FINDING OF NO SIGNIFICANT IMPACT

To All Interested Agencies, Parties and Private Groups:

In accordance with the regulations of the Council on Environmental Quality, at 40 Code of Federal Regulations, Part 1500, the U. S. Environmental Protection Agency (EPA), Region 6, has performed an environmental assessment of the following proposed action:

Proposed Action: Funding Assistance for the Proposed Wastewater System Improvement Project for Colonia Esperanza, Chihuahua, Mexico

Applicant: Junta Rural de Agua (JRA) de Esperanza

Proposed Project. Esperanza is a small community of about 2,069 people located within the municipality of Praxedis G. Guerrero, in the State of Chihuahua, Mexico, across the Rio Grande from the community of Acala, Texas. Esperanza does not have a wastewater treatment system and proposes to construct a wastewater collection system and a 0.10 million gallons per day treatment plant. Area residents rely on inadequate and improperly constructed cesspools for their wastewater treatment. Untreated wastewater is released to an irrigation ditch that flows to the Rio Grande, exacerbating the deterioration of surface water quality and put the health and safety of area residents in jeopardy. The population is projected to increase to 2,456 by the year 2030.

Findings. The JRA is seeking funding assistance for the proposed project from the Border Environmental Infrastructure Fund administered by the North American Development Bank. Approval of the funding requires Border Environment Cooperation Commission certification, which requires an environmental assessment (EA) under the National Environmental Policy Act. On the basis of the EA, the EPA, Region 6, has made a preliminary determination that the project is not a major federal action significantly affecting the quality of the human environment, and that preparation of an Environmental Impact Statement (EIS) is not warranted. The project individually, cumulatively, or in conjunction with any other action will not have a significant adverse effect on the quality of the environment.

Comments regarding this preliminary decision not to prepare an EIS and issue a Finding of No Significant Impact (FNSI) may be submitted to the U.S. Environmental Protection Agency,
Office of Planning and Coordination (6EN-XP), 1445 Ross Avenue, Suite 1200, Dallas, Texas 75202-2733. All comments will be taken into consideration. No administrative action will taken on this decision during the 30-day comment period. This preliminary decision and the FNSI will become final after the 30-day comment period expires if no new information is provided to alter this finding. Copies of the EA and requests for review of the Administrative Record containing the information supporting this decision may be requested in writing at the above address, or by telephone at (214) 665-8150.

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Richard E. Greene
Regional Administrator

Enclosure

ENVIRONMENTAL ASSESSMENT ON THE PROPOSED FUNDING THROUGH THE BORDER ENVIRONMENTAL INFRASTRUCTURE FUND FOR THE COLONIA ESPERANZA WASTEWATER SYSTEM IMPROVEMENT PROJECT IN THE MUNICIPALITY OF PRAXEDIS G. GUERRERO, CHIHUAHUA, MEXICO

1.0 PROPOSED ACTION

1.1 Purpose and Need for Proposed Action. Colonia Esperanza is a small community of 2,069 people, located within the municipality of Praxedis G. Guerrero, in the State of Chihuahua, Mexico, across the Rio Grande from the community of Acala, Texas (Figure1). Esperanza does not have a wastewater collection and treatment system and residents rely on improperly constructed cesspool systems for their wastewater treatment. Untreated wastewater is released into an irrigation ditch which flows to the Rio Grande.

1.2 Proposed Action. Esperanza proposes to construct a 0.10 million gallons per day (MGD) wastewater treatment plant (WWTP) and collection system. The WWTP would be an anaerobic-facultative pond system with two polishing lagoons, headworks, a coarse screen, a sand settling chamber, and a pump and lift station. The collection system would include subcollector lines, a pump station, and a pressure transmission line.

The Junta Rural de Agua (JRA) de Esperanza has applied for funding from the Border Environmental Infrastructure Fund (BEIF), administered by the North American Development Bank. Approval of the grant requires Border Environment Cooperation Commission (BECC) certification, which requires an environmental assessment (EA) under the National Environmental Policy Act.

