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# USMCA Tijuana River Watershed

## Eligible Public Entities Coordinating Group (EPECG)

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**October 30, 2023**  
10:00 – 11:00 a.m. PT

### Agenda

Objective:

- Share updates on topics including solicitation for ITP expansion and infrastructure projects in Mexico.

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<b>10:00 am</b> <b>5 mins</b>	<b>Welcome and Opening Remarks</b> – Martha Guzman, U.S. EPA Regional Administrator and Dr. Maria-Elena Giner, USIBWC Commissioner
<b>10:05 am</b> <b>10 mins</b>	<b>General Updates</b> – Doug Liden, U.S. EPA Region 9 Water Division <ul style="list-style-type: none"><li>- Status of projects in Mexico</li><li>- Looking back on project milestones</li></ul>
<b>10:15 am</b> <b>15 mins</b>	<b>ITP Updates</b> – Dr. Maria-Elena Giner, USIBWC Commissioner <ul style="list-style-type: none"><li>- Immediate repairs</li><li>- Cost and solicitation for expansion</li></ul>
<b>10:30 am</b> <b>10 mins</b>	<b>Air Quality Monitoring Updates</b> – David Sodeman and Kevin Bradley, San Diego County Air Pollution Control District
<b>10:40 am</b> <b>15 mins</b>	<b>Q &amp; A</b>
<b>10:55 am</b> <b>5 mins</b>	<b>Closing Remarks</b> – Bruno Pigott, U.S. EPA Principal Deputy Assistant Administrator for Water

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# USMCA Tijuana River Watershed

## Eligible Public Entities Coordinating Group

Microsoft Teams Meeting: October 30, 2023

# Federal, State, and Local Stakeholder Engagement Eligible Public Entities Coordinating Group

- US Army Corps of Engineers
  - North American Development Bank
  - DOS – Consulate General of Tijuana
  - US Customs & Border Protection
  - US Navy
  - US DOI/FWS
  - US International Boundary and Water Commission
  - US Department of Commerce/NOAA
  - State of CA – EPA
  - State of CA – Natural Resources Agency
  - State of CA – Coastal Commission
  - San Diego County
  - San Diego Port Authority
  - San Diego Regional Board
  - City of Chula Vista
  - City of Coronado
  - City of Imperial Beach
  - City of San Diego
- ▶ **Congressional staff also participating**

# Today's Agenda

- Welcome & Overview
- General updates with USEPA
  - Status of projects in MX
  - History of projects so far
- ITP Updates with USIBWC
  - Immediate repairs
  - Cost and solicitation for expansion
- Air Quality Monitoring updates with SDAPCD
- Q&A
- Closing Remarks

# Welcome & Overview

Martha Guzman, EPA Regional Administrator

Dr. Maria-Elena Giner, USIBWC Commissioner

# General Project Updates

Doug Liden, U.S. EPA Region 9 Water Division

# US & Mexico Signed Agreements Summer 2022



Nation	Commitment
U.S.	\$330 M
Mexico	\$144 M
Total	\$474 M

## Statement of Intent

- Framework to implement a comprehensive suite of projects.
- Identifies projects, resources and timelines.
- Includes commitment to invest in short- and long-term projects on both sides of border.

## Minute 328 – Treaty Annex

- First step in binational implementation of the Statement of Intent framework
- Includes cost-share on O&M of South Bay International Wastewater Treatment Plant

# Mexico Contributions

Within the first year of signing the Minute 328 treaty annex, Mexico has secured \$45 M of their 5-year \$144 M commitment.

- Projects in Mexico will continue to reduce wastewater flows
  - ✓ Replacement of the 42-inch wastewater line to San Antonio de Los Buenos (SAB) plant by November 2023
  - ✓ Construction contract bid for new SAB plant in late 2023
  - ✓ Construction started on the International Collector to prevent wastewater spills of up to 58 MGD
  - ✓ Construction contract for PB1 to go out for bid in early 2024
  - ✓ Construction contract for Laureles I is under procurement

