



**Good Neighbor Environmental Board (GNEB) Video/Teleconference
Microsoft Teams Virtual Platform
May 5, 2022; 2:00 p.m.–6:00 p.m. EDT**

MEETING SUMMARY

Welcome, Introductions and Overview of Agenda

Eugene Green, GNEB Designated Federal Officer, Federal Advisory Committee Management Division, Office of Resources and Business Operations, Office of Mission Support, U.S. Environmental Protection Agency (EPA); Paul Ganster, Chair, GNEB; and Irasema Coronado, Vice Chair, GNEB

Mr. Eugene Green welcomed the participants and conducted the roll call. A list of meeting participants is included as Appendix A.

Dr. Paul Ganster, GNEB Chair, and Dr. Irasema Coronado, GNEB Vice Chair, thanked the participants for attending. Dr. Coronado is excited to advance the quality of life in the U.S.–Mexico border region. Dr. Ganster provided an overview of the agenda, which is included as Appendix B.

The official certification of the minutes by the Chair is included as Appendix C.

GNEB Annual Report Topic (Water and Wastewater Infrastructure in the Border Region) and Goals for Today's Meeting

Paul Ganster, Chair, GNEB

Dr. Ganster commented that the ability to meet face-to-face offers the opportunity for many sidebar discussions about how to develop GNEB's annual report and allows the members to get to know one another better. Although this virtual meeting does not offer these opportunities, it is designed to allow a number of experts in border water and wastewater infrastructure issues to present and the GNEB members to ask questions.

He reminded the members that GNEB is an independent Federal Advisory Committee tasked with providing annual reports. The topic of water and wastewater infrastructure on the border is complex, and the Board must develop realistic recommendations and offer approaches to improve the quality of life in border communities. GNEB must consider how to make a difference regarding the set of issues related to lack of adequate water and wastewater infrastructure in the border region and how to be prepared for future demands. Simply recommending additional funds does not receive a positive response. The Board does not have research staff, so the members must rely on their and their organizations' resources and be willing to participate actively in performing research and writing text for GNEB's written products.

The current Board members have expertise and experience with the border context and border water issues. Dr. Ganster expects that the members will bring diverse perspectives and enhance Board deliberations and discussions. Historically, members who share similar concerns have worked together to research and develop text relating to these concerns. For example, if the Board decides to include energy issues related to water and wastewater infrastructure in the report, a small group interested in energy issues will collaborate to draft that portion of the report. The Board members will have adequate time to review report drafts, provide input, and come to consensus about the information and recommendations contained in the report.

The goals for this meeting are to develop a list of priority topics for the final report, identify Board members who will lead these topics, consider specific approaches to maximize the value of the report (i.e., What is the major message that GNEB would like to convey?), and discuss next steps and timelines. Crosscutting topics in the past have included *colonias*, tribal issues, climate change and financing.

By December 31, the Board must submit to the U.S. President and Congress an advice letter of approximately 15–20 pages that outlines the major themes. In 2023, GNEB will develop a full, detailed report on the major themes.

Dr. Teresa Pohlman commented that the federal government is concerned about emerging contaminants (e.g., PFAS), so this might be another issue for the breakout groups to consider.

Public Comments

Mr. Green called for public comments and acknowledged the members of the public who had requested to attend the meeting. No oral or written comments were offered.

Expert Presentations

Water and Wastewater Infrastructure

Salvador López, Chief Environmental Officer, North American Development Bank (NADBank)

Mr. Salvador López explained that NADBank was established in 1994 to develop and finance environmental infrastructure along the U.S.–Mexico border to improve the well-being of the population. NADBank is owned and governed equally by the U.S. and Mexico governments. NADBank has a 10-member, binational board of directors, with an equal number of representatives from each country.

Funded projects must be located within 62 miles north of the border and 186 miles south of the border, with seven eligible project types: water, solid waste, air quality, sustainable energy, sustainable cities, sustainable production and climate change. NADBank provides loans, grants and technical assistance. As of the end of calendar year 2021, 288 projects with a total investment of \$10.2 billion have been funded. Of these projects, 169 have been in the water and wastewater sector.

NADBank-supported drinking water projects in Mexico have improved eight water treatment plants and resulted in 120.5 miles of new waterlines and 5,639 new connections to water systems. These improvements benefited more than 500,000 people. The wastewater projects NADBank supported in Mexico benefited nearly 8 million people through improvement of 41 wastewater treatment systems and the construction of 1,042 new miles of wastewater lines and 378,977 new connections to sewer systems. Key indicators indicate that significant progress has been made in Mexico border states in recent decades, but significant challenges in water resources management, drinking water distribution, sanitation and stormwater management remain.

Mr. López displayed pie charts highlighting the differences in water supply sources in the sister cities of San Diego–Tijuana and El Paso–Ciudad Juárez. The majority of water in Mexico’s cities comes from river and ground water sources, whereas San Diego and El Paso have more diversified water supplies.

NADBank-supported drinking water projects in the United States have improved 18 water treatment plants and resulted in 187 miles of new waterlines and 8,516 new connections to water systems. These improvements benefited more than 700,000 people. The wastewater projects NADBank supported in the United States benefited nearly 300,000 people through improvement of 26 wastewater treatment systems and the construction of 527.5 new miles of wastewater lines and 23,932 new connections to sewer

systems. Key challenges in U.S. border communities include the availability and resiliency of water resources, basic infrastructure, and affordability.

Mr. López summarized that significant progress has been made in basic infrastructure, but gaps remain. Population growth and climate change create additional challenges that are expected to be exacerbated in the future, requiring new policies, technologies and funding mechanisms. NADBank has been an important player in addressing water management and other environmental issues in the border region through binational cooperation, planning and project development, institutional capacity building, leveraging capital to mobilize other resources, and effectively funneling U.S. funding to projects in Mexico that provide strong binational benefits. EPA-funded grants have contributed to close the gap in basic infrastructure needs in Mexico communities and in *colonias* and other underserved communities in the United States.