2.0 ALTERNATIVES

2.1 Alternatives Available to the EPA.

2.1.1 Approval for Grant Funding for the Project as Proposed. Depending on available funding, EPA can recommend approval of the grant for the proposed project without modification.

2.1.2 Approval for Grant Funding for a Modified Project. Information received during the EA process could result in identification of significant adverse impacts that would require modification of the project to mitigate the impacts. Modification of the project may allow the EPA to accept the project as modified and recommend approval of the grant funding.

2.1.3 Recommend Preparation of an EIS. A determination that the project as proposed could result in potentially significant adverse impacts to the environment that cannot be satisfactorily mitigated would preclude a recommendation of approval of the grant funding. The preparation of an Environmental Impact Statement (EIS) would then be recommended to evaluate the potentially significant impacts. The EIS process includes a scoping meeting to identify critical facts and issues, a Draft EIS, a public comment period on the Draft EIS, a public hearing on the Draft EIS, the Final EIS, a public comment period on the Final EIS, and a Record of Decision.

2.2 Alternatives Considered by the Applicant. Three action alternatives were developed for the proposed wastewater treatment process. The alternative to construct a facultative pond and polishing lagoons system, and the alternative to construct an Imhoff tank, facultative pond, and polishing lagoons system were eliminated because to the high capital and operation and maintenance costs (O&M). Action alternatives were not developed for the collection system which was incorporated into the wastewater treatment alternatives.

2.2.1 Alternative 1 - The No-Action Alternative. Under the No-action Alternative, the wastewater treatment system would not be constructed. Untreated wastewater would continue to flow to the Rio Grande, and ground water would continue to be potentially compromised by the use of the malfunctioning cesspools.

2.2.2 Alternative 2 - Wastewater Treatment Plant. Alternative 2 is the preferred alternative. It would construct an anaerobic-facultative pond system with two polishing lagoons on a 12.4-acre site located approximately 0.6 miles southeast of Esperanza. One treatment module with an average flow capacity of 0.10 MGD would be constructed and would be able to serve the projected population to year 2030. The WWTP would include headworks, a coarse screen, a sand settling chamber, and a pump and lift station. Sludge would be removed from the anaerobic and facultative lagoons on a periodic basis and disposed of in an approved landfill facility. The treated effluent would be discharged to the Dren Interceptor, which flows to the Rio Grande. The Dren Interceptor is an unlined ditch that runs parallel to the Rio Grande from Ciudad Juárez to El Cuervo.

3.0 AFFECTED ENVIRONMENT

3.1 Land Resources. Elevations in the general region range from 3,500 feet above mean sea level (msl) to over 5,000 feet msl. The region has a diverse habitat and vegetation, varying from desert lowlands and plateaus to riparian province. The desert lowlands receive an average annual precipitation of 9.43 inches, while the higher elevations may receive as much as 20 inches per year; July and August are usually the high rainfall months. Winds are primarily from the northeast during January, and from the southeast or southwest from March to October. The annual mean temperature of the region is 64.7°F.

3.1.1 Land Use. Land use in the community of Esperanza consists primarily of residential, commercial and agricultural production areas. The proposed construction site was formerly used for cultivation. It is bounded on the northside by the Rio Grande and the Dren Interceptor, on the

northwest by a small residential development, cultivated fields to the east, and a dirt road and Interstate Highway No. 2 to the south (Figure 2). The surrounding area is flat to rolling terrain comprised of sandy and clay loam soils that support scrub brush, cacti, and grasses. Predominant soils in the vicinity of Acala on the United States (U.S.) side are Harkey-Glendale-Gila and Bluepoint-Badland-Pajarito. Harkey-Glendale-Gila soils run parallel to and along the Rio Grande, while the Bluepoint-Badland-Pajarito soils run parallel and northeast of the Harkey-Glendale-Gila soils. These soils are especially suitable for producing cotton and alfalfa, and some grain sorghum, small grain, bermuda grass pasture, and vegetable crops.

