

# How to Improve Water Quality in the Rio Grande/Rio Bravo

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# Water Quality Challenge of the Rio Grande/Rio Bravo

- Both Mexico and the United States agree that the quality of the Rio Grande/Rio Bravo should be improved
- The two nations have delegated to the IBWC/CILA responsibility over basin water quality
- IBWC/CILA does not have the authority or funds to manage water quality on their own
- There are five barriers to improving water quality in the basin

# Barriers to Water Quality Improvement

- Two sovereign nations with different water quality standards
- Five separate states involved along with federal agencies
- A large number of water quality stakeholders: towns/cities, farmers/irrigation districts, industries, other water users
- Rapid economic and population growth along much of both sides of the border
- Poverty along both sides of the border

# Water Quality Solutions are Known

- Collection of urban wastewater through sewerage systems
- Treatment of sewerage to reduce contaminants discharged to river
- Prevention of non-point source wastewater discharges from septic systems and farm runoff

# Water Quality Problem

- Fundamental challenge to Mexico and US: no one water quality problem but a series of local problems along the river
- Solutions require cooperation among multiple stakeholders along river
- Neither Mexico nor the US has the authority, money or will to coerce stakeholders, so they will need to involve them in a solution

# Fiction of a Water Quality Standard

- Mexico, the US and Texas have distinct water quality standards
- There is a close-to-zero likelihood of a common water quality standard
- One water quality standard is not necessary for quality improvements
- IBWC/CILA respond to local political agreements rather than national expectations

# Nuevo Laredo Treatment Plant

Parameter	Adopted Parameter	Mexican Standard
DO	> 2.0 mg/l	4.0 mg/l
Ph	6.0 to 9.0	-
Fecal coli	200 col./100 ml*	-
S. Solids	20 mg/l*	75 mg/l*
BOD(5)	20 mg/l*	75 mg/l*

\*: as a 30-day average value

# Discharge Standards of IBWC/CILA

IBWC Minute	Location	Standard
264/274	Mexicali/Calexico	neither Mexico nor US
270/283	Tijuana/San Diego California	
298	Outside Tijuana	Mexico
279	Nuevo Laredo/Laredo	US

# Water Quality Standard Cases

Minute 264 (1980): exceeds MX standards, not US

Minute 274 (1987): no standards, just \$

Minute 270 (1985): only contact recreation standards

Minute 183 (1990): meet California standards

Minute 298 (1997): meet Mexican standards

Minute 279 (1989): meet US and Texas standards

# Voluntary Steps to Resolve Local Water Quality Issues

- Identify what stakeholders perceive are the water quality problems within their reach
- Ask stakeholders what they are willing to do to improve water quality
- Work with IBWC/CILA, federal and state agencies to quantify outcomes of stakeholder voluntary actions to water quality
- Develop initial watershed management plans based on planned actions
- Help stakeholders find financing and technical assistance to achieve voluntary outcomes

# Regulatory Steps if Voluntary Actions Do Not Suffice

- None of the bi-national, federal or state agencies have much leverage over local stakeholders
- Regulatory actions will require carrots, not sticks
- Regulatory actions will require decades
- Conditions will worsen rather than improve due to opportunity costs of delay