

International Boundary and Water Commission United States and Mexico

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Page 1 of 3

TRANSBOUNDARY ISSUES IN THE TIJUANA RIVER BASIN NEWSLETTER



Through Minute 320 of the International Boundary and Water Commission, United States and Mexico (IBWC), entitled "*General Framework for Binational Cooperation on Transboundary Issues in the Tijuana River Basin*," dated October 5, 2015, different issues have been identified in the Tijuana River basin requiring binational coordination between the United States and Mexico to address them. The Minute identifies the priority topics of common interest in this basin as water quality, sediment, and solid waste.

Minute 320 established a Binational Core Group composed of federal, state, and local government agencies as well as non-governmental organizations (NGOs) from both countries and tasked it with establishing Binational Work Groups (BWG). These groups meet to discuss the issues that require attention, as well as to explore different opportunities for cooperation on the three priority themes.

This newsletter summarizes the status of implementing recommendations derived from the investigation of the wastewater spill to the Tijuana River that occurred during the first week of February 2017. It also summarizes the actions carried out by the Commission and the Minute 320 Work Groups during the months of August to December 2018.

A) WATER QUALITY:

During March and April of 2017, a binational investigation was carried out on the spill of untreated wastewater that was bypassed into the Tijuana River. This bypass occurred because of the rupture of a section of the "Insurgentes" collector, in the vicinity of the confluence between the Tijuana and Alamar Rivers, in Tijuana, Mexico. According to the recommendations derived from the investigation, the institutions of both countries that make up the Minute 320 Water Quality BWG have done the following:

- 1. Equipment for emergency situations:** The State Public Services Commission of Tijuana (CESPT) acquired equipment for the construction and maintenance of the sanitary sewer network.
- 2. Installation of flow meters:** The IBWC acquired and installed flow meters in the Tijuana River. Currently, the flow meters that are operating are: the meter located downstream from the intake of the CILA Pumping Station (PB-CILA) before the international border, the meter located immediately upstream from the intake of PB-CILA, and the one located downstream of the border in the U.S. This will help quantify the amount of wastewater in the system or lost in the event of a bypass.

- 3. Communication:** An international protocol for spill notifications was prepared and is being used by the responsible agencies of both countries. Likewise, a requirement to notify the IBWC was included in the CESPT emergency response protocol when spills occur with potential for cross-border impact. Also, a protocol for the operation of the PB-CILA pumping station was prepared. These protocols are available on our website.

On the afternoon of December 10, 2018, an event of this nature occurred in the Tijuana River due to the rupture of a concrete section of the Poniente Collector in Tijuana. The discharge to the Tijuana River was estimated at 7 million gallons per day (MGD). This situation was reported through the International Spill Reporting Protocol mentioned above. The following are works being done by CESPT:

- a. Part of the flows of the damaged collector were bypassed towards other, smaller sewer lines;
 - b. PB-CILA was cleaned and put back into operation even though the flows within the river exceed the pumping capacity of the infrastructure. This was done to reduce as much as possible the impact of the discharge to the U.S.; and
 - c. CESPT initiated the temporary repair of the collapsed collector during the week of December 17, 2018. It is expected that during early 2019 the permanent repair will be built in this section of the Poniente Collector with resources from the North American Development Bank (NADB).
- 4. Infrastructure Assessment:** The diagnosis of the existing bypass and pumping system of the Tijuana River is currently at 60% complete and it is expected to be completed at the beginning of 2019. This study includes the evaluation of new infrastructure alternatives in Mexico and the U.S. to determine the feasibility of increasing the capacity to manage the flows in the Tijuana River. The main objective of this study is to reduce the negative impacts on the quality of the waters that reach the Pacific Ocean. This project is being performed by ARCADIS and financed by the United States Environmental Protection Agency (USEPA) through the North American Development Bank (NADB).
- 5. Infrastructure Works:** CESPT is currently rehabilitating collectors identified as needing immediate repairs in Tijuana. The following table shows the progress of these works to date:

| Collector | Goal | Start Date | Status |
|---|------------|------------|--------|
| Insurgentes Collector, El Mexicano-Puente Ermita | 791 meters | 6/25/18 | 60% |
| Insurgentes Collector, Parque Morelos-Los Alamos | 714 m | 6/25/18 | 8% |
| Oriente Collector, Buena Vista | 494 m | 6/8/18 | 50% |
| INV Collector, Fundadores-Esteban Calderon | 1,066 m | 6/25/18 | 35% |
| Poniente Collector, Viento Alisos-Cuauhtemoc, stage 1 | 207 m | 6/16/18 | 70% |
| Poniente Collector, Viento Alisos-Cuauhtemoc, stage 2 | | 7/2/18 | 50% |
| San Martin Collector, San Martin-Cañon Del Sainz | 535 m | 6/25/18 | 60% |

Wastewater collector repairs:

CESPT invested a total of \$28.71 million pesos (\$1.5 million USD) in 2017, and has programmed another \$86.01 million pesos (\$4.5 million USD) for 2018.

Additionally, CESPT and CONAGUA combined resources to rehabilitate other stretches of the Poniente Collector as well as PB-CILA and PB-1 pumping stations, for a total of \$4 million USD in 2018. Also, the USEPA through the NADB contributed \$1.06 million USD towards rehabilitation of a section of the Poniente Collector. The joint investment of the Mexican and U.S. governments in these works in 2018 was more than \$5 million USD.

The Mexican Section of the IBWC allocated more than \$250,000 USD in 2018 for the installation of donated pumps and the installation of control panels at PB-CILA and in the Tijuana River channel near the international border to reduce the volume of wastewater crossing into the United States.

- 6. Water Quality Monitoring:** CONAGUA carries out a Water Quality Monitoring Program on the Tijuana River and the Alamar River, as part of its national monitoring network. Additionally, both Sections of the IBWC developed a Binational Monitoring Program to collect and analyze water quality in the Tijuana River and adjacent transboundary canyons. The program includes sampling for sediment and water in the transboundary canyons quarterly, and sampling monthly in the Tijuana River in Mexico and in the U.S. The first collection of joint samples took place on December 7th and 8th and it corresponded to a rain event. This binational program will have a duration of 1 year. At the end of the project, both Sections of the IBWC will summarize the results of the sampling and prepare a technical report to be published in both English and Spanish.
- 7. Binational Field Inspections:** IBWC has conducted joint tours of the Tijuana River channel and tributary streams to detect and act on potential transboundary wastewater spills. Also, binational field inspections by the Binational Water Quality Work Group will be conducted periodically to visit sites of interest within the Tijuana River basin.



Photos: December 2018, water quality sample collection as part of the IBWC Tijuana River and Canyons binational study.

B) SEDIMENT:

The USIBWC has awarded a contract to Stantec for a feasibility study to locate and size sediment basin(s) in the Tijuana River between the International Border and Dairy Mart Road to intercept sediment, transboundary flows, incidental wastewater flows, and capture debris and trash. The study will include Hydrologic/Hydraulic and Sediment Transport modeling. The study will develop alternatives and identify a preferred alternative. A conceptual design will also be developed for the preferred alternative.

C) SOLID WASTE:

The scope of work on the binational study for the installation of trash booms in different strategic sites along the Tijuana River on the U.S. side has been developed and is awaiting funds to perform the feasibility study.



In preparation for the rainy season, the Mexican Section of the IBWC allocated \$17,800 USD to remove the temporary earthen berms that were in the Tijuana River in Mexico, which were built earlier this year to retain wastewater flows before its crossing into the U.S. Also, solid waste was removed from all the rain discharge sites near the international boundary of the Tijuana River channel to prevent them from flowing downstream. These works were carried out October and November.

Photo: removal of sediment/debris from the river.