

Special Section

SOUTH BAY'S RIVER STIX



■ AMERICA'S INVISIBLE ENVIRONMENTAL DISASTER

CENTURY OF SEWAGE

When it rains the trouble begins. Untreated sewage enters the Tijuana River and crosses into the U.S., causing serious health issues.

BY IYARIE MURGUIA

TIJUANA RIVER ESTUARY, U.S.-MEXICO BORDER—

A pair of lanky flamingoes bestride the muddy banks of the serpentine Tijuana River as it wriggles toward the Pacific Ocean. Ticked pink by a smorgasbord of snails and riparian delights, the mysterious Florida natives do not seem bothered by the fact that they are somehow on the wrong side of the continent.

Another mystery is how they can stand the smell.

Beautiful to gaze across at a distance, the verdigris estuary that separates Imperial Beach from Baja California on this day has a gag-inducing reek of sunbaked sewage. A hellish odor evokes

Milton's River Styx rather than the cherished wetlands that once attracted birds by the millions and birdwatchers by the thousands. It is a struggle for survival.

The estuary is losing.

So is the ocean.

Tijuana's explosive growth, vast drainage basin, geographic slope toward the border and wholly insufficient infrastructure is a quaternion of disaster for ocean waterfronts and beaches in Southern San Diego County. Coastline from Imperial Beach to the Silver Strand has been closed all year. Sewage even closed Coronado – one of the world's most scenic beaches – most of calendar year 2023.

