## California Regional Water Quality Control Board San Diego Region

### **David Gibson, Executive Officer**



### Executive Officer's Report August 10, 2022

### **Table of Contents**

Part A	– San Diego Region Staff Activities	2
1.	Personnel	
2.	Border Water Quality Efforts (Attachment A-2)	2
Part B	– Significant Regional Water Quality Issues	
1.	Lake San Marcos Update: Aeration Pilot Study	4
2.	Enforcement Actions for May and June 2022 (Attachment B-2)	6
3. <i>(Atta</i>	Sanitary Sewer Overflows in the San Diego Region – April and May 2022 chment B-3)	7
4.	Transboundary Flows from Mexico into the San Diego Region – April and Mag	y
	– Statewide Issues of Importance to the San Diego Region	

The August report for the Tentative Schedule of Significant NPDES Permits, WDRs, and Actions, Agenda Items Requested by Board Members, and the attachments noted above are included at the end of this report.

## Part A – San Diego Region Staff Activities

#### 1. Personnel

Staff Contact: Dulce Romero

An updated San Diego Water Board staff list can be viewed at: <u>San Diego Regional Water</u> Quality Control Board Staff List (ca.gov).

#### Recruitment

We are actively recruiting for seven positions: one limited-term Senior Environmental Scientist Specialist in the Healthy Waters Branch; one Water Resource Control Engineer, one Graduate Student, and one Scientific Aid in the Surface Water Protection Branch; two Engineering Geologists and one Environmental Scientist in the Site Restoration Groundwater Protection Branch.

Information regarding our vacancies is located on the CalCareers and San Diego Water Board websites:

https://calcareers.ca.gov/CalHRPublic/Search/AdvancedJobSearch.aspx.https://www.waterboards.ca.gov/sandiego/about\_us/employment/.

## 2. Border Water Quality Efforts (Attachment A-2)

Staff Contact: David Gibson

On June 17, 2022, US EPA formally released the Draft Programmatic Environmental Impact Statement (Draft PEIS) for Project Alternatives for the <u>Tijuana River Watershed</u> to be funded from the \$300 million allocated by Congress through the United States-Mexico-Canada Agreement (USMCA). US EPA held two public meetings on July 19<sup>th</sup> and July 20<sup>th</sup> to provide an overview and receive public comments on the federal NEPA process and the Alternatives being studied. Written comments were due to EPA by August 1, 2022. The San Diego Water Board led an effort to provide a shared comment letter with several state and local agencies. The agencies that co-signed on the comment letter to EPA with the Water Board include:

- CalEPA
- State Lands Commission
- State Parks
- County of San Diego

- City of San Diego
- Port of San Diego
- City of Imperial Beach
- Surfrider

The Draft PEIS identified three Alternatives. A "No Action" Alternative is included. The Proposed Action includes two alternatives. Alternative 1 is a set of core projects focused on the expansion of the US International Boundary and Water Commission (IBWC) International Treatment Plant (ITP) to at least 50MGD, repairs to the Tijuana sewer collection system to reduce spills, and a US-side Advanced Primary Treatment Plant to treat river diversions up to 30MGD from the PBCILA Tijuana River diversion pump station in Mexico. Alternative 2 includes the priorities previously identified by the Water Board and co-signatory agencies in the Joint Resolution R9-2019-0246 including a larger US located river diversion and treatment plant (60 MGD), a trash boom in the Main Channel, a new, modern wastewater treatment plant

at San Antonio de los Buenos, as well as projects to develop and return recycled wastewater to Tijuana for re-use. Table 2-1 below is the Draft PEIS summary of the Proposed Action.

Alternative		Project Title	Project Location
Core Projects	ojects	A. Expanded ITP Option A1: Expand to 40 MGD Option A2: Expand to 50 MGD Option A3: Expand to 60 MGD	U.S. only
Alternative 1: Cor	Supplemental Projects	B. Tijuana Canyon Flows to ITP Option B1: Trenching via Smuggler's Gulch and Monument Rd Option B2: Trenchless via Smuggler's Gulch and Under Mesa Option B3: Connect to Existing Canyon Collector System	U.S. and Mexico
Iteri	Sup	C. Tijuana Sewer Repairs	Mexico only
A	e +	D. APTP Phase 1	U.S. and Mexico
	Core	E. APTP Phase 2	U.S. only
	e 2:	F. U.Sside River Diversion to APTP	U.S. only
	ativ	G. New SABTP	Mexico only
	Alternative	H. Tijuana WWTP Treated Effluent Reuse	Mexico only
	Ā	I. ITP Treated Effluent Reuse	U.S. and Mexico
		J. Trash Boom(s)	U.S. only

Table 2-1. Projects Constituting Alternatives 1 and 2

In addition, the California Legislature approved \$35 million in Budget Act 2021 (\$20 million) and Budget Act 2022 (\$15 million) for water quality restoration or protection projects in the New River and Tijuana River watersheds. On July 19, 2022, the State Water Board adopted a Resolution (Item 3) to authorize the Deputy Director of Division of Financial Assistance to approve and fund projects to address water quality in the rivers that come across the border from Mexico. Projects in the Tijuana River watershed were identified from over 12 years of discussion and planning in the Tijuana River Recovery Team Recovery Strategy: Living with the Water, the IBWC Minute 320 work group discussions on water quality, sediment, and trash, and the County of San Diego Tijuana River Valley Needs and Opportunities Assessment Report. The draft implementation plans for the pending Bacterial Indicators and Trash TMDLs were also considered in soliciting and compiling projects from the Recovery Team agencies and organizations for State Water Board consideration. The projects proposed and approved to date include:

- Tijuana River Trash Boom(s): County of San Diego \$4,000,000
   Install trash boom in main channel and Matadero Canyon to address trash in Tijuana River and nearby canyons
- Sewage System Monitoring: US IBWC/CILA/CESPT \$200,000 Install SmartCovers or equivalent devices to monitor sewage system for maintenance and operations needs and early identification of failures in Tijuana
- Smuggler's Gulch Improvement Project: County of San Diego \$4,000,000 Construct basin and trash boom, restoration of grade to remove wastes and reduce flooding in Matadero Canyon/Smuggler's Gulch

Brown Property Restoration: County of San Diego \$ 1,800,000
 Remove historically placed fill and annually deposited sediment and trash in Tijuana River downstream of Hollister Avenue bridge to reopen a natural braided channel hydrology of the 25- year floodplain

Finally, the Commissioners of the U.S. and Mexico sections of IBWC have re-initiated the Minute 320 Binational Framework to address water quality, sediment, and trash in the Tijuana River watershed. This includes the appointment of new members to the Binational Core Group. I am pleased to report that I have been invited by Commissioner Maria-Elena Giner to participate in the IBWC Minute 320 Binational Core Group.

## Part B – Significant Regional Water Quality Issues

## 1. Lake San Marcos Update: Aeration Pilot Study

Staff Contact: Sarah Mearon

Lake San Marcos is a seasonally stratified reservoir impaired by elevated phosphorus and nitrogen, excess algal growth, and low dissolved oxygen. The lake and San Marcos Creek, upstream and downstream of the lake, are on the California 303(d) list of impaired water bodies for several pollutants. These impairments interfere with the recreation and habitat beneficial uses of the lake. The Site Restoration Unit has provided oversight of investigation and restoration activities for this case since 2015.

Citizens Development Corporation (CDC), along with the County of San Diego, the Cities of San Marcos and Escondido, and Vallecitos Water District (collectively, the Parties), are cooperatively and voluntarily working to restore the water quality of Lake San Marcos and Upper San Marcos Creek. The Parties prepared a Remedial Investigation/Feasibility Study Report¹ in 2016 that includes recommendations for lake and watershed restoration measures. One of the proposed remedies is the combination of a lake aeration system and a modified selective withdrawal system, the goal of which is to increase lake circulation, prevent stratification, and improve oxygenation in the lake.

The Parties installed and began operating Phase I of an aeration system at Lake San Marcos in early 2022. The objective of the system is to eliminate stratification in the lake by promoting vertical mixing of lake water in the deep portion of the lake. The system operates by pumping compressed air to 10 diffuser arrays, located at the bottom of the lake. These diffuser arrays operate similarly to fish tank "air bubblers," but on a much larger scale. Lake waters mix as rising bubbles entrain water from the bottom of the lake and transport it to the lake surface. Vertical mixing counteracts differential thermal warming of surface waters in the summer months and promotes a thermally mixed condition (i.e., lake temperature is similar throughout the water column). Maintaining the lake in a mixed condition prevents stratification, which in turn reduces nutrient release from sediments and prevents the formation of a nutrient-rich anoxic at the bottom of the lake. The effectiveness of the aeration system can broadly be

<sup>&</sup>lt;sup>1</sup>https://documents.geotracker.waterboards.ca.gov/esi/uploads/geo\_report/9786993443/T1000 0003261.PDF

assessed by determining (1) the degree to which the water column remains thermally mixed, (2) the distribution of dissolved oxygen throughout the water column, and (3) mass of nutrients in the water column.

The Parties activated the system following an unusually dry winter. Typically, wet winter weather produces stormwater inputs to the lake that would normally contribute to a vertically mixed condition in the deep lake into spring or early summer. However, a cooler anoxic layer began forming in the deep lake in March 2022, which is an early sign of stratification. The Parties' activation of the system was initiated in a phased manner, with diffuser activations staggered progressively into the lake. This phased approach was successful with only minor hydrogen sulfide odors present in the immediate vicinity of the diffusers for approximately one day, indicating successful mixing. The Parties addressed other issues with the system during the first few months of operation: the generator and compressor housing required additional modification to address overheating, a faulting issue was addressed by replacement of a control panel, and a second faulting issue was addressed by recalibrating the diffuser pressurization settings. The Parties reported no fish kills or algal blooms during the time taken to resolve these issues.