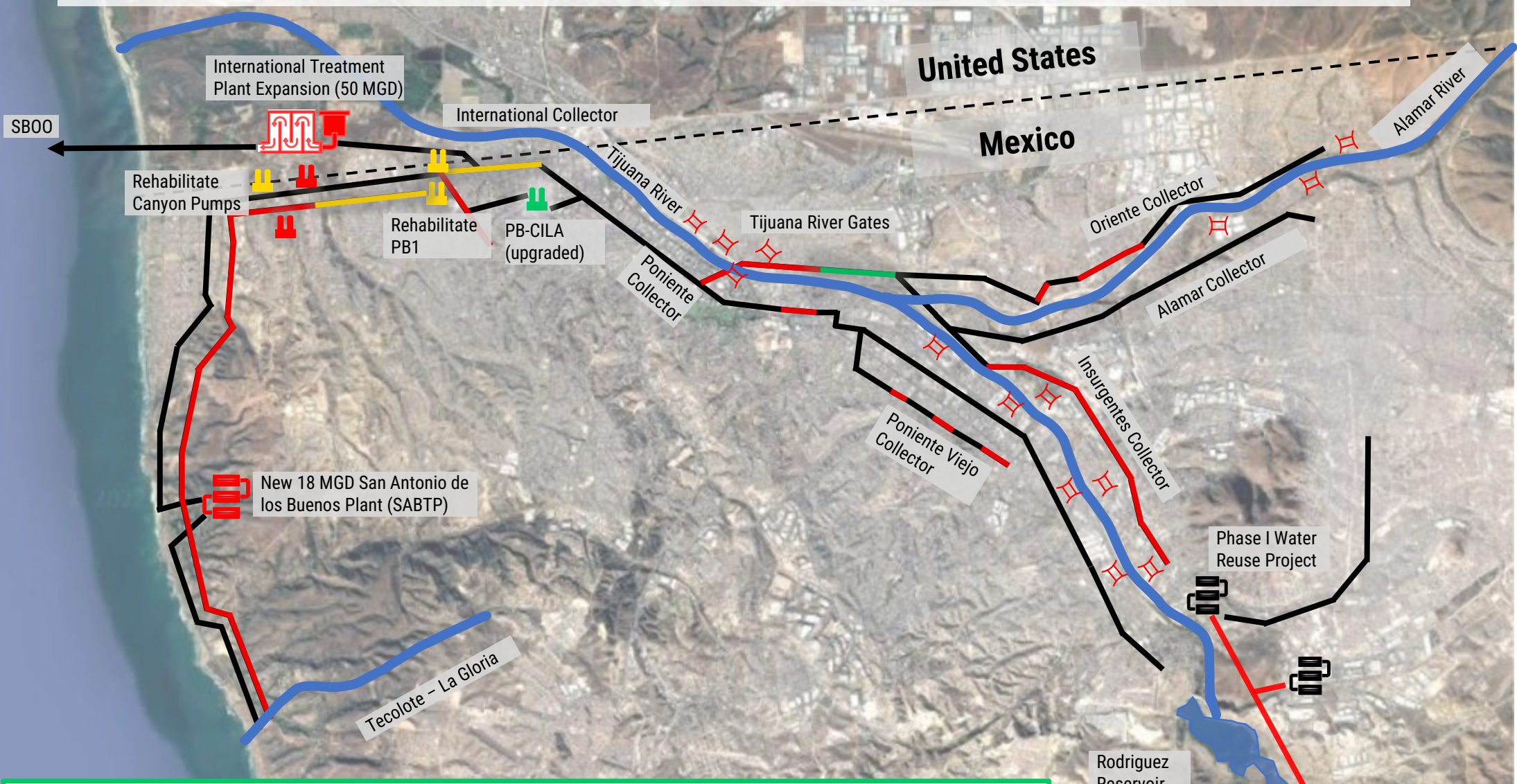
Pipe to be installed in Matadero Canyon



International Collector construction 20% completed



# Current Progress – Oct 2023




Infrastructure in green construction is complete

Infrastructure in yellow is in procurement/under construction.

Infrastructure in red is part of the scope for rehabilitation, replacement, etc. under Min 328 and SOI

# History of implementation and cost estimates

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- 2020** - Congress appropriated \$300 million, before feasibility study
  - 2021** - Feasibility study and EPECG/Public process defines suite of projects
    - Preliminary estimates for SBIWTP expansion (Class V): **\$300 million**
  - 2022** - Contract issued for SBIWTP Facility Assessment and more detailed cost estimate
  - May**
  - 2023** - Updated cost estimate completed after the FY24 President's Budget was released (Class IV): **\$600 million** without anaerobic digesters
  - October**
  - 2023** - Pre-solicitation Notice for design/construction

# ITP Updates

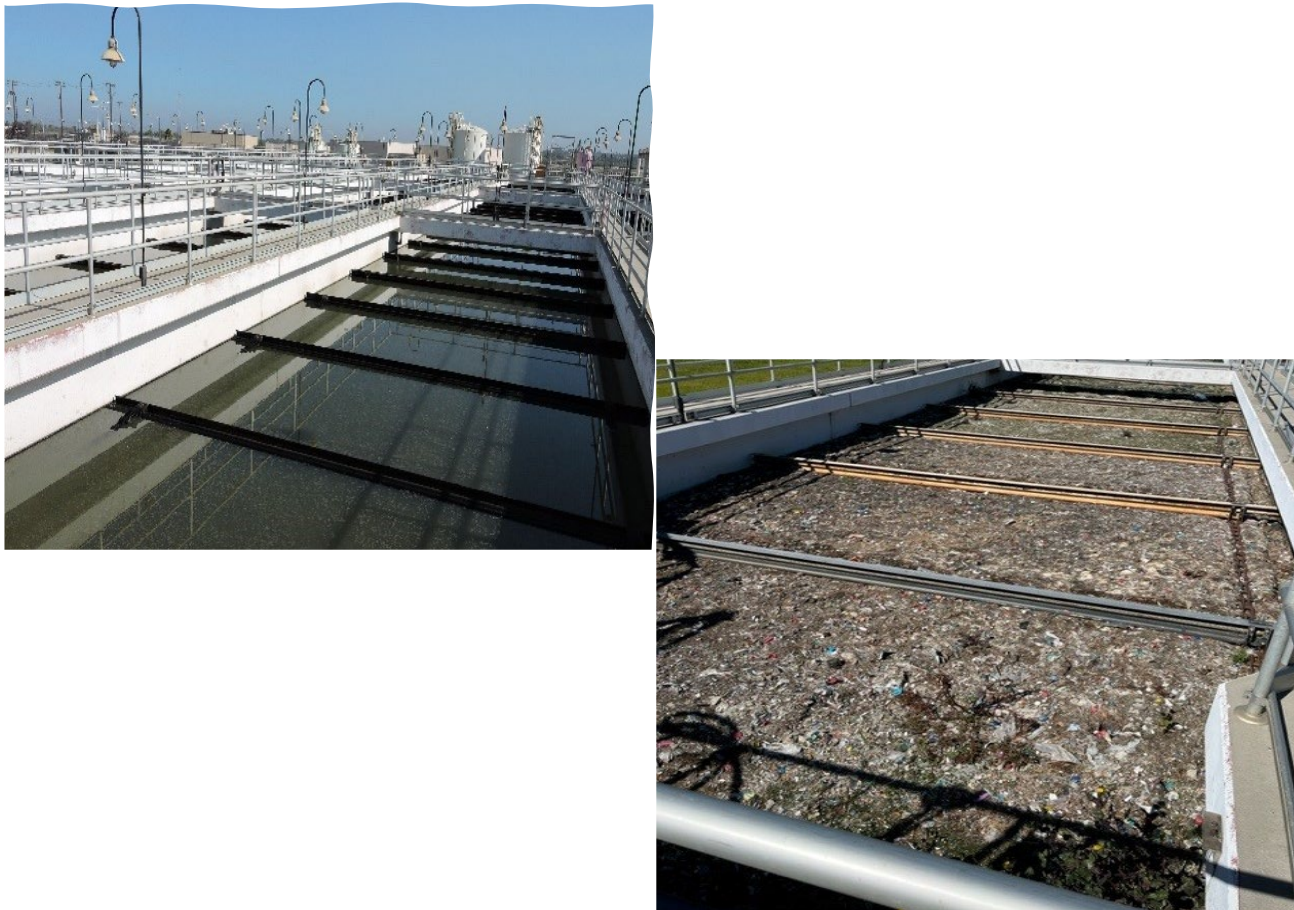
Dr. Maria-Elena Giner, PE  
USIBWC Commissioner

# SBIWTP- Current Challenges



- Rupture July 2022
- Loss of 25 MGD wastewater system capacity
- Flows diverted to the SBIWTP as excess flows
- Flows diverted to the Tijuana River as transboundary flows