After 85 years of problems with Tijuana sewage there may be stirrings of

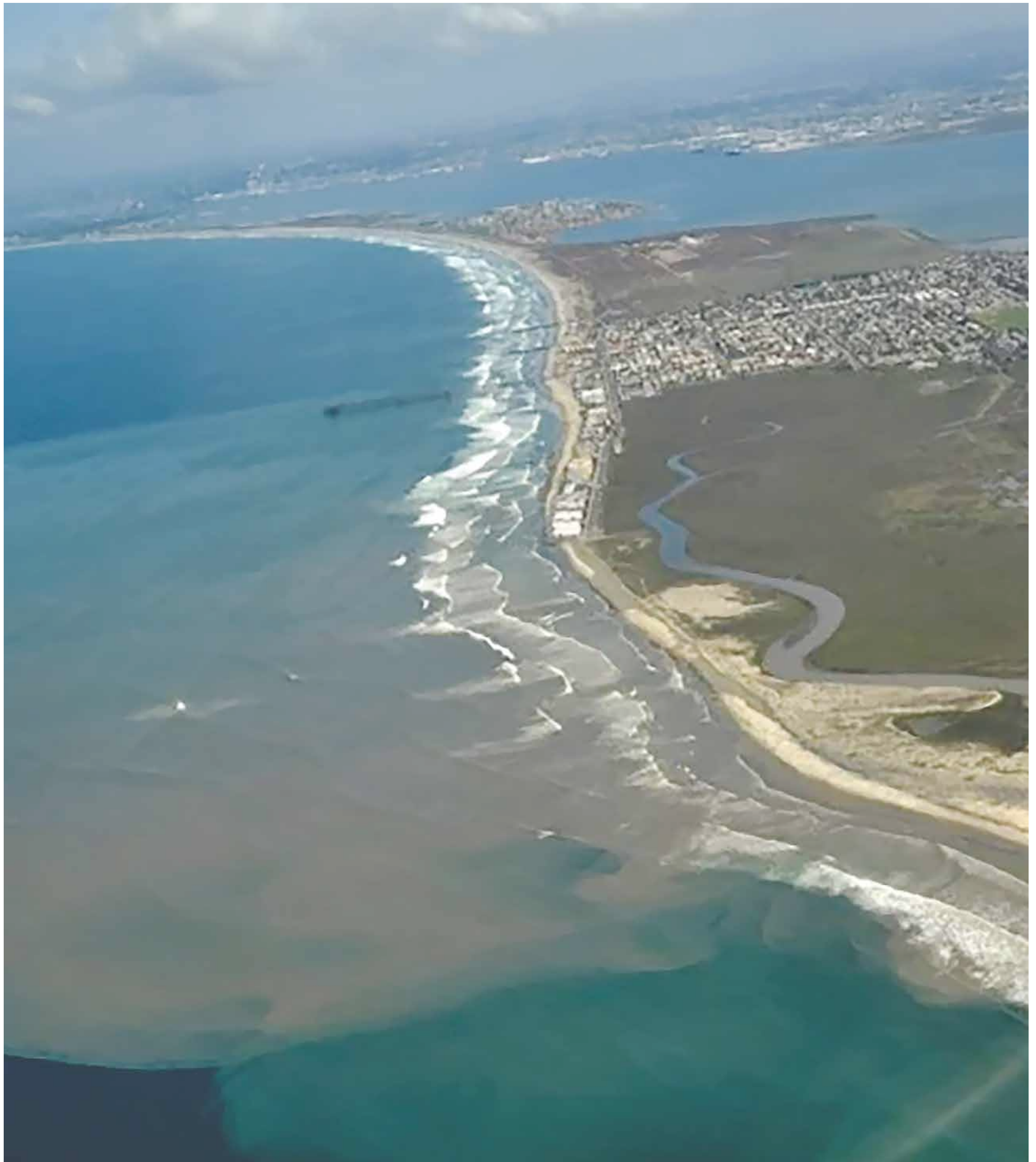


Photo Courtesy of KPBS

'POKING GOD IN THE EYE'—Tropical Storm Hilary flushed billions of gallons of raw sewage and industrial waste through the Tijuana River Valley near San Ysidro out to the Pacific Ocean at Imperial Beach. Filthy water forced the closure of beaches from the border to Coronado. Sewage spills have been a persistent problem for 85 years.

action by the federal governments of Mexico and the United States.

Again.
Maybe.

Environmentalists have struggled to put the crisis on the radars of Mexican and American officials since the Roosevelt Administration, so the fact that the presidents of both nations have mentioned the problem seems like progress.

Feeble stopgaps, bandages and patches have consistently failed to keep sewage, industrial runoff and trash out of the Tijuana River and out of the ocean. Solutions have all buckled under the massive increases in Tijuana sewage and wastewater that crosses the border in the river or by rolling down hillsides into the U.S. Sewage also enters the ocean from the coastal Punta Bandera treatment plant four miles south of downtown Tijuana and a sprawling but overmatched plant in Rosarito.

Once in the water, the northern coastal counter current steadily moves it north to the coastlines of Imperial Beach, Chula Vista, National City and Coronado. The most recent sewage spill roared into the ocean like a pungent brown serpent during Tropical Storm Hiliary in August. An already overmatched and crumbling South Bay International Wastewater Treatment Plant was damaged and wholly ignored by the torrent of filth that overran it.

A conservative estimate to repair and expand the plant is \$660 million. Some experts shake their heads and say the cost will be closer to \$1 billion. President Biden's \$300,000 million request to Congress may not pass and may not be enough to create the infrastructure north of the border necessary to collect and treat filthy runoff from Tijuana.

WildCoast founder Dr. Serge Dedina and other longtime advocates for the ocean and beaches say we need to act fast while we have the attention of politicians in Washington D.C. and Mexico City. Soon their gaze will move elsewhere like it has so many times since 1929.

NINE DECADES OF DIRTY WATER:

Relentless Timeline of Untreated Sewage and Inattentive Politicians

1927

San Ysidro residents propose a Tia Juana River Valley Flood Control District in the San Ysidro region. The effort failed.

1929

Government officials from Mexico and the U.S. meet in Washington to discuss the Ready to Act River Pact to set international policy for the Rio Grande, Colorado and Tia Juana rivers. The governments were not ready to act and nothing came of the meetings.

1930

Tijuana, population 11,271, builds a septic tank designed to serve 5,000 residents. The border outpost has no other sewage infrastructure.

1934

U.S. and Mexico officials consider digging a tunnel to conduct untreated sewage and wastewater from the border to the ocean. The tunnel idea collapses under the \$60,000 price tag.

