

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

Resource Summary

(\$ in thousands)

Appropriations	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Increase / Decrease
American Positions	18	18	0	(18)
Funds	26,447	31,453	30,400	(1,053)

Program Description

The International Boundary and Water Commission (IBWC) is a treaty-based binational organization comprised of a United States Section (USIBWC) and a Mexican Section. The U.S. Section is headquartered in El Paso, Texas, and the Mexican section is headquartered in Ciudad Juarez, Chihuahua. Both sections have field offices strategically situated along the boundary, which enables the IBWC to carry out its mission objectives and meet its obligations.

Pursuant to treaties between the United States and Mexico, as well as U.S. law, the USIBWC carries out construction projects undertaken independent of, or with, Mexico to rehabilitate or improve water deliveries, flood control, boundary preservation, and sanitation.

Since the Convention of February 1, 1933, which provided for rectification of the Rio Grande through the El Paso–Juarez Valley, the two governments have participated