Border Water and Wastewater Infrastructure

Maria-Elena Giner, Commissioner, International Boundary and Water Commission (IBWC)

Dr. Maria-Elena Giner explained that IBWC is responsible for applying the boundary and water treaties between the United States and Mexico. The broad range of responsibilities of the U.S. Section of IBWC (USIBWC) includes flood control, water delivery, oversight of dams and hydroelectric power plants, sanitation, and boundary demarcation. Major ongoing projects include Colorado River conservation projects, construction and sediment removal along the Upper and Lower Rio Grande, and Amistad Dam projects. USIBWC's annual budget is \$50 million for construction and \$50 million for salaries and expenses for the 253 authorized staff positions—reduced from 313, which USIBWC is trying to restore—at 12 offices in the border region and Washington, D.C.

Dr. Giner described deferred maintenance, equipment replacement, flood control and other unfunded projects that highlight IBWC's work on serious needs along the border related to water supply and flood protection. The USIBWC's estimated deferred maintenance budget is \$11 million; extraordinary deferred maintenance is estimated to cost \$487 million. Sediment removal is critical to protect residents from flooding and provide more efficient water delivery. New sediment basins are being installed to keep sediment from reaching the Rio Grande, making sediment removal easier. USIBWC is assessing how to deploy a sediment management plan; next steps include a sediment transport study and engaging in agreements with municipalities to install sediment control structures upstream. Congress appropriated \$7.23 million for the Heavy Equipment Replacement Program. Aging equipment (e.g., dozers, excavators, graders), some from the early 1980s, requires costly repairs and needs replacement at a cost of \$60 million. The Rio Grande Flood Control System requires \$889 million for 172 miles of levees and gaps that need to be raised and rehabilitated to meet Federal Emergency Management Agency (FEMA) standards. Other unfunded projects include dam safety (requires \$215 million) and renovation of 61 facilities (requires \$31 million).

Dr. Giner displayed a map of international dams and areas covered under the *1906 Convention Between the United States and Mexico for the Equitable Distribution of the Waters of the Rio Grande* (Convention of 1906) and *1944 Treaty Between the United States of America and Mexico Relating to the Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande* (1944 Water Treaty), as well as a current map of select dams in the Rio Grande Basin. Water delivery under the Convention of 1906 is based on usable water storage in the Elephant Butte Reservoir; this year, as a result of drought conditions, the United States will be able to provide only 15.7 percent of the full allocation, which will affect agricultural users.

Dr. Giner displayed a graph of historical water deliveries to Mexico from 1939 to 2021, as well as a graph of estimated water volumes allotted to the United States by Mexico under the 1944 Water Treaty. Under the 1944 Water Treaty, the United States delivers a volume of up to 1.5 million acre-feet (maf) annually

to Mexico. In times of surplus, the United States delivers a total volume of up to 1.7 maf annually. In extraordinary drought, Mexico's volumes are reduced in proportion to U.S. proportions.

IBWC met in October 2020 to discuss Minute 325, which considers measures to end the current Rio Grande water delivery cycle to improve the predictability and reliability of Rio Grande water deliveries to users in the United States and Mexico. Calibration is underway, and scenarios will be analyzed to determine the impacts to both countries.

Minute 319, regarding cooperation on the Colorado River, was a 5-year pilot agreement signed in 2012 that calls for investment in water conservation, conserved volumes of water in Lake Mead to be held in the United States for future delivery to Mexico, reduced water deliveries during low-level events at Lake Mead, increased water deliveries during high-level events at Lake Mead, deferred water deliveries for Mexico until repair of earthquake damage, and establishment of binational workgroups. Under Minute 319, \$21 million was invested in water conservation and environmental projects in Mexico in exchange for delivery of 124,000 maf to the United States; 1,100 acres of enhanced riparian habitat were created. Overall, it was a successful pilot project that provided a model for binational cooperation. Several canal, well and other projects also were completed under Minute 319.

USIBWC is developing a white paper on conserving water and creating new water sources. Dr. Giner described the scope of work of the project, which includes reviewing existing studies and reports, conducting interviews, reviewing existing proposals, assessing the existing legal structures and barriers, and providing recommendations based on the analysis. Dr. Giner encouraged the participants to follow USIBWC on Twitter ([@usibwc](https://twitter.com/usibwc)).

Environmental Justice, Border Water and Wastewater Infrastructure for *Colonias*

Carlos Rincón, Director, U.S.–Mexico Border Office, Region 6, EPA

Dr. Carlos Rincón explained that the 1983 La Paz Agreement defines the U.S.–Mexico border region as 62 miles north and 124.7 miles south of the border. *Colonias* started as clusters of makeshift houses and mobile homes—often with only a few dozen residents—offering people the possibility of land and home ownership. More than 2,200 *colonias* soon sprung up along the southwest border from Texas to California. Lots often were sold using unscrupulous contract-for-deed arrangements, often leaving individuals without a legal title for their small, unimproved lots of land that had no access to electricity, gas, public services or indoor plumbing. *Colonias* are substandard housing developments, found in the U.S.–Mexico border region, where residents lack safe, sanitary housing and basic services. Where sewer systems do exist, treatment plants do not, and untreated wastewater is at best discharged to inefficient septic tanks that are expensive to maintain.

Dr. Rincón displayed a map of the *colonias*, noting that 1,884 of the *colonias* are located in Texas. In Texas, 358,024 individuals reside in *colonias*, compared with 278,209 individuals living in 104 *colonias* in Arizona, 157,408 individuals living in 154 *colonias* in New Mexico, and 46,269 individuals living in 35 *colonias* in California. Dr. Rincón also displayed charts of *colonias* and *colonias* populations per Texas county.

Colonias have been prioritized by need. Those that are not served by a public water or wastewater facility and have health hazards present are Priority 1. Priority 2 includes *colonias* not served by water or wastewater systems with no hazards present or *colonias* that are served by water or wastewater facilities that are in serious violation of regulations. Priority 3 includes *colonias* in which only some residents are not served by water or wastewater facilities. *Colonias* that have adequate water and wastewater services are Priority 4. Priority 5 *colonias* are uninhabited.