By order of the governments of Mexico and the U.S., members of the International Boundary Commission meet in San Diego to discuss sewage in the Tijuana River Basin. American farmers in the San Ysidro area protest the flow of sewage from Tijuana. A

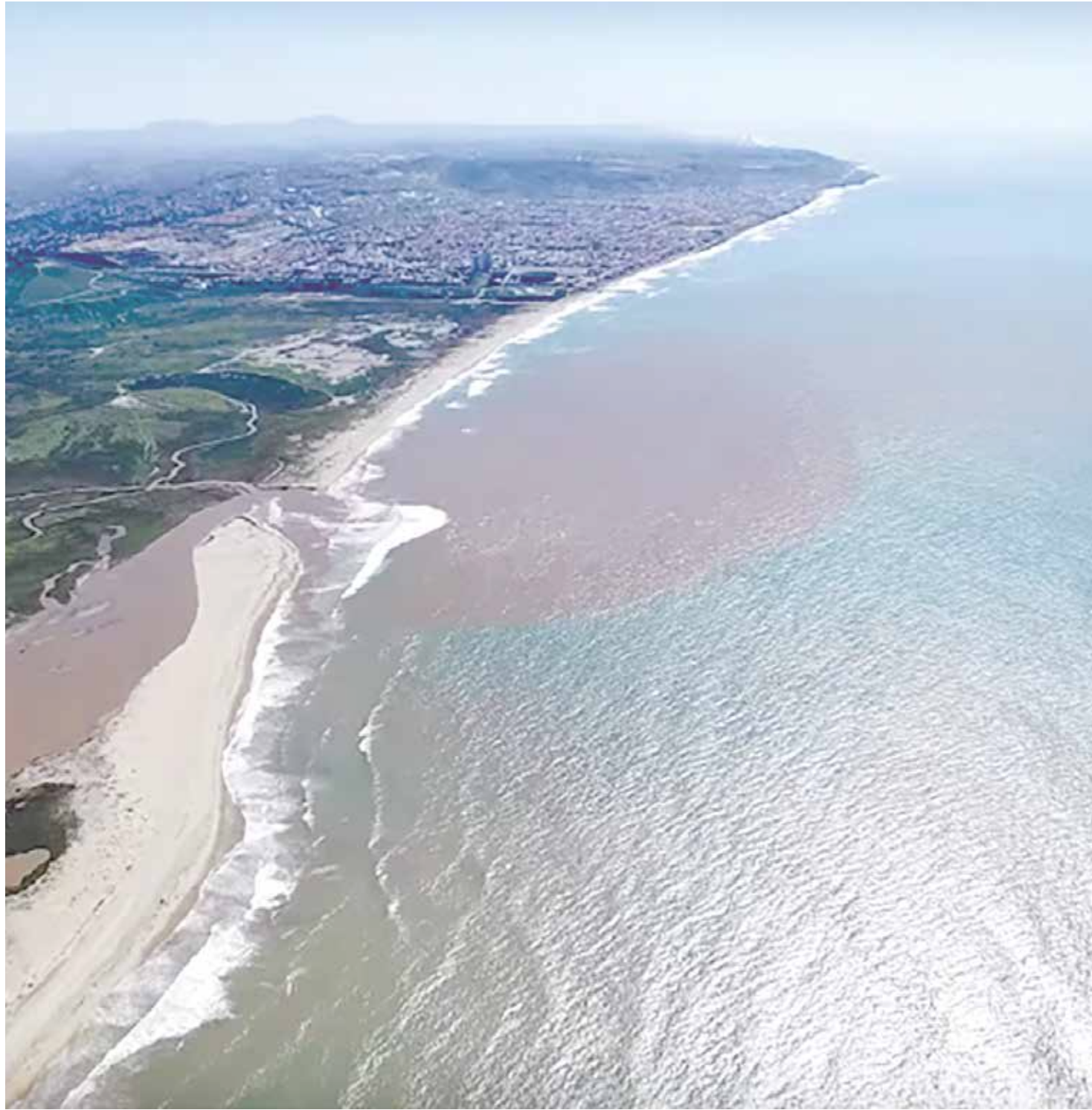


Photo Courtesy of Surfline.com



Photo Courtesy of Voice of San Diego



Photo Courtesy of SDRCC



Photo Courtesy of WildCoast



Photo Courtesy of Pier South

DESTRUCTIVE TORRENT OF SEWAGE—(top) Looking south at Boca del Rio where the filthy brown Tijuana River empties into the azure Pacific. (above) Tijuana's vast drainage basin collects untreated in the river which crosses into the U.S. near San Ysidro.

