



# Nogales Field Office

United States Section  
International Boundary & Water  
Commission

# IBWC Field Offices & Projects

## OFICINAS DE LA CILA EN LA FRONTERA NORTE



# Organization

- ▶ The USIBWC is composed of the Office of the Commissioner, Operations Department, Engineering Department and the Administrative Department.
- ▶ The Nogales Field Office is part of the Operations Department, Operations & Maintenance Division

# Responsibilities & Mission of the Nogales Field Office

- ▶ To successfully manage Operations Department programs within the Field Office area of responsibility
- ▶ Provide initial assessments to other Departments and Divisions of issues and situations that may arise

# Nogales Field Office Area of Responsibility

- ▶ Along U.S./Mexico Boundary from New Mexico Border to Lukeville, AZ.
- ▶ 229 Miles of Boundary jurisdiction

# Nogales Field Office History

- ▶ USIBWC Involved with the Nogales area since the establishment of Monuments in 1880s
- ▶ In the 1930's the USIBWC oversaw the construction of the Nogales Wash tunnels and concrete lined portion of the Nogales Wash
- ▶ In the 1940's and 50's the USIBWC worked with the City of Nogales to establish the first Nogales International Wastewater Treatment Plant (NIWTP).
- ▶ In the late 1960's and early 1970's the USIBWC worked with the City of Nogales to relocate the NIWTP to its current location in Rio Rico and also build a new trunk line & IOI from the International Border to the new treatment facility
- ▶ In 1990 a field office was established in Rio Rico at the NIWTP to oversee the construction of the upgrade to the NIWTP and to perform other field office functions

# Nogales Field Office Scope

- ▶ Operate & Maintain the Nogales International Wastewater Treatment Plant
- ▶ Demarcation of U.S./Mexico Border
- ▶ Coordination with Mexican Section
- ▶ Flow monitoring & reporting of International wastewater flows
- ▶ Inspection and resolution of border encroachment issues
- ▶ Coordination with DHS on border fence
- ▶ Citizens Forum
- ▶ Coordination with stakeholders
- ▶ Determination of financial re-imbursments

# 1944 WATER TREATY

- ▶ Authorized Commission to give "preferential attention to the solution of all border sanitation problems"
- ▶ 3 international wastewater treatment plants were subsequently constructed:
  - South Bay International Wastewater Treatment Plant -located in San Diego; treats sewage from Tijuana
  - Nuevo Laredo International Wastewater Treatment Plant - located in Nuevo Laredo, Mexico; treats Mexican sewage
  - Nogales international wastewater treatment plant (NIWTP) - located in Rio Rico, AZ; treats sewage from the U.S. And Mexico

# Nogales International Wastewater Treatment Plant (NIWTP)

- ▶ Technology Upgrade completed June 2009
- ▶ Vastly improved effluent quality, Advanced treatment system (BNR)
- ▶ Funded by EPA/BECC grant
- ▶ 80% flow from Mexico





# NIWTP History

- ▶ Original plant built in 1950s, located in downtown Nogales, AZ
- ▶ NIWTP was relocated to Rio Rico in 1972, capacity was increased
- ▶ In 1992 the NIWTP capacity and treatment technology were upgraded
- ▶ In 2009 NIWTP technology was upgraded and capacity was reduced

# 2009 NIWTP Upgrade

- ▶ Plant technology was upgraded to a Biological Nutrient Removal process (BNR)
- ▶ BNR converts ammonia to harmless Nitrogen gas
- ▶ Disinfection technology upgraded from Chlorine gas to Ultraviolet Light through direct funding by USIBWC & City of Nogales
- ▶ Previous plant could not remove ammonia, which is toxic to endangered species in Santa Cruz River

# NIWTP Challenges

- ▶ BNR facilities are very expensive to Operate and Maintain
- ▶ BNR is an advanced treatment technology which requires highly skilled personnel to operate, the NIWTP is the most advanced treatment system IBWC operates.
- ▶ BNR process is much more sensitive to influent flow makeup
- ▶ NIWTP is a biological process and unable to treat contaminants such as metals entering the facility, this results in a pass through with the contaminants ending up in the effluent or the biosolids. These industrial pollutants can cause plant upsets and compliance issues

# NIWTP Success

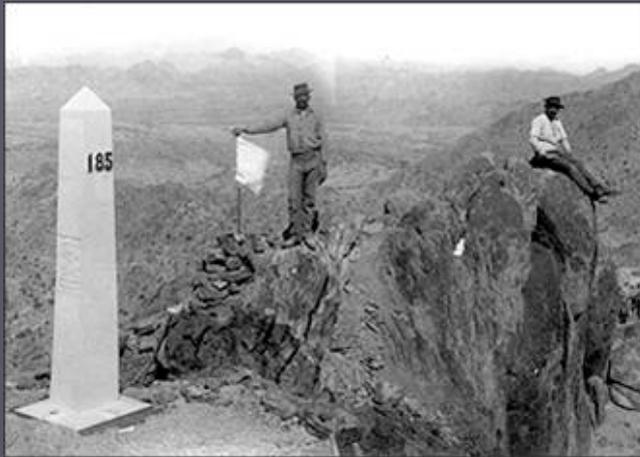
- ▶ Ammonia has been essentially eliminated from the NIWTP effluent
- ▶ CBOD and TSS has been significantly reduced in the effluent
- ▶ Turbidity levels (water clarity) has significantly improved

# NIWTP Finances

- ▶ The NIWTP is operated by the USIBWC and receives reimbursement for O&M costs from Mexico and the City of Nogales, Arizona
- ▶ The USIBWC does not own the influent wastewater, the NIWTP effluent or the biosolids generated
- ▶ All potential revenues from any of these sources would go to their respective owners

# Land Boundary Monuments

## Demarcation, Maintenance/Repair



# Land Boundary Monuments

- ▶ The Nogales Field Office is responsible for 96 Monuments
- ▶ 82 Iron Monuments and 14 Masonry Monuments, all were installed in the 1800's
- ▶ Monuments are the treaty recognized International Boundary
- ▶ The International Boundary is the line of sight from the tip of one monument to the next
- ▶ Only by the concurrence of the U.S. Commissioner and the Mexican Commissioner can a monument be moved, the new location then becomes the official International Boundary

# Monument 122 - Nogales, AZ



# Encroachment Investigations



# Boundary Resurvey 1894







LIMITE  
DE LA  
REPUBLICA  
MEXICANA  
TRATADO DE 1883  
RESTABLECIDO  
POR  
TRATADOS DE  
1882-1889

LA DESTRUCCION  
O DESLOCACION DE  
ESTE MONUMENTO ES  
UN DELITO PUNIBLE  
POR MEXICO O LOS  
ESTADOS UNIDOS





# Ports Of Entry

- ▶ The USIBWC & MxIBWC oversee demarcation indicators at each Port of Entry (POE)
- ▶ Some POEs are offset from the International Boundary by as much as 100 yards (Mariposa POE), but the demarcation is still the official dividing line between Mexico and the United States

# Sasabe Demarcation



# Lukeville Demarcation



# San Miguel Gate



# Transboundary Sanitation

- ▶ Investigation of fugitive flows
- ▶ Technical Assistance
- ▶ Coordination with EPA/ADEQ/CILA/Local Gov.



# THANK YOU!!

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