The Parties have operated the system for several weeks without issue and are monitoring the lake in accordance with the Board-approved aeration pilot study work plan. The Parties are collecting observational data, which is indicating that the lake water column is being mixed and that the primary objective of the system has been met. The Parties intend to review nutrient concentration data over the dry summer season to assess whether the system is reducing deep lake water nutrient loads. The pilot study will end in September 2022, at which time the lake is anticipated to remain mixed under natural conditions. The pilot study report will include recommendations on how the system might be optimized in future project phases. San Diego Water Board staff will continue to provide the updates on Lake San Marcos as information becomes available.



Image: South end of Lake San Marcos showing bubbling at the surface from diffusers installed as part of the Phase I aeration system.

## 2. Enforcement Actions for May and June 2022 (Attachment B-2)

Staff Contact: Chiara Clemente

During the months of May and June 2022, the San Diego Water Board issued 1 Administrative Civil Liability (ACL) Order, 2 Investigative Orders, 6 Notices of Violation, and 4 Staff Enforcement Letters. A summary of each written enforcement action taken is provided in the attached table. The State Water Board's <a href="Enforcement Policy">Enforcement Policy</a> contains a brief description of the kinds of enforcement actions the Water Boards can take.

Additional information on violations, enforcement actions, and mandatory minimum penalties is available to the public from the following on-line sources:

State Water Board Office of Enforcement webpage: http://www.waterboards.ca.gov/water\_issues/programs/enforcement/

California Integrated Water Quality System (CIWQS): <a href="http://www.waterboards.ca.gov/water">http://www.waterboards.ca.gov/water</a> issues/programs/ciwqs/publicreports.shtml

State Water Board GeoTracker database: https://geotracker.waterboards.ca.gov/

## 3. Sanitary Sewer Overflows in the San Diego Region – April and May 2022 (Attachment B-3)

Staff Contact: Keith Yaeger

Sanitary sewer systems may experience failures resulting in sanitary sewer overflow (SSO) discharges that may affect waters of the United States and/or the State of California (State). There are many factors (including factors related to geology, design, construction methods and materials, age of the system, population growth, and system operation and maintenance), that can influence the likelihood of an SSO and the volume of the discharge. Major causes of SSOs include: grease blockages, root blockages, sewer line flood damage, manhole structure failures, vandalism, pump station failures, power outages, excessive stormwater inflow or groundwater infiltration, debris blockages, failures due to aging sanitary sewer systems, lack of proper operation and maintenance, insufficient capacity, and contractor-caused damages. Many SSOs are preventable with adequate and appropriate facilities, source control measures, and operation and maintenance of the sanitary sewer system.

SSO discharges from public sewage collection systems and private laterals into the San Diego Region can contain high levels of suspended solids, pathogens, toxic pollutants, nutrients, oil, and grease. SSO discharges can pollute surface and ground waters, thereby threatening public health, adversely affecting aquatic life, and impairing the recreational use and aesthetic enjoyment of surface waters. Typical impacts of SSO discharges include the closure of beaches and other recreational areas, the inundation of property, and the pollution of rivers, estuaries, and beaches.

State agencies, municipalities, counties, districts, and other entities (collectively referred to as public entities) that own or operate sewage collection systems report SSO spills through an online database system, the *California Integrated Water Quality System* (CIWQS). These SSO spills are required to be reported under the <u>Statewide General SSO Order</u>, the <u>San Diego Regional General SSO Order</u>, and/or individual National Pollutant Discharge Elimination System (NPDES) permit requirements. Some federal entities report this information voluntarily. Most SSO reports are available to the public on a real-time basis at the <u>State</u> Water Board Public SSO Report Database.

2

<sup>&</sup>lt;sup>2</sup> State Water Board Order No. 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems as amended by Order No. WQ 2013-0058-EXEC, Amending Monitoring and Reporting Program for Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.

<sup>&</sup>lt;sup>3</sup> San Diego Water Board Order No. R9-2007-0005, *Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region*.

<sup>&</sup>lt;sup>4</sup> Marine Corp Base Camp Pendleton reports sewage spills to CIWQS as required by its individual NPDES permit, Order No R9-2019-0167, NPDES Permit No. CA0109347, *Waste Discharge Requirements for the Marine Corps Base, Camp Pendleton, Southern Regional Tertiary Treatment Plant and Advanced Water Treatment Plant at Haybarn Canyon, Discharge to the Pacific Ocean through the Oceanside Ocean Outfall.* The United States Marine Corps Recruit Depot and the United States Navy voluntarily report sewage spills through CIWQS.

Details on the reported SSOs and private lateral sewage discharges (PLSDs) in April and May 2022 are provided in the following attached tables:

- Table 1: April 2022 Summary of Public and Federal Sanitary Sewer Overflow Events
- Table 2: May 2022 Summary of Public and Federal Sanitary Sewer Overflow Events
- Table 3: April 2022 Summary of Private Lateral Sewage Discharge Events
- Table 4: May 2022 Summary of Private Lateral Sewage Discharge Events
- Table 5: April and May 2022 Summary of Sewage Discharges by Source

A summary view of information on sewage spill trends are provided in the following attached figures:

- Figure 1: Number of Spills per Month
- Figure 2: Volume of Public SSOs per Month
- Figure 3: Volume of Federal SSOs per Month
- Figure 4: Volume of PLSDs per Month

The figures show the number and total volume of sewage spills per month from April 2021 through May 2022. During this period, 36 of the 64 collection system agencies in the San Diego Region reported one or more sewage spills. Twenty-eight collection system agencies did not report any sewage spills. A total of 173 sewage spills were reported and more than 96,000 gallons of sewage reached surface waters.

Additional information about the San Diego Water Board sewage overflow regulatory program is available on the San Diego Water Board's SSO Website.

## 4. Transboundary Flows from Mexico into the San Diego Region – April and May 2022 (Attachment B-4)

Staff Contact: Keith Yaeger

Water and wastewater in the Tijuana River and from canyons located along the international border ultimately drain from the City of Tijuana, Baja California, Mexico (Tijuana) into the United States. The water and wastewater flows are collectively referred to as transboundary flows. The United States Section of the International Boundary and Water Commission (USIBWC) has built canyon collectors that capture dry weather transboundary flows for treatment at the South Bay International Wastewater Treatment Plant (SBIWTP) located at the United States/Mexico border. Dry weather transboundary flows that are not captured by the canyon collectors for treatment at the SBIWTP, such as flows within the main channel of the Tijuana River,<sup>5</sup> are reported by the USIBWC pursuant to Order No. R9-2021-0001, the National Pollutant Discharge Elimination System (NPDES) permit for the SBIWTP discharge.

<sup>&</sup>lt;sup>5</sup> Tijuana River transboundary flows typically consist of a mixture of groundwater, urban runoff, storm water, treated sewage wastewater, and untreated sewage wastewater from infrastructure deficiencies and other sources in Mexico.

These uncaptured flows can enter waters of the United States and/or the State of California (State), potentially polluting the Tijuana River Valley and Estuary, and south San Diego beach coastal waters.

According to the 1944 *Water Treaty for the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande* and stipulations established in <u>IBWC Minute No. 283</u>, the USIBWC and the Comisión Internacional de Limites y Aguas (CILA)<sup>6</sup> share responsibility for addressing border sanitation problems, including transboundary flows. Efforts on both sides of the border have led to the construction and ongoing operation of several pump stations and treatment plants to reduce the frequency, volume, and pollutant levels of transboundary flows. This infrastructure includes but is not limited to the following:

- The SBIWTP, located just north of the United States/Mexico border, provides secondary treatment for a portion of the sewage from Tijuana and transboundary flows conveyed from canyon collectors located in Smuggler's Gulch, Goat Canyon, Canyon del Sol, Stewart's Drain, and Silva Drain. The secondary-treated wastewater is discharged to the Pacific Ocean through the South Bay Ocean Outfall, in accordance with USIBWC's NPDES permit, Order No. R9-2021-0001.
- Several pump stations and wastewater treatment plants (WWTPs) in Tijuana, including the San Antonio de los Buenos WWTP, the La Morita WWTP and the Arturo Herrera WWTP.
- The River Diversion Structure and Pump Station CILA in Tijuana diverts dry weather transboundary flows from the Tijuana River. The flows are diverted to a discharge point at the Pacific Ocean shoreline, approximately 5.6 miles south of the United States/Mexico border; or the flows can be diverted to SBIWTP or another wastewater treatment plant in Tijuana, depending on how Tijuana's public utility department (CESPT) directs the flow into the collection system. The River Diversion Structure is not designed to collect wet weather river flows and any river flows over 1,000 liters per second (35.3 cubic feet per second, 22.8 million gallons per day).

In April and May 2022, there were a total of two reported transboundary flows resulting in more than 1.2 billion gallons of contaminated water<sup>7</sup> flowing from Mexico into the United States.

Details on the transboundary flows reported in April and May 2022 are provided in the attached tables:

- Table 1: April and May 2022 Summary of Transboundary Flows from Mexico by Event
- Table 2: April and May 2022 Summary of Transboundary Flows from Mexico

A summary view of information on transboundary flow trends are provided in the following attached figures:

• Figure 1: Number of Transboundary Flows per Month

<sup>&</sup>lt;sup>6</sup> The Mexican section of the IBWC.

<sup>&</sup>lt;sup>7</sup> As used in this report, the term "contaminated water" is intended to refer to water that either meets the definition of "contamination" under Water Code section 13050(k) or that creates, or threatens to create, a condition of "pollution" under Water Code section 13050(l).

