitated stakeholder process that includes the participating agencies, stakeholders from both sides of the river and representatives of the local binational community of water users. The options will be incorporated into a binational water quality improvement plan along with the technical analysis justifying their selection, including estimation of option costs.

Legitimizing the Analysis

The official mechanism for obtaining binational concurrence on technical aspects of the plan is the IBWC process. Once completed, the binational water quality plan resulting from the LRGWQI effort (or the main elements of the plan) would be incorporated as an agreement approved through the IBWC, US and Mexico.

Institutionalizing the Agreement(s)

The 1944 Water Treaty is the most appropriate institutional mechanism for reaching binational agreement on the elements of any binational water quality plan resulting from the LRGWQI.

Plan Development and Implementation

The LRGWQI pilot project should proceed in three stages:

- The **first stage** would include initial binational discussions and development of a binational study plan. The first stage would also include initial historical data review, identification of key stakeholders, and development of a stakeholder participation strategy
- The **second stage** would include binational data collection, technical analysis/modeling, and stakeholder involvement. The second stage of the LRGWQI will result in a binational water quality improvement plan.
- The **third stage** would assess implementation and would result in a report(s) evaluating the progress achieved under the LRGWQI.

Implementation and Monitoring

Two (2) types of monitoring associated with the LRGWQI pilot project, programmatic monitoring and ambient monitoring are envisioned:

- Programmatic Monitoring - the project will develop a plan to monitor the progress of implementation of the measures and solution strategies detailed in the binational water quality plan.

- Ambient Monitoring - the project will also develop a plan for each nation to monitor the progress in achieving the water quality goals specified in the plan.

Each nation should be willing to share Mexican and US information sources so that each side and its citizens have confidence regarding sources of effluents and the ambient quality of the river.

Sustaining the Effort

The LRGWQI pilot project should develop consensus procedures for Mexico and the U.S. to cooperate in future water quality planning beyond the scope of the initial plan(s). Each party should officially acknowledge their interest in a long-term effort to improve ambient water quality within the Lower Rio Grande/Río Bravo.

Stakeholder Involvement

Each of the binational partner agencies involved in water quality (TCEQ, EPA, IBWC-U.S. and Mexico, CONAGUA, and CEAT) will determine their appropriate stakeholder involvement. There can be a benefit from utilizing research or outreach efforts of other organizations and agencies **from both countries**. The stakeholder involvement processes will rely as much as possible on existing public and stakeholder outreach forums and mechanisms such as EPA's Border 2012 (2020) efforts, IBWC's Citizen Forums and the TCEQ and IBWC's Clean Rivers Program Basin Steering Committee meetings in the United States, as well as other efforts led by Mexican organizations such as Basin Councils.

Schedule

The development of the binational water quality plan resulting from the LRGWQI schedule as proposed based on a starting point of September 2012:

- Stage 1 – 12 months: beginning in September 2012;
- Stage 2- up to two years (2014); and
- Stage 3- 12 months (2015).