Photo: Nick Statom & Stephen Holleman

USMCA Tijuana Projects update

Special Council Workshop, City of IB

Doug Liden, EPA

March 27, 2024

EPA's prior USMCA work

1) Technical feasibility analysis

2) EPECG workgroup and prioritization of projects

3) PEIS under NEPA

4) Development of binational agreements (with IBWC/CILA CONAGUA, etc.)

5) Monitoring and modeling of ocean currents and TJ River Valley (Scripps, SDSU)

6) Interagency Agreements with IBWC to transfer USMCA funds

EPA's current role

1) Continue binational meetings and track Mexico's investment in TJ projects.

2) Continue EPECG meetings and public meetings.

3) Oversee BWIP investment in TJ infrastructure via NADBank, including LM/AH reuse project, PB1 rehab, TJ River Gates, etc.

4) Provide technical support to IBWC on design of ITP rehabilitation and expansion.

5) Continue to support monitoring projects and pilot projects via Border 2025 funds and ORD funds.

Why Mexico's engagement is so important

1) Treating already treated wastewater from Tijuana and Tecate uses limited and expensive treatment capacity at ITP.

2) Providing better collection of wastewater in Mexico will reduce impacts of wet-weather flows.

3) New river diversion system in U.S. would require channelization of Tijuana River in U.S. and greatly increase O&M.

4) Reuse of TJ's wastewater creates incentive for wastewater collection.

5) Mexico's decisions on how to address drought will affect U.S. water quality in future (ocean desal vs reuse, for example).

Days of Tijuana River dry-weather flow events in U.S.
## ("rainfall year" begins in Aug and ends in July. "2023" still ongoing)
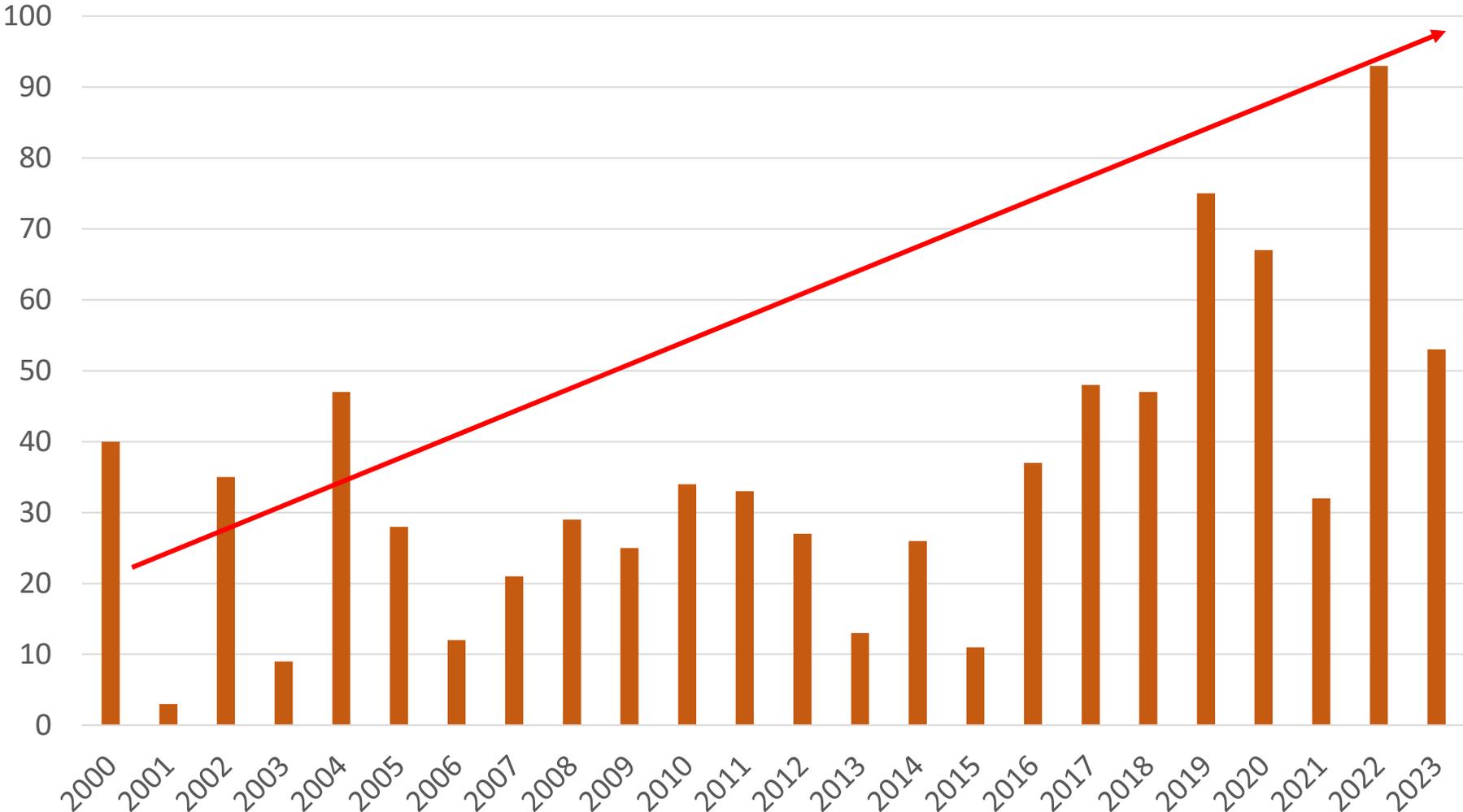
Days wet-weather river flows above 60 mgd in U.S

