

**SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT  
&  
FINDING OF NO SIGNIFICANT IMPACT**

for the

**Los Alisos Wastewater Treatment Plant and Conveyance  
System Construction  
Nogales, Sonora, Mexico**

**I. Introduction**

This document supplements the *Environmental Assessment for Nogales International Wastewater Treatment Plant (NIWTP,) Upgrade/Expansion International Outfall Interceptor, Replacement, Wastewater Collection System Rehabilitation, Nogales, Arizona and Nogales, Sonora*, which was prepared by the U.S. Environmental Protection Agency (EPA) in March, 2000 and the Finding of No Significant Impact (signed on April 3, 2000 and reaffirmed on May 27, 2007). The Environmental Assessment (EA) evaluated the potential environmental consequences for the proposed series of projects to rehabilitate, upgrade or construct wastewater infrastructure facilities in Nogales, Arizona and Nogales, Sonora, including the “Los Alisos Treatment Plant and Conveyance System Construction, Sonora, Mexico.” (the Project)

The purpose and scope of this Supplemental Environmental Assessment (SEA) is limited to cataloging the changes that have been made in the scope of the Project since the original assessment was written and detailing the potential impacts relevant to or associated with the revised scope of the Project. With the exception of the points described in the following sections, the original EA (available on line at <http://www.epa.gov/usmexicoborder/infrastructure/nogales/wasteall.pdf>) accurately represents: the Project’s purpose and need; the analyses of the Project’s design alternatives, including the alternative of no action and the preferred alternative; and the potential environmental impacts associated with each alternative.

The Project will be constructed entirely within Mexico; this SEA explores and documents the environmental consequences of the proposed federal action in the U.S. In order to evaluate the environmental impacts of the proposed Project in Mexico, including the proposed changes to the Project catalogued in this SEA, a separate Manifestacion de Impacto Ambiental (MIA) will be prepared for this project.

This document will also serve as a Supplemental Finding of No Significant Impact for the proposed project, including the changes specified below.

## II. Brief Description and History of the Project

The Ambos Nogales region (Nogales, Arizona [AZ] -Nogales, Sonora [SN]) has a critical trans-boundary wastewater problem, with raw sewage from Mexico flowing north into the U.S. through the Nogales Wash and exposing residents of both cities to public health hazards. An increasing but still insufficient (approximately 70%) proportion of the Mexican sewage is collected and treated at an international treatment plant located in Nogales, AZ, which is currently discharging effluent that does not meet U.S. water quality standards and is toxic to the Gila Top Minnow, an endangered species.

The existing NIWTP is unique, as it serves both Nogales, AZ (21,000 population) and Nogales, SN, Mexico (over 275,000 estimated population). While the NIWTP serves the entire U.S.-side population, only a portion (approx. 70%) of the Mexican-side population is served. Effluent from the NIWTP violates U.S. water quality standards and the facility is under a federal Consent Order to bring effluent discharges into compliance. The International Boundary and Water Commission, U.S. Section (IBWC) and the City of Nogales are co-owners of the NIWTP. IBWC operates the plant and charges the City and Mexico for their respective shares of the treatment costs.

To address the bi-national problems Congress earmarked funds in the Fiscal Year 1995 Appropriations to plan, design and construct wastewater infrastructure for the area. Using the earmarked funds, EPA supported a multi-year bi-national planning effort with Mexico, which resulted in the Ambos Nogales Wastewater Facilities Plan and established a five-part program to address the trans-boundary wastewater pollution problems in both cities. Mexico's concurrence and financial participation in the wastewater program was predicated on the inclusion of potable water facilities to provide clean drinking water to the Nogales, SN population. Consistent with this plan, several infrastructure projects have been developed and constructed or are underway in Arizona and Sonora.

The infrastructure program's projects include the phased development and construction of one water and five wastewater components based on commitments of financial assistance from EPA, Mexico and the City of Nogales, AZ. These projects are intertwined and complement one another to provide an integrated solution to the water and wastewater problems suffered by the region. The status of these projects is:

NIWTP Upgrade – Project mobilization and construction were initiated in March, 2007. Construction is now at about 97% and scheduled for completion before October, 2009.

International Outfall Interceptor (IOI) Rehabilitation – Work on the rehabilitation of the IOI manholes began in early 2008, is now complete. Replacement of the IOI has been deferred until additional funding becomes available.