OFFICIALS CANNOT EVEN AGREE ON WHAT THINGS ARE NAMED

Digging through the history books and archives to learn about the region's sewage and pollution issues is a confusing, mind-numbing exercise chockablock with false starts, broken promises, half measures and government incompetence on both sides of *la linea*.

Then there are the names. Reporters, politicians and experts have different names for many things, most notably the river causing so much of the trouble. Depending on who writes the report, the infamous source of the border sewage is the Tia Juana River, Tijuana River or Rio Juanita. Residents of the borderlands

know the name of the sprawling city south of *la frontera* is Tijuana, which is said to have derived from the Kumeyaay People's name for the area, *Tiwan*, ("near the sea.") An early rancher named his spread Rancho Tia Juana for reasons debated by historians. He also named the river that vivisected his property the Tia Juana River. That was the accepted name of the river on both sides of the border for about a century.

American settlers in the area that is now San Ysidro and Imperial Beach named the river and the wetlands near its mouth the Tia Juana River Valley. From the

1920s-1960s the river and the river valley were called Tia Juana and Tijuana interchangeably in newspaper accounts and government reports in both countries, thus the inconsistent nomenclature in The Sun timeline published in this section.

Tijuana pretty much won out as the name of the river and its namesake valley by the 1970s, though stubborn old Tia Juana still makes an occasional appearance. Tia Juana is not a typo, just an anachronism from an earlier time when Spanish, Ipai and English speakers thought they heard something else.

proposal to invest \$100,000 for a pipeline to conduct sewage through the wetlands to the ocean is never funded.

1936

A rudimentary treatment plant built west of Monument Road consisting of two 45-foot subterranean tanks.

American farmers and the Palm City Chamber of Commerce vote to approve a flood control plan based on projects on the Mississippi River which would dig a channel parallel to the Tijuana River to conduct sewage straight to the ocean.

1937

Work begins on the project which continues into 1939.

1938

Mexican and U.S. officials approve plan to dump effluent from Tijuana septic tank straight into the ocean rather than allowing it to flow through the Tijuana River Estuary.

1941

Severe late Spring thunderstorms flood the Tijuana River Basin and destroy a 1,000-foot section of the sewage channel. Local officials blame the federal government for "faulty construction" and refuse to pay for repairs.

1944

Mexico and the U.S. sign a treaty related to water use from the Colorado, Rio Grande and Tijuana rivers that gives "preferential attention to the solution of all border sanitation problems." American officials and businesses site the treaty for decades to criticize Mexico's "inattention" to sewage and clean water issues.

1947

Damage and insufficient capacity hamper the primitive Tijuana River Sewage Disposal System. Federal officials say there are no funds available to repair and upgrade the system.

California State Park System refuses to include the Tijuana River Valley and Estuary in the state park system due to sewage from Tijuana entering the ocean at Imperial Beach. State officials call the sewage "a health menace."

1948

Tijuana has a population of almost 60,000 and the same 1920s septic tank designed for a population of 5,000. Raw sewage pumped through outfall pipe near Playas de Tijuana straight into the ocean.

1952

San Diego County recommends connecting Tijuana and San Ysidro to a treatment system planned for San Diego metropolitan area.

1953

San Diego Regional Water Pollution Control Board reports Pacific Ocean near the border "has been seriously impaired for beneficial recreational use as a result of the discharge of raw, undisinfectated sewage from the (Tijuana) International Sewage Outfall."

1954

Bond measure to build San Diego Metropolitan Sewage System fails.

1955

IBWC and Mexican hydrologists authorized to investigate sewage issue. No report was made.

1958

Tijuana officials agree to "move solid wastes and scum" from its septic tank before dumping contents into the ocean.

San Diego County Health Department oversees an "intensive chlorination program" from May 29 through September 14 when the program exhausts its funding. One week later water quality at beaches was deemed unsafe.

