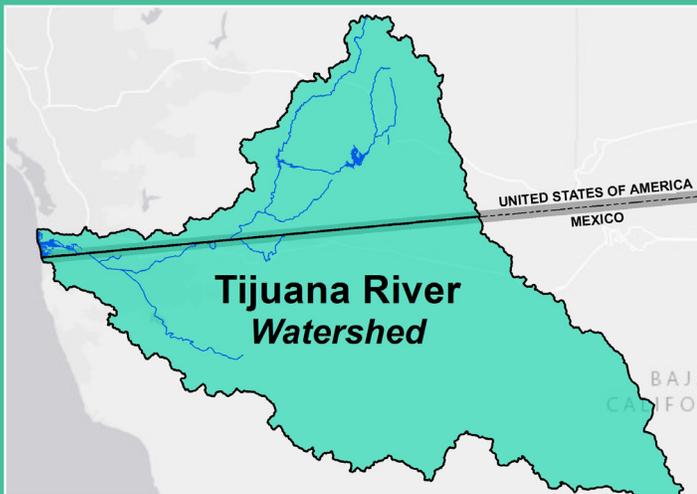


# TIJUANA RIVER

## Watershed Management Area

### FY 2018 Water Quality Improvement Plan Annual Report Executive Summary

The Tijuana River watershed is the southernmost watershed in the San Diego region. Three quarters of the Tijuana River Watershed is in Mexico. The portion located in the United States comprises the Tijuana River Watershed Management Area (WMA).



#### WATER QUALITY IMPROVEMENT PLAN

In 2016, the Responsible Agencies developed a Water Quality Improvement Plan (Plan) in accordance with the regional municipal storm drain system discharge permit (MS4 Permit). The Plan focuses on reducing pollutants from the Responsible Agencies' storm drain systems within the WMA, with sediment identified as the Highest Priority Condition. The Plan also recognizes the water quality impacts of cross border discharges and other Federal and State programs designed to address them.

#### FISCAL YEAR 2018 ANNUAL REPORT

The Fiscal Year (FY) 2018 Annual Report describes the progress of the Plan's third year of implementation. This Executive Summary is a snapshot view of the outcomes and achievements, strategy implementation, and monitoring results of the Responsible Agencies for FY 2018. Appendix 1 of the Annual Report provides a crosswalk that details how each of the applicable MS4 Permit requirements has been met.



#### RESPONSIBLE AGENCIES



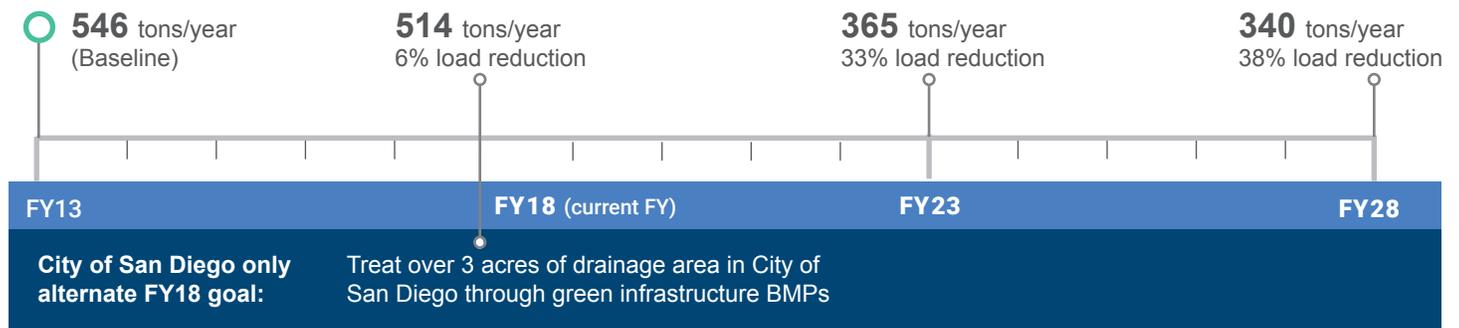
# Highest Priority Water Quality Conditions

The Responsible Agencies identified **sediment** from storm drain systems' wet weather discharges in the lower watershed (see map below) as the Highest Priority Condition. Sediment was identified based on analysis of water quality data and public input during development of the Plan.

The Plan describes the strategies that will be used to target sediment. Although addressing sediment is the focus of the Plan, many of the strategies also provide added benefits by addressing other pollutants and water quality conditions.