- Figure 2: Tijuana River Transboundary Flow Volume per Month
- Figure 3: Canyon Collector Transboundary Flow Volume per Month

These figures show the number and volume of transboundary flows per month from April 2021 through May 2022. During this period, there were a total of 86 reported transboundary flows resulting in more than 9 billion gallons of contaminated water flowing from Mexico into the United States. The number and volume of transboundary flows has increased compared to previous years due to infrastructure issues in Mexico and at the SBIWTP. While the full extent of the infrastructure issues in Mexico is unknown, the San Diego Water Board is aware of several infrastructure issues at the SBIWTP. Notably, the gate valves at Junction Box 1 (JB1) of the SBIWTP are largely inoperable. With the gate valves inoperable, USIBWC currently has limited control over the amount of flow entering the SBIWTP other than through communications with Mexico to limit the flow. Under the terms of the San Diego Water Board's Cease and Desist Order No. R9-2021-0107, as amended by Order No. R9-2021-0220, USIBWC was required to complete the design for the repair of the gate valves no later than January 31, 2022. However, USIBWC was unable to complete the design for the repair until June 30, 2022. USIBWC reported that it was unable to meet the deadline due to difficulties in verifying field conditions in Mexico. The Cease and Desist Order directs USIBWC to complete repairs to the gate valves as soon as reasonably possible. USIBWC has allocated funds for the repair of the gate valve and anticipates completing repairs by September 30, 2023.

On December 13, 2021, USIBWC notified the San Diego Water Board that a section of the International Collector (also referred to as the International Interceptor) has deteriorated. The International Collector is a critical wastewater pipeline in Mexico that conveys Tijuana wastewater and Tijuana River flows to Pump Station 1 (PB1) in Mexico or the SBIWTP. The deteriorated section of the International Collector is located beneath the highway just across the United States/Mexico border at Stewart's Drain (see Figure 4). When the International Collector is pressurized above typical operational wastewater flows, the wastewater backs up and leaks from the deteriorated section and flows into the United States at Stewart's Drain. The International Collector can become over pressurized when pumping capacity at PB1 is insufficient during peak flows and when capacity is reduced due to power outages, pump failures, or blockages within the collection system. The number of transboundary flows at Stewart's Drain has increased because of the deteriorated section of the International Collector. In response to the increase in transboundary flows at Stewart's Drain, USIBWC, CESPT, and CILA implemented several corrective actions to reduce the number and volume of transboundary flows at Stewart's Drain. On January 15, 2021, CESPT and CILA shut down Pump Station CILA to relieve pressure on the deteriorated section of the International Collector. On January 28, 2022, Pump Station CILA was brought back online but at a reduced pumping capacity. The reduced flow from Pump Station CILA decreased but did not eliminate the transboundary flows at Stewart's Drain. On February 8, 2022, USIBWC raised the gate at JB1 to allow additional flow into the SBIWTP and further reduce backpressure on the International Collector. Raising the gate on JB1 appears to have resolved the transboundary flows at Stewart's Drain. It is currently unknown whether there is an obstruction in the collection system that resulted in additional backpressure, or if the International Collector has deteriorated such that it can no longer withstand typical backpressure in the system.

Additional information about sewage pollution within the Tijuana River Watershed is available on the <u>San Diego Water Board's Tijuana River Watershed Website</u>.

# Part C – Statewide Issues of Importance to the San Diego Region No Report

## CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

Significant NPDES Permits, WDRs, and Actions of the San Diego Water Board

August 10, 2022 APPENDED TO EXECUTIVE OFFICER'S REPORT

#### TENTATIVE SCHEDULE SIGNIFICANT NPDES PERMITS, WDRs, AND ACTIONS OF THE SAN DIEGO WATER BOARD

## Action Agenda Items - San Diego Water Board

## September 14, 2022 Rancho California Water District

Action Agenda Item	Action Type	Written Comments
		Due
Rescission of Order No. R9-2009-0009, Waste Discharge Requirements for the California Department of Forestry and Fire Protection Rainbow Conservation Camp (Tentative Order No. R9-2022-0049). (Brandon Bushnell)	Waste Discharge Requirement Rescission	15-Jul-22
Update on Agricultural Monitoring Programs. (Cailynn Smith)	Informational Item	N/A
Update on Santa Margarita Total Maximum Daily Load Development. (Lark Starkey)	Informational Item	N/A
Rancho California Water District and Eastern Municipal Water District Update. (David Gibson)	Informational Item	N/A
Discussion of Board Member Meeting with the Southern California Coastal Water Research Project (SCCWRP). (David Gibson)	Informational Item	N/A
Cannabis Program Update. (Brian Covellone)	Informational Item	N/A

October 12, 2022 Meeting Cancelled

## November 9, 2022 San Diego Water Board

Action Agenda Item	Action Type	Written Comments Due
Rescission of Order No. 94-041, Waste Discharge Requirements for Live Oak Springs (Tentative Order No. R9-2022-0057). (Brandon Bushnell)	Waste Discharge Requirement Rescission	TBD
Resolution in Support of the Strategic Water Quality Assessment Approach for San Diego Bay (Tentative Resolution No. R9-2022-0019). (Wayne Chiu)	Tentative Resolution	24-11-21
Sediment Quality Objectives Update. <i>(Tom Alo)</i>	Informational Item	N/A
Underground Storage Tank Program Update. (Amy Grove)	Informational Item	N/A
Old Town Campus Redevelopment and Stewart Mesa Ag Fields Update. (Sean McClain)	Informational Item	N/A

## Agenda Items Requested by Board Members

September 9, 2020

Requested Agenda Item	Board Member	Status
Update on new scientific information regarding climate change and how we are including climate change considerations in our work.	Abarbanel	Ongoing

February 10, 2021

Requested Agenda Item	Board Member	Status
Update about the range of chemicals that might cause problems with the symporter of the fetus.	Olson	Winter 2021-22

March 10, 2021

Requested Agenda Item	Board Member	Status
Annual update on the progress and accomplishments of the Project Clean Water program, including information related to the impacts of the program on water quality.	Abarbanel, Warren	Ongoing
Region-wide workshop regarding the water quality issues in the Tijuana River Valley, including a discussion of water quality objectives and steps needed to achieve them.	Abarbanel	June 2022

April 14, 2021

Requested Agenda Item	<b>Board Member</b>	Status
Update from State Board on the lessons learned regarding the use of Zoom remote meeting platform for Board Meetings to inform how the Regional Boards move forward when we return to the office and hold Board meetings in person	Warren	Winter 2022
Information regarding the Water Board's Training Academy climate change courses	Abarbanel	Upcoming

May 12, 2021

Requested Agenda Item	Board Member	Status
Update from SCCWRP regarding current research projects.	Abarbanel	Completed March 2022

June 9, 2021

Requested Agenda Item	Board Member	Status
Update about the issues associated with the South Orange County Wastewater Authority's (SOCWA's) Coastal Treatment Plant being in a fire zone.	Warren	Winter 2021-22

August 11, 2021

Requested Agenda Item	Board Member	Status
Drought and sustainability meeting with County Water Authority to find out how we can support their efforts	Abarbanel	Winter 2022
Briefing regarding the new State Water Resources Control Board fresh water harmful algal blooms policy.	Olson	March 2022

**December 8, 2021** 

Requested Agenda Item	Board Member	Status
Update on the Contact Water Recreation (REC-1) Water Quality Objectives project, with information regarding the use of HF-183 in particular.	Olson	Upcoming
Update on SCCWRP's recent efforts	Abarbanel	March 2022
Update on the health of San Diego Bay	Abarbanel	Spring 2022
Update on the efforts regarding Lake San Marcos	Abarbanel	Spring 2022

**February 9, 2022** 

Requested Agenda Item	Board Member	Status
Update on homeless issues along the San Diego River and efforts being made to address the issues	Strawn	Summer 2022

March 9, 2022

Requested Agenda Item	Board Member	Status
Update on SOCWA Ocean Acidification and Hypoxia Model.	Abarbanel, Strawn	Summer 2022

May 11, 2022

Requested Agenda Item	Board Member	Status	
Atmospheric Rivers Presentation from Dr. Marty Ralph, Scripps Institution of Oceanography	Abarbanel	Fall 2022	





August 10, 2022















August 1, 2022

Via email to: Tijuana-Transboundary-EIS@epa.gov

c/c to USEPA, Elizabeth Borowiec, borowiec.elizabeth@epa.gov

Comment on Draft Programmatic Environmental Impact Statement (Draft PEIS) for the proposed United States-Mexico-Canada Agreement (USMCA) Mitigation of Contaminated Transboundary Flows Project (the Proposed Action).

Dear United States Environmental Protection Agency (EPA) and U.S. International Boundary and Water Commission (USIBWC),

The undersigned individuals would like to thank EPA and USIBWC for working with the Federal, State, and local stakeholders in the Eligible Public Entities Coordinating Group (EPECG) to identify the set of project options to be considered for evaluation. Resources appropriated and leveraged by the USMCA Implementation Act will be transformative for communities and wildlife within and nearby the Tijuana River border region.