Nogales, AZ Sewer Rehabilitation – Rehabilitation of portions of the wastewater collection system was completed in 2001. Beginning in 2007, the City has initiated repairs of the sewer system in the Old Nogales area of the city. Sewer assessment and construction are expected to be complete in 2009.

Nogales, SN Sewer Rehabilitation – A previous project addressed urgent repairs to sections of the collection system. Rehabilitation and relocation of the main sub-collectors, needed to reduce raw sewage spills, is underway. Construction is expected to be completed in 2009.

Nogales, SN Water System Improvements – This EPA supported project, which is still under construction but has completed its major components, will install a water distribution ring around the city and put in a metering system. The project's implementation period is October 2006 – December 2009.

Nogales, SN Wastewater Conveyance and Treatment Facilities (Los Alisos) – This is a new construction project to build pumping stations, conveyances and a treatment plant in the Los Alisos area of Nogales, Sonora. Community has finalized acquisition of the land for the project and final design for the pump stations and force main have been completed. The project, which should initiate construction in mid-2009, will receive assistance from EPA's Border Environment Infrastructure Fund (BEIF). The expansion of this project's workplan to include new wastewater service to six Colonias in Nogales, SN is the catalyst for this SEA.

### **Purpose and Scope of Supplemental EA/FNSI**

The City of Nogales, SN together with its bi-national partners initiated the conceptual planning for the Project to address the problems of water and wastewater service and the transboundary flows of untreated wastewater in the mid-1990s after the issue was highlighted by the IBWC. The original plan for this proposed wastewater project included two pumping stations, a force main/gravity line to convey wastewater up and over the divide into the Los Alisos basin and a wastewater treatment facility at Los Alisos. These items were analyzed in the facilities planning documents and their environmental impacts were evaluated in the original EA/FNSI. Because there has been no significant change in the plans for these items or in the affected environment, the EPA's Finding issued in 2000 was reaffirmed in June of 2007. However, since that time, the project has been expanded to include the construction of wastewater connections and conveyance for the provision of new wastewater collection services to the following six Colonias in Nogales, SN: Las Primavera, Luís Donald Colosio, El Rastro, Las Torres, Flores Magón, and Jardines de las Montaña. The location of these six Colonias relative to the urban center of Nogales and the US-MX border is illustrated below



Currently, wastewater generated in these Colonias, which house approximately 34,560 people, is either disposed of in cess pools before entering the environment or is discharged directly to the environment as raw sewage. The installation of wastewater collection and conveyance systems and new service connections to over 8,600 homes in these Colonias will protect public health by significantly reducing contamination of surface and near-surface groundwater resources in Nogales, SN as well as reducing fugitive flows of raw sewage into naturally flowing streams entering the U.S., such as the Nogales Wash.

The following sections of this SEA will evaluate the potential impacts to the transboundary (area of interest) environment of adding service to the six Colonias mentioned above. The Project's transboundary area of interest is defined as a semi-circle with a radius of three miles, centered at the point at the international border crossing located at the corner of West International Street and Grand Avenue in Nogales, Arizona.

Only those potential impacts and their respected environments that are affected by the supplemental actions will be considered in this document.

### III. Direct and Indirect Impacts to Affected Environments

#### A. Air Quality/Odors

Nogales, AZ is listed as a *non-attainment* area for PM<sub>10</sub>. Construction impacts associated with the proposed wastewater collection and conveyance systems' installation would include short-term, localized fugitive dust emissions generated during ground disturbance, trenching, and related site preparation activities, and combustion emissions from vehicles and heavy-duty equipment during installation. These impacts will be minimized at the construction site through dust control and standard engineering processes. The proposed project would be constructed and operated entirely within the boundaries of the six Colonias listed above. The farthest northern extent of the proposed construction would be more than two miles south of the U.S.- Mexico border. It is unlikely that the transport of particulates resulting from construction would cause any measurable impact to air quality in the U.S.

#### B. Water Resources – Surface Water

The International Boundary and Water Commission's Minute 276 (July 26, 1988) resolved that the total capacity of the NIWTP and IOI allotted to Nogales, SN is limited to 434 liters per second (l/s), which is equivalent to 9.9 million gallons per day (mgd). Nogales, SN currently sends all of its collected wastewater across the international boundary to the NIWTP. At the time of this writing, Nogales, SN is sending wastewater flows to the NIWTP in excess of the 9.9 mgd allotted by international treaty. These excess flows tax the collection and conveyance system, which was not designed to carry these additional loads and lead to surcharging, backups and contamination of the environment in both Sonora and Arizona including the Nogales Wash, a tributary of the Santa Cruz River. Additionally, the NIWTP is now completing an upgrade and will soon lack the capacity to adequately treat flows from Mexico in excess of the treaty allotted 9.9 mgd. Continued excess flows could result in the overloading of the newly upgraded facility and a resumption of noncompliant discharges from the NIWTP to the Santa Cruz River. Increased wastewater flows from the connection of homes in the six Colonias proposed for new service would exacerbate the impacts on overloaded conveyances and treatment systems and could lead to increased contamination of the Santa Cruz River.