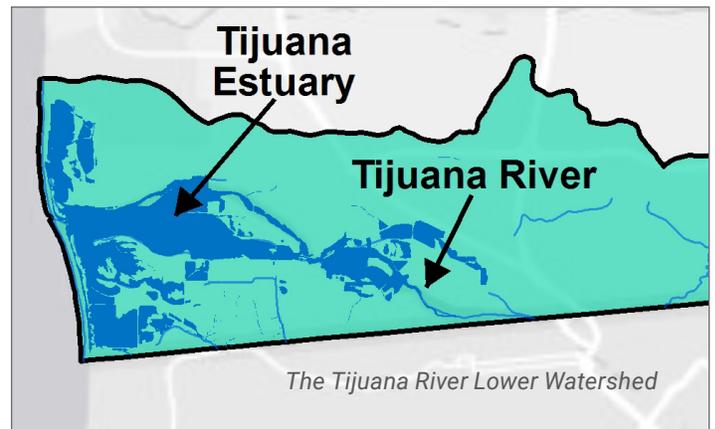
## SEDIMENT GOAL TIMELINE: WATER QUALITY IMPROVEMENT PLAN



### GOALS AND SCHEDULES

As shown in the timeline above, goals are based on sediment load reduction. Progress toward achieving the goals is evaluated by calculating the average sediment load from outfalls in the lower watershed monitored during storms each year.

The City of San Diego also established an alternate goal for 2018 of constructing green infrastructure to remove the sediment in storm water runoff from over three acres of land before it enters a waterbody.



### WHAT IS SEDIMENT?

Sediment in the Plan refers to sedimentation, siltation, and turbidity. Sediment is a natural part of a healthy watershed, but increased erosion from human disturbance can lead to excess sediment washing into storm drains, streams, and estuaries. Sediment can block storm drains and streams, causing flooding. Increased sediment input to wetlands and estuaries can also upset these ecosystems, destroying habitat.



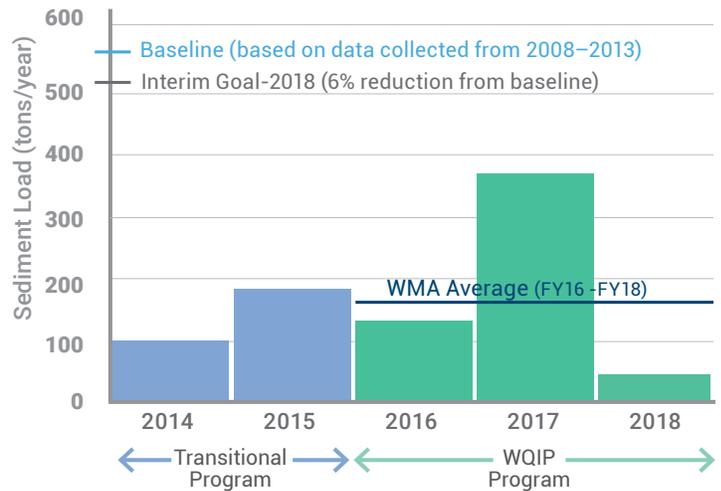
# Progress Toward Goals



## SEDIMENT REDUCTION OUTCOMES

 The average sediment load from Tijuana River WMA outfalls recorded during the first three years of implementing the Plan (182 tons/year) is lower than the 2018 interim goal (514 tons/year). The 2018 interim goal to reduce sediment load has been met.

 Typically, higher levels of rainfall and flow directly contribute to increased sediment loads from outfalls to receiving waters. FY 2018 measured the lowest rainfall and sediment load of the permit term, but even in the wettest year, FY 2017, the sediment load was still below the 2018 interim goal.



## GREEN INFRASTRUCTURE OUTCOME

The City San Diego has also accomplished its alternative 2018 interim goal of installing green infrastructure.



# Monitoring

Water quality monitoring and assessment provide data used to determine whether the interim and final numeric goals for sediment load reduction are being achieved.

In addition, monitoring programs also collect data for a broad range of other water quality indicators. An overall assessment of data is prepared once every five years. The most recent of these assessments is included in the Regional Monitoring and Assessment Report submitted in December 2017.



## TYPES OF MONITORING

**Receiving Water:** includes water quality monitoring in dry and wet weather, trash assessments, stream erosion monitoring, and assessing the health of biological habitat.