EPA's Proposed Action evaluated in the Draft PEIS is the issuance of U.S. appropriations (including but not limited to USMCA Implementation Act appropriations) for implementation of projects to address impacts from transboundary flows in the Tijuana River watershed and adjacent coastal areas. Alternative 1 includes "Core Projects" that are sufficiently evolved to be ready for decision making and, after completing the NEPA process, would be considered analyzed in sufficient detail for action to be taken immediately. Alternative 2, "the comprehensive solution", includes the Core Projects identified in Alternative 1 plus a larger range of projects known as the Supplemental Projects, several of which are

not yet ready for decision making. We understand that these Supplemental Projects require additional consideration in subsequent tiered NEPA documents before a decision can be made and action can be taken. Table 2-1 in the Draft PEIS lists the projects in each Alternative:

Alter	native	Project Title	Project Location
Core Projects	Projects	A. Expanded ITP Option A1: Expand to 40 MGD Option A2: Expand to 50 MGD Option A3: Expand to 60 MGD	U.S. only
Alternative 1: Core	Supplemental Pr	B. Tijuana Canyon Flows to ITP Option B1: Trenching via Smuggler's Gulch and Monument Rd Option B2: Trenchless via Smuggler's Gulch and Under Mesa Option B3: Connect to Existing Canyon Collector System	U.S. and Mexico
lteri	Sup	C. Tijuana Sewer Repairs	Mexico only
A	+ +	D. APTP Phase 1	U.S. and Mexico
	Core	E. APTP Phase 2	U.S. only
	e 2:	F. U.Sside River Diversion to APTP	U.S. only
	ativ	G. New SABTP	Mexico only
	Alternative	H. Tijuana WWTP Treated Effluent Reuse	Mexico only
	Alt	I. ITP Treated Effluent Reuse	U.S. and Mexico
		J. Trash Boom(s)	U.S. only

Table 2-1. Projects Constituting Alternatives 1 and 2

For decades, pollution and contamination from transboundary flows have impacted the community health, economy, and ecosystems from San Ysidro and Imperial Beach to Coronado. Although significant improvements in water quality in the coastal and Tijuana River Valley waters are anticipated with completion of the projects in the Alternative 1: Core Projects, which we fully support, significant waste loads and problematic pollution risks to human and environmental health will remain if the full range of projects previously considered in the "Holistic Alternative I-2" presented to the EPECG are not fully realized. Pursuant to the requirements of section 303(d) of the Clean Water Act, the San Diego Regional Water Quality Control Board (San Diego Water Board) is drafting Total Maximum Daily Loads (TMDLs) for Bacterial Indicators and Trash to address the decades long impairment of the Tijuana River and Estuary. The draft TMDLs consider key components of the "Holistic" Alternative I-2 as it was described in the EPECG process as critical to achieving the waste load reductions essential to restore and thereafter maintain the chemical, physical, and biological integrity of the Tijuana River and Estuary. It should also be noted that, as very well described in the Draft PEIS, there have been very serious impacts to Environmental Justice Communities that will continue unabated if the Alternative 2: Supplemental Projects E-J are not fully implemented. Indeed, it was at the urging of representatives of these communities at the Environmental Justice Town Hall Meeting the San Diego Water Board in held in South Bay in June 2017 that these TMDLs were identified as a critical priority of the 2018 Triennial Review of the San Diego Water Board Basin Plan.

For those reasons, we most strongly support **Alternative 2: Core Projects A-D plus Supplemental Projects E-J.** While we recognize the imperative to move forward with existing funding and achieve the clear benefits of the **Alternative 1: Core Projects**, we nonetheless strongly urge EPA to work with its

partners in Mexico to seek additional funding, direct existing funding, and continue to develop and implement each of the Alternative 2: Supplemental Projects as quickly as possible.

#### Alternative 1: Core Projects

With the USMCA funding that is available the Alternative 1: Core Projects of the Draft PEIS are a logical start and will address human health risks associated with inadequate sewage collection and treatment in the metropolitan Tijuana area with existing funding in the shortest time practicable. These projects will address some of the transboundary flows of sewage and industrial wastes in the Tijuana River and its tributaries as well as reduce or eliminate the onshore discharge at Punta Bandera of raw or partially treated sewage and diverted river flows. Similar to the development in the 1950s-1960s of the regional sewage collection and treatment system serving much of metropolitan San Diego today, realigning the sewerage collection system serving most of Tijuana into a primarily gravity fed system to a regionally sized wastewater treatment facility at the South Bay International Wastewater Treatment Plant (ITP) is a key component to reducing ocean pollution from the discharges at Punta Bandera and the regular flows of sewage and industrial waste flows in the Tijuana River and Canyon Tributaries. To be most effective for present and future generations in the region shared by Tijuana and San Diego, the approach described in the Draft PEIS should provide for:

- 1) The largest expansion of the ITP practicable to provide for the long-term growth of Tijuana and Tecate:
- centralized treatment of wastewater flows to secondary standards before discharge through the South Bay Ocean Outfall (SBOO);
- 3) reduced river flows and treatment of diverted river flows to advanced primary standards before comingled discharge with secondary ITP effluent through the SBOO;
- 4) achieving waste load reductions and allocations in the draft TMDLs for Bacterial Indicators and Trash in the Tijuana River Valley
- 5) monitoring and assessment of impacts in the receiving waters offshore through the SBOO;
- 6) predictable and reliable operations and maintenance budgeting for the largest volume of wastewater originating in metropolitan Tijuana; and
- 7) the opportunity for improved maintenance and expansion of the Tijuana potable water supply and wastewater collection systems.

The implementation of the Alternative 1: Core Projects should support continued investments by the Comisión Estatal de Servicios Públicos de Tijuana, (CESPT), US EPA, and the North American Development Bank (NADBank) to expand the water purveyance system and wastewater collection system to serve all of Tijuana and Tecate as well as develop effective recycled water reuse, including potable reuse. In particular, these efforts should be focused on ending discharges of raw sewage to storm water systems and rivers and creeks from underserved areas and reduce or prevent sanitary sewer overflows and minimize non storm flows in the Tijuana River and Canyon Tributaries. To achieve most if not all the aforementioned long-term benefits to both countries, we strongly support Alternative 1: Core Project A-Option A3: Expand to 60 MGD. We do not support any expansion smaller

than in Alternative 1: Core Project A-Option A2: Expand to 50 MGD.

Regarding the Alternative 1: Core Project B: Tijuana Canyon Flows to ITP, we recommend Option B2: Trenchless Installation via Smuggler's Gulch and Under Mesa be identified as the preferred alternative. This alternative, although more expensive, avoids potential impacts to the proposed County of San

Diego Smuggler's Gulch Improvement Project and does not rely on an outdated pump station that presently serves the Goat Canyon and Smuggler's Gulch Canyon Collectors.

We strongly support **Alternative 1: Core Project C: Tijuana Sewer Repairs** that include rehabilitating or replacing targeted sewers in Tijuana to reduce the amount of untreated wastewater that currently leaks from the sanitary sewer in Tijuana. We do recommend that the Draft PEIS consider the potential for increased flows in future metropolitan growth scenarios in the final sizing and design of the upgraded sewerage system. The investments in the targeted segments should be augmented by expansion of service areas to reduce illicit flows of raw wastewater and industrial wastes into the Tijuana River from underserved areas of Tijuana. Finally, the Draft PEIS should also consider the need for expansion or construction of a coastal collection system to serve areas on the coast presently discharging raw or partially treated wastewater directly to the ocean north and south of Punta Bandera.

Among our highest and strongest recommendations is support for **Alternative 1: Core Project D: APTP Phase 1.** Establishing a 35-MGD Advanced Primary Treatment Plant for river diversions at PBCILA and discharging the effluent comingled with ITP wastewater treated to secondary will significantly reduce discharges at Punta Bandera that effect coastal water quality as far north as Coronado during some south swell conditions. We further strongly support the Draft PEIS language supporting the potential expansion under Phase 2 (**Alternative 2: Supplemental Project E (Expansion of the APTP to 60 MGD)** and further study of Project F (a US side river diversion) to augment the existing PBCILA river diversion. Planning for the largest practicable expansion of river diversion and treatment capacity should be considered as a long-term investment in water capture for beneficial use as well as shorter term waste capture and treatment. We believe the future of Tijuana and San Diego will necessitate capturing and using as much local waters as possible to meet many diverse municipal needs as our mutual ability to reply on the Colorado River water imports is decreased due to climate change aridification of the Colorado River watershed.

#### **Alternative 2: Core Projects and Supplemental Projects**

The undersigned agencies and organizations strongly support the continued study and development in the Tier 2 of the Draft PEIS of the **Alternative 2: Supplemental Projects E-J** as rapidly as resources in Mexico and the US can support. The opportunity afforded EPA and its partners agencies in Mexico at this time is transformative and an investment in the future of our shared ecology, economy, communities, and resources of the Tijuana River watershed. It should be noted in the Draft PEIS that the California Legislature has already allocated \$35 million for border water quality improvement projects. A unique opportunity for federal-state-local agency partnership is developing that could help ensure the fullest success of the projects being studied in the Draft PEIS and identified for subsequent analysis in the Tiered approach described. We strongly encourage EPA and IBWC to work with the state and federal agencies to fully complete the **Alternative 2: Supplemental Projects**.

Regarding **Alternative 2: Supplemental Project E: APTP Phase 2** (Project E), we sincerely appreciate the vision of the Draft PEIS that provides for construction of **Alternative 1: Core Project D** with pads and stubs for the expansion to 60 MGD, which we strongly support, in Project E.

Similarly, for Alternative 2: Supplemental Project F: U.S.-Side River Diversion to APTP (Project F), we strongly support sizing the diversion system to 60 MGD to accommodate increased capture for treatment of wet weather flow events. As stated above, implementation of river diversion and treatment projects are considered a key component of the implementation plans of the draft TMDL for Bacterial Indicators. Fully implementing the largest diversion and treatment options will help ensure that restoration of maintenance of the chemical, physical, and biological integrity of the irreplaceable Tijuana River Valley and Estuary are realized through these projects.

We acknowledge the issues and considerations for sizing and location that are described in the Draft PEIS and suggest that the imminent construction of a cross river bridge/border fence at the US Mexico International Border in the concrete portion of the Tijuana River be considered as an opportunity for optimizing waste capture and flow diversion. To the extent that it is constructed, future studies should consider operational needs of Project F as well as **Alternative 2: Supplemental Project J: Trash Booms** downstream by ensuring pre-storm debris loads captured in the bridge/fence are removed before storm flows mobilize them and convey them downstream.