1959

San Diego County Health Department discovers that Mexico is not removing scum and sludge from its septic tank. It is dumped directly into the ocean.

Mexico's federal government rejects offer to connect to San Diego's newly expanded sewage system, saying it would be too expensive. Officials say they will pursue a less expensive



Photo Courtesy of San Diego Union-Tribune

\$500,000 option to build oxidation ponds and reclamation facilities in Tijuana. Estimated time of completion is nine months. The project is never completed.

Mexico's federal government assumes responsibility for operating Tijuana's septic tank. Contents continue to be dumped straight into the ocean.

1960

San Diego health officials announce that water pollution along County beaches "is the worst ever seen." San Diego Bay is under a "continuous quarantine" and Mission Bay is "heavily polluted." They blame Tijuana sewage. City and County embark on construction on regional "Metro System" that will end with an ocean floor outfall three miles off coast of Point Loma.

1961

Mexico opens a new pump station to transport sewage to a partially completed southbound canal.

1962

Mexico runs out of money to complete the southbound canal. Work stops about 5.5 miles south of the border where raw sewage is channeled into an arroyo then flows across a beach and into the ocean. Canal is never completed.

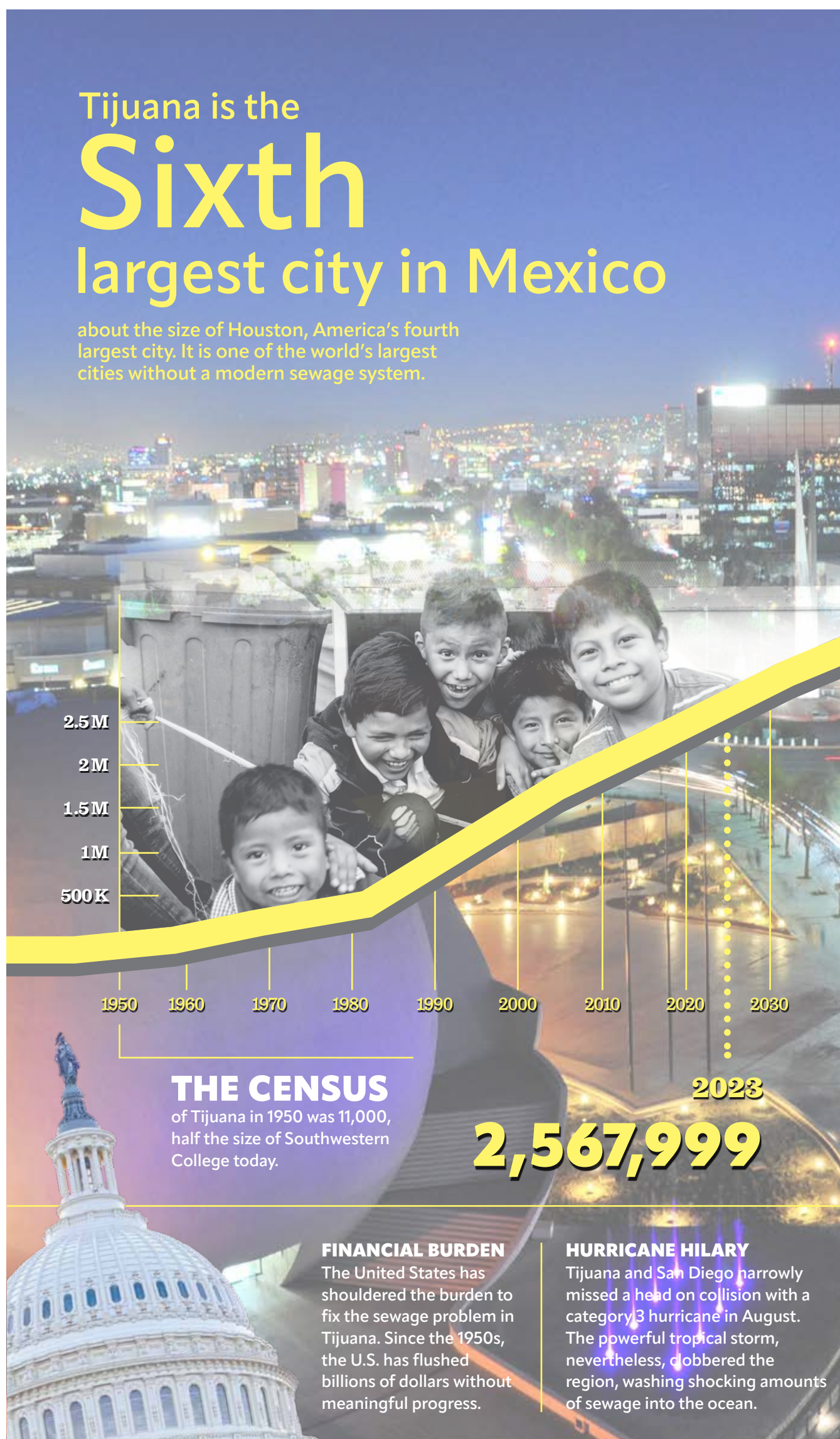
Tijuana pump station fails. All of the city's raw sewage flows across the border. Mexican officials discuss an "emergency connection" to the San Diego Metro System. The connection is not made.