Nogales, SN is now in the design and procurement stage of the Los Alisos wastewater conveyance and treatment facilities components of the Project, which will install pumping, piping and treatment capacity for all wastewater generated in Nogales, SN in excess of the 9.9 mgd allowed to flow across the border. The expected completion date for this conveyance and treatment project in Nogales, SN is the end of 2010. In order to avoid a potential negative impact to the NIWTP and the Santa Cruz River, the provision of new wastewater collection service to the six Colonias listed above should not be initiated until Los Alisos is operating and treating wastewater in Mexico.

### C. Cumulative Impacts

As was mentioned above, the city of Nogales, Sonora is proposing to build a new wastewater conveyance system and treatment plant at Los Alisos concurrently with the proposed new service to the six listed Colonias. Additionally, the city of Nogales, SN will continue to be adding drinking water service connections to those currently lacking service. The disturbances created by this construction will be localized in both time and place, but could temporarily impact air quality across the border. The cumulative impact of the proposed new project and new drinking water service flows on water quality of the Nogales Wash and Santa Cruz River should not be significant as long as these flows are diverted to the new facilities at Los Alisos. The hook-up of 8,600 new service connections in conjunction with a failure to complete the Los Alisos facilities could result in significant impacts to surface water quality of those resources.

## IV. Environmental Consequences and Conditions

The NEPA guidance recommends that the evaluation of an action alternative should include consideration of means to reduce, or mitigate adverse environmental impacts. Mitigation measures are identified to ensure that an action does not create any significant adverse effects.

The identified potential negative or adverse effects associated with the implementation of the action alternatives could be minimized through the implementation of appropriate practices and technologies. Construction activities should be conducted in a manner sensitive to potential environmental impacts. Generation of dust and PM<sub>10</sub> emissions should be minimized using appropriate and accepted methods. Construction activities should be limited to normal weekday working hours, if possible, to minimize the potential effects to local residents associated with construction noise.

Additionally, in order to reduce impacts on the NIWTP and the Santa Cruz River system, construction scheduling shall be managed in such a way that new service hook-ups will not be installed before completion of conveyance and treatment facilities to treat the these communities' effluent at Los Alisos.

The following positive effects would be realized by implementing the proposed actions.

- Elimination of leakage and infiltration of untreated wastewater from cesspools into groundwater resources;
- Reduction of human pathogens in surface waters and in the shared transboundary environment and a concomitant reduction in community health risks;
- Reduction of offensive odors;

Therefore, the EPA, after considering a wide range of regulatory, environmental and socio-economic factors, in compliance with the National Environment Policy Act, has identified no significant impacts to the environment resulting from the implementation of the proposed project.

## **V. Public Review**

The original EA is on file, and is available for public inspection at the EPA Region 9 office, 75 Hawthorne St., San Francisco, CA 94105. In addition, the EA and this document will be posted on the on the EPA website at <http://www.epa.gov/border2012/infrastructure> and Border Environment Cooperation Commission (BECC) website at <http://www.cocef.org>.

Interested persons, including those who disagree with this proposal, may submit comments to EPA Region 9 by May 10, 2009, which provides a minimum of 30 calendar days from the date this document was made available for review. No administrative action will be taken on this proposed project prior to the expiration of this comment period. Comments, via letter, fax or email, should be sent to Tom Konner at the address listed below.

Tom Konner (WTR-4)  
U.S. EPA, Region 9  
75 Hawthorne Street  
San Francisco, CA 94105  
Telephone: (415) 972-3408  
Fax: (415) 947-3537  
Email: [konner.thomas@epa.gov](mailto:konner.thomas@epa.gov)

After EPA assesses any comments received, those comments, EPA's responses, and this Finding of No Significant Impact (FNSI) will be forwarded to the Regional Administrator for review and signature. If the Regional Administrator signs this FNSI, it will not be re-circulated for review but will be available to any individual upon request.