Potential Impacts. Under the No-action Alternative there would be no ground disturbance and soils in the area would not be affected. Implementation of Alternative 2 would involve grading, excavation, and cut/fill activities. All improvements and installation of lines would occur within existing road rights-of-way (ROWs) and areas previously disturbed by urban development and agricultural activities. All construction-related impacts to soils would be temporary. It is estimated that the installation of the wastewater treatment and collection system would require nine to eighteen months to complete. There would be no significant impact to soils associated with the preferred alternative and none of the 25,000 acres of prime farmland in the U.S. side of the Rio Grande valley would be affected.

3.2 Water Resources.

3.2.1 Surface Water. The only surface water resource in the vicinity of the study area is the Rio Grande, which downstream from El Paso carries mostly treated municipal water and irrigation return flows. There are no major rivers or streams feeding the Rio Grande between Caballo Dam in southern New Mexico, and El Paso. In southwestern Hudsbeth County, there is the Arroyo Alamo which flows intermittently for twenty miles from a point northeast of Fort Hancock to the Rio Grande.

The Texas Commission on Environmental Quality (TCEQ) has set water quality standards for aquatic life, contact recreation, public water supply, and fish consumption. The TCEQ has also divided the river systems in the state into management segments. The proposed project area is in the vicinity of Rio Grande Segment 2307, which extends from below Riverside Diversion Dam in El Paso to the confluence of the Conchos River in Presidio County. The segment is designated for contact recreation, high-quality aquatic life use, and public water supply, and currently exceeds the acceptable levels for phosphorus, chloride sulfate, total dissolved solids and fecal coliform. The violations are attributed to poorly constructed or malfunctioning septic and sewage collection systems, improperly managed disposal of animal wastes, and municipal/industrial point sources. Fecal coliform concentrations primarily result from untreated or poorly treated discharges from inadequate wastewater treatment.

Potential Impacts. Under the No-action Alternative, wastewater would continue to be released untreated and residents would continue using inadequate cesspools. In the long-term, the number of on-site systems would be expected to increase with increase in population.

Implementation of Alternative 2 would tend to improve the water quality of surface waters, and would help protect the local ground water resources. The treated effluent would be discharged to the same drainage ditch which presently receives the untreated wastewater. Trans-boundary impacts to local and regional water resources would be positive as a result of the implementation of the preferred alternative. A water quality model study conducted by the BECC in July 2006, indicated that the treated wastewater from existing and projected wastewater treatment facilities located in Ciudad Juarez, and those projected for construction in the communities of Porfirio Parra, Guadalupe, Praxedis G. Guerrero, and El Porvenir, would not result in significant adverse impacts to the water quality of the Rio Grande. Mexican regulations at NOM-003-ECOL-1997, establish the maximum level of pollutants in the discharge of treated wastewater into waters and resources of Mexico.

3.4.2 Ground Water. The region around the Esperanza, Acala, Texas, to the El Paso-Hudspeth county line, is within the Hueco-Mesilla Bolson aquifer, which is comprised of the Hueco Bolson and Mesilla Bolson aquifers. Water for Ciudad Juárez is supplied from the Hueco Bolson, which in Mexico has a slightly lower quality. Large scale withdrawal of ground water has increasingly deteriorated the quality of the aquifer. Approximately 310,000,000 m^3/year of groundwater is extracted in the Juárez Valley, which is about 20,000,000 m^3/year in excess of recharge.

Potential Impacts. Under the No-action Alternative, soil and water contamination would continue to increase because of the projected increase in population. Residents would continue using cesspools to process their wastewater, potentially resulting in significant adverse impacts to ground water. Under Alternative 2, the connection of residences to the collection and treatment system would eliminate or reduce the potential for ground water contamination from the cesspools. In Mexico, the standards for the maximum permitted levels of contaminants in drinking water are given in Norm NOM-127-SSA-1994.

3.3 Ambient Air Quality. The project area is across the Rio Grande from the community of Acala, in Hudsbeth County, which is east of El Paso County. El Paso County is a designated non-attainment area for particulate matter-10 and carbon monoxide.