1963

Point Loma-based Metro Water Treatment System begins operations. It includes 27.5 miles of interceptors, two central pumping stations and a new primary treatment plant with a capacity of 88 million gallons a day. Participating agencies include Imperial Beach, Chula Vista, National City, La Mesa, Lemon Grove, El Cajon, Montgomery, Spring Valley and the U.S. Navy. Tijuana opts out.

1965

Atmospheric river storm runoff damages Tijuana's pump station. Raw sewage again flows over the U.S. border. The U.S. and Mexico sign IBWC Minute No. 222, a treaty authorizing construction of an emergency pipeline connecting Tijuana to the San Diego Metro System. Less than half of Tijuana homes and businesses are connected to its sewage system. Tijuana uses the valved turnout pipe intermittently until 1975 and more extensively through 1998 when the South Bay International Wastewater Treatment Plant opens.



Source: worldpopulationreview.com

INFORMATIONAL GRAPHIC / STAFF

UNIMAGINABLE FILTH AND REFUSE—The Tijuana River is an open sewer, aquatic trash pit and collector for industrial waste. Major storms have washed the bodies of farm animals and humans into the U.S. and onto the sands of Imperial Beach. Ecoli, malari and flesh-eating bacteria live in the river and the Tijuana Estuary on the American side of the border. Nine decades of finger pointing, underfunded remedies and politicized indifference have allowed the problem to fester.



Photo Courtesy of WildCoast



Photo Courtesy of Imperial Beach Patch



Photo Courtesy of CESPT

1966

Torrential rain ruptures Tijuana's main sewage pipe. Sewage flows toward the coast.

1967

Imperial Beach signs an agreement with developers to dredge out the Tijuana River Estuary to build a marina surrounded by hundreds of residential units. Environmentalists call the plan "an utter disaster." Early planning makes no provisions for flooding or sewage spills. The marina is never built.

Officials of the Tijuana River Flood Control Project urge Mexico and the U.S. to jointly construct a flood control project in the Tijuana River Valley. Mexico built most of the project south of the border, but the U.S. never started the northern portion.

1973

Mexico announces plans for an elaborate treatment plant to be located 15 miles southwest of Tijuana. The plant was never built.

1974

San Diego Mayor Pete Wilson discontinues work on the northern part of the international flood control project, infuriating Mexican officials. A subsequent heavy rainstorm washed torrents of sewage and wastewater through the Tia Juana River Valley. Population increases in and near Goat Canyon and Smuggler's Gulch on Tijuana hillsides add to the sewage and trash problem by sending material straight across the border. None of the homes east of Playas de Tijuana along the hilly border are connected to the Tijuana sewage system.

1975

Mexican news media report a new sewage plant under construction just south of Tijuana. Construction was abandoned before year's end, leaving the 1935 septic tank as Tijuana's only sewage collection.

1978

An El Niño-fired storm destroys a pipeline causing raw sewage to spill into Smuggler's Gulch and across the border into the Tijuana River Estuary near San Ysidro.