Approximately 20 to 80 percent of *colonias* populations have wastewater facilities, and 10 to 90 percent have drinking water services, depending on the state. By state, approximately 50 to 80 percent of *colonias* are served by wastewater facilities, and 10 to 90 percent are served by drinking water facilities. New Mexico has the lowest percentages in all four categories.

Dr. Rincón described the EPA historical *Colonias* Wastewater Treatment Assistance Program (CWTAP), Border Environment Infrastructure Fund (BEIF), and Border 2025's association with the *Colonias* Water and Wastewater Program. CWTAP received \$300 million in the mid-1990s for projects in unincorporated *colonias* within 62 miles of the border that were in existence before November 1989; the projects were closed by 2012. BEIF, managed through NADBank, and Border 2025 offer grant financing for high-priority drinking water and wastewater infrastructure projects located within 62 miles of the border.

Colonias have significant water and wastewater challenges, including lack of access to adequate drinking water services and public wastewater systems, water quality compliance issues in areas that do have service, lack of wastewater service connections from sewer street lines to homes, use of inadequate containers that expose hauled water to the elements, risk of water well contamination from failing septic tanks, flooded or muddy streets that obstruct public and school transportation and emergency services, and high expenses for the purchase of bottled water and water-hauling services.

Dr. Rincón noted seven current projects supported by BEIF and Border 2025 in Texas, New Mexico and the Rio Grande Valley. A number of resources are available for *colonias* information and data:

- [U.S.–Mexico Border Water Infrastructure Grant Program](#)
- [U.S. Department of Housing and Urban Development *Colonias* and Farmworker webpages](#)
- [U.S. Department of Agriculture Rural Utilities Service](#)
- [Texas Department of Housing and Community Affairs Office of *Colonia* Initiatives](#)
- [Texas Water Development Board Economically Distressed Areas Program 2020–2021 Annual Report](#)
- [Texas Commission on Environmental Quality \(TCEQ\)](#)
- [Texas Attorney General](#)
- [New Mexico Finance Authority *Colonias* Infrastructure Board](#)
- [New Mexico Environment Department Water Quality Control Commission Regulations Standards](#)
- [Arizona Department of Housing](#)
- [Colonias in Arizona and New Mexico: Border Poverty and Community Development Solutions](#)
- [TexasLawHelp.org](#)
- [A.Y.U.D.A. Inc.: Adult and Youth United Development Association](#)
- [ARISE: A Resource In Serving Equality](#)
- [Southeastern New Mexico Economic Development District](#)
- [Empowerment Congress of Doña Ana County](#)
- [Methodist Healthcare Ministries of South Texas, Inc.](#)
- [Texas A&M University *Colonias* Program](#)
- [EPISO/Border Interfaith: El Paso Interreligious Sponsoring Organization](#)
- [DIGDEEP](#)
- County Commissioners Courts

Water and Wastewater Infrastructure Challenges for Border Tribes

Evaristo Cruz, Director of Community Development, Ysleta del Sur Pueblo, and Jill Sherman-Warne, Executive Director, Native American Environmental Protection Coalition

Mr. Evaristo Cruz displayed a map of the Ysleta del Sur Pueblo property boundaries, noting the difference between the pueblo and other tribes. The pueblo is a checkerboarded, urban community, with

noncontiguous pieces of land within the urban setting of El Paso. The tribe's northern housing district includes 150 homes, and the southern housing district includes almost 400 homes. Many of the tribe's water and wastewater needs are tied closely to El Paso water utilities and the Lower Valley Water District. Additional pueblo land in El Paso County (Hueco Tanks) has its own challenges because of the lack of development in the area. Further south, the tribe operates a 75,000-acre ranch that supports ranching and agricultural activities.

Working with its water providers is key for the pueblo, but this is not universal for all tribes. Many tribes have large, contiguous lands and treatment-as-a-state status, which allows them to operate their own water and wastewater systems and infrastructure. It is important to note that tribes and communities along the U.S.–Mexico border often are linked in terms of water and wastewater resources and infrastructure. Ysleta del Sur Pueblo fully supports the El Paso water utilities and Lower Valley Water District because the tribe is tied completely into these systems.

El Paso has initiated a number of water conservation efforts, including incentives and rebate programs, municipal conservation laws, and installation of leak detection technologies. Ysleta del Sur Pueblo supports these efforts. Following the adoption of the water conservation ordinance, [per-person consumption of water has been reduced by 30 percent](#). The Lower Valley Water District provides assistance for the pueblo and *colonias* in El Paso County. The district's water installation plan includes [envisioned water and wastewater projects](#) for subdivisions in El Paso County; \$38 million has been set aside for 18 water infrastructure projects and \$26 million for 15 wastewater infrastructure projects. These projects affect the pueblo's southern living district.

Mr. Cruz displayed two [satellite images](#) highlighting the severely affected water levels in the Elephant Butte Reservoir caused by drought between June 1994 and July 2013. These areas are important to the tribe's cultural and traditional practices, and access to the Rio Grande is important not only for surface water resources but also the spiritual and cultural species that the water supports (e.g., plants). Resources have become so scarce that the Kickapoo Traditional Tribe of Texas has traveled nearly 500 miles to gather its traditional resources in locations near the Ysleta del Sur Pueblo. The need to conserve surface water has become critical, and conservation efforts may have unintended consequences on plant and other life. Ysleta del Sur Pueblo is using its ground water resources for agriculture at a rate higher than the recharge rate.

The area deals with water extremes—drought or flooding; flooding causes severe erosion. The tribe is exploring innovative technologies and approaches for stormwater containment, including French drains and on-site ponding. During drought conditions, soil stabilizers are used to control dust, decrease particulate matter and mitigate erosion.