Potential Impacts. Under the No-action Alternative, air quality would not be affected and existing noise levels would not change since there would be no construction. Under the action alternative, soil erosion and fugitive dust and vehicular exhaust emissions near the construction areas may increase and potentially have an insignificant trans-boundary impact on ambient air quality. Dust suppression techniques such as watering, and the application of soil stabilizers would be used at construction sites to minimize fugitive dust. Noise associated with the project would come primarily during the excavation of the treatment ponds. Operational noise would be minimal due to the non-mechanical nature of the treatment units.

Any impacts would be temporary and would not be significant. Noise would attenuate to background levels over distance and no receptors would be within the audible radius of the construction site or exposed to the construction noise for a long duration. The proposed

construction of the WWTP would be in a sparsely populated area. Mexican regulations at NOM-041-SEMARNAT-1999 and NOM-045-SEMARNAT-1996, set maximum emission limits for vehicles using gasoline and for vehicles using diesel, respectively. The regulations at NOM-080-SEMARNAT-1994 and NOM-081-SEMARNAT-1994, set the maximum emission limits for noise from motor vehicles and from fixed sources, respectively.

3.4 Biological Resources.

3.4.1 Flora. The proposed project area is within the Chihuahuan biotic province of the Chihuahuan Desert. Creosote bush (*Larrea tridentata*), tarbush (*Flourensia cernua*) are common species for the Chihuahuan Desert. Common plants in the northern portions of the desert include four-winged saltbush (*Atriplex canescens*), Mariola (*Parthenium incanum*), mesquite (*Prosopis glandulosa*), a variety of small to medium-sized cacti, yuccas (*Yucca elata, Yucca torreyi*), agaves (*Agave lecheguilla*), ocotillo (*Fouquieria spendens*), sotol (*Dasylirion* spp.), and the barrel cactus (*Ferrocactus wislizenii*). Grasses include black gramma (*Bouteloua eriopoda*) and tobosa grass (*Hilaria mutica*). Since the Rio Grande and its adjacent drains and flood control levees are the only physical barriers between the U.S. and Mexico, and since the landscape is similar on both sides, the same or similar plant life can be expected to exist on the Mexican side of the border.

3.4.2. Fauna. Faunal species found in the area of the proposed project are characteristic of the Chihuahuan biotic province. This area is called the Basin and Range physiographic province. In many cases, species in the basin deserts and grasslands are different from the species of the more mountainous regions, although some species range over both mountains and basins. Native faunal components of the Basin and Range include 17 species of amphibians, 86 species of reptiles, 34 species of fish, approximately 321 species of birds, and 91 species of mammals.

3.4.3 Threatened and Endangered Species and Critical/Sensitive Habitats. The Mexican federal government has designated 154 natural protected areas. Seven of these areas are in Chihuahua. The closest one to the study area is the Campo Verde Flora and Fauna Protection Area located approximately 109 miles west of Ciudad Juárez.

Mexico's regulations for protection of endangered and threatened (T&E) species are found at NOM-059-SEMARNAT-2001, and include species afforded special protection or likely to be extinct. The regulations at NOM-059-ECOL-2001, prohibit the taking, possession, transportation, or sale of any animal species designated T&E, without a permit. The regulations identify four categories for status classification: a) endangered species; b) threatened species; c) special protection species, and d) possibly extinct from wildlife communities. The state of Chihuahua does not have a separate list, but the northern species are included in the national list.