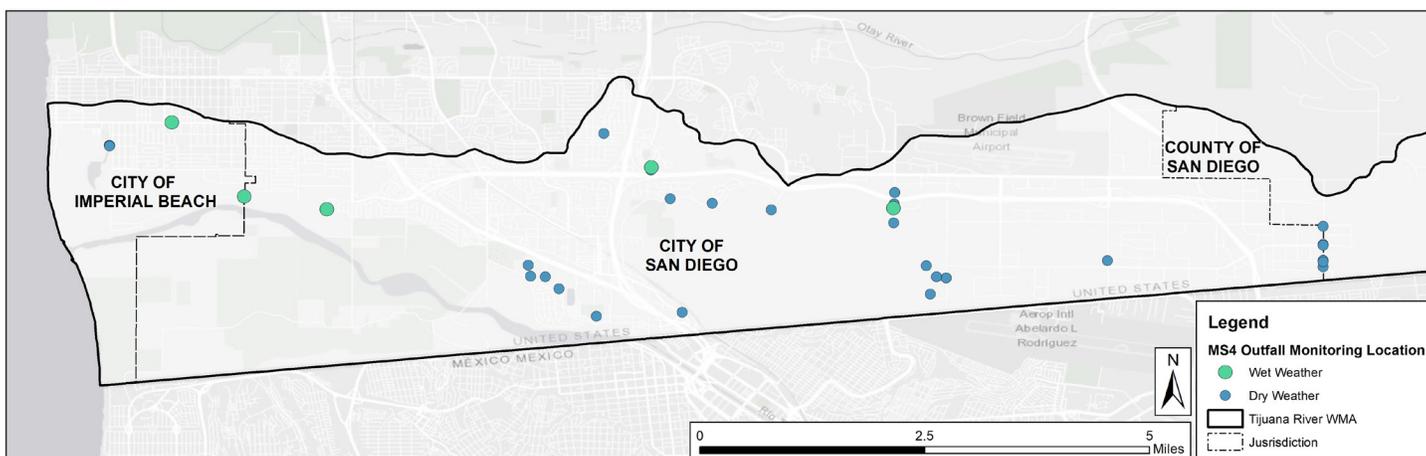
**Outfall Discharge Monitoring:** includes observations and water quality testing in dry and wet weather, trash assessments, and source investigations. A map of outfall monitoring locations is below.

**Special Studies:** includes a regional study of reference beach and stream conditions, and a sediment study specific to the Tijuana River Watershed.

## OUTCOMES

<b>Receiving Water</b>	The two bioassessment stations assessed for stream health in the upper watershed received scores of Fair (potentially altered) to Good (within statistical range for reference conditions).
<b>Dry Weather Outfall</b>	No flowing water to downstream water bodies was observed at any of the monitored outfalls during observations.
	101 of 101 (100%) identified sources of discharge were eliminated as part of the RAs' Illicit Discharge Detection and Elimination (IDDE) program.
<b>Wet Weather Outfall</b>	The watershed-average sediment load of 182 tons/year recorded during the first three years of implementing the Plan met the 2018 interim goal of 314 tons/year.
	100% of storm water action levels of water quality were met.
<b>Special Study</b>	The Regional Reference Streams and Beaches Special Studies were completed in FY 2016 and FY 2017, respectively, and the watershed-specific Sediment Special Study was completed in FY 2017.

## TIJUANA RIVER MONITORING OVERVIEW



# Strategies

The Responsible Agencies implement strategies to meet water quality goals. Strategies can be structural facilities that treat runoff, or they can be practices, such as street sweeping and public outreach. Most of the strategies implemented here were designed to address sediment but also reduce other pollutants such as bacteria, metals, and trash.



## CLEAN-UP EVENTS

Responsible Agencies support a series of education and community cleanup events to engage community volunteers and groups to become environmental stewards. Community activities during FY 2018 related to Creek to Bay, Coastal Cleanup Day, Tijuana River Action Month, and the CalRecycle Grant Special Waste Material Program for Tire Collection, which removed over 38 tons of waste tires from waterways and sensitive habitat areas.



## SUSTAINABLE LANDSCAPES PROGRAM

In FY 2018, the Responsible Agencies continued to offer incentives to improve water quality throughout the Tijuana River WMA. The Sustainable Landscapes Program provides a comprehensive approach to integrating multiple sustainability concepts and resource benefits for residential-scale urban landscapes through education and training, technical assistance, landscape material, and financial incentives. Incentives include \$1.75 per square foot for qualified applicants who replace water-intensive turf grass with landscaping that provides several environmental benefits.