We strongly support Alternative 2: Supplemental Project G: New SABTP with a treatment capacity of 5 MGD. We do request that EPA clarify in the final PEIS the expected volume and sizing needed to address current and planned flows in San Antonio de los Buenos Creek. While most existing flows will be conveyed to and treated at the Project A: Expanded ITP and Project D: APTP facilities, estimates of these volumes delivered to (or bypassing) SABTP vary considerably across the several studies completed to date. In addition, the current SABTP discharges directly onto the beach, which has proven to be a serious coastal water quality impact as far north as Coronado during some south swell conditions. Consequently, we recommend that EPA and Mexico study reuse of the effluent to limit or eliminate ocean discharge. Nonpotable uses like landscaping irrigation could make use of nearly the full volume during summer months. Additional treatment could make use of the effluent as a potable supply to augment other projects described in the Draft PEIS. Both potable and non-potable re-use could end the impacts from this facility on coastal water quality for decades as well as provide locally reliable source water for aridification and climate change adaption in Mexico. If an ocean discharge is likely to remain from SABTP, we encourage the study and construction of an ocean outfall with diffusers in deeper waters offshore to improve dilution and dispersion away from onshore currents. Finally, to the extent practicable, the final PEIS should make clear the future growth in waste flows and the specific service area of the SABTP in agreements with Mexico to prevent the facility from being overwhelmed.

We similarly strongly support Alternative H: Supplemental Project H: Tijuana WWTP Treated Effluent Reuse (Project H). As stated above, San Diego and Tijuana share a common watershed and deeply connected economy that depends on maximizing and realizing effective water recycling and reuse, including for potable purposes. Effectively redirecting the flows from the Arturo Herrera and La Morita WWTPs to beneficial reuse as potable supply is critical to meet future water needs and reduce dry weather flows in the Tijuana River and optimize Projects D, E and F.

**Alternative 2: Supplemental Project I: ITP Treated Effluent Reuse** (Project I) is equally important to the transformative changes in wastewater treatment and recycled water re-use envisioned in the Draft PEIS and should be a top priority in future planning efforts. This project together with Project H above are critical to the long-term credibility and durability of these projects and to realize the fullest, binational

benefits of the investments to the shared economies, ecosystems, and communities in the Tijuana River watershed.

While the Draft PEIS Alternatives are very properly focused on human and environmental protection from sewage and the pathogens and wastes it conveys, human and environmental health are also significantly at risk from the long-standing failure to address transboundary flows of solid waste. The solid waste conveyed in large flow events includes plastics, tires, debris, and other wastes. Some of these constitute risk as habitat for mosquito (Aedes spp.) vectors of diseases like Zika, Chikungunya, Yellow Fever, and Dengue. In addition, the breakdown products of plastics are a significant risk to the estuary and ocean habitats and organisms. Accordingly, we very strongly support continued study and development of Alternative 2: Supplemental Project J: Trash Boom(s) (Project J). We recommend that the Draft PEIS acknowledges the value of state and federal partnerships with local agencies, which have carried a disproportionate burden of managing these wastes in the Tijuana River Valley, to realizing the full potential of Project J. Local agencies including California State Parks and County of San Diego have built or are investing in trash booms and sediment management basins in Goat Canyon and Smuggler's Gulch. A Tijuana River trash boom, especially one coupled with a project to restore flood control capacity of the Main Channel upstream of Dairy Mart Rd in the US, would address the conveyance of the largest volume of solid waste impacting the Tijuana River Valley, Estuary, and coastal waters of the Pacific Ocean. It should be noted in the Draft PEIS that while it is impracticable to capture and divert large storm flows to the APTP in Alternative 1: Core Project D and Alternative 2: Supplemental Projects E and F, capturing solid waste in large storm flows is possible as has been demonstrated in the State Parks Goat Canyon trash boom and the recently deployed Alta Terra trash boom project in Smuggler's Gulch. Thus, Project J should be studied and designed to capture solid waste in the largest practicable storm flow events in the Tijuana River upstream of Dairy Mart Rd.

#### **General Recommendations on Alternatives Considered in the Draft PEIS**

Temporary treatment or reduction of existing flows at Punta Bandera should be included until improvements at Punta Bandera are implemented.

Raw and partially treated sewage discharges at Punta Bandera from San Antonio de los Buenos treatment plant and bypassed flows from Pump Station 1A/1B are responsible for dangerous health conditions and water quality impairment in coastal waters north to Coronado. Although interim measures may seem impracticable, temporary treatment or reduced flows to Punta Bandera is a critical stopgap until construction of a new 5-MGD conventional activated sludge plant at the existing SABTP site in Mexico (Alternative 2: Supplemental Project G). One way this might be achieved is resolving the discharges to the Tijuana River that are captured and pumped to Punta Bandera (Alternative 1: Core Project C and Alternative 2: Supplemental Projects H. Redirection of treated wastewater flows from Arturo Herrera and La Morita WWTPs to beneficial reuse outside the Tijuana River watershed or to municipal potable re-use through groundwater augmentation or reservoir storage would reduce Tijuana River flows at PB CILA by at least 15 MGD.

The Draft PEIS and subsequent planning should take the Department of Homeland Security (DHS) cross river "border wall" project into account.

The DHS has announced resumption of a construction of a border fence that crosses the Tijuana River, providing a bridge cross river access for Customs and Border Protection and adjustable gates/barriers to prevent access by undocumented immigrants and smugglers. As described, the new infrastructure would likely impede flow until the gates are raised. The impoundment of dry weather flows should be considered in the future operations of PBCILA and **Alternative 1**: **Core Project D**: **APTP**. The opportunity to incorporate this new infrastructure, the construction of which is described as imminent in summer of 2022, should be addressed in the draft PEIS and considered in the design of river diversions to the proposed Advanced Primary Treatment Plant (APTP) in the **Alternative 1**: **Core Project D** and in future planning for **Alternative 2**: **Supplemental Projects E and F** and to augment trash control **Alternative 2**: **Supplemental Project J**.

Although outside the scope of the Draft PEIS, we suggest that to the extent that wastes accumulate behind the cross-river border fence, federal agencies in both countries (e.g. US Department of Homeland Security and Comisión Nacional del Agua (CONAGUA México) should have an agreement in place to routinely govern the collection and disposal of the wastes prior to storm events to augment downstream debris collection efforts. Current or future binational negotiations should address this point.

#### Water reuse

As described above, the reuse of wastewater is an essential part of sustainable, resilient water supply management in this region including both metropolitan Tijuana and San Diego. Thus, any large expenditure of federal and partner funds should facilitate, and not restrict or ignore, maximum reuse of wastewater. We note that **Alternative 1** does not include or preclude the ability to reuse water, and **Alternative 2** (Section 2.5.2.5, Supplemental Project I) could facilitate reuse in Mexico. This is another very compelling reason for **Alternative 2**: **Supplemental Projects H and I** be prioritized for funding and implementation given the likelihood of increased aridification of the Colorado River watershed associated with climate change. Tijuana and San Diego enjoy a shared regional economy and share a reliance on a rapidly diminishing supply of water from the Colorado River and should invest in a mutually advantageous expansion of effective water recycling for potable reuse as envisioned in **Alternative 2**: **Supplemental Projects H and I**. As mentioned above, the possibility of effective reuse of effluent from **Alternative 2**: **Supplemental Project G**: **New SABTP** could significantly reduce the impact and costs of ocean discharge while also providing source water to meet future local needs.

Thus, we urge adoption of **Alternative 1: Core Project A, Option A.3 (Expansion to 60 MGD)** because it envisions the future water and wastewater needs of Tijuana and it provides both the highest average daily flow capacity and is thus most able to generate safe recycled water and accommodate the supply demands of population growth demands.

As referenced above, for wastewater projects in Mexico, the goal should be to reuse treated water in Mexico rather than discharge the treated waste to the main Tijuana River channel. We support diverting the flows from Arturo Herrera and La Morita wastewater plants from the river

to beneficial reuse to reduce large effluent volumes in the main channel. Effective wastewater reuse (rather than effluent discharge to main channel) will provide a much-needed supply of water and will be protective of the capacity and longevity of the downstream **Alternative 1**: **Core Project D** and **Alternative 2**: **Supplemental Projects E and F**.

#### Monitoring for performance evaluation must be part of the projects considered.

The project Alternatives considered in the Draft PEIS should expressly state that performance monitoring is part of each project being considered, and thus would be funded, and that performance includes water quality, human health, and environmental outcomes. Likewise, EPA and USIBWC should also estimate expected improvements in terms of attaining water quality standards that are currently impaired due to transboundary flows, not just in terms of reduced days and volumes of flow. As the **Alternative 1: Core Projects** and **Alternative 2: Supplemental Projects** are studied and constructed, the San Diego Water Board will be confer with EPA, USIBWC, and the City of San Diego to discuss potential changes in the existing NPDES Permit Receiving Waters Monitoring and Reporting requirements for the discharges from the SBOO that may help address this need while ensuring the receiving waters offshore are adequately monitored and assessed pursuant to the Clean Water Act.

For instance, monitoring designs should include pre- and post-project and/or up- and downstream monitoring of bacteria, trash, sediment, flow, or other constituents as appropriate. Effectiveness monitoring must verify that pollutants other than those in human sewage, such as industrial waste and trash, are reduced to ensure projects meet the goals outlined in the Draft PEIS. Opportunities for partnerships to develop such monitoring and assessment exist with local agencies, San Diego State University, UCSD Scripps Institution of Oceanography, the Boz Institute, and the Southern California Coastal Water Research Program (SCCWRP).