Four endangered species and two threatened species on the U.S. list may potentially occur in Hudsbeth County. Five endangered species and nine threatened species on the Texas list may potentially occur in Hudsbeth County. Some species on the federal or state list are

migrants and may only pass through the county only seasonally. Other species are only known to have historically occurred in the county or are considered extirpated. The bluntnose shiner, the Chihuahuan mud turtle, and the Rio Grande silvery minnow live in water. The Rio Grande silvery minnow has historically been found in the Rio Grande and Pecos rivers. It prefers pools and backwaters of medium to large streams in areas with a mud, sand, or gravel bottom. The Chihuahuan mud turtle prefers slow-moving or still bodies of water, and locations with soft-bodied beds consisting of sand or mud that support a large amount of aquatic vegetation. The Chihuahuan Desert lyre snake lives in limestone-surfaced desert, mostly in crevices. The Texas horned lizard prefers flat, open, semi-arid areas with loose rocky, sandy, and loamy soils with sparse vegetation, including areas of cactus and brush. The Trans-Pecos black-headed snake lives in mesquite-creosote and piñon-juniper-oak communities.

3.4.4 Potential Impacts. Under the No-Action Alternative, there would be no construction activities and no biotic resources would be affected. Also, there would not be any effect on T&E species in the area. However, continued operation of the wastewater collection system as it exists, and the lack of a wastewater treatment system, would allow a potentially hazardous and unsafe situation to continue.

Under the action alternative, vegetation within the road ROWs and urbanized areas may be affected. Most of the construction activities would occur in areas that have been disturbed by urban development and agricultural activity. None of the rural vegetation communities present are unique, and no special category plant species or critical habitat were identified in the proposed project area. Faunal species are relatively low at the proposed project area, and no T&E species, sensitive species or species of concern were identified. No significant adverse impact is expected to occur as a result of the proposed project.

3.5 Floodplain Management and Wetland Protection. The proposed project is located in Mexico, which does not have specific floodplain management regulations. The International Boundary and Water Commission maintains a levee system on both sides of the Rio Grande for flood control. The system has removed contiguous areas and the proposed project area from the designated Rio Grande floodplain. There are no floodplain areas in the WWTP or lift station site, and there are no designated wetlands within 170 miles of the proposed project area in Mexico. In the U.S., the nearest designated wetland area is about 10 miles away from the Alamo Alto and Ft. Hancock area.

3.6 Cultural Resources. Under the No-action Alternative, there would be no construction activity and no cultural resource area would be impacted. There would be no impact to cultural resources under the action alternative since all construction would occur primarily on previously disturbed areas. The proposed WWTP site has being cultivated and the line between the pump stations and the WWTP site will mostly follow existing road ROWs. No cultural resources were found during a visual survey of the proposed WWTP site. In the event a potential site is uncovered during construction, the Instituto Nacional de Antropología e Historia would be notified for guidance. Work would be allowed to continue in those areas outside the discovery

area. All construction would occur in Mexico and would not affect historic or cultural resources in the U.S.

3.7 Socio-economics. The population in the general area on the U.S. side is predominantly Hispanic, and has a higher percentage of residents with incomes below the poverty level than the state average. On the Mexican side, the minimum wage is about US$94 per month (at an exchange rate of 10.8 Mexican pesos per U.S. dollar). Under the No-action Alternative, the discharge of untreated wastewater and potential contamination of ground water would continue unchanged. Because of the proximity and high interaction of the communities on both sides of the Rio Grande, the health and safety of area residents would continue to have a high potential for the spread of diseases. The area could become less desirable to live in, and some residents may decide to move. Waterborne diseases would probably increase as a result of the projected increase in population.

Under the action alternative, socio-economics, environmental justice and public health in general would be beneficially affected. Water borne diseases would be reduced or eliminated, and the quality of water available for reuse in irrigation would be improved. The improvements may create a more desirable place to live, which could result in a slight increase in population. The total number of new jobs directly related to the project would be minute, and most likely, the construction workers would be local residents. No significant impacts on local infrastructures would be expected.

3.8 Cumulative Effects. The No-Action Alternative would not contribute to the general improvement in municipal and sanitation services throughout the Rio Grande corridor. The action alternative would help improve water quality in conjunction with other water projects, and would tend to have a positive trans-boundary impact along the Rio Grande region. Improvements to the wastewater collection system would tend to reduce the potential for potable water contamination from the leaky lines.