Ms. Jill Sherman-Warne, a member of the Hoopa Valley Tribe, explained that she would discuss the needs of the 20 California border tribes and displayed a map showing the locations of these tribes. The U.S. government recognizes that tribes have authority over their lands. The coordinating principles of the 1999 U.S.–Mexico border agreement acknowledged tribes' authority to participate as partners; however, this has not been fully realized.

California border tribes exist in a varied ecosystems (e.g., farms, orchards, deserts). Unfunded needs continue to exist among these tribes, which have not been fully engaged to participate in border agreements. The 2011 Indian Health Service (IHS) Sanitation Deficiency System (SDS) indicated that 57 tribes in California were in need of water systems, storage, community systems, wells and water main pipelines. As of 2019, 31 tribes are listed in IHS SDS as a result of changes made to how tribes are placed on the SDS and not because the needs of 26 tribes have been addressed. This change may or may not have included tribal consultation. Most IHS SDS unfunded tribal needs in California are rated as Level II or III.

Level III is defined as “an Indian tribe or community with a sanitation system that has an inadequate or partial water supply and a sewage disposal facility that does not comply with applicable water supply and pollution control laws or that has no solid waste disposal facility.”

Ms. Sherman-Warne displayed a map of each of the 20 California border region tribal reservations, describing the salient features of each. Many are remote, and several are located in mountainous areas with limited access. The Campo Indian Reservation is located on both sides of the U.S.–Mexico border, with tribal members living on each side. Highways cross several reservations. One reservation is only 10 acres, another is uninhabited, and another is a checkerboarded community. Many reservation roads are unpaved and a single lane. Very few reservations have community water and sewer systems, and the existing systems often are old and need to be replaced. The Rincon Indian Reservation deals with endangered species, and the Santa Ysabel Reservation faces wildfires nearly every year. Many of these tribes have submitted multimillion dollar requests for water and wastewater system installation or upgrades; approximately \$34 million worth of water and wastewater projects are needed among the California border tribes.

Member Q&A Session

Dr. Giner recently finished her doctoral dissertation, which focused on measuring outcomes and lessons learned in *colonias*, and [one of the chapters has been published](#). She would like to highlight the oversized infrastructure that exists in these communities because they did not grow as expected. The issues that were easier to address were taken care of first, and now rural and isolated areas that are difficult to extend services to remain in need. She spoke to more than 100 utilities during her dissertation research, and the common theme is that these communities do not have the resources to build and grow the necessary facilities.

Dr. Rincón commented that he will be gathering similar data with information that will be valuable. Treating water and breaking linkages to old sewer infrastructure in some areas will increase water quality because these areas will not be receiving untreated, legacy sewage. It also is important to consider how infrastructure improvements on the Mexico side of the border will improve conditions on the U.S. side. The Region 6 Regional Administrator is interested *colonias* and rural communities. Region 6 can provide resources to perform research and draft text.

Breakout Sessions: Board Member Discussions and Report Outs

Group 1

Dr. Ganster reiterated that the goals are to identify priority areas for the report and determine which members will work on them. He asked the group members to consider the overall messaging of the report: What is the major point that the Board would like to make? The group should develop a short blurb that describes what GNEB would like to convey. He asked the group members to identify specific points that occurred to them as they listened to presentations or to describe the ideas that they had submitted when asked to provide their areas of interest prior to the meeting. Dr. Ganster noted that the original report statement that GNEB worked on with the Council on Environmental Quality is available, and the Board members should have familiarized themselves with it before the meeting.

Ms. Rebecca Roose commented on her top-tier issues for this topic. The first is local capacity development, particularly in small, rural, disadvantaged and tribal communities and *colonias*. Capacity building must cover technical, financial (e.g., the ability to pursue funding) and managerial capacity for water and wastewater systems. Although the federal government acknowledges the reality of the situation in these communities, adequate policies have not been directed toward this issue. Her second top-tier

issue is climate change and resiliency, including climate science and research around greater urbanization and extended drought.

Mr. William Micklin agreed with Ms. Roose's top-tier issues. Tribes' priorities include capacity building around water, wastewater and energy systems, as well as climate change adaptation and resiliency. It is difficult for tribes to make themselves competitive for funding, with increasing competition occurring between tribes that have and those that do not. For example, funding is provided to infrastructure systems that are inarguably part of the problem. Also, Indigenous knowledge should be considered more seriously. Currently, water is scarce (drought) or it arrives in large volumes during storms and destroys infrastructure (flooding). Keeping water balanced through Indigenous practices is important. Systems are needed that use waste streams for fuel to generate renewable energy in border communities (e.g., compacting ash). Such approaches introduce layers of different energy systems and allow waste streams to be used as practical measures to achieve climate change goals. The Board should explore Indigenous knowledge systems and how they can be introduced into the knowledgebase for determining practices and projects that help retain water within communities.

Mr. Joaquin Marruffo suggested that GNEB explore the issue of stormwater management. Management of stormwater in binational border communities could provide positive effects for infrastructure and human health. Lack of stormwater management can affect existing infrastructure by transporting waste and sediment and causing sanitary sewer overflows; often these flow from Mexico into the United States. Green and gray infrastructure must be considered as part of the solution.

Dr. Ganster agreed that it is not possible to address issues in the United States without looking at both sides of the border. This has been a dilemma for GNEB because statutorily the report must address only the U.S. side of the border. It is necessary, however, to assess the entire watershed—binational problems need binational solutions. GNEB's report must include a strong focus on the entire border region. Many border communities face many of the same problems.

Ms. Melisa Gonzales, a stormwater specialist, agreed that she would like to see stormwater addressed, as well as water reuse (e.g., purple pipes). Water reuse is unknown in her area in south Texas—7 miles from the border in Alamo, Texas—and she is very interested in this topic because water is a great commodity.