# SBIWTP- Current Challenges



## Excess Flows

- Clogging of bar screens with trash & sediment
- Excessive wear and tear of influent pumps – 3/6 pumps operational
- Overloaded grit chambers
- Overloaded primary sedimentation tanks – no solids removal
- Solids carryover into the secondary treatment
- Permit exceedances in volume & effluent quality

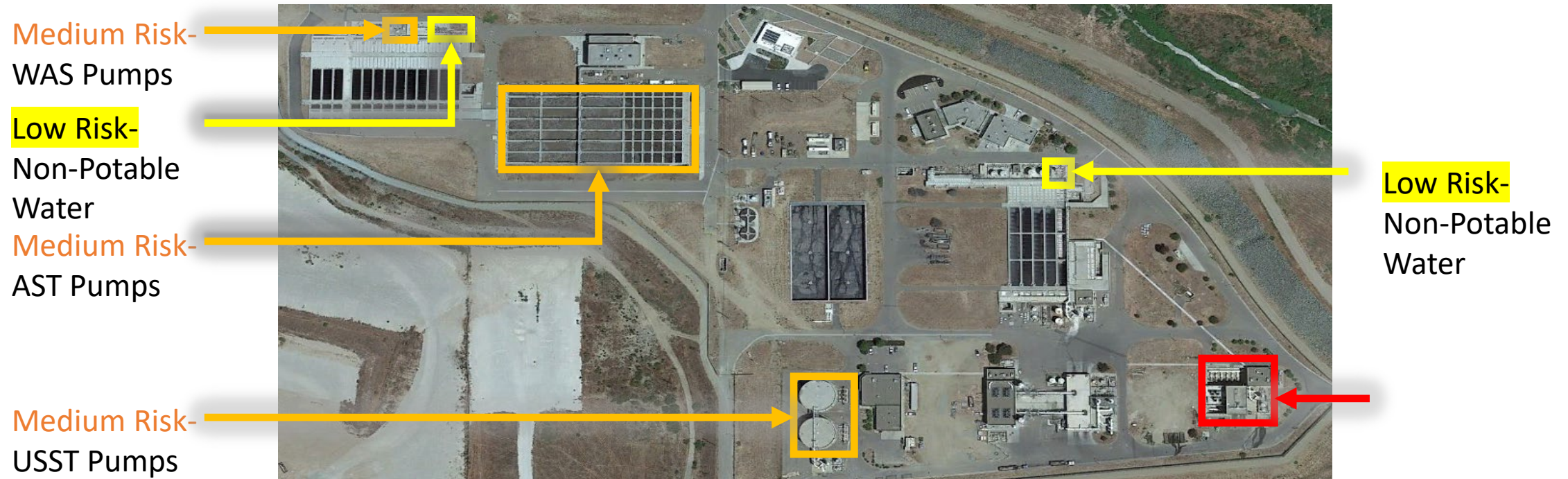
# Steps Forward for SBIWTP Compliance

- **Outcome:** Achieve a permit compliant SBIWTP within 9 to 12 months. Incremental improvements expected.
- IBWC has **awarded \$10M in FY 2023** in capital improvements for:
  - ✓ Replacing **Junction Box 1** as a design build
  - ✓ Rehabilitation of all the **mechanical parts** for primary sedimentation tanks, which have long lead times
  - ✓ Cleaning out the **primary sedimentation tanks**
  - ✓ Replacement of **influent pumps #1 and # 5**
- Mexico is replacing the **42-inch wastewater line** to SAB
  - ✓ Estimated completion of **November 2023**
  - ✓ Will reduce dry weather **transboundary flows**
  - ✓ Will reduce **excess flows** to plant

# Tropical Storm Hilary Impacts

- Exacerbated vulnerabilities primarily through excessive flows and influx of debris:
- Excessive Inflows
  - Exceeded the design flow capacity of the plant **by 100% for 6 hours** (25 vs 50+ MGD) and by **320% for 6 hours** (80 MGD) on Sunday August 20, 2023 to Monday, August 21, 2023
  - Filled the **equalization tanks** within the first hour of storm
  - Secondary treatment was **bypassed** at 5pm Sunday for 10 hours and flow discharged through outfall
  - **Flooding** of headworks- pump and electrical issues
- Trash, Sediment, and Debris impacted the entire plant
  - Excess build-up in **wet wells, tanks, and basins**
  - Carried by **flow into pumps** (influent, WAS, USST, non-potable water)
  - **Entanglement of trash** in impellers and check valves – pump failures

# Tropical Storm Hilary Impacts Evaluation and Recovery



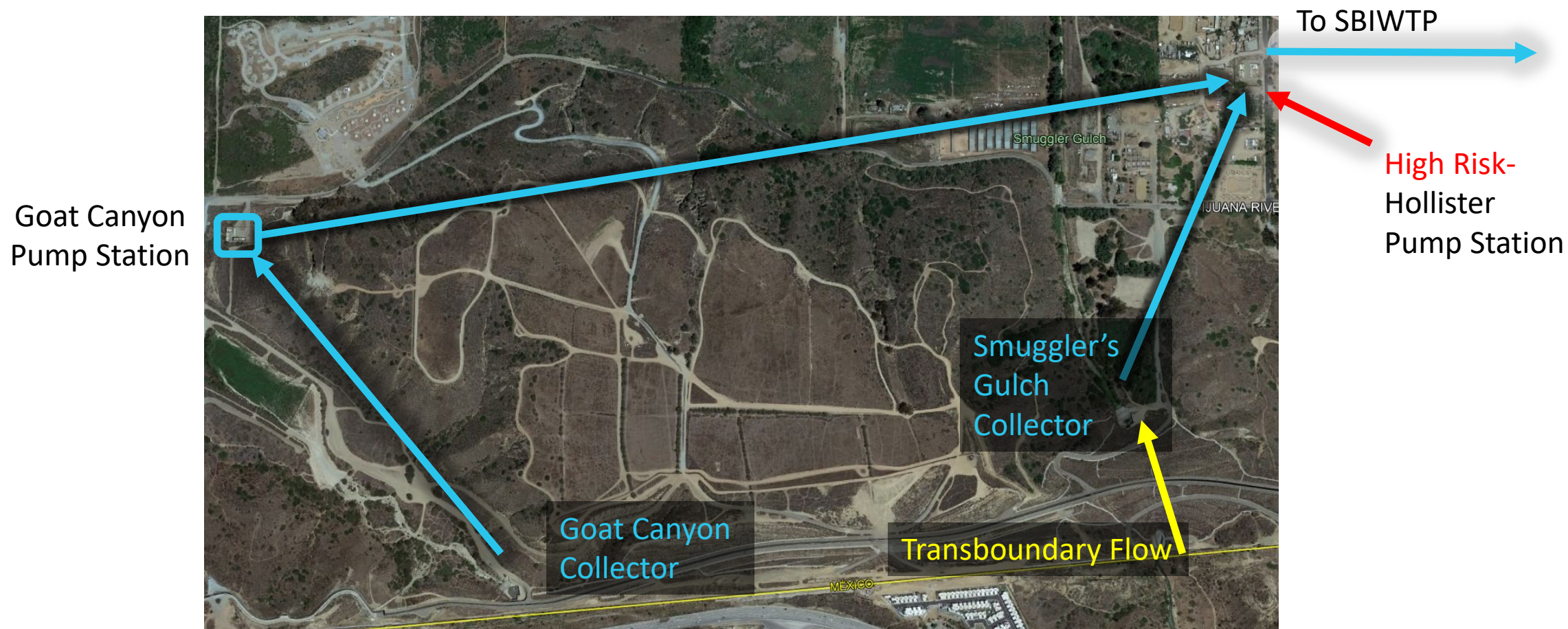
**High Risk-** Failure leads to SBIWTP shutdown and 100% untreated sewage flow in Tijuana River

