

U.S. Customs and Border Protection (CBP)

CBP's Tijuana River Valley Recovery Efforts and
Impacts of Transboundary Flows on Border Security

June 21, 2017



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Erosion and Flood Control Measures

In order to address erosion due to infrastructure construction, Customs and Border Protection (CBP) implemented revegetation projects at Smuggler's Gulch and Bunker Hill. Efforts at both sites have been successful at restoring native vegetation and reducing sediment transport. For both projects erosion pins were set up and monitored.

CAL1
CAL2



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Slide 2

CAL1 The revegetation plan included salvaging and replanting plants at the project site, broadcast seeding and hydroseeding, and installing an irrigation system. For the Bunker Hill project, prior to its commencement RECON Environmental salvaged succulent vegetation (e.g., cacti, agave) from the footprint of the construction area and replanted later.

CRAIG, AMBER L, 6/14/2017

CAL2 Results of the Pin Monitoring can be shared upon request.

CRAIG, AMBER L, 6/14/2017

Erosion Control Measures

Smuggler's Gulch



September 2011



May 2016



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Erosion Control Measures

Bunker Hill



June 2013



April 2016



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Tijuana River Valley Sewage Spills

Transboundary debris and sediment trapped by border security measures, west of Goat Canyon collector



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Tijuana River Valley Sewage Spills

Risks related to transboundary flows from Mexico

Under the current conditions, the risk from transboundary flows has not been addressed fully and the scope of the threat posed by the raw sewage will continue to evolve. Goat Canyon has essentially become a landfill larger than a football field with extensive amounts of e-coli present (per historical testing of wet weather flows) as well as related gases due to decomposition of human waste (methane and hydrogen sulfide are common gases resulting from decomposing human waste).

Persons or industry in Tijuana, B.C., Mexico, continue to dump unknown suspected toxic material via and around the runoff system resulting in waste travelling north into the Tijuana River Valley wildlife preserve areas, Border Field State Park and other locations near residential areas.



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Tijuana River Valley Sewage Spills

A Border Patrol Agent's work place



Tijuana River



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What are the threats to U.S. Border Patrol Agents?

Unfiltered, raw sewage and unknown hazardous materials (to include heavy metals, industrial waste, etc.) from the unlawful dumping and uncontained runoff from Mexico.

- When drying out can give off methane and hydrogen sulfide gases which can be very caustic to the respiratory system. The dried particles can also contain pathogens and other airborne contaminants that can get into the eyes and lungs.
- Typically, it takes 2–3 months for enteric bacteria to significantly reduce in soil.

According to officials at the IBWC, what goes into their collectors is untreated domestic wastewater containing blood borne pathogens, viruses, etc. Potentially has high metal content, though not likely due to Tijuana's industrial pretreatment program.

- Water from unknown sources has been illegally trucked in and dumped into the collectors without the knowledge of the IBWC.



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Risks related to transboundary flows from Mexico

- At this time, the Border Patrol is aware of 19 transboundary flows between November 2016 and June 2017.
- At least four of those were reported only by Border Patrol so the content and quantity are unknown.
- The total of the known quantities (as reported by the IBWC) is 3,077,370 gallons, excluding the February spill that was reported as 143,000,000 gallons (a figure that has been disputed by some).
- While it's true that many of the flows entering from Mexico's canyons are captured by the collectors and delivered to the wastewater treatment plant, the solids sit in open air until they dry. The health impacts of what will eventually become an airborne hazard are not fully known.



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What are the threats to U.S. Border Patrol Agents?

In an article by the San Diego Union Tribune it was noted that “research by David Cummings, a microbiologist at Point Loma Nazarene University, revealed extra-hardy DNA flourishing in the sewage-laced sediment of the Tijuana River Valley. Cummings and his students have uncovered an array of genes that help their bacteria hosts survive shots of penicillin, quinolones and other fundamental infection-fighting antibiotics.”

Other risks include typhoid fever, bacterial dysentery, cholera, giardiasis, poliomyelitis, hepatitis A, legionnaires’ disease, Methicillin Resistance Staphylococcus Aureus infection (MRSA), pesticides and many more.



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What are the threats to U.S. Border Patrol Agents?

“Safe limit” exposure for e-coli (once in a thirty day period) is **235 MPN/100 ML** and **10,000 MPN/100 ML** for coliform.

In Goat Canyon, current levels (as of May 1, 2017) are in excess of **23,000,000 MPN/ML** for e-coli and in excess of **86,000,000 MPN/ML** for coliform.

In the month of May, 2017 thirty-nine incidents of exposure were reported by agents. Includes eye/throat irritation, infection and rashes.



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Impacts to U.S. Border Patrol Agents and homeland security

Advice given to CBP personnel by the Department of Environmental Health is to “take precaution whenever they are around water coming across the border, especially during dry weather. Don't drive thru it fast, don't walk in it, don't touch it, etc... If someone does come into contact with Tijuana River water they should launder clothing and shoes and wash the affected body parts thoroughly with soap and warm water ASAP.”

