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United States and Mexico

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Subcommittee on Water Resources and the Environment
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Thank you for inviting me to testify regarding the Fiscal Year 2022 budget request for the U.S. Section of the International Boundary and Water Commission. We welcome the opportunity to discuss the current issues and opportunities to improve infrastructure and the quality of life in the United States along the U.S. southern border with Mexico.

The International Boundary and Water Commission (IBWC)'s mission is to provide binational solutions to issues that arise during the application of U.S.-Mexico treaties regarding, among other things, water quality and flood control in the border region, including constructing, rehabilitating and operating flood control systems, storage dams, and wastewater treatment plants, as directed by Congress. The IBWC is an international organization composed of U.S. and Mexican Sections, each headed by an Engineer Commissioner appointed by the President of the country. Each Section is administered independently of the other. The U.S. Section (USIBWC) is an independent federal agency that operates under the foreign policy guidance of the Department of State and is funded through the annual Department of State, Foreign Operations, and Related Programs Appropriations Act.

The IBWC has over a century of experience in bi-national cooperation and partnership, dating back to the temporary boundary commissions established by the Treaty of Guadalupe, the Gadsden Treaty, and an 1882 Convention to map the international boundary between the United States and Mexico. The U.S. and Mexican governments established what became the IBWC (then the International Boundary Commission) in 1889, initially to resolve boundary-related differences arising along the border. The 1944 U.S.-Mexico water treaty established the key organizational components of IBWC and its two sections. Today, the IBWC is charged with applying boundary and water treaties concluded between the United States and Mexico, including water distribution and flood management of the transboundary rivers, and settling differences that arise in their application along the nearly 2,000-mile border. Virtually every aspect of USIBWC's mission protects American lives and property and supports the economies of U.S. border communities by facilitating water deliveries for agricultural, industrial and municipal uses.

The USIBWC's activities include:

- demarcation of the land boundary along the States of California, Arizona and New Mexico, including at international ports of entry and international bridges;
- preservation of the international boundary defined by the Rio Grande along the State of Texas;
- determination and accounting for national ownership of the waters of the Rio Grande and Colorado River and allocation of water between Mexico and the United States

during severe drought;

- operation and maintenance of flood control systems consisting of over 500 miles of river and floodway levees, 20,000 acres of floodplains, 700 hydraulic structures, 100 hydrologic gaging stations, and four diversion dams;
- operation and maintenance of two international storage dams and associated hydro-electric power plants;
- operation and maintenance of two wastewater treatment facilities in the United States;
- maintenance of two international bridges in the El Paso/Ciudad Juarez area;
- water quality monitoring for bi-national IBWC-approved projects and exchange of data; and
- review of all plans for new international bridges, border crossings, and pipe and power lines that cross the international boundary to ensure compliance with boundary treaty requirements.

This year, the Department of State, in tandem with the U.S. Section of the IBWC, submitted four reports to Congress on: Mexico's Rio Grande water deliveries to the United States; the release of effluent from Mexico into the United States; the interagency plan to address the impact of toxic transboundary flows on U.S. communities; and USIBWC support for the state of Texas's efforts to control Carrizo cane along the border.

Priority Issues

Water Delivery

As the Western United States faces unprecedented severe drought conditions, the USIBWC's ability to negotiate international agreements, known as Minutes, with Mexico under the 1944 Water Treaty allows our respective countries to develop solutions to current issues, and our water accounting function helps ensure the equitable distribution of the waters of the Rio Grande and Colorado Rivers is in accordance with the treaties and Minutes. For the Colorado River basin, USIBWC helped develop and implement Minutes 319 and 323, ensuring that if the United States makes a shortage declaration, Mexico will take cuts to Colorado River water deliveries along with the Lower Colorado River Basin in the United States. The Bureau of Reclamation expects to make a shortage declaration in August 2021, forcing automatic water delivery cuts in 2022. USIBWC's budget provides for work to implement drought planning and water conservation in the Colorado River Basin, including working with Reclamation and Mexico to prepare to implement cuts in Mexico.

This year marks the first year of water savings by Mexico under the Binational Water Scarcity Contingency Plan agreed to in Minute 323, a plan that complements savings undertaken in the United States under the domestic Lower Basin Drought Contingency Plan approved by Congress in 2019. Prior to this year, under the terms of Minute 323 and related Minutes, Mexico has conserved hundreds of thousands of acre-feet of water, adding to

volumes conserved in the United States, to help boost Lake Mead elevation and forestall mandatory reductions to users in both countries.