**Medium Risk-** Failure leads to partial treatment of sewage discharged through ocean outfall

**Low Risk-** Impacts operations and may lead to partial treatment of sewage discharged through ocean outfall



# Tropical Storm Hilary Impacts Evaluation and Recovery- Canyon Collectors & Pump Stations



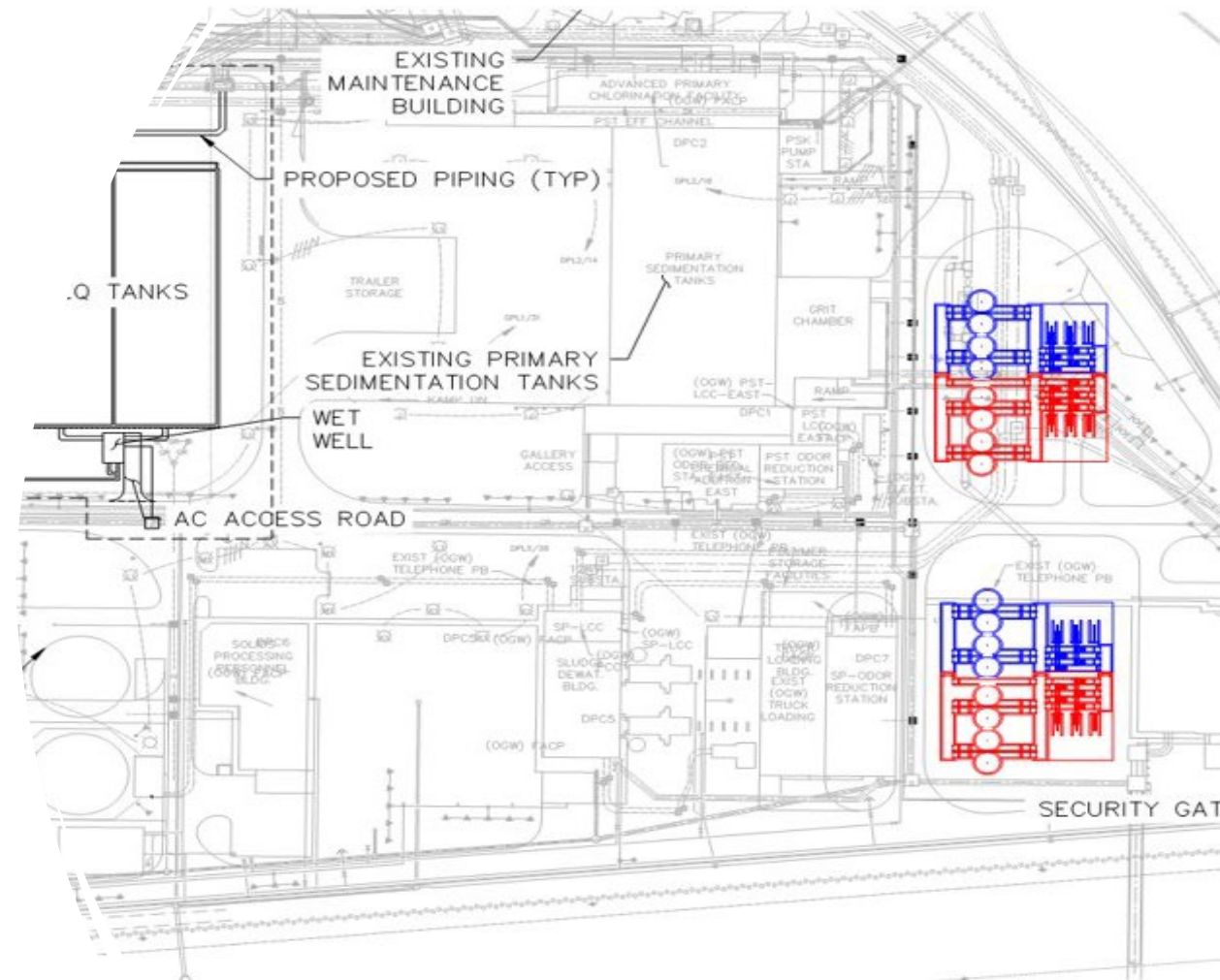
# Hilary Recovery Plan

Recovery: \$8.0 million has been redirected from IBWC's budget

- Repair will be done in parallel with WWTP compliance - 9 to 12 months
- Incremental improvements have started
- Recovery elements will include some redundancy
  1. Headworks – High Risk
    - Emergency pump and electrical repairs at headworks -Done
    - Replace influent pumps: Install 2 pumps previously ordered to arrive Oct 2023
    - Contractor working with vendors for 4 additional influent pumps
  2. Replace 11 inoperable pumps throughout the plant – Medium Risk
    - Most pumps have been ordered
    - Hollister pump station now operating
  3. Rehabilitate both unstabilized sludge storage tanks with pumps, valves and piping – Medium Risk
    - Contractor working with vendors for materials