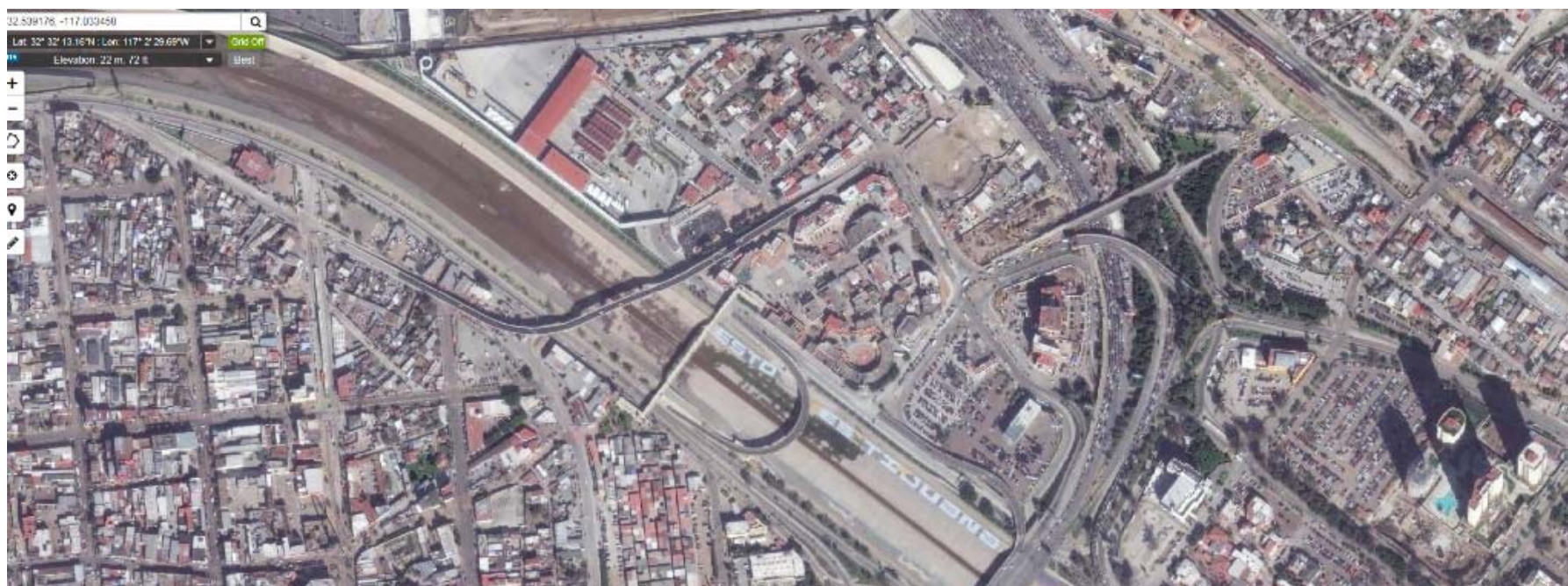
While Agents are encouraged to stay out of contaminated areas and to immediately wash themselves and their vehicles should exposure occur, they do not have the luxury to abandon their area of operations— nearly the entirety of which has been contaminated.



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Untreated sewage entering the U.S. via the Tijuana River channel January 31, 2017



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Untreated water bypassing the Goat Canyon collector April 30, 2017



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Tijuana River Valley Sewage Spills

Black water at Goat Canyon March 1, 2017



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Goat Canyon constant influent for multiple weeks (dates were not recorded) in March and April, 2017

Multiple tests were done over the weeks the water was present, finding it to be highly contaminated and hazardous to health (total coliform measured 24,196,000 MPN/100ml on 3/28/17).

It should be noted that there had not been rain in over 9 weeks when this event occurred.



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Unknown substance entered into Goat Canyon May 5-6, 2017



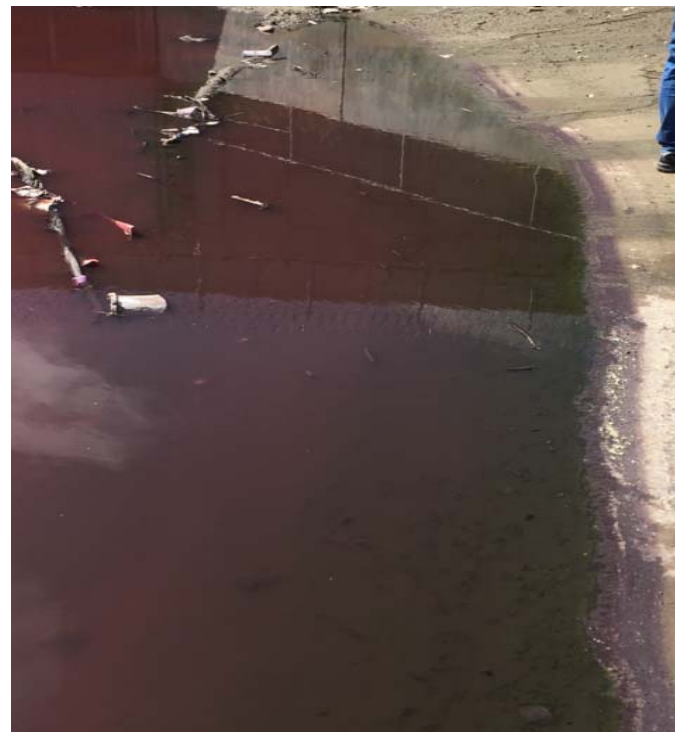
CBP has video of this flow coming through from Mexico.