On the Rio Grande in Texas, under the 1944 Water Treaty, Mexico is required to deliver water from the Rio Grande to the United States in five-year cycles. For the water delivery cycle that ended in October 2020, USIBWC was instrumental in ensuring Mexico finished without a water debt. IBWC conducts regular technical and policy meetings to ensure Mexico meets its Rio Grande delivery requirements and the United States and Mexico fulfill their obligations on the Colorado River.

Sanitation - San Diego, California

Another of the Commission's top priorities is addressing sanitation conditions along the U.S. Mexico border. To that end, USIBWC operates and maintains two bi-national wastewater treatment facilities at San Diego, California (South Bay International Wastewater Treatment Plant) and Nogales, Arizona, and participates with Mexico in its operation of a facility in Mexico that discharges into the Rio Grande River near Laredo, Texas. In the early 1990s when NAFTA was being drafted and implemented, Mexico made major investments in sanitation infrastructure with substantial U.S. cost-shares through entities like the Border Environmental Cooperation Commission (BECC) and EPA. The San Diego wastewater treatment facility was also constructed during this time. However, rapid economic and

demographic growth along Mexico's northern border with the United States did not bring proportionate Mexican investments in infrastructure or maintenance of the existing infrastructure, particularly in water and sanitation. As a result, much of that infrastructure is coming to the end of its useful life. This results in increased operations and maintenance costs at USIBWC's facilities and recurring sewage spills across the border into the United States.

For decades, nearby communities have had to cope with the transboundary wastewater flows between Tijuana and San Diego. Despite massive U.S. investment in the City of Tijuana's collection system, that system has aged, and the city's population has grown since the mid-1990s. During rainstorms or wet weather in Tijuana and when pipelines or pumps break, water flows to the Tijuana River and canyons and mixes with unknown amounts of urban runoff, treated effluent from the Tijuana River, and wastewater in Mexico before flowing into the United States. During dry weather, the runoff is largely groundwater and some untreated flows from illegal connections in Mexico (dry-weather flows); during storms, this runoff mixes with large amounts of rainfall (wet-weather flows). Thus, transboundary flows that cross the U.S.-Mexico international border can transport pollutants generated in Mexico that impact downstream surface waters in the United States.

Among the factors leading to transboundary flow incidents are aging and unmaintained Tijuana sewer lines and pumps, power outages, and wet weather flows from storms that overwhelm the capacity of pumps in Mexico that are diverting sewage flows away from the United States. USIBWC uses its relationships with Mexican officials to

leverage larger solutions than one small agency can achieve on its own. We consult closely with U.S. stakeholders and encourage Mexican officials to access federal, state, local and private sources to fund repairs.

In the mid-1990s the IBWC constructed the South Bay plant to treat a limited amount of Mexican wastewater sent to the plant primarily from the City of Tijuana's collection system, before discharging the treated effluent offshore in the Pacific Ocean. The collection system in Mexico includes a small-capacity pump in the Tijuana River in Mexico to divert to the South Bay plant the dry-weather flows that occur in the river on a regular basis. However, there are two scenarios when the flows from Mexico overwhelm South Bay's capacity. First, when it rains, wastewater mixes with stormwater in the Tijuana River and canyons, exceeding Mexico's capacity to capture the river flows and exceeding the South Bay plant's treatment capacity. The River simply cannot be stopped from flowing into the United States and no single wastewater treatment plant could treat the entire river, which is part of the drainage of a watershed that is over 1,700 square miles in size.

Second, Mexico's wastewater system sometimes sends flows to the South Bay plant that exceed its limited capacity. Over the last four years, pump station failures and leaks in Tijuana's sewage pipelines have become particularly acute, leading to increased wastewater flow to the United States. For example, the plant began receiving much higher flows from Mexico's collection system in August 2020. The USIBWC was informed after many inquiries that Mexico was experiencing electrical power difficulties with pump stations PB1A and PB1B, and that multiple sections of the conveyance lines to a Mexican-side treatment plant had

collapsed and were undergoing repairs. Due to this confluence of multiple system components breaking down all at once, Mexico was unable to decrease the flow coming to the South Bay plant. From approximately August 2020 through January 2021, flows in excess of 25 million gallons per day were sent to the plant. While transboundary flows through the River channel were greatly reduced during this period, the plant began to experience effluent exceedances in November 2020.

American communities are understandably frustrated. The State of California, (through the San Diego Regional Water Quality Board), two municipalities, the Port of San Diego, and an environmental group have filed three related lawsuits against USIBWC for alleged Clean Water Act violations related to transboundary flows from Mexico. The plaintiffs are demanding construction of defensive infrastructure in the United States aimed at preventing the flows from Mexico that exceed the South Bay plant's capacity. Although the activities that form the basis for the plaintiffs' claims do not constitute any violations of law, settlement could resolve the litigation in a manner that fosters long-term cooperation. Given the engineering and regulatory complexities in addressing this issue, all stakeholders must work together in proposing and implementing technically feasible solutions while accounting for long-term operation and maintenance costs and regulatory issues.