Dr. Pohlman commented that the Infrastructure Investment and Jobs Act, which is commonly referred to as the Bipartisan Infrastructure Law, has pumped billions of dollars into federal agencies (e.g., EPA, FEMA, U.S. Department of Transportation, U.S. Department of Energy) and state and local governments to use for loans and grants. In writing its report, GNEB will define the problem, examine the parameters and develop solution sets. As a part of these solution sets, the report could provide information on how communities can obtain grant money for infrastructure projects. She would like GNEB to help border communities access these funds. Agencies are trying to determine which entities are the neediest, and Dr. Pohlman would like the southwest border area to be the recipient of these funds. Gathering and providing information about what funding is available from agencies would be a useful tool for disadvantaged communities along the border.

Ms. Roose commented that the largest ever investment in water and wastewater infrastructure is in the Bipartisan Infrastructure Law. Those funds will flow through EPA to states to run through their Drinking Water and Clean Water State Revolving Funds, and energy-efficiency projects can be included. States must identify what projects are eligible, and the onus is on them to provide outreach and education. GNEB can examine states' actions and identify gaps that need to be filled to bolster states' ability to get the funding where it needs to go, which is disadvantaged communities. Dr. Pohlman agreed, noting that the Board's report can provide recommendations to the federal government on where funds should be directed and could suggest the development of a strategic plan to allow border states to coordinate to

spend Bipartisan Infrastructure Law funds along the southwest border. Mr. Rafael DeLeon remarked that as EPA implements the Bipartisan Infrastructure Law, EPA staff can provide the Board with relevant information.

Dr. Pohlman sees a number of efforts and activities related to the Bipartisan Infrastructure Law, but the coordinated effort Ms. Roose suggested provides the opportunity to change lives with an efficient use of the Bipartisan Infrastructure Law funds. GNEB has a chance to accomplish something extraordinary and special.

Mr. Erik Lee thought that assisting border communities to access funding is an excellent idea. The process needs to be more fluid, and agencies need to change their thinking because the money is not theirs. The combination of bankers and bureaucrats could result in stringency. The Paycheck Protection Plan could be used as a model; it provided funds to small businesses quickly and efficiently. The U.S.–Mexico border region needs something similar to the Paycheck Protection Plan to address infrastructure issues. In terms of Ms. Gonzales' point of water reuse being unknown in certain border areas, some of the larger cities may have information to share with the smaller, rural communities (e.g., technology transfer). Other areas outside of the United States also have a strong grasp of innovation in water reuse and could serve as resources.

Dr. Ganster agreed that large cities with many resources and expertise, such as San Diego, have come very far, but their successes took decades of research and work. His concern is that smaller communities that do not have grant writers and project managers may be left behind. For example, small communities cannot put a shovel-ready project together. How can these smaller communities compete for resources? Many interesting challenges exist.

Mr. Micklin agreed, noting that the Bipartisan Infrastructure Law often requires a significant match. GNEB should recommend that agencies that have the authority to exercise a waiver to eliminate matching funds do so. Many grants have conditions that require applicants to demonstrate long-term sustainability, and communities that lack infrastructure and have the greatest need do not have the ability to generate revenue to demonstrate sustainability; therefore, they cannot create competitive applications. These communities face significant obstacles. He also recommended that the Board focus on natural resources. Communities must engage in real, regular and meaningful participation in decision-making, particularly federally recognized tribes and their government-to-government relationships. Restoration of the indigenous environment is critical to sustainably support solutions; changes to the original environment have caused an increased number of wildfires with significant negative effects, the ground to be fairly impervious to stormwater runoff, and extended drought to be a continuing problem. Managing water and wastewater requires examining these natural systems.

Dr. Ganster commented that NADBank has learned over the years that funding infrastructure projects without ensuring sustainable operations and maintenance is disastrous because many projects deteriorated quickly, before their time. The issue is about not only obtaining support for projects but also building the capacity to obtain funding to maintain infrastructure, as Ms. Roose spoke about. Smaller communities, including tribal communities, are competing against one another for funding. Does a better approach exist to allow communities to build capacity to facilitate development and maintenance of projects?

Ms. Gonzales remarked that she knows that if her city is competing against a larger city, her city will lose the grant. It is not a lack of grant-writing talent; it is the lack of matching funds. One recommendation could be to provide funding based on community size so that applicants are competing against equivalent communities. Grant cycles often are unfair to smaller communities.

Ms. Roose commented that much of the discussion's focus has been on different types of barriers that communities experience seeking and accessing funding and sustaining their capacity over time. She

recommended that in writing its report, the Board focus on analyzing the most common and persistent barriers. GNEB may not be able to develop recommendations to address all barriers, but it can identify strategies and recommendations for those that are most common, pressing and pervasive. She recommended that the approach be to pair an analysis of current barriers with an analysis of the resources available through this unprecedented amount of funding. The Board's recommendations should focus on how border communities can find the resources that they need to address their water and wastewater infrastructure issues.

Group 2

Mr. José (Joe) Hinojosa suggested conducting a cost-benefit analysis for wastewater, as in the Board's 2015 report, which is an effective public policy strategy that assigns an economic value to water conservation and treats it as a source of additional supply.

Dr. Kimberly Collins commented that focusing on local governance would be interesting, including infrastructure needs, administrative oversight issues and types of funding available to local governments. Networked governance—such as public-private partnerships and community-based organization collaboration with local and tribal governments—also could be examined. Dr. Collins noted that decisions at high levels often are driven by politics, suggesting the need for more focus on and assistance to groups at the local level, where public agencies are working to provide resources to their communities.

Mr. Riazul Mia commented that Laredo, Texas, will require significant funding for wastewater in the next 5 years, but the Bipartisan Infrastructure Law is written in a way that makes the community ineligible based on income level. Although Laredo provides wastewater services to outside areas, the infrastructure is larger than necessary, resulting in water quality issues. The system cannot be flushed because drainage is inadequate. Mr. Mia emphasized the need to assess the effects of new regulations on communities, which often do not have funding to make mandated changes. Dr. Giner commented that such issues are consistent in many locations and added that infrastructure implemented by the Economically Distressed Areas Program is aging, but no low-cost funding is available to replace pieces of oversize systems.