Other projects applying for and eligible for BEIF and/or Project Development Assistance Program funding include the integrated wastewater service projects for Colonia Anapra and the southeast zone of Cd. Juárez, Chihuahua; improvement projects to the wastewater system in Praxedis, Guadalupe D.B., and Horizon Regional Municipal Utility District; improvement projects to the potable water and wastewater system in Dr. Porfirio Parra and El Porvenir; water and wastewater system improvements for Clint and the southeast Lower Valley Water District planning area between Clint and Fabens, and the Socorro-San Elizario planning area.

4.0 OTHER ENVIRONMENTAL CONSIDERATIONS

4.1 Unavoidable Adverse Impacts. The No-action Alternative would continue the use of potentially faulty cesspools allowing existing sanitary health problems to remain uncorrected. The action alternative would have potentially unavoidable, temporary adverse impacts from dust, vehicle emissions, traffic disruption, noise, and the possibility of soil erosion during construction. Installation of the collection lines would require some excavation on previously

disturbed land and would not likely affect biological or cultural resources or known historic sites. The proposed improvements make it likely that water quality in the Rio Grande would improve even with population growth along its banks. The amount of Rio Grande water rights transferred from agricultural use to municipal and industrial use would be expected to increase with the implementation of these projects, as well as the amount of wastewater discharged.

4.2 Relationship of Short-Term Uses and Long-Term Productivity. The No-action Alternative would save money in the short-term, but without the needed repairs and water and wastewater improvements, the health and safety of area residents and economic growth in the area would continue to deteriorate. Also, the cost to correct these problems would increase and become more difficult in the long run. In the short-term, there would be no impacts to terrestrial wildlife or aquatic communities. In the long-term direct and indirect impacts to wildlife communities would be minimal, but the aquatic communities in the Rio Grande would tend to decline due to the lower oxygen levels associated with the continuous discharge of oxygen depleted wastewater.

Under the action alternative, the short-term use of the environment could result in the temporary increase in fugitive dust and vehicular exhaust emissions, potential soil erosion, noise, disruption in traffic patterns, increased truck traffic, and possible temporary increase in employment and business activity. These impacts would cease at completion of construction activities. In the long-term, aquatic communities in the Rio Grande, the public health and safety, and socio-economic setting for the general area would benefit from the improved quality of the wastewater discharge. The release of raw sewage to surface water, potential ground water contamination, and odors from the cesspools would be reduced or eliminated. In addition, the quality of water used for irrigation would be improved. The capital costs of the action alternatives would be substantial, but costs would tend to increase if the improvements are delayed. The action alternative would provide better planned and more efficient wastewater service.

4.3 Irreversible and Irretrievable Commitments of Resources. Resources irreversibly and irretrievably committed would include the land resources and the materials, energy and financial resources used for construction and operation of the proposed project. The WWTP and lift station would be built on previously disturbed agricultural land. Construction of the proposed project could irretrievably commit the land and contiguous area to a specific use. Other elements of the project will be built on road ROWs, easements, or agricultural land. No significant unavoidable adverse impacts are expected to occur.

5.0 MAPS AND AGENCIES CONTACTED

U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service
International Boundary and Water Commission
Natural Resource Conservation Service
Border Environment Cooperation Commission
North American Development Bank
Texas Commission on Environmental Quality
Texas Historical Commission
Texas Department of Parks and Wildlife
Texas Water Development Board
Secretaría de Comunicaciones y Obras Públicas
Secretaría de Planeación y Evaluación
Secretaría de Desarrollo Urbano y Ecología
Secretaría del Medio Ambiente y Recursos Naturales
Secretaría de Salud
Comisión Nacional del Agua, Subdireccion General Técnica
Comisión Internacional de Limites y Aguas
Instituto Nacional de Antropología e Historia
Instituto Nacional de Estadística, Geografía e Informática
Junta Central de Agua y Saneamiento del Estado de Chihuahua
Junta Rural de Agua de Esperanza
Juvenal Rodela Campos, Mayor of Municipality of Esperanza
Ysleta Pueblo Del Sur Pueblo

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