# What is our priority for the SBIWTP Expansion Project?

- **Reduce Untreated Wastewater Flows to the Pacific Ocean – 90%**
- **Expand Capacity to 50 MGD-** From 25 MGD to 50 MGD
- **Rehabilitation of Existing Plant** - rehabilitate essential processes and infrastructure needed for expansion
- **Add Peaking Factor-** additional capacity to treat temporary flows up to 75 MGD reliably and still meet permit requirements
- **Total Cost:** \$600M +/- 30%



# Next Steps

- It is estimated that this **project has exceeded** its USMCA funding availability by \$310 M +/- 30%
- Construction will be **phased**, based on availability of funds
- Finalizing **procurement** documents
- **Pre-solicitation** notice issued **October 20, 2023**
- **Solicit bids** in the fall of 2023 for design and construction
- **Construction schedule** to be developed during design phase
- Opportunities will be identified to **initiate operations incrementally** to allow for gradual and earlier increase of treatment capacity

# Conclusion

## Complying with our discharge permit is a priority

- Self-Reporting
- Realigned \$18M to address work required due excess flows from Pipeline 1A break in July 2022 and Tropical Storm Hilary in August 2023
- These improvements will achieve compliance of the plant independent of the bigger project
- **Incremental improvement will be seen after November at plant**

## Activities with Mexico

- Binational meetings to identify solutions are held regularly at field office and HQ level
- USIBWC-CILA Rapid Response notification for local officials
- High-level communication was held with to Mexico to urge repair of pipeline PB1A to reduce excess flows. **Dry weather transboundary flows should decrease by November**
- Minute 328 regular meetings held to ensure advancement of projects

# Conclusion

## **Communication with stakeholders**

- Frequently brief legislative and executive branch of the federal government
- Three citizens forum meetings per year
- Periodic public meetings through USMCA process
- Twitter and email communication

## **Other Funded Infrastructure Activities**

- Manpower Study
- Asset Management System
- Capital Plan

# Air Quality Monitoring

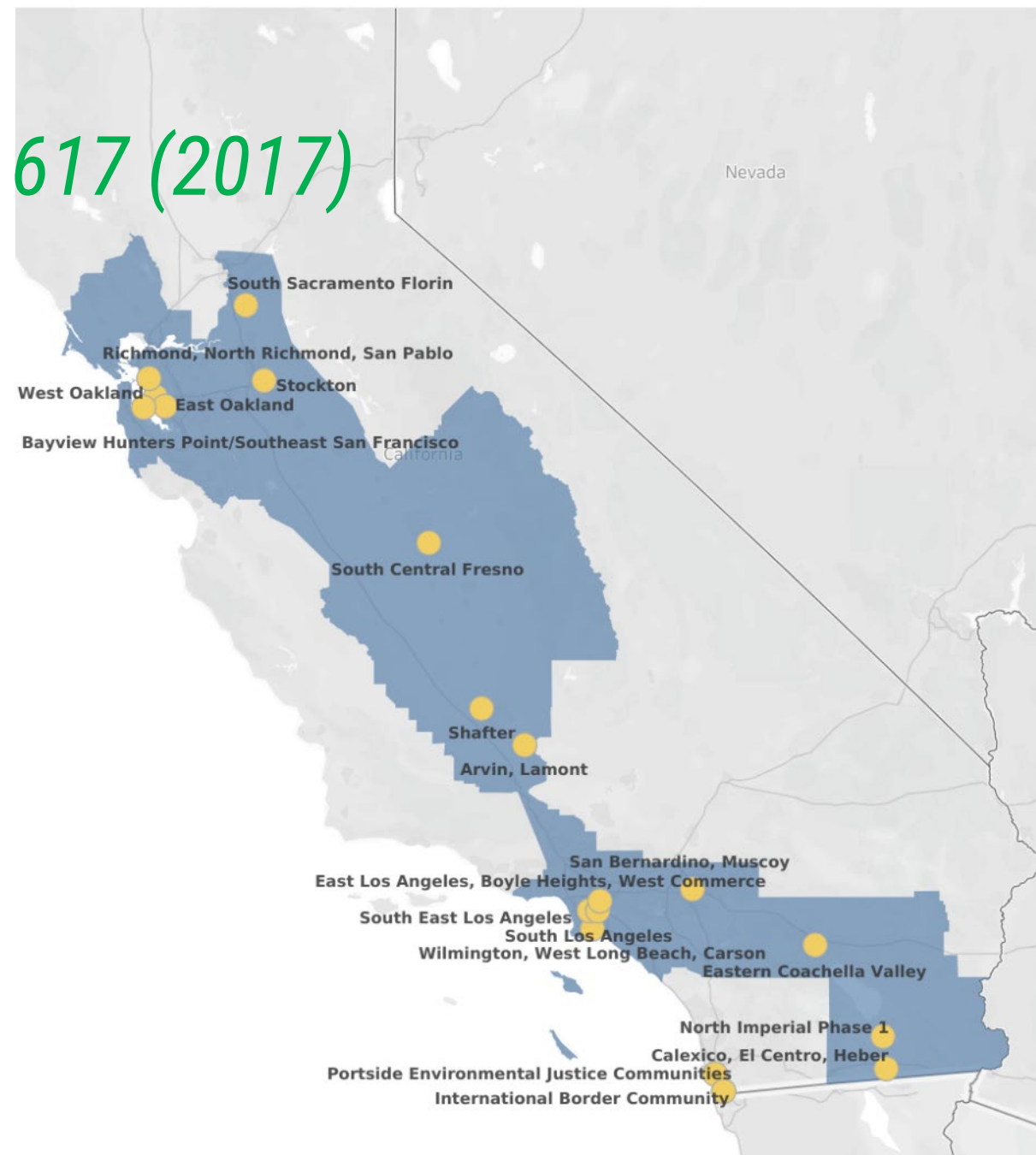
David Sodeman & Kevin Bradley

San Diego County Air Pollution Control District

# Assembly Bill 617 (2017)

## *Proyecto de Ley de la Asamblea 617 (2017)*

- Purpose of bill is to identify and reduce air pollution in communities experiencing environmental injustices.
- *El propósito del proyecto de ley es identificar y reducir la contaminación del aire en las comunidades que experimentan injusticias ambientales.*
- A key component to the bill is community engagement in the development of programs.
- *Un componente clave del proyecto de ley es la participación de la comunidad en el desarrollo de programas.*