## COMMUNITY OUTREACH

To inform local agencies of activities within the watershed outside their jurisdictions, discuss lessons learned, and promote opportunities for collaboration, the watershed workgroup facilitated a tour of the Tijuana River Valley in May 2018. The tour featured areas of interest in the Tijuana River Valley, examples of BMPs implemented throughout the watershed, and a demonstration of bioassessment methods.



## PHASE 2 IMPROVEMENT OF DIRT ALLEYS



During the reporting period, the City of Imperial Beach completed the construction contract for the second phase of "green" alley improvements

for the remaining unpaved alleys in the City (0.53 mile of green alleys). This second alley paving project targeted the unimproved dirt alleys that are located primarily in the San Diego Bay WMA. The project implements a green streets design that involves permeable concrete, storm water retention, and dry wells, and will have water quality benefits similar to those of phase 1 of the project. The storm water quality benefits include retention and infiltration of storm water and removal of trash, sediment, and nutrients.

# Binational and Regional Efforts

The Responsible Agencies are active in binational efforts to coordinate action to mitigate discharges from Mexico, which are significant contributors to receiving water beneficial use impairments within the watershed. These efforts include the Regional Board-led Tijuana River Valley Recovery Team (Recovery Team) and the U.S. International Boundary and Water Commission (IBWC)-led Minute 320 efforts.



## TIJUANA RIVER VALLEY RECOVERY TEAM

The Responsible Agencies are entering the tenth year of participation in the Recovery Team. The Recovery Team is a collaboration of more than 30 government agencies, property owners, academic and research institutions, non-governmental organizations, and other interested parties from both sides of the U.S.–



Mexico border. The Recovery Team uses a stakeholder-led approach to reduce impacts of sediment and trash to the Tijuana River Valley, including the river and the estuary.

## REGIONAL EFFORTS

Co-permittees in the San Diego Region worked together on a number of projects during FY 2018. Collaboration extended to Orange and Riverside Counties when feasible. Examples of these projects include:

- Integrated Regional Water Management Plan
- Trash Amendments Baseline Study
- Regional Events to Improve Public Participation
- Watershed Stewardship Pilot Program
- Continued Improvement of the San Diego Region Model BMP Design Manual

## BINATIONAL CORE GROUP

The Responsible Agencies also participated in the IBWC Minute 320 process to create a Binational Core Group. The basis for the group in the watershed is to provide a framework for binational cooperation on transboundary issues, to develop environmental infrastructure, and to improve environmental conditions on the U.S.-Mexico border region. It includes workgroups focused on addressing sediment, water quality, and trash.

Heavy rains during the 2016–2017 wet season had significant impacts on infrastructure in Mexico. These rains resulted in several large waste water spills, which had massive impacts to communities on the U.S. side of the border. In March 2018, local agencies filed a lawsuit against the federal government, alleging that the IBWC is violating the Clean Water Act and the Resource Conservation and Recovery Act by not implementing appropriate infrastructure to address cross-border flows containing sewage and other pollutants from Mexico.

Additional binational efforts that promote collaboration between the U.S. and Mexico to address environmental issues and waste management challenges are supported in the region through the following:

- Border 2020
- North American Development Bank (NadBank) and Border Environment Cooperation Commission (BECC)
- San Diego Association of Governments (SANDAG) Borders Committee
- Tijuana River National Estuarine Research Reserve (TRNERR) Advisory Council
- California-Mexico Border Relations Council
- CalEPA Border Programs
- Surfrider “No Border Sewage” Program

# Adaptive Management and Conclusions



The adaptive management process evaluates data to assess whether modifications to numeric goals, schedules, or strategies are necessary.

The RAs are currently meeting the interim (2018 and 2023) and final 2028 sediment load reduction goals in the Tijuana River WMA. Assessment toward the 2023 interim goal and final permit term goal will be determined during the development of the corresponding annual reports, after all applicable data have been collected. No changes to pollutant sources, goals, strategies, schedules, or monitoring activities were identified as a result of the adaptive management process. Some recommendations for potential changes to the MS4 Permit, particularly the assessment and reporting requirements, are discussed in the Report of Waste Discharge (2017), which was prepared collectively by all the municipal agencies in the region.



## FINAL GOAL TIMELINE WATER QUALITY IMPROVEMENT PLAN