#### **Environmental Justice**

We gratefully acknowledge the attention that EPA has placed on the issues of Environmental Justice impacts associated with the projects being studied in the Draft PEIS. The mitigation measures described are expected to mitigate the impacts as much as practicable. Residents and visitors to State and Regional Parks and the Federal Reserve have been disproportionately affected by the transboundary flows. It should be noted, as mentioned by speakers in the July 20, 2022, Stakeholder Meeting and described above, that the status quo (routine sewage and trash flows) dating back to the 1950s in the Tijuana River Valley have been a source of ongoing Environmental Justice concerns in San Ysidro and Imperial Beach. Non-governmental organizations like WILDCOAST and the Tijuana River Valley Equestrian Association specifically raised this issue with the San Diego Water Board in starting August 2008 regarding trash and debris in the Tijuana River Valley. Similar concerns have been raised since the inception of the TRVRT and the TRVRT Recovery Strategy focused on solid waste, sediment/flooding, and sewage and industrial wastes to address the pervasive Environmental Justice impacts of the transboundary flows experienced in these communities by residents and visitors. Finally, we are aware of research (in press) on the impacts of aerosolized pathogens and irritants on local Environmental Justice communities that, when published, should be included in the future

analyses for **Alternative 2: Supplemental Projects** as they are advanced. EPA should acknowledge in the Draft PEIS, that without full implementation of the projects in **Alternative 2: Supplemental Project E-J**, many of these Environmental Justice and ecosystems impacts will continue unabated.

#### **Environmental Impacts and Mitigation Measures**

The Draft PEIS is exhaustive in the review of potential environmental impacts of the many project alternatives. These impacts can be mitigated, and the measures proposed will address many of the impacts appropriately. Unavoidable impacts should be considered in context with the significant burden local communities and ecosystems have experienced for decades. The TRVRT Recovery Strategy identified some of these dilemmas when it identified the Tijuana River Main Channel upstream of Dairy Mart Rd. and Smuggler's Gulch and Goat Canyon upstream of Monument Rd as "actively managed channels" in its vision of the future of the Tijuana River Valley in which longstanding transboundary flows of wastes were addressed through projects that were antecedents of the ones being studied in the Draft PEIS. Impacts associated with Alternative 2: Supplemental Projects will also be considered in the rule making CEQA process for the draft TMDLs and project specific NEPA/CEQA actions. In addition, many of the impacts from the projects described are temporary or relatively modest in scale and should be analyzed in context of with decades of transboundary pollution and impairment of beneficial uses and community health and should be used to inform project development rather than be considered grounds to remove any of the projects under consideration in Alternative 1: Core Projects or Alternative 2: Supplemental Projects. Finally, as stated above, without full implementation of these projects, much of the long-standing community, ecosystem, public health, and Environmental Justice impacts to the Tijuana River Valley and Estuary will continue unabated.

#### **NEPA-CEQA Nexus**

The NEPA analysis in the Draft PEIS is extraordinary in its scope and detail. The San Diego Water Board will be able to rely on technical details of the analysis to support amended or future permits for the **Alternative 1**: **Core Projects** including the expanded ITP and the APTP facility and the comingled secondary and advanced primary treated effluent discharges through the SBOO. Additional CEQA compliance analysis may be required for components of the **Alternative 1**: **Core Projects** including certain options **in Alternative 1**: **Core Project B**: **Tijuana Canyon Flows to ITP** that may be constructed within state or local jurisdiction. For example, depending on the Option selected for Reach 5 in Smuggler's Gulch, a Clean Water Act section 401 Water Quality Certification (401 Certification) may be required for dredge or fill impacts to Waters of the United States. Finally, to the extent practicable, we request that EPA continue to work with the San Diego Water Board to ensure that the environmental analysis can meet CEQA needs for state issued permits and regulatory actions (401 Certifications or Waste Discharge Requirements) for the **Alternative 2**: **Supplemental Projects**.

#### Recommendation

The transformative opportunity of the Proposed Action being studied in the Draft PEIS is critical to restoring and protecting water quality and ensuring a safe, reliable supply of recycled water for the future needs of Tijuana. For all the foregoing reasons, we strongly support moving forward with **Alternative 2: Core Projects** plus **Supplemental Projects** as described in the Draft PEIS with consideration of the above embedded recommendations as quickly as funding and additional studies will allow. Continued coordination with state and local agencies are critical to the success of these efforts in Mexico and the US and should be a cornerstone of the Final PEIS and subsequent environmental analysis especially for the **Alternative 2: Supplemental Projects**.

Respectfully,

and with

David W. Gibson, Executive Officer San Diego Water Board

Todd Gloria, Mayor City of San Diego

Nora Vargas, Vice Chair, San Diego County Board of Supervisors-First District Supervisor

Non & Vag

Joe Stuyvesant, President/CEO Port of San Diego

Andy Hall, City Manager City of Imperial Beach

Jennifer Lucchesi, Executive Director California State Lands Commission

Gina Moran

Gina Moran, District Superintendent II San Diego Coast District California State Parks

Jared Blumenfeld, Secretary for California Environmental Protection Agency

Chad Nelson, CEO Surfrider International

## **Enforcement Actions for May and June 2022**

#### **NPDES WASTEWATER**

Enforcement Date	Enforcement Action	Entity/ Facility/Location	Summary of Violations and Enforcement	Applicable Permit/Order Violated
5/31/2022	Staff Enforcement Letter	CAPEXCO c/o Keywest Engineering, Groundwater extraction at 13247 Poway Road, Poway	Multiple effluent violations, deficient monitoring, deficient reporting	National Pollutant Discharge Elimination System (NPDES) General Order No. R9-2015-0013

#### **NPDES STORMWATER**

Enforcement Date	Enforcement Entity/ Action Facility/Location		Summary of Violations and Enforcement	Applicable Permit/Order Violated	
6/8/2022	Administrative Civil Liability Order No. R9- 2022-0094	Baldwin & Sons et. al., Portola South TTM 15353, Lake Forest	ACL Order totaling \$6.6 million for deficient BMP implementation and multiple unauthorized discharges	NPDES General Construction Order No. 2009-0009-DWQ	
5/25/2022	Notice of Violation No. R9- 2022-0086	Caltrans District 8, Project EA-1C8504 Ortega Highway CA- 74, Lake Elsinore	Deficient BMP implementation	NPDES General Construction Order No. 2009-0009-DWQ	

#### WASTE DISCHARGE REQUIREMENTS: WASTEWATER

Enforcement Date	Enforcement Entity/ Action Facility/Location		Summary of Violations and Enforcement	Applicable Permit/Order Violated	
5/6/2022	Notice of Violation and 13267 Order No. R9-2022-0072	Paul Kelley & Fain Drilling and Pump Co. Inc., Unregulated Well Drilling Site, Murrieta	Unauthorized discharge	Water Quality Control Plan for the San Diego Basin (Basin Plan)	

## **Enforcement Actions for May and June 2022**

Enforcement Date	Enforcement Action	Entity/ Facility/Location	Summary of Violations and Enforcement	Applicable Permit/Order Violated
6/10/2022	Notice of Violation and 13267 Order No. R9-2022-0074	Santa Rosa Regional Resources Authority, Santa Rosa Water Recycling Facility, Murrieta	Unauthorized discharges and multiple exceedances of effluent limits	Waste Discharge Requirement (WDR) Order No. 94-092
5/11/2022	Staff Enforcement Letter	Caltrans District 11, Temecula Truck Inspection Facility, Fallbrook	Deficient reporting	WDR Order No. 92-56
6/27/2022	Staff Enforcement Letter	Riverside County Regional Parks, Skinner Lake Recreation Area, Winchester	Deficient reporting	WDR Order No. 95-018
6/7/2022	Notice of Violation No. R9- 2022-0015	Vineyard Grant James, Ramona	Unauthorized discharge	Basin Plan

### WASTE DISCHARGE REQUIREMENTS: AGRICULTURE

Enforcement Date	Enforcement Entity/ Action Facility/Location		Summary of Violations and Enforcement	Applicable Permit/Order Violated	
6/6/2022	Staff Enforcement Letter	Frog Environmental Group, multiple locations	Late reporting	WDR General Agricultural Order No. R9-2016-0004	

## **Enforcement Actions for May and June 2022**

## WASTE DISCHARGE REQUIREMENTS: CANNABIS

Enforcement Date	Enforcement Entity/ Action Facility/Location		Summary of Violations and Enforcement	Applicable Permit/Order Violated	
5/6/2022	Notice of Violation	Bassem Kabbara Property, Anza	Unauthorized discharges related to cannabis cultivation	California Water Code (CWC) Sections 13260 and 13264	
6/21/2022	Notice of Violation No. R9- 2022-0110	Yankui Yang Property, Warner Springs	Unauthorized discharges related to cannabis cultivation	CWC Sections 13260 and 13264	

Table 1: April 2022 - Summary of Public and Federal Sanitary Sewer Overflow Events

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain and Recovered (Gallons) <sup>4</sup>	Total Discharged to Land (Gallons) <sup>5</sup>	Surface Water Body Affected <sup>6</sup>	Miles of Pressure Sewer	Miles of Gravity Sewer	Population in Service Area <sup>7</sup>
City of Escondido	220	220	0	0	220	Not Applicable	6.5	368	148,000
City of Laguna Beach	5,225	5,225	0	0	5,225	Not Applicable	9	92	18,000
City of National City	100	100	0	100	0	Not Applicable	1	105	58,967
City of Oceanside	2750	2750	0	2750	0	Not Applicable	37.7	456.1	175,464

<sup>&</sup>lt;sup>1</sup> Total Volume = total amount that discharged from sanitary sewer system to a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>2</sup> Total Recovered = total amount recovered from a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>3</sup> Total Reaching Surface Waters = total amount reaching separate storm drain (not recovered), drainage channel, and/or surface water body, but does not include amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>4</sup> Total Reaching Separate Storm Drain and Recovered = total amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>5</sup> Total Discharged to Land = total amount reaching land.

<sup>&</sup>lt;sup>6</sup> Agencies are only required to note the surface water body affected if the discharge reaches or has the potential to reach a surface water. If the discharge did not reach a surface water and does not have a potential to reach a surface water (i.e., a discharge to land or a discharge to a separate storm drain that is fully recovered) the surface water body affected is listed as "Not Applicable." If the discharge was to a surface water body or to a separate storm drain and was not fully recovered, and the surface water body was not reported, the surface water body affected is listed as "Not Reported."