This subcommittee has expressed particular interest in infrastructure in the Tijuana River Valley and, while it is not typical for USIBWC to report on another agency's efforts, it will do so here given Congress's interest in this geographic region and the overlap of EPA-USIBWC efforts. In January 2020, Congress appropriated $300 million for border area

infrastructure, as part of the United States-Mexico-Canada Agreement (USMCA) implementing legislation. The funds were appropriated to EPA to design and construct new infrastructure in coordination with eligible public entities. EPA is assessing which of nine technically feasible proposed projects to build. USIBWC has been identified as one from a list of 11 eligible entities including state and local agencies who may be suitable candidates to implement one or more of the nine projects. The leading projects under consideration include an expansion of the USIBWC's South Bay plant, which treats wastewater to the secondary level, or construction of a new treatment plant adjacent to the existing one, for treatment of much larger volumes of wastewater at the advanced primary level.

As part of EPA's process, USIBWC is taking part in a series of meetings with California stakeholders to review the project options. It will take several years to conduct feasibility studies, obtain environmental approvals, and design and build new structures. If USIBWC participates in any of the projects, that project will need bi-national participation and therefore may also involve a new IBWC Minute. If the Administration determines that IBWC is the entity most appropriate to own and operate additional wastewater management infrastructure in the Tijuana Valley, IBWC's authority to receive additional funds, construct new facilities, and own and operate such facilities would need to be clarified.

Technical feasibility studies need to cover the affordability not only of construction, but also of operation and maintenance for the life of the project. The long-term operation and maintenance costs of some of the proposed projects are significant and this operational aspect, as well as technical feasibility, need to be carefully understood by any entity

participating in the implementation of the projects. Some of the projects, if built, would require as much as $40-50 million annually to operate and maintain. The studies also need to determine whether the new structures meet regulatory requirements.

The two Sections of IBWC have joined forces with local stakeholders in the United States to establish a binational Rapid Response Team in the San Diego – Tijuana region. In January 2020, the team responded to a clogged pipe behind a highway in Tijuana which created a large pool of water that threatened to collapse the highway and bring contaminated water into the United States. The team provided subject matter experts and lent City of San Diego bypass pumps to Tijuana to control the flow. USIBWC was able to drain the pool, capturing all the contaminated water and treating it at the South Bay International Wastewater Treatment Plant.

Mexico's federal government allocated the equivalent of over ten million dollars in 2020 to upgrade Tijuana sanitation infrastructure. In July 2020, the Mexican Section of IBWC took over the operation of the largest pump station, PB-CILA, ensuring round-the-clock operation and improved maintenance. By May 2021, the Mexican Section completed the station's rehabilitation, refurbishing pumps and acquiring new ones. The Mexican Section's analysis of Tijuana's needed sanitation infrastructure upgrades between 2021 and 2024 has a projected cost of 4.7 billion pesos, or roughly 240 million dollars. If funds are obtained, the plan's execution would include the use of treated wastewater, the upgrade of wastewater treatment plants, the repair and replacement of wastewater pipelines, and the

repair of pump stations.

Sanitation - Nogales, Arizona

Southeastern Arizona has been impacted by deteriorating international wastewater pipelines in Santa Cruz County known as the Nogales Main Collector Line (Trunkline) and the International Outfall Interceptor (IOI). Wastewater from Nogales, Sonora, Mexico as well as Nogales and Rio Rico, Arizona, travels through the wastewater pipelines to the Nogales International Wastewater Treatment Plant (NIWTP), which is operated and maintained by the USIBWC. The multi-year rehabilitation of the Nogales IOI is needed to avoid adverse environmental impacts and to ensure reliable operation of the wastewater collection and treatment system.

The amount of Mexican sewage treated at the NIWTP has often exceeded agreed limits. In addition, since 2011 the Mexican government has failed to pay the full amount owed for treatment of this sewage, leading to a debt of over 4 million dollars. The City of Nogales, Arizona, has also failed to pay for treatment of its domestic wastewater. The transboundary flows sometimes include heavy metals primarily from industries in Mexico and the treatment plant cannot remove these contaminants. This led the Arizona Department of Environmental Quality (ADEQ) to sue the USIBWC in 2012, asserting violations of the Clean Water Act, and to issue a violation for USIBWC's discharge in 2019.