Mr. José Palacios commented that the Lower Rio Grande/Rio Bravo Water Quality Initiative aims to create a binational watershed protection plan for the lower Rio Grande. The framework was designed in 2013, and this goal is an objective of Border 2025. He noted the importance of regionalization of water infrastructure, which the Texas Water Code promotes and is relevant for smaller communities that cannot implement larger infrastructure. Operation and maintenance costs could be divided among smaller communities. Binational wastewater treatment plants in sister cities also were noted by the TCEQ Office of Water. Mr. Palacios also emphasized the importance of promoting human resources, noting the need for more water and wastewater management professionals to be identified, trained and certified. Universities need to promote wastewater management as a career. TCEQ also is assessing the relationship between water conservation in agriculture and water supply for communities.

Mr. Mia suggested that the group avoid duplicating work by reviewing documents gathered by the Texas Water Development Board identifying water needs for the state. He also commented on the significant water loss that occurs in unlined irrigation canals.

Dr. Alan Sweedler pointed out that wastewater treatment uses significant amounts of energy, yet renewable energy sources and energy conservation opportunities have not been explored at most facilities.

Mr. Cruz pointed out that overengineered systems result in untapped capacity that could be used for regions that cannot fill their own needs. He planned to contact the Kickapoo Traditional Tribe of Texas, whose land extends into Mexico, because the tribe might have insights on water usage and riparian rights

across the border. Mr. Cruz pointed out that ground water use is higher in Mexico, but economic drivers also exist on the Mexico side of the border; for example, Ciudad Juárez is much larger than El Paso, but El Paso has more water infrastructure. Mr. Cruz wondered what equivalent water systems and the equivalent ability to draw from shared aquifers would look like.

Mr. Alejandro Barcenas pointed out that the agriculture sector uses most of the water, but defining more consistent policies on crops farmed in this area is not always realistic. Current crops often are not species designed for desert environments. He added that ground water regulations differ between the United States and Mexico; Mexico's regulations are federal, but U.S. regulations vary by state. He wondered how to administer regulations to manage binational aquifers and how to maintain improvements made, especially in Mexico, when governments and priorities change often and investments made in water infrastructure are not maintained. He suggested that a binational management entity for maintenance be developed.

Dr. Coronado wondered about the budget of the Mexican Section of the IBWC (known in Mexico as Comisión Internacional de Límites y Aguas or CILA).

Mr. Carlos Suarez cautioned against framing agricultural water use in a way that suggests farmers are being told what to grow, which has been a challenge in some farm bills in the past. He added that some work on watersheds, which do not have political lines, is needed and have occurred in the past. He commented that as a diplomat in Mexico, his team worked with the Comisión Nacional del Agua (the Mexico National Water Commission, commonly known in Mexico as CONAGUA) on water issues; he recommended enhancing relationships with entities that can assess needs along the border and identify how both countries can benefit.

Ms. Kathryn Becker pointed out that many farmers who work on the U.S. side near the border also work in Mexico, but because of the infrastructure and regulatory environments on each side, they farm different products. She added that because this statutorily is a U.S. report, the opportunity to discuss Mexico may be limited. Ms. Becker pointed out that sourcing and infrastructure development overlap in some ways, so both breakout groups may discuss how Executive Order 14008 must be satisfied. She emphasized the need to show how infrastructure aids communities in responding to this executive order, particularly as related to environmental justice.

Group 2 concluded its session by identifying roles and responsibilities of the group members, which are detailed in the action items.

Report Outs

Dr. J. Phillip King reported out for Group 1, which discussed the need for local capacity development, particularly for underserved and tribal communities and *colonias*. Communities need assistance with building technical, financial and management capacities, particularly with a focus on increasing climate change resiliency. Agencies also need to take better advantage of Indigenous knowledge systems to better manage the landscape (e.g., capture more stormwater, use waste streams to generate local energy). Stormwater management is needed to prevent infrastructure damage and contamination. Group 1 noted the difficulty of addressing issues on one side of the border without also addressing issues on the other side of the border. GNEB should coordinate a strategy to help border communities obtain funding that is available but scattered. The Bipartisan Infrastructure Law has provided a great deal of funding, but smaller municipalities find it difficult to compete with larger municipalities, so building capacity for grant writing, as well as for maintenance and management of funded projects, is critical. The group thought that compiling a list of all funding opportunities would be helpful for border communities. Federal funding is being channeled through states, and states need assistance with outreach and training to disseminate these funds. Coordination among states and local government is critical to ensure that funding is getting to the

communities that need it. The current funding process is unfair because larger entities that have resources and matching funds receive the bulk of funding. The communities that need the resources most lack the resources to obtain them. More funding agencies should relax or waive matching fund requirements. States also need to provide outreach to tribes. Wildfires will significantly affect the future of water supply and wastewater systems. GNEB needs to engage in a robust barriers analysis so that the Board can identify and prioritize the barriers to better address them.

Dr. Collins provided the report out for Group 2, which discussed reconsidering and updating the cost-benefit analysis from GNEB's 2015 report with a focus on water and wastewater and understanding the overall border situation. The Board should consider local-level management, as well as current federal legislation and how local governments can meet these federal requirements. Disadvantaged communities, such as border communities, often struggle to meet the requirements of unfunded mandates. The Lower Rio Grande/Rio Bravo Water Quality Initiative is working on a watershed protection plan. Also important are examining how the regionalization of water infrastructure can benefit smaller border communities and understanding how binational wastewater treatment facilities and watersheds fit into this regionalization. GNEB should examine what human capital, resources and training are needed in the border region to address water and wastewater infrastructure issues. Water conservation and its relationship to water supplies are important, as is the need to better understand power and energy supply—including cost—and wastewater treatment. The group discussed riparian rights and tribal issues and how to ensure that tribes are engaged. Many issues arise from the Mexico side of the border, so it would be interesting to see how improved infrastructure in Mexico would affect the U.S. side. The group also discussed conservation as related to agriculture and ground water regulations, as well as network governance among local, state and federal governments. Agriculture also has some overlap with infrastructure issues. Finally, the group considered how executive orders related to environmental justice and climate change can be applied to meet the infrastructure, maintenance and capacity needs of border communities.