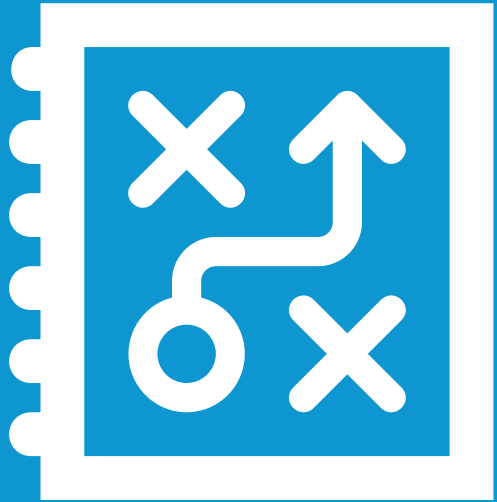
# International Border Community Steering Committee

*Comité Directivo Comunitario de la Comunidad Fronteriza Internacional*

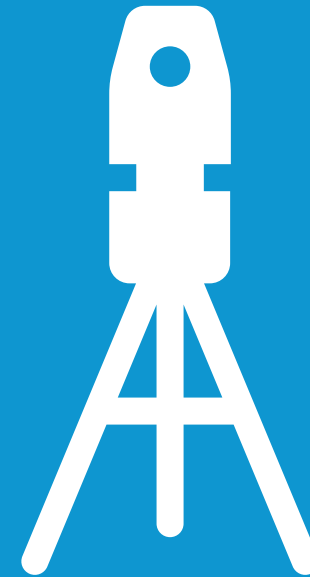


# Community Air Protection Program

## *Programa de Protección del Aire Comunitario*



**Community Emissions Reduction Program (CERP)**  
*Programa Comunitario de Reducción de Emisiones*



**Community Air Monitoring Plan (CAMP)**  
*Plan de Monitoreo del Aire Comunitario*



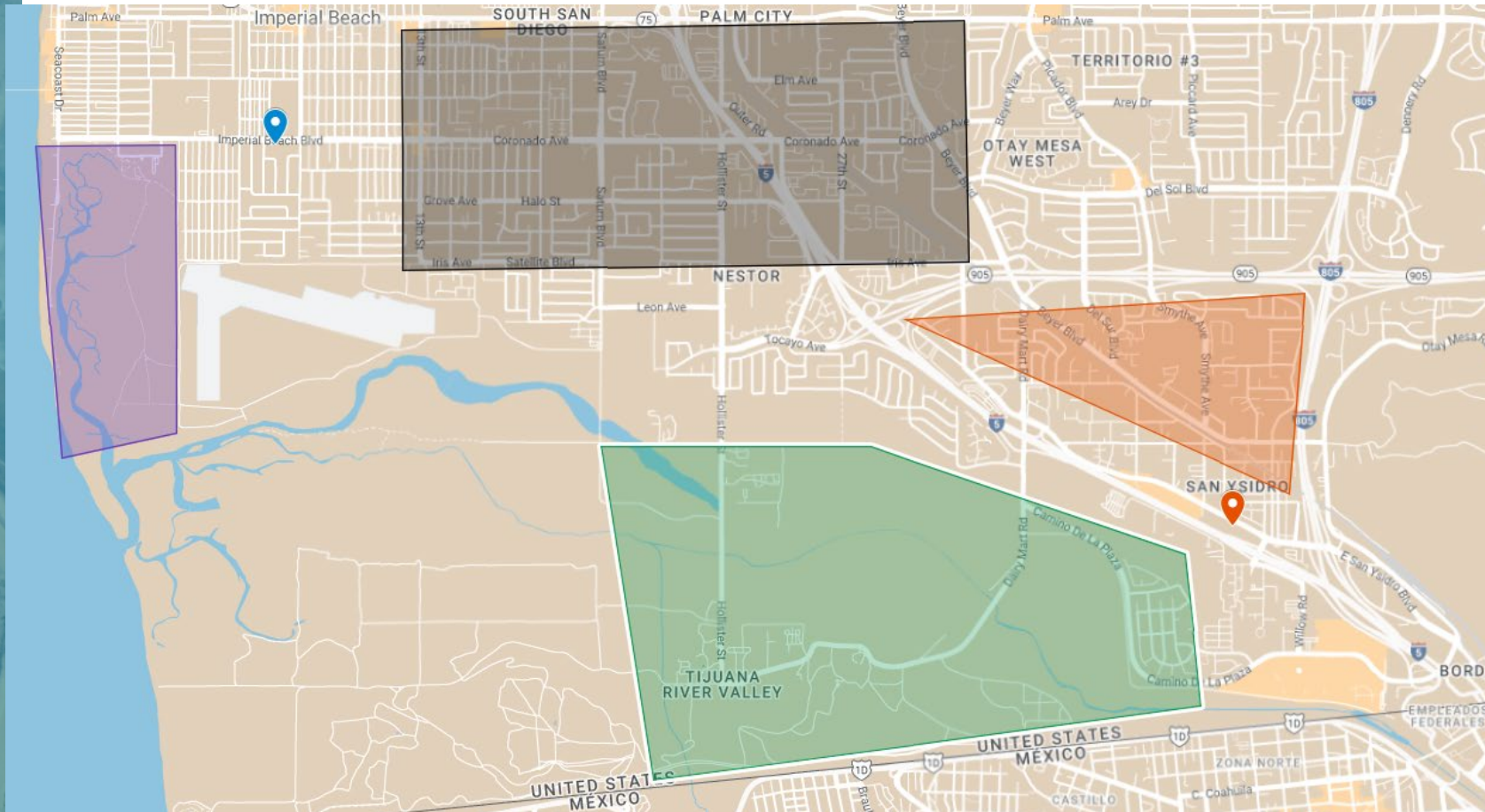
# Monitoring Equipment – AQMesh

## *Equipo de Monitoreo - AQMesh*

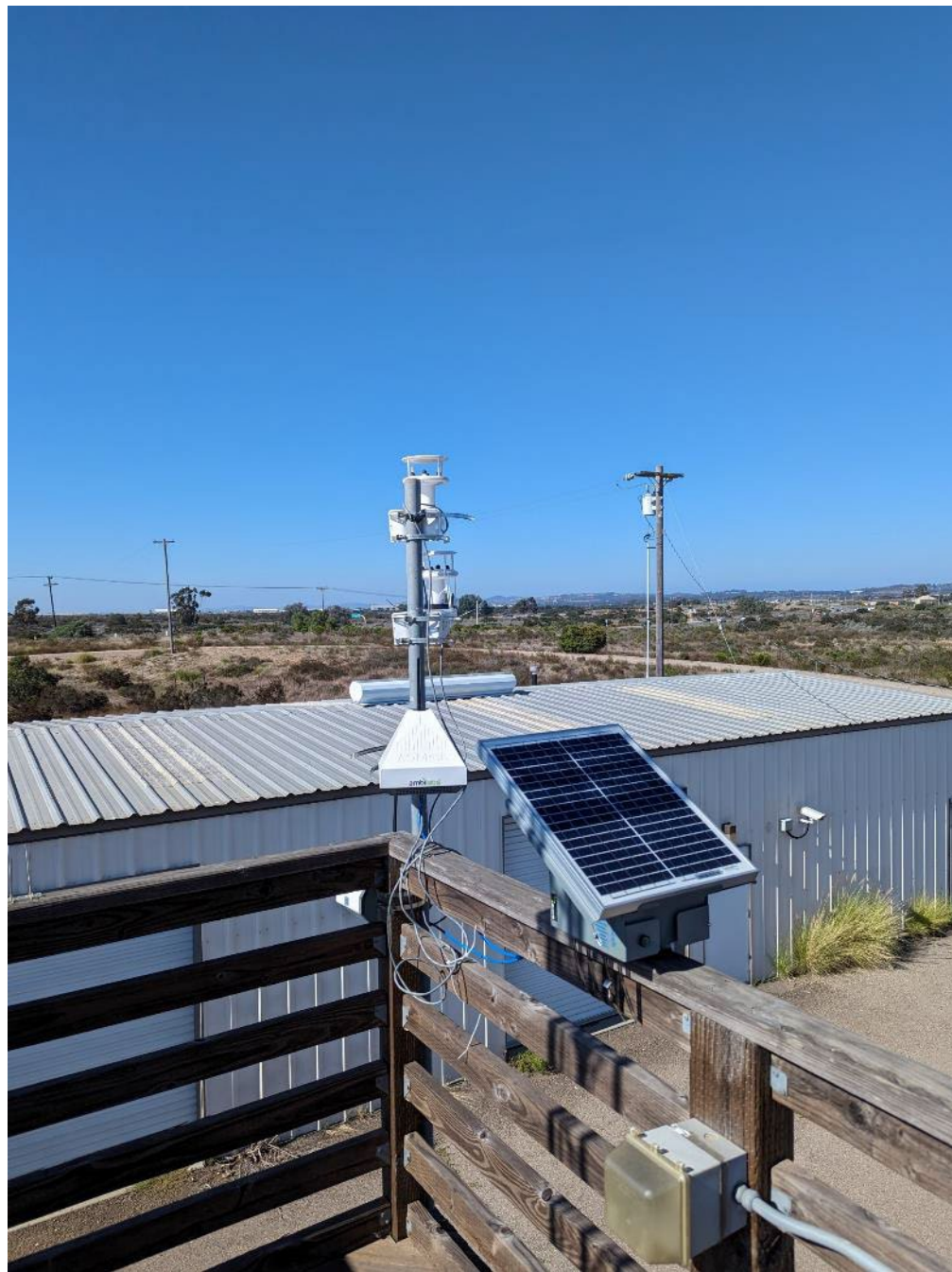
- Funded by a U.S. EPA Border 2025 Grant
  - Solar-powered
  - Data transmission via cellular network
  - Sensors for:
    - Hydrogen sulfide
    - Sulfur dioxide
    - Total volatile organic compounds
    - Carbon monoxide
    - Nitrogen dioxide
    - Wind speed and direction
    - Temperature, pressure, and humidity
  - Capable of measuring levels below hydrogen sulfide odor limit (10 ppb)
- Financiados por una subvención la EPA a través del Programa Frontera 2025
  - Utiliza energía solar
  - Transmite datos a través de red celular
  - Identifica niveles de:
    - Sulfuro de Hidrógeno
    - Dióxido de Azufre
    - Compuestos Orgánicos Volátiles Totales
    - Monóxido de Carbono
    - Dióxido de Nitrógeno
    - Dirección y velocidad del viento
    - Temperatura, presión y humedad atmosféricas
  - Capaz de medir niveles de sulfuro de hidrógeno por debajo del límite de olor (10ppb)

# Monitoring Locations

## *Ubicaciones de Monitoreo*



-  San Diego Fire Station 29
-  City Hall - Imperial Beach
-  Tijuana River Valley - Estuary
-  San Ysidro - Residential
-  Tijuana River Valley - East
-  South San Diego - Residential