<sup>&</sup>lt;sup>7</sup> As reported in the Collection System Questionnaire required under Order No. 2006-0003-DWQ.

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain and Recovered (Gallons) <sup>4</sup>	Total Discharged to Land (Gallons) <sup>5</sup>	Surface Water Body Affected <sup>6</sup>	Miles of Pressure Sewer	Miles of Gravity Sewer	Population in Service Area <sup>7</sup>
City of Poway	3	3	0	0	3	Not Applicable	3.5	185	49,986
City of San Clemente	4,200	200	0	0	4,200	Not Applicable	3.7	177.6	51,339
City of San Clemente	342	0	0	0	342	Not Applicable	3.7	177.6	51,339
City of San Diego	555	555	0	165	390	Not Applicable	112.5	2931.2	2,300,000
City of San Diego	2,100	2,100	0	942	1,158	Not Applicable	112.5	2931.2	2,300,000
City of San Diego	205	205	0	0	205	Not Applicable	112.5	2931.2	2,300,000
City of Vista	40,900	31,900	12,000	12,000	16,900	Buena Vista Creek	0.3	214	90,000
Fallbrook Public Utility District	25	25	0	0	25	Not Applicable	4.6	78.6	23,000

Table 2: May 2022 - Summary of Public and Federal Sanitary Sewer Overflow Events

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain and Recovered (Gallons) <sup>4</sup>	Total Discharged to Land (Gallons)⁵	Surface Water Body Affected <sup>6</sup>	Miles of Pressure Sewer	Miles of Gravity Sewer	Population in Service Area <sup>7</sup>
City of Escondido	50,100	100	0	0	50,100	Not Applicable	6.5	368.0	148,000
City of Poway	400	250	150	0	250	Pomerado Channel	3.5	185.0	49,986
City of San Diego	2,400	2,400	0	2,400	0	Not Applicable	112.5	2931.2	2,300,000
City of San Diego	1,570	1,570	0	1,570	0	Not Applicable	112.5	2931.2	2,300,000

<sup>&</sup>lt;sup>1</sup> Total Volume = total amount that discharged from sanitary sewer system to a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>2</sup> Total Recovered = total amount recovered from a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>3</sup> Total Reaching Surface Waters = total amount reaching separate storm drain (not recovered), drainage channel, and/or surface water body, but does not include amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>4</sup> Total Reaching Separate Storm Drain and Recovered = total amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>5</sup> Total Discharged to Land = total amount reaching land.

<sup>&</sup>lt;sup>6</sup> Agencies are only required to note the surface water body affected if the discharge reaches or has the potential to reach a surface water. If the discharge did not reach a surface water and does not have a potential to reach a surface water (i.e., a discharge to land or a discharge to a separate storm drain that is fully recovered) the surface water body affected is listed as "Not Applicable." If the discharge was to a surface water body or to a separate storm drain and was not fully recovered, and the surface water body was not reported, the surface water body affected is listed as "Not Reported."

<sup>&</sup>lt;sup>7</sup> As reported in the Collection System Questionnaire required under Order No. 2006-0003-DWQ.

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain and Recovered (Gallons) <sup>4</sup>	Total Discharged to Land (Gallons) <sup>5</sup>	Surface Water Body Affected <sup>6</sup>	Miles of Pressure Sewer	Miles of Gravity Sewer	Population in Service Area <sup>7</sup>
City of San Diego	25,875	21,375	0	0	25,875	Not Applicable	112.5	2931.2	2,300,000
City of San Diego	750	0	0	0	750	Not Applicable	112.5	2931.2	2,300,000
United States Marine Corps Base — Camp Pendleton (Federal Facility)	1	0	0	0	1	Not Applicable	39.2	125.0	83,340
United States Navy Southwest Division (Federal Facility)	400	0	400	0	0	San Diego Bay	Not Available	Not Available	Not Available

Table 3: April 2022 - Summary of Private Lateral Sewage Discharge Events

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land (Gallons) <sup>4</sup>	Surface Water Body Affected <sup>5</sup>	Population in Service Area <sup>6</sup>	Number of Lateral Connections
City of San Clemente	36	36	0	36	Not Applicable	51,339	17,558
City of San Diego	150	150	0	150	Not Applicable	2,300,000	266,181
City of San Diego	246	216	30	216	Not Reported	2,300,000	266,181
Carlsbad Municipal Water District	613	613	0	613	Not Applicable	69,825	22,700
Fallbrook Public Utility District	25	25	0	25	Not Applicable	23,000	4,696
Padre Dam Municipal Water District	457	457	0	457	Not Applicable	70,724	15,716
South Coast Water District	218	218	0	218	Not Applicable	43,193	14,762

<sup>&</sup>lt;sup>1</sup> Total Volume = total amount that discharged from private lateral to a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>2</sup> Total Recovered = total amount recovered from a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>3</sup> Total Reaching Surface Waters = total amount reaching separate storm drain (not recovered), drainage channel, and/or surface water body, but does not include amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>4</sup> Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land = total amount reaching separate storm drain that was recovered and/or total amount reaching land.

<sup>&</sup>lt;sup>5</sup> Agencies are only required to note the surface water body affected if the discharge reaches or has the potential to reach a surface water. If the discharge did not reach a surface water and does not have a potential to reach surface water (i.e., a discharge to land or a discharge to a separate storm drain that is fully recovered) the surface water body affected is listed as "Not Applicable." If the discharge was to a surface water body or to a separate storm drain and was not fully recovered, and the surface water body was not reported, the surface water body affected is listed as "Not Reported."

<sup>&</sup>lt;sup>6</sup> As reported in the Collection System Questionnaire required under Order No. 2006-0003-DWQ.

Table 4: May 2022 – Summary of Private Lateral Sewage Discharge Events

Responsible Collection System Agency	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land (Gallons) <sup>4</sup>	Surface Water Body Affected <sup>5</sup>	Population in Service Area <sup>6</sup>	Number of Lateral Connections
City of National City	30	30	0	30	Not Applicable	58,967	8,000
City of San Diego	4,600	2,500	2,100	2,500	Not Reported	2,300,000	266,181
City of Vista	150	150	0	150	Not Applicable	90,000	17,109

<sup>&</sup>lt;sup>1</sup> Total Volume = total amount that discharged from private lateral to a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>2</sup> Total Recovered = total amount recovered from a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>3</sup> Total Reaching Surface Waters = total amount reaching separate storm drain (not recovered), drainage channel, and/or surface water body, but does not include amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>4</sup> Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land = total amount reaching separate storm drain that was recovered and/or total amount reaching land.

<sup>&</sup>lt;sup>5</sup> Agencies are only required to note the surface water body affected if the discharge reaches or has the potential to reach a surface water. If the discharge did not reach a surface water and does not have a potential to reach surface water (i.e., a discharge to land or a discharge to a separate storm drain that is fully recovered) the surface water body affected is listed as "Not Applicable." If the discharge was to a surface water body or to a separate storm drain and was not fully recovered, and the surface water body was not reported, the surface water body affected is listed as "Not Reported."

<sup>&</sup>lt;sup>6</sup> As reported in the Collection System Questionnaire required under Order No. 2006-0003-DWQ.

Table 5: April and May 2022 - Summary of Sewage Discharges by Source

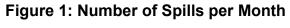
Spill Type	Month/Year	Number of Spills	Total Volume (Gallons) <sup>1</sup>	Total Recovered (Gallons) <sup>2</sup>	Total Reaching Surface Waters (Gallons) <sup>3</sup>	Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land (Gallons) <sup>4</sup>
Public Spills	April 2022	12	56,625	43,283	12,000	44,625
Public Spills	May 2022	6	81,095	25,695	150	80,945
Federal Spills	April 2022	0	0	0	0	0
Federal Spills	May 2022	2	401	0	400	1
Private Spills	April 2022	7	1,745	1,715	66	1,679
Private Spills	May 2022	3	4,780	2,680	2,100	2,680
All Spills	April 2022	19	58,370	44,998	12,066	46,304
All Spills	May 2022	11	86,276	28,375	2,650	83,626

<sup>&</sup>lt;sup>1</sup> Total Volume = total amount that discharged from sanitary sewer system to a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>2</sup> Total Recovered = total amount recovered from a separate storm drain, drainage channel, surface water body, and/or land.

<sup>&</sup>lt;sup>3</sup> Total Reaching Surface Waters = total amount reaching separate storm drain (not recovered), drainage channel, and/or surface water body, but does not include amount reaching separate storm drain that was recovered.

<sup>&</sup>lt;sup>4</sup> Total Reaching Separate Storm Drain & Recovered and/or Discharged to Land = total amount reaching separate storm drain that was recovered and/or total amount reaching land.



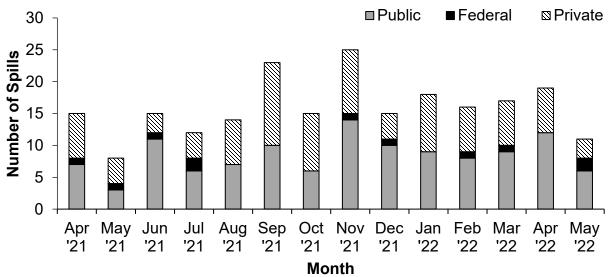


Figure 1: The number of public, federal, and private sewage spills per month from April 2021 through May 2022.