Action Items and Next Steps

Dr. Ganster is impressed by the thoughtful comments of the Board members and participants. He will review the meeting summary when it is available, develop a rough report outline from these comments, and circulate the outline to the GNEB members for their comments.

The Board will need additional group discussions. Mr. Green indicated that GNEB members can meet in groups of seven or eight to discuss the report; meeting in larger groups would invoke Federal Advisory Committee Act rules. Dr. Coronado commented that everyone will be able to contribute to the small groups. Once the outline is completed, small groups can be established. Members will work in these small groups to discuss their topics, create plans for researching and drafting text, and then carry out these plans.

Adjournment

Drs. Ganster and Coronado thanked the GNEB members for their thoughtful discussion and EPA staff and contractors for their support.

Mr. Green thanked Drs. Ganster and Coronado for their leadership. He will send the PowerPoint presentations and background information to the members. He also will circulate the action items and summary to the Board members when they are ready.

Dr. Ganster adjourned the meeting at 6:01 p.m. EDT.

Action Items

- Dr. Ganster will—
 - Review the meeting summary when it is available.
 - Develop a rough report outline from the information in the summary.
 - Circulate the outline to the GNEB members for their comments.
- Dr. Coronado will—
 - Contact Mr. Hinojosa for more information on the agricultural sector.
 - Participate in the small-group editing team.
- Mr. Palacios and TCEQ staff will—
 - Research transborder watershed protection and institutionalization of effort.
 - Research operation and maintenance challenges in small communities.
 - Research Amistad Dam remediation.
 - Research regional and border-wide approaches to regional water management.
 - Contact a colleague in the TCEQ Office of Water who can provide information on human capital development.
- Mr. Barcenas will—
 - Research shared aquifers.
 - Provide contact information for experts in ground water issues.
- Mr. Mia will—
 - Share a study on ground water.
 - Contact a colleague on the Texas Water Development Board.
- Mr. Cruz will contact the Kickapoo Traditional Tribe of Texas to gain insight about water usage and riparian rights across the border.
- Dr. Collins will review local-level management issues with Dr. Coronado's assistance.
- Mr. Green will send the PowerPoint presentations and background information to the Board members.
- GNEB members will—
 - Meet in groups of no more than eight members to continue their discussions.
 - Provide comments on the report outline after Dr. Ganster distributes it.

Appendix A: Meeting Participants

Chair

Paul Ganster, Ph.D.

Director
Institute for Regional Studies of the Californias
San Diego State University
San Diego, CA

Vice Chair

Irasema Coronado, Ph.D.

Director and Professor
School of Transborder Studies
Arizona State University
Tempe, AZ

Nonfederal, State, Local and Tribal Members

Alejandro R. Barcenas

Community Services/Public Works Director
City of Nogales
Nogales, AZ

Kimberly Collins, Ph.D.

Executive Director, Barbara and William
Leonard Transportation Center
Professor, Department of Public Relations
California State University, San Bernardino
San Bernardino, CA

Evaristo Cruz

Director of Community Development
Ysleta del Sur Pueblo
El Paso, TX

Melisa Gonzales

Special Projects Director
City of Alamo
Alamo, TX

Josiah Heyman, Ph.D.

Director
Center for Interamerican and Border Studies
The University of Texas at El Paso
El Paso, TX

José (Joe) Hinojosa

General Manager
Santa Cruz Irrigation District No. 15
Edinburg, TX

Mignonne Hollis

Executive Director
Arizona Regional Economic Development
Foundation
Sierra Vista, AZ

James Phillip King, Ph.D., P.E.

Researcher and Graduate Advisor
Department of Civil Engineering
New Mexico State University
Las Cruces, NM

Erik Lee

Interim Board President
North American Research Partnership
Sierra Vista, AZ

Joaquin Marruffo

Border Programs Coordinator
Arizona Department of Environmental Quality
Tucson, AZ

Riazul Mia, P.E., CFM

Assistant City Manager
City of Laredo
Laredo, TX

William Micklin

Chief Executive Officer
Ewiiapaayp Band of Kumeyaay Indians
Alpine, CA

Jonathan Niermann

Commissioner
Texas Commission on Environmental Quality
Austin, TX

Rebecca Roose, J.D.

Deputy Cabinet Secretary of Administration
Former Water Protection Division Director
New Mexico Environment Department
Santa Fe, NM

Alan Sweedler, Ph.D.

Community Advisor
Clean Energy Alliance
San Diego, CA

Prescott Vandervoet
Co-Owner and Operator
Vandervoet and Associates Inc.
Rico Rio, AZ

Federal Members

***International Boundary and Water
Commission***

Maria-Elena Giner, Ph.D.
Commissioner
International Boundary and Water Commission
El Paso, TX

U.S. Department of Agriculture

Carlos Suarez
State Conservationist (State Director)
Natural Resource Conservation Service
U.S. Department of Agriculture
Davis, CA

U.S. Department of Homeland Security

Teresa R. Pohlman, Ph.D., LEED, AP
Executive Director
Sustainability and Environmental Programs
Office of the Chief Readiness Support Officer
U.S. Department of Homeland Security
Washington, D.C.

Designated Federal Official

Eugene Green

Designated Federal Official
Good Neighbor Environmental Board
Federal Advisory Committee Management Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

U.S. Environmental Protection Agency Regional Office Participants

Region 6

Robert Houston
Staff Director
Communities, Tribes and Environmental
Assessment
Region 6
U.S. Environmental Protection Agency
Dallas, TX

U.S. Department of Transportation

Colleen Vaughn
Senior Environmental Policy Analyst
Office of the Secretary
U.S. Department of Transportation
Washington, D.C.