Search waterbodies
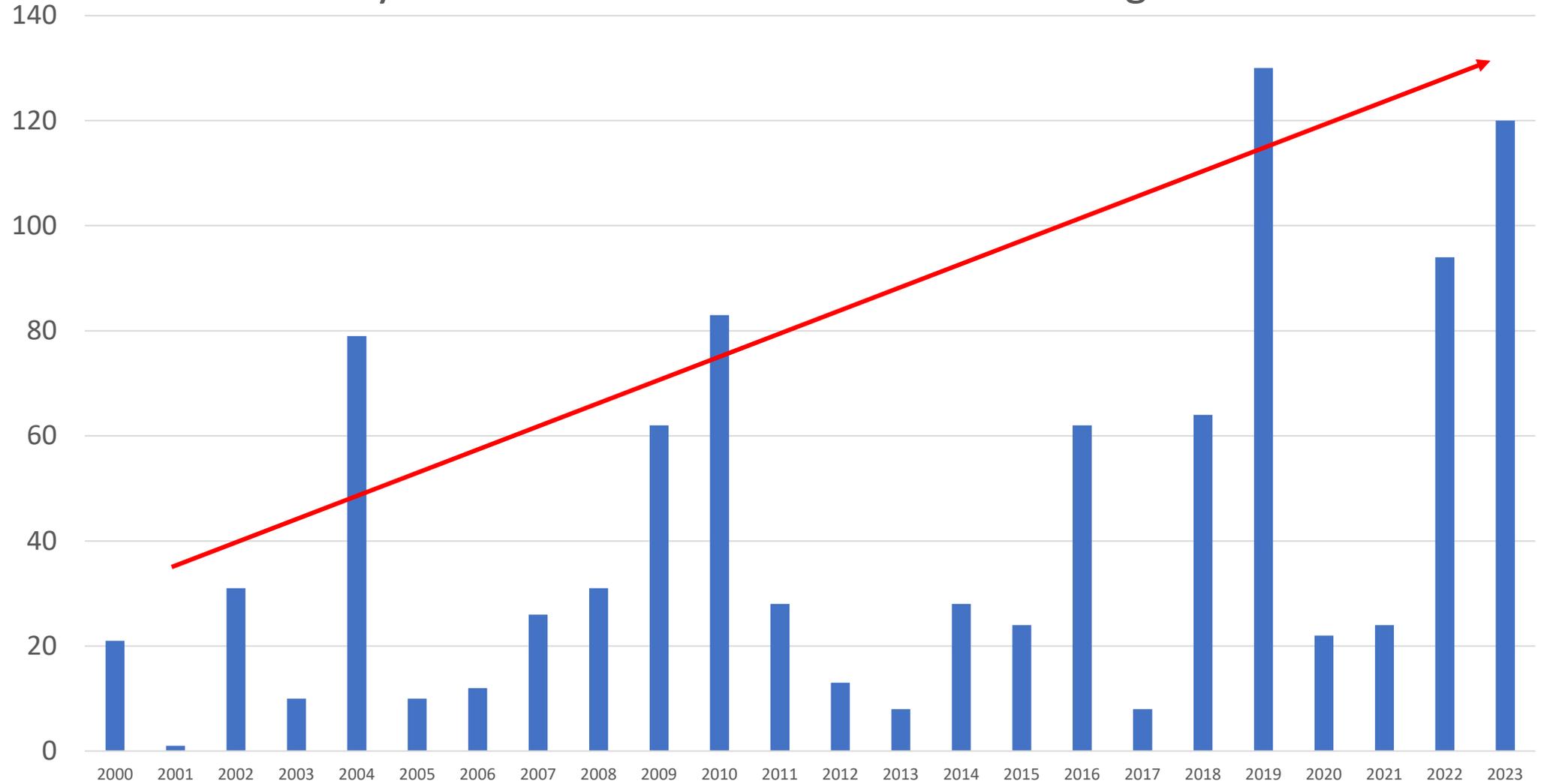
Tijuana River and Estuary 303(d) listed for:

Ammonia (127820), Ammonia (Unionized) (115522), Ammonia as Nitrogen (76720), Benthic Community Effects (76951), Bifenthrin (112175), Cadmium (112157), Chlorpyrifos (126834), Color (125510), Cypermethrin (112176), Diazinon (112160), Dichlorvos (112161), Eutrophic (74679), Indicator Bacteria (128040), Low Dissolved Oxygen (77817), Malathion (86255), Nitrogen (127520), Oxygen, Dissolved (112165), Permethrin (130330), Pesticides (76067), Phosphorus (112168), Pyrethroids (112174), Sedimentation/Siltation (77353), Selenium (112169), Solids (69841), Surfactants (MBAS) (76722), Synthetic Organics (77084), Total Nitrogen as N (76763), Toxicity (112171), Trace Elements (77421), Trash (69701), Turbidity (112172)

"Otras aguas" into TJ river must be reduced
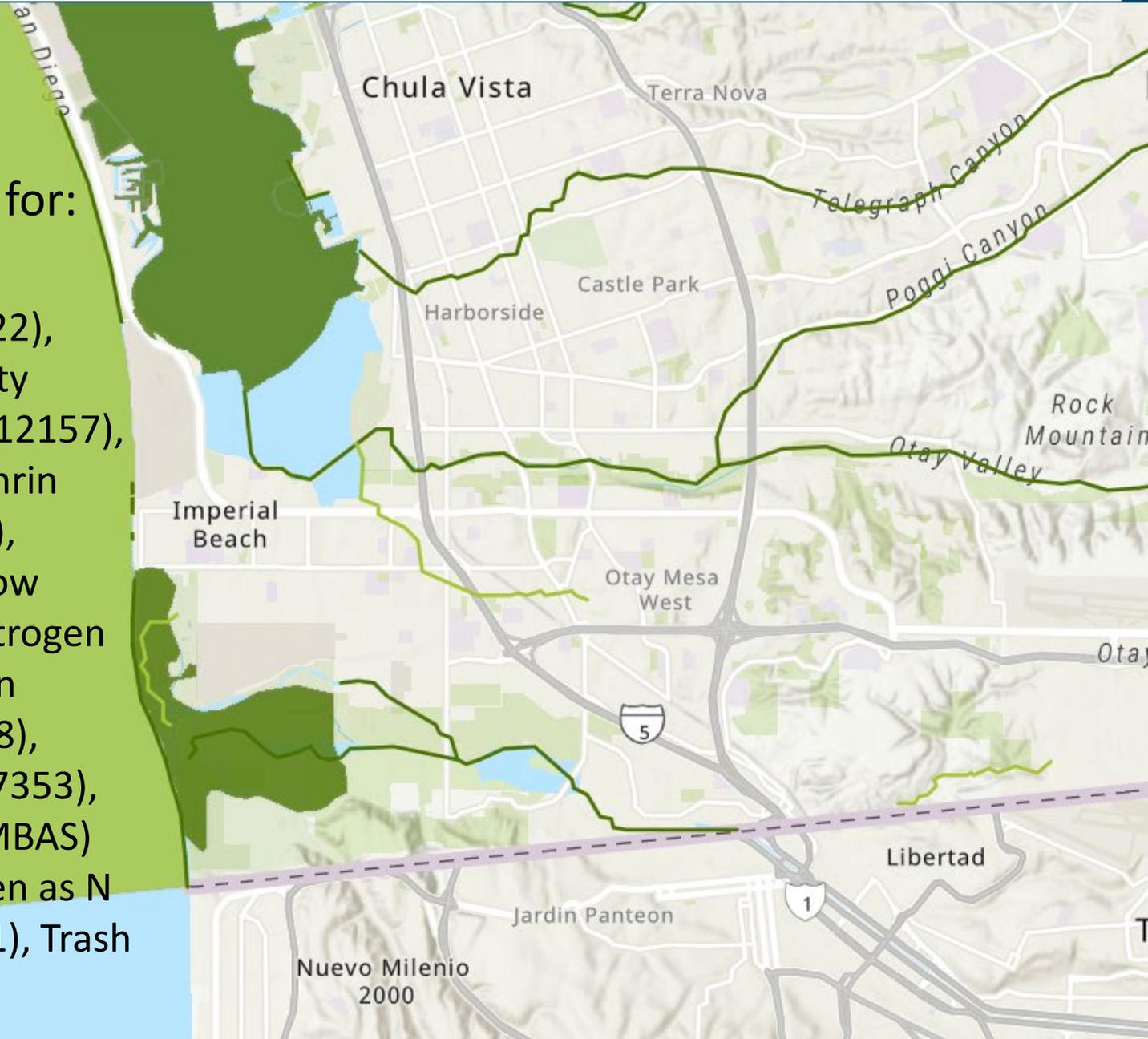
Current Progress Short-Term Projects