1979

Tijuana's main pumping station experiences a major failure and the open canal washes out 3.2 miles south of the border. About 70 percent of Tijuana's sewage is routed to the emergency bypass, the rest flows across the border in multiple locations.

1980

One of the largest storms of the century causes the Rodriguez Dam to spill over and massive runoff throughout the Tijuana watershed. Rampaging floodwaters break the 30-inch pipe that has been transporting the majority of Tijuana's sewage to Point Loma. More than 15 million gallons a day of Mexican sewage washes through the Tijuana Estuary and out to sea at Imperial Beach. San Diego County Health Department quarantines four miles of beaches from the border to the Naval Amphibian Base on the Silver Strand. Coronado mayor and Hotel del Coronado manager deny reports that city beaches are fouled.

Imperial Beach Mayor Brian Bilbray and some councilmembers and supporters launch "Operation Beaver," their hands-on attempt to plug the Boca del Rio (Mouth of the River) outlet where the Tia Juana River empties into the ocean at Imperial Beach. Bilbray personally operates a bobcat to scoop up sand to plug the mouth of the river. He is later warned by the Environment Protection Agency that his actions are illegal. Bilbray unrepentant.

1981

San Diego City Council releases land in the Tijuana River Valley earmarked for a sewage treatment plant for a housing development. It also okays a waiver that would exempt San Diego from complying with the Clean Water Act of 1972 to avoid building a secondary sewage plant to clean water to 90 percent pure before its release into the ocean. Reagan Administration officials signal they



PHOTO BY IYARIE MURGUIA



PHOTO BY IYARIE MURGUIA



Photo Courtesy of Voice of San Diego

will support the plan until the project falls through.

Unusually heavy winter rains from 1981-83 bring a series of floods and sewage spills. Some rains are so heavy they wash the bodies of farm animals from Mexico all the way to the sands of Imperial Beach.

1982

A "blue ribbon committee" is formed consisting of representatives from six American government agencies. Members vow to "abandon short-range thinking to come up with a permanent answer to the problem of Tijuana sewage spills."

1983

Aquatic hyacinth plants are introduced to sewage collection ponds to break down and consume sewage and toxins. Botanists and biologists warn that the plants could damage the ecosystem if they get into the wetlands.

International Boundary and Water Commission begins work on a 13-acre holding pond in the Tia Juana Valley. Resident and elected officials protest, arguing the ponds will breed mosquitos and cause illness.

Water released from Tijuana's Rodriguez Dam courses through the Tijuana River pushing sewage and trash across the border and into the ocean. Imperial Beach Mayor asks/ demands that Baja California Governor Roberto de la Madrid close the dam's spillways immediately. Spillways are closed, though reopened a few weeks later, ostensibly for repair work. Bilbray asks the California Governor George Deukmejian and President Reagan to declare Imperial Beach a disaster area. Bilbray threatens to personally dam up the Tijuana River at the border.

Reagan and Mexican President Miguel de la Madrid meet and declare the two countries will work together to solve the sewage problem. No further action is taken.

Residents and businesses announce plans to build a collection system of "concrete tubs" at Smuggler's Gulch and Goat Canyon. They are never built.

1984

Blue Ribbon Commission issues report offering "short-term and interim measures."

Bilbray, without EPA authorization, builds a makeshift dike across the Tijuana River to block effluent and trash from reaching the ocean at Imperial Beach. "When your back is against the wall, you have to do something," he told a San Diego Tribune reporter.

California Legislature approves \$5 million for construction of a "bare bones" sewage treatment plant. Federal government will only contribute \$5 million toward the project, which was never started.

Mexico receives a \$46.4 million loan from the International Development Bank. American officials immediately begin to pressure Mexico to use it to fix the sewage problem. Mexican officials make it clear they do not appreciate the "intrusion into Mexico's affairs."

13-acre sewage collection pond completed. It is designed to handle 3 million gallons of sewage daily.

Imperial Beach Star News article summarizes 50 years of sewage woes. Health officials propose pumping "vast amounts" of chlorine through the estuary. Environmentalists oppose the idea as a "disaster" that "is bad for the critters." They also warn about invasive hyacinth plants escaping into the estuary.