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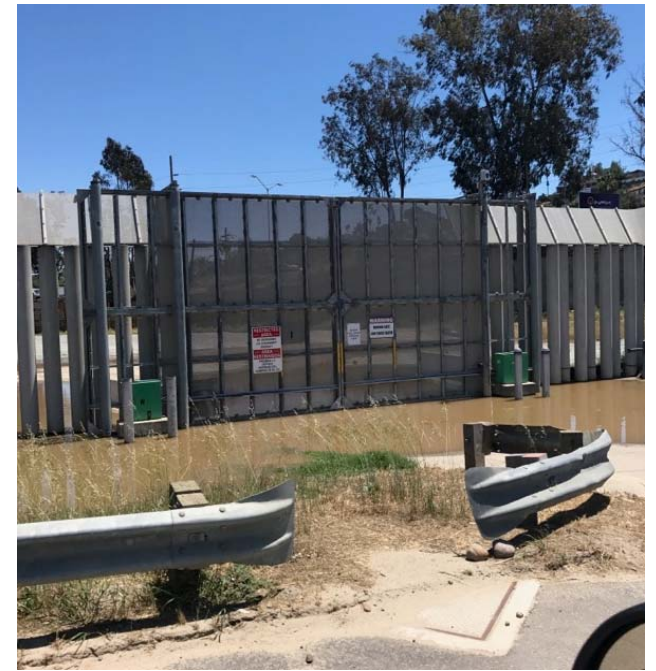
Unknown substance entered into Goat Canyon May 5-6, 2017



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Mexican wastewater pipe broken in auto accident sent untreated sewage into the U.S. from the Mexican Highway May 21, 2017

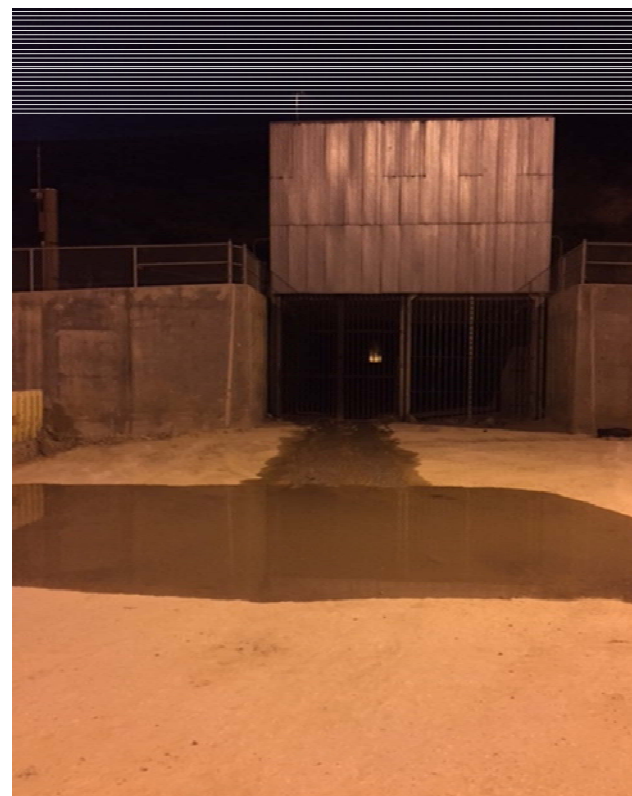


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Goat Canyon illegal dumping June 9, 2017, approximately 10:00 p.m.

Agent reported that it smelled like “detergent and sewage.”



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Stewart's Drain July 17, 2014

Per an IBWC employee, raw sewage was dumped into the open collector to “let it dry.”



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Proposed Actions

- An accurate, thorough assessment of the full impacts of transboundary flows needs to be done by appropriate officials to determine the content and severity of pathogens, hazardous materials, and toxins for the health and safety of agents, residents and visitors of the Tijuana River Valley.
- IBWC and CESPT need to report all transboundary flows.
- Imperial Beach Station will continue to monitor, document, assess, and report conditions in the area of operations.
- Border Patrol will work to develop a process for notifying all involved partner agencies of any transboundary flows agents encounter.



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