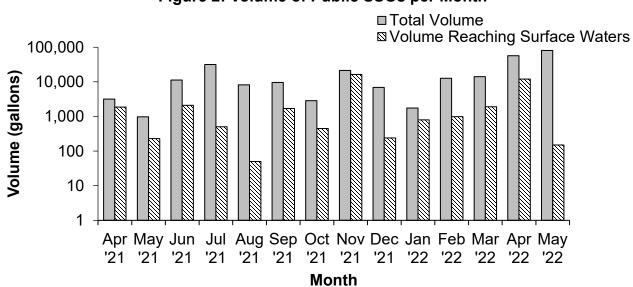


Figure 2: Volume of Public SSOs per Month

**Figure 2:** The volume of sanitary sewer overflows (SSOs) from public agencies per month from April 2021 through May 2022. Note the logarithmic scale on the vertical axis showing the wide variation in spill volumes.

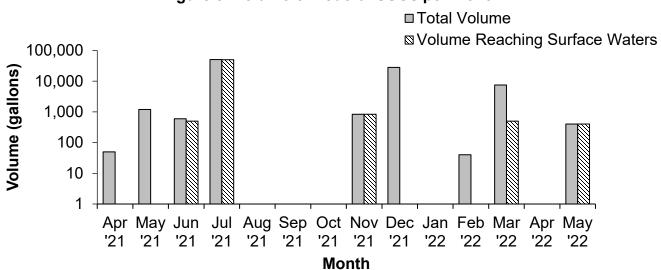


Figure 3: Volume of Federal SSOs per Month

**Figure 3:** The volume of sanitary sewer overflows (SSOs) from federal agencies per month from April 2021 through May 2022. Note the logarithmic scale on the vertical axis showing the wide variation in spill volumes.

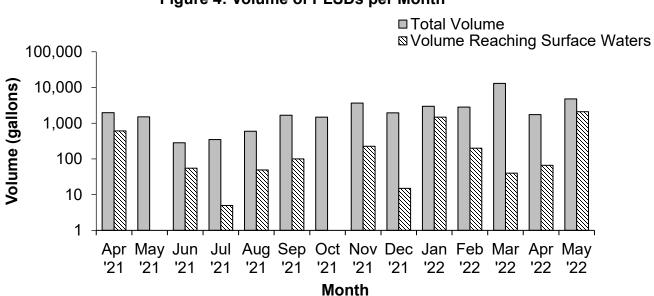


Figure 4: Volume of PLSDs per Month

**Figure 4:** The volume of private lateral sewage discharges (PLSDs) per month from April 2021 through May 2022. Note the logarithmic scale on the vertical axis showing the wide variation in spill volumes.

Table 1: April and May 2022 – Summary of Transboundary Flows from Mexico by Event<sup>1</sup>

Location	Transboundary Flow Start Date	Transboundary Flow End Date	Weather Condition <sup>2</sup>	Total Volume (Gallons) <sup>3</sup>	Total Volume Recovered (Gallons) <sup>3</sup>	Total Volume Reaching Surface Waters (Gallons) <sup>3</sup>	Additional Details Reported By USIBWC
Tijuana River Main Channel	3/28/22	4/7/22	Wet and Dry	1,100,000,000	0	1,100,000,000	Pump Station CILA was shut down due a storm event. As a result, flow in the Tijuana River bypassed the River Diversion Structure and crossed the United States/Mexico border.
Tijuana River Main Channel	4/22/22	4/28/22	Dry <sup>4</sup>	187,600,000	0	187,600,000	Pump Station CILA was shut down due to a rain event. Additionally, trash and sediment buildup at Pump Station CILA caused a delay in restarting Pump Station CILA. As a result, flow in the Tijuana River bypassed the River Diversion Structure and crossed the United States/Mexico border.

<sup>&</sup>lt;sup>1</sup> Transboundary flow volumes are obtained from self-monitoring reports submitted by USIBWC pursuant to Order No. R9-2021-0001.

<sup>&</sup>lt;sup>2</sup> Order No. R9-2021-0001 defines wet weather as the period of time when a storm event produces 0.1 inches or greater within a 24-hour period plus 72 hours after, based on the Goat Canyon Pump Station rain gauge.

<sup>&</sup>lt;sup>3</sup> Total transboundary flow volume, total volume recovered, and total volume reaching surface waters is an estimate provided by USIBWC.

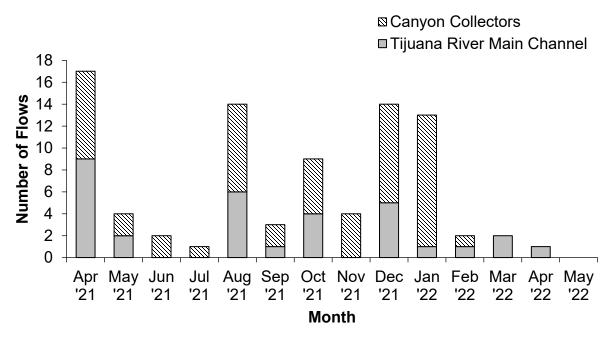
<sup>&</sup>lt;sup>4</sup> USIBWC reported that on April 22, 2022, there was 0.08 inches of precipitation as measured at the Tijuana River rain gauge and heavier precipitation in Mexico. USIBWC did not report any precipitation on April 22, 2022, at the Goat Canyon Pump Station rain gauge.

Table 2: April and May 2022 - Summary of Transboundary Flows from Mexico<sup>1</sup>

Location	Month/Year	Number of Transboundary Flows	Total Volume (Gallons)	Total Volume Recovered (Gallons)	Total Volume Reaching Surface Waters (Gallons)
Tijuana River Main Channel	April 2022	1	187,600,000	0	187,600,000
Tijuana River Main Channel	May 2022	0	0	0	0
Canyon Collectors	April 2022	0	0	0	0
Canyon Collectors	May 2022	0	0	0	0
All Locations	April 2022	1	187,600,000	0	187,600,000
All Locations	May 2022	0	0	0	0

<sup>&</sup>lt;sup>1</sup> For transboundary flows that start and end in different months, Table 2 includes the transboundary flow in the month the transboundary flow started. For example, the transboundary flow at the Tijuana River main channel that started on March 28, 2022, and ended on April 7, 2022, was not included in Table 2.

**Figure 1: Number of Transboundary Flows** 



**Figure 1:** Number of reported transboundary flows per month from April 2021 through May 2022 at the canyon collector systems and the Tijuana River main channel. For transboundary flows that start and end in different months, the figure includes the transboundary flow in month the transboundary flow started. The number of transboundary flows at the canyon collectors in October 2021 includes a transboundary flow at Canyon K, which does not have a canyon collector system.

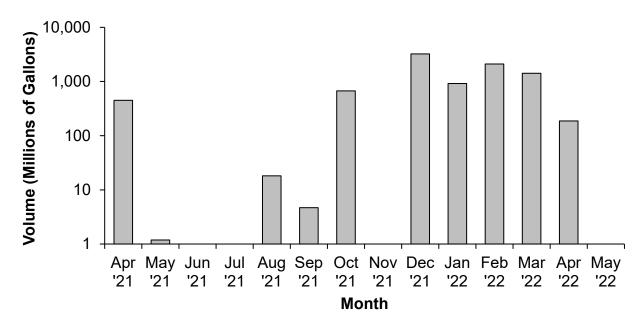


Figure 2: Tijuana River Transboundary Flow Volume

**Figure 2:** Volume of reported transboundary flows per month from April 2021 through May 2022 at the Tijuana River main channel. For transboundary flows that start and end in different months, the figure includes the total volume of the transboundary flow in the month the transboundary flow started. Note the logarithmic scale on the vertical axis showing the wide variation in transboundary flow volumes.

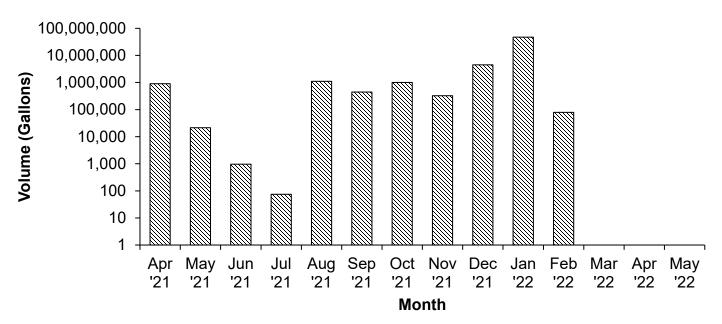


Figure 3: Canyon Collector Transboundary Flow Volume

**Figure 3:** Volume of reported transboundary flows per month from April 2021 through May 2022 at the canyon collector systems. The volume reported in October 2021 includes the transboundary flow at Canyon K, which does not have a canyon collector system. Note the logarithmic scale on the vertical axis showing the wide variation in transboundary flow volumes.

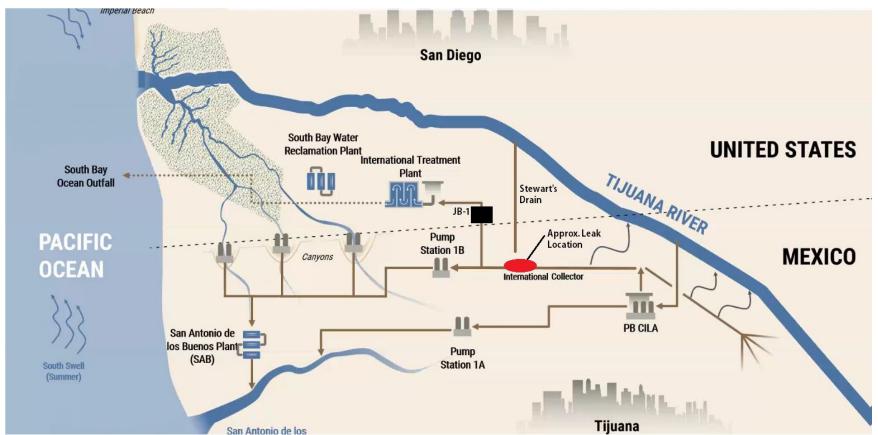


Figure 4: Map of wastewater infrastructure in the United States and Mexico. The approximate location of the deteriorated section of the International Collector is shown in red. Map provided by USIBWC.