U.S. Environmental Protection Agency

Rafael DeLeon, Esq.
Principal Deputy Assistant Administrator
Office of International and Tribal Affairs
U.S. Environmental Protection Agency
Washington, D.C.

Carlos Rincón, Ph.D.

Director
U.S.–Mexico Border Office
Region 6
U.S. Environmental Protection Agency
El Paso, TX

Region 9

Lily Lee

Manager
Water Infrastructure Office
Region 9
U.S. Environmental Protection Agency
San Francisco, CA

Emily Pimental

Border Specialist and Regional Coordinator
U.S.–Mexico Border Program
Region 9
U.S. Environmental Protection Agency
San Francisco, CA

Other U.S. Environmental Agency Participants

David Ack

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Stephanie McCoy

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Lisa Almodovar

Deputy Director
Office of Regional and Bilateral Affairs
Office of International and Tribal Affairs
U.S. Environmental Protection Agency
Washington, D.C.

Gina Moore

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Oscar Carrillo

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Richard Peprah

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Marta Jordan

U.S.–Mexico Program Manager
Office of International and Tribal Affairs
U.S. Environmental Protection Agency
Washington, D.C.

Brian Piccolo

Office of Information Technology Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Monica Lewis

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Nolan Pinkney

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Toni Rousey

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Christine Taylor

Federal Advisory Committee Management
Division
Office of Resources and Business Operations
Office of Mission Support
U.S. Environmental Protection Agency
Washington, D.C.

Other Federal, State, Tribal and Local Participants**Kathryn Becker, J.D.**

Assistant General Counsel and Tribal Liaison
Office of General Counsel
New Mexico Environment Department
Santa Fe, NM

Jay Collert

Director of Environmental Compliance
Office of the Chief Readiness Support Officer
U.S. Department of Homeland Security
Washington, D.C.

Claudia Gil

Environmental Science Specialist
Arizona Department of Environmental Quality
Nogales, AZ

Kristen Goodrich, Ph.D.

Coastal Training Coordinator
Tijuana River National Estuarine Research
Reserve
Imperial Beach, CA

Christoffer Jonsmyr (for Vivian Moreno)

Communications and Outreach Director
City of San Diego
San Diego, CA

Christy Kehoe

Mid-Atlantic Regional Marine Debris
Coordinator
Marine Debris Program
Office of Response and Restoration
National Oceanic and Atmospheric
Administration
Washington, D.C.

Salvador López

Chief Environmental Officer
North American Development Bank
San Antonio, TX

Lucas Lucero

Southwest Border Coordinator
Arizona State Office
Interior Region 8
Bureau of Land Management
U.S. Department of the Interior
Phoenix, AZ

Steven Magallanes

Forest Border Liaison
Coronado National Forest
U.S. Forest Service
Tucson, AZ

Eddie Moderow

Border Affairs Manager
Texas Commission on Environmental Quality
Austin, TX

Laura Norman, Ph.D.

Supervisory Research Physical Scientist
Western Geographic Science Center
U.S. Geological Survey
Tucson, AZ

José Luis Palacios

Border Affairs Intern
Texas Commission on Environmental Quality
Austin, TX

Jill Sherman-Warne

Executive Director
Native American Environmental Protection
Coalition
Murrieta, CA

Contractor Support

Kristen LeBaron

Senior Science Writer/Editor
The Scientific Consulting Group, Inc.
Gaithersburg, MD

Sally Paustian

Writer/Editor
The Scientific Consulting Group, Inc.
Gaithersburg, MD

Appendix B: Video/Teleconference Agenda



Good Neighbor Environmental Board (GNEB)

Virtual Meeting: Microsoft Teams

May 5, 2022, 2:00 p.m.–6:00 p.m. EDT

AGENDA

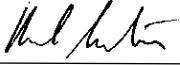
- 2:00–2:10 p.m.** Welcome and Member Role Call
- Eugene Green, GNEB Designated Federal Officer
 - Dr. Paul Ganster, Chair, GNEB
 - Dr. Irasema Coronado, Vice Chair, GNEB
- 2:10–2:20 p.m.** GNEB Annual Report Topic (Water and Wastewater Infrastructure in the Border Region) and Goals for Today’s Meeting
- Dr. Paul Ganster, Chair, GNEB
- 2:20–2:30 p.m.** Public Comments
- 2:30–4:30 p.m.** Expert Presentations
- 2:30–3:00 p.m. Water and Wastewater Infrastructure
- Salvador López, Chief Environmental Officer, North American Development Bank (NADBank)
- 3:00–3:20 p.m. Border Water and Wastewater Infrastructure
- Dr. Maria-Elena Giner, Commissioner, International Boundary and Water Commission (IBWC)
- 3:20–3:40 p.m. Environmental Justice, Border Water and Wastewater Infrastructure for *Colonias*
- Dr. Carlos Rincón, Director, U.S.–Mexico Border Office, Region 6, EPA
- 3:40–3:50 p.m. Break
- 3:50–4:30 p.m. Water and Wastewater Infrastructure Challenges for Border Tribes
- Evaristo Cruz, Director of Community Development, Ysleta del Sur Pueblo
 - Jill Sherman-Warne, Executive Director, Native American Environmental Protection Coalition (NAEPC)

GNEB AGENDA (continued)

- 4:30–5:00 p.m.** Member Q&A Session
- 5:00–5:40 p.m.** Breakout Session: Board Member Discussions and Report Outs
- 5:40–6:00 p.m.** Action Items and Next Steps
- 6:00 p.m.** Adjournment

Appendix C: Chair Certification of Minutes

I, Paul Ganster, Chair of the Good Neighbor Environmental Board (GNEB), certify that this is the final version of the complete minutes for the video/teleconference held on May 5, 2022, and that the minutes accurately reflect the discussions and decisions of the meeting.



Paul Ganster, GNEB Chair

June 8, 2022

Date