Elected officials and environmentalists warn against "name calling," "finger pointing" and "disrespectful rhetoric toward Mexico."

1987

Mexico opens coastal treatment plant at Punta Bandera, about five miles southwest of downtown Tijuana, in January.

In October the Punta Bandera plant breaks down and sewage escapes into the ocean.

1988

San Diego City Council approves "big pipe," a 12-foot-wide conduit capable of conducting 600 million gallons a day.

1990

U.S. and Mexico agree to a treaty to build an International Wastewater Treatment Plant on a 75-acre site on the border. Proponents say it could treat 25 million gallons a day with expansion capacity of up to 100 million gallons.

Local, state and federal officials argue over who is responsible for maintaining sewage collection ponds, so no one does.

1991

Primary construction complete on South Bay International Wastewater Treatment Plant. U.S. pays most of the \$256 million cost.

1992

Hyacinth plants spread throughout Tijuana River Estuary, crowding out native species and providing cover for mosquitoes, which breed in the shade under the leaves. Hyacinth suffocate fish by taking oxygen from the water, threatening the entire ecosystem. Migratory birds blocked from water and food, greatly reducing their numbers.

1994

Bilbray and local environmentalists – one-time allies in the fight against sewage spills – disagree over "Operation Beaver" tactics that grade landscape to create dikes that block sewage from reaching the ocean. Bird advocates argue that Bilbray and others are destroying habitat for endangered ground nesting Least Bell Vireo terns. "I shall leave no tern unstoned," replied Bilbray.

Nestor resident David Gomez forms Citizens Revolving Against Pollution (CRAP).

Taxpayer advocates and civic groups argue that the South Bay International Wastewater Treatment Plant is "mis-managed and ill-planned." They predict the project will fail due to poor construction techniques and lack of oversight.

Sierra Club announces a lawsuit to block construction of International Wastewater Plant arguing it will do excessive damage to the environment. The plant breaks ground in July. Price tag grows to \$388 million. CRAP announces support for treatment plant but insists an overflow canal that would empty into the ocean is also necessary.

1995

Mexico considers reneging on all previous flood control and sewage management agreements due to economic crisis brought on by devaluation of the peso.

1999

South Bay International Wastewater Treatment Plant opens.

2015

U.S. and Mexico International Boundary and Water Commission agree to a framework for binational cooperation related to the Tijuana River Basin. No further actions ever made public.

2017

More than 150 million gallons of raw sewage discharged into the Tijuana River, overrunning the South Bay treatment plant and entering the ocean. Beaches from Imperial Beach to Coronado closed.

2020

Congress allots \$300 million for the construction of infrastructure to reduce pollution from the Tijuana River.

2022

U.S. and Mexico agree to "reduce transboundary wastewater in the Tijuana River watershed and Pacific Ocean through a suite of infrastructure projects on both sides of the border." It calls for doubling capacity of the South Bay Wastewater Treatment Plant.

2023

A "substantial" pipe rupture in Tijuana leads to a sewage spill that reaches the ocean and spreads up the coast to Coronado.

A Clean Water Act report concluded that the South Bay treatment plant was only able to remove about 34 percent of sewage and toxins in the runoff it collected.

Tropical Storm Hiliary unleashes torrential rain in Baja California Norte, cascading 3 billion gallons of contaminated water through the Tijuana River Valley and through to the ocean. Beaches from the border to Coronado were closed for months.

President Biden announces an additional \$310 million for augmentation of the South Bay treatment plant, raising the federal contribution to \$630 million. Many experts insist the project will require at least \$1 billion.

Research by Imperial Beach doctors Kimberly and Matthew Dickson concludes that people can be sickened by water-borne pollution that dries and becomes airborne. People who have gone in the ocean or to the beach are suffering from many of the same ailments as swimmers and surfers.

Sources: San Diego Tribune, San Diego Union, Imperial Beach Star News, San Diego Union-Tribune, San Diego Reader, Coronado News, Dr. Steve Schoenherr, South Bay Historical Society, Voice of San Diego, WildCoast, Surfrider Foundation, Sierra Club, KPBS, federal and county records.