Infrastructure in green construction is complete

Infrastructure in yellow is under design/construction (at least partly funded).

Infrastructure in red is part of the scope for rehabilitation, replacement, etc.

One solution: reuse of wastewater-feasibility study undertaken by NADBank

Increase in monitoring in Mexico to measure level of contamination of river during dry-weather. Establish trends to determine benefits of investment.
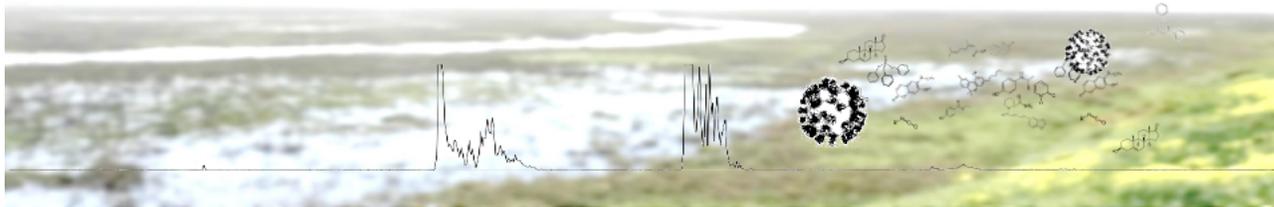
Evaluating the potential for real-time water quality monitoring of sewage pollution in the Tijuana River Estuary

Natalie Mladenov, Trent Biggs, and Dan Sousa

Student team: **Field Leads:** Stephany Garcia, Elise Piazza, **Lab Leads:** Keyshawn Ford, Elisa Rivera, Alex Grant
Callie Summerlin, Trinity Magdalena-Weary, Ben Downing, Isaiah Hand, Emily Deardorff, Elena Aguilar, Adolfo Lopez-Miranda
Dept of Civil, Construction & Environmental Engineering and Dept of Geography, San Diego State University

SAN DIEGO STATE UNIVERSITY · J. W. Sefton Foundation Family foundations · EPA · NASA · WIRL WATER INNOVATION & REUSE LAB

Thank you!

Motivation

1) Need real-time warning of contamination events

2) Need a way to assess progress on water quality improvements

Problem:
Sample-based monitoring is time consuming and expensive

Findings

- TRP sensor is reliable as a warning of sewage pollution against the "no cross-border flow" background

- Neap tide results in an elevated and persistent sewage signal in the estuary

  - May mean that more sewage flows to the coastal zone without mixing in the estuary

  - Implications for modeling of coastal pollution (SIO?)

https://giddingslab.ucsd.edu/
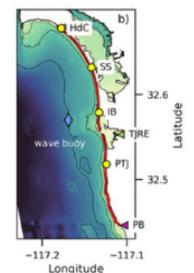
Tijuana's river diversion intakes