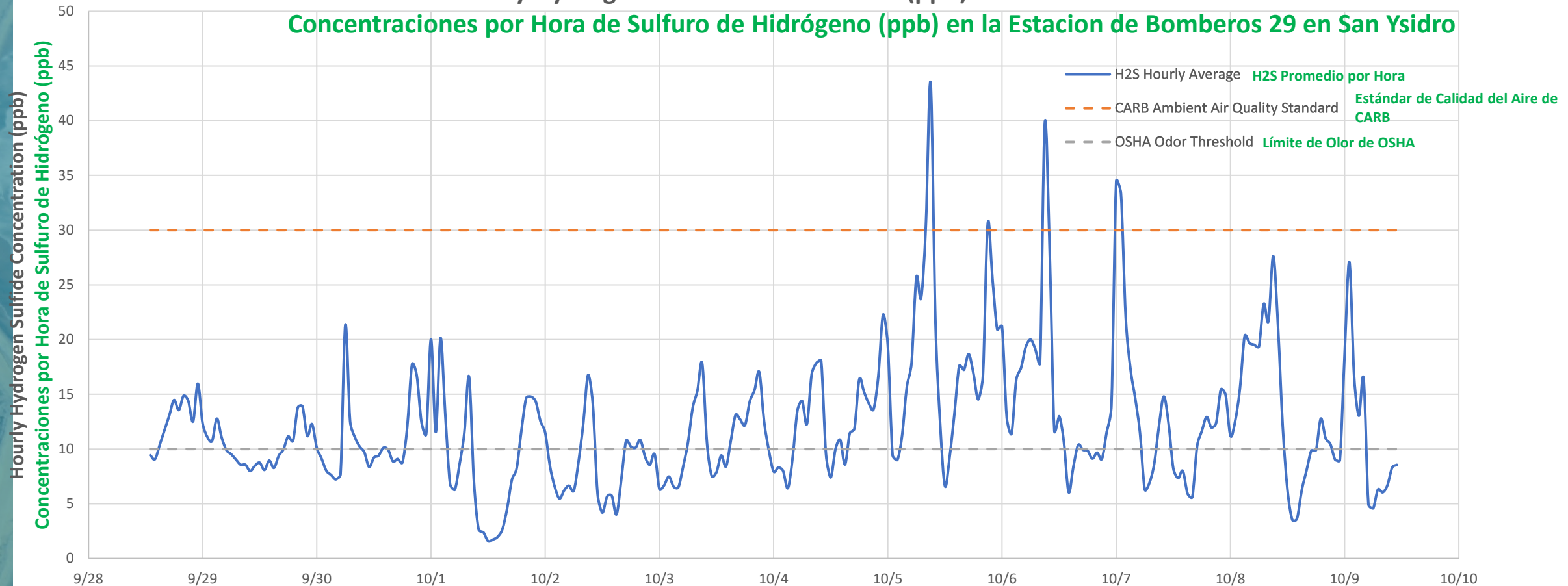


# Monitoring Data – First Sensor

## *Datos de Monitoreo – Sensor primero*

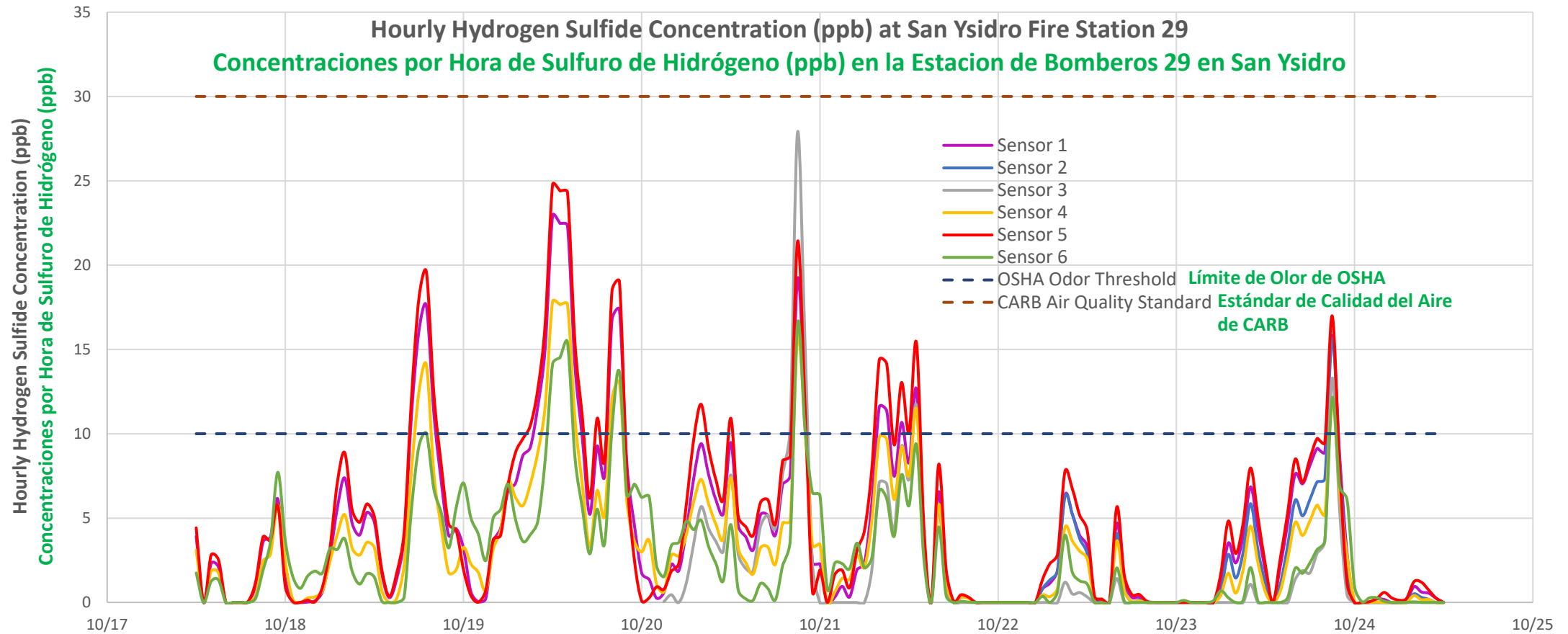
Hourly Hydrogen Sulfide Concentration (ppb) at San Ysidro Fire Station 29

Concentraciones por Hora de Sulfuro de Hidrógeno (ppb) en la Estacion de Bomberos 29 en San Ysidro



# Monitoring Data – All Sensors

## *Datos de Monitoreo – Todos los Sensores*





# Challenges and Next Steps

## Dificultades y Próximos Pasos

- Data issues
    - Transmission and publication to sdapcd.org
    - Loss of stored data, possibly from website maintenance
  - Quality assurance and control
    - All six sensors collocated currently
    - Procuring reference grade analyzer for San Ysidro monitoring site
  - Other locations for sensors
    - Imperial Beach City Hall
    - South Bay Water Reclamation Plant
    - More tbd
  - Collaboration on analysis and research
- Problemas de datos
    - Transmisión y publicación a sdapcd.org
    - Pérdida de datos archivados, posiblemente de mantenimiento de sitio web
  - Seguro y control de calidad
    - Todos de los seis sensores están colocados ahora
    - Comprar monitor “reference grade” por sitio monitoreo en San Ysidro
  - Otras ubicaciones por sensores
    - Ayuntamiento de Imperial Beach
    - South Bay Water Reclamation Plant
    - Y más
  - Colaboración en análisis y investigación

# Contact Information

## *Información de Contacto*

- Kevin Bradley
  - Senior Chemist – Community Air Monitoring Program
  - [Kevin.Bradley@sdapcd.org](mailto:Kevin.Bradley@sdapcd.org)
- David Sodeman
  - Chief – Monitoring and Technical Services
  - [David.Sodeman@sdapcd.org](mailto:David.Sodeman@sdapcd.org)
- Domingo Vigil
  - Deputy Director
  - [Domingo.Vigil@sdapcd.org](mailto:Domingo.Vigil@sdapcd.org)

Thank you! ¡Gracias!

# Q & A

Contact us: [TijuanaWater@epa.gov](mailto:TijuanaWater@epa.gov)

# Closing Remarks

Bruno Pigott, EPA Principal Deputy Assistant Administrator for Water