Future Prospects for Binational Desalination

A History of Cooperation

The 1944 Treaty between Mexico and the United States:

- addresses transboundary allocation and management of water on the three most important shared rivers (Rio Grande, Colorado, and Tijuana).
- treaty permits crafting subsidiary agreements, known as “minutes” (or technical amendments), implementing and applying their provisions to problems—water, sanitation, or boundary-related.
- On September 21, 2017, the Commissioners of the International Boundary and Water Commission signed Minute No. 323, “Extension of Cooperative Measures and Adoption of a Binational Water Scarcity Contingency Plan in the Colorado River Basin”.
- Section IX. B of Minute 323, “New Water Sources Projects,” notes the existence of opportunities for joint cooperative projects with the potential for increasing delivery or exchange of Colorado River water benefitting both nations. Three of the five projects were desalination projects.
- **There has been a lot of discussion of a desalination project on the Sea of Cortez in Mexico.**

Feasibility & Concerns

EDITOR'S PICKS

PANEL DISCUSSING DESALINATION IN MEXICO FAILS TO INCLUDE ENVIRONMENTAL IMPACT, MEXICAN VOICES

ASU's Global Center for Water Technology held a panel on the feasibility of water importation from Mexico, sidestepping environmental concerns and Mexican representation

- Cost likely north of $3,000/acre-feet.
- Environmental concerns.
- Equity concerns.

Keys to Reaching a Deal

"Available evidence suggests, however, that in arid zones, where water scarcity is a vital factor shaping parties' water resource objectives, parties will vigorously defend their established entitlements to riparian resources as a precondition to any further agreement ***(Zawarhi, 2010).***

"riparian nations are apt to favor transboundary agreements when these compacts produce a "basket of benefits" for stakeholders rather than merely achieving a solitary benefit or purpose ***(Priscoli and Wolf, 2009)".***

Creating the "win-win" is the key!

Ag and Mining Need Water

- In 2023, **Mexico was a net exporter of agri-food and beverage products with a trade surplus equivalent to US$7.8 billion** (exports: US$51.8 billion, imports: US$44.0 billion). As **Mexico's 2nd largest import market for agri-food and drink products, Canada imported US$1.3 billion in 2023.**

- Canada's agricultural imports were valued at approximately $48.2 billion (2023). The **US, accounted for about 56.8% of Canada's agricultural imports. Mexico supplies approximately 20% of Canada's annual net produce consumption.**

- Arizona exported $556 million to Canada, including vegetables, fresh or dried grapes, lettuce, melons, and fresh or chilled tomatoes. **Arizona's top agricultural markets are Canada (33%) and Mexico (22%).**

- Canadian investment in Sonora, Mexico, has been substantial, particularly in the mining sector. **Canadian mining companies have invested approximately $12 billion in Mexico, with a significant portion directed towards Sonora.**

How to Improve Future Prospects?

- Binational desalination plant is technically feasible but not necessarily implementable.
- To be successful the project development needs to:
  - Include all stakeholders on both sides of the border.
  - Provide water to address environmental needs.
  - Needs to be constructed at the right time (when the economics support and other lower cost options have been exhausted). Project development could take 15 to 20 years.
  - **Recognize and address the beneficial economic interconnectivity of the three countries in the North American region (United States, Mexico, and Canada).**