USIBWC has worked within the Administration's budget request process to obtain federal funds to repair the Trunkline and IOI. Through multiple-year appropriations, USIBWC has received nearly $44 million in funding to rehabilitate the pipelines by installing a new liner inside the pipeline. The ADEQ obtained state and non-governmental funds for a cost share with the federal government. USIBWC solicited proposals for the construction of the initial phases of the Trunkline and IOI relining, and we hope to award a contract by July 2021. The multi-year rehabilitation of the Nogales IOI is needed to avoid adverse environmental impacts and to ensure reliable operation of the wastewater collection and treatment system.

The project represents a narrow settlement of litigation between ADEQ and the USIBWC over the pipeline. A broader settlement that also delineates federal and local responsibilities for maintaining the pipeline has not yet been possible. Although the City of Nogales, Arizona disputes past charges for wastewater treatment, by USIBWC's account the City owes us over $5 million (or over $6 million if we include interest and penalties) for the treatment of city wastewater. USIBWC agrees with the City that charges should be based on actual usage and is prepared to negotiate how usage is calculated. The City and USIBWC have agreed to mediate this and other legal issues in Autumn 2021.

The City of Nogales, Sonora has also accumulated large unpaid balances for the treatment of its wastewater at NIWTP. In coordination with the U.S. Department of State, USIBWC has repeatedly pressed Mexico's federal government to pay the ballooning debt on

behalf of the local utility, which currently amounts to over $4 million.

Flood Control and Dam Safety - Texas

Dam safety is another one of USIBWC's top priorities. While the Agency does not seek additional funds for its Safety of Dams Program this year, it will use unobligated carryover balances to develop and implement risk mitigation plans. USIBWC is working with the Mexican Section to determine the best option to reduce the risk of dam failure, which will require a cost share with Mexico. The most recent safety inspections have identified urgent or high priority deficiencies at five of the six Rio Grande dams operated by the U.S. Section or jointly with the Mexican Section. American, International, Retamal, and Falcon Dams received a Dam Safety Action Classification (DSAC) of "High Priority, Conditionally Unsafe," while Amistad Dam received a DSAC rating of "Urgent, Potentially Unsafe." A minimum of $20 million in unobligated carryover funds will be used to implement mitigation measures at Amistad International Dam. About 98 percent of the water used in the Lower Rio Grande Valley of Texas and Mexico is released from Amistad and Falcon Dams, providing potable water for 1.5 million U.S. and Mexican border residents. Failure of either of these dams would have catastrophic consequences in terms of potential loss of life and property, and damage to the economy in the Lower Rio Grande Valley.

Components of Agency's Proposed 2022 Budget

The President's FY 2022 budget request for the USIBWC Salaries and Expenses (S&E) Account is for $51,970,000, an increase of $2,200,000 above the FY 2021 Appropriation of $49,770,000. The requested funds will allow the USIBWC to continue critical or urgent maintenance and repairs of its facilities and infrastructure for storage, diversion, and flood control of river waters, as well as maintenance of USIBWC sanitation projects. The request funds 249 positions of the authorized total of 253 and administrative costs of the U.S. Section, as well as the funds needed for the continued operation and maintenance of the U.S. portion of bi-national infrastructure along the border. That infrastructure is required to ensure compliance with treaties and other international agreements between the United States and Mexico that are within the purview of the IBWC.

The USIBWC has eight field offices and four satellite offices that span the border from San Diego, California to Brownsville, Texas. Staff in these offices operate and maintain projects, including many operated jointly with Mexican Section personnel based in companion offices on the Mexican side of the border. Of the roughly $52 million request, $34.5 million will support continued operation and maintenance (O&M) costs of existing infrastructure. This activity includes the measurement and determination of the national ownership of boundary waters.

The S&E funding also covers the U.S. share of O&M for two international wastewater treatment plants, two major international storage dams with associated

hydroelectric power plants, four diversion dams, river channel and levee projects, and boundary demarcation activities.

The remaining $17.5 million that is requested for the S&E Account includes $12.7 million for administration, which covers negotiations and supervision of joint projects with Mexico to solve international boundary and water problems; overall management of the USIBWC; formulation of operating policies and procedures; and financial management, information technology (IT) infrastructure modernization and administrative services to carry out international obligations of the United States consistent with international agreements and other authorities.

In addition, $4.8 million is requested to cover activities in USIBWC's Engineering Department, which support our projects and include technical and environmental planning, engineering design and hydraulic studies, construction oversight of new projects, and engineering guidance. Other areas include environmental monitoring and compliance; surveys and mappings, and investigations to determine the need for and feasibility of future projects. Engineering funds also cover the design and management of projects, surveys, studies, and investigations to address international boundary and water problems with Mexico in accordance with IBWC treaties and agreements. The IBWC participates in multi-agency water quality programs in the Rio Grande, Colorado River, New River, and the Pacific Ocean.

The FY 2022 Construction Account request of $46.8 million is $2.2 million below the FY 2021 President's Budget of $49.0 million. Of this amount, $28.8 million is requested for the Water Conveyance Program: this includes $20.8 million for rehabilitating and upgrading the Rio Grande flood control levee systems, which have impacts in southern New Mexico and Texas, and $8.0 million to rehabilitate the Tijuana River levee systems protecting the San Diego area. The amount of $15.0 million is requested for the Resource and Asset Management Program, including $5.7 million for deferred maintenance and repairs and $5.0 million for facilities renovation, among other projects. The request also includes $3.0 million for the Water Quality Program, for the rehabilitation of the Nogales International Outfall Interceptor and Trunkline, as described above.

Planned Rio Grande flood control levee upgrades are part of a multi-year effort to protect communities along the Rio Grande. The construction and maintenance of the Rio Grande flood control system are part of an effort undertaken with Mexico to preserve the Rio Grande as the international boundary and protect lives and property on both sides of the river. The U.S. Section is responsible for maintaining levees and floodways on its side of the border, as is Mexico on its territory. On the U.S. side, the USIBWC flood control system consists of over 500 miles of levees and interior floodways, segments of which date to the 1930s and 1940s. The system is divided in three parts: the Upper Rio Grande flood control system protects one million U.S. residents in the Las Cruces, New Mexico-El Paso, Texas area, with its 225 miles of levees; the fifteen-mile long Presidio Valley system protects nearly 5,000 people in Presidio, Texas; and the Lower Rio Grande system, with its 270 miles

of river and interior floodway levees, protects one million U.S. residents in the Brownsville-Harlingen and McAllen-Edinburg-Mission areas in south Texas.

Deficient segments of the flood control system will be improved in order of priority by risk, population, and development. Improvements will include upgraded levees, floodwalls, gated hydraulic structures, and other structures to sustain the system's conveyance capacity and contain floodwaters. By building structures that meet criteria established by the Federal Emergency Management Agency (FEMA), the program can alleviate the need for border residents to purchase costly flood insurance.

The Tijuana River Levee System Rehabilitation Project will rehabilitate approximately four miles of deficient levees and related flood control structures along the Tijuana River in the United States. Originating in Mexico, the Tijuana River crosses into the United States near San Ysidro, California, then flows west 5.3 miles to discharge into the Pacific Ocean at a point 1.5 miles north of the border. The levee system protects San Ysidro from river floods. The agency has completed the environmental assessment and the engineering work is almost complete. Construction of the first phase of the levee system improvements will address improvements on the river's North levee. A second construction phase for the river's South levee will be the subject of a future funding request.

The FY 2022 Request for $5,700,000 will continue the multi-year Deferred Maintenance and Repairs Project, established in FY 2020, for the repair and replacement of

mission-critical assets in prioritized order. This includes infrastructure for storage, diversion, and flood control of transboundary river waters, as well as our sanitation projects. It also includes field office facilities and heritage assets such as Falcon International Dam and the fixed monuments demarcating the U.S.-Mexico boundary. Deferred maintenance and repairs requirements have accumulated over years of funding constraints. The Request will allow execution of the second phase of this multi-year project.

Originally funded in FY 1992, the Facilities Renovation project will continue with a multi-year program to renovate and modernize deteriorated IBWC facilities along the U.S.-Mexico border to current industry standards. These facilities, most of which were constructed between 1930 and 1950, require major rehabilitation work to meet OSHA standards, comply with current environmental laws, and provide more efficient, effective, and secure working environments. The project consists of structural, electrical and mechanical improvements, as well as renovations necessary to meet regulatory requirements.

The USIBWC has performed condition assessments of its facilities to determine a priority ranking based on condition, purposes, and code compliance, and to determine the most cost-effective means of improvement either through renovation or replacement. Among the more urgent priorities, the agency will provide for a new administration building at the Lower Rio Grande Field Office in Mercedes, Texas. The existing administration building is an old metal building in poor condition that contains asbestos and does not have fire protection. The old building will be demolished and replaced with a new building of the

same size, designed to comply with current building codes and conserve energy.

The USIBWC welcomes your support as we implement these important projects as part of our mission to address boundary and water issues along the U.S.-Mexico border. Thank you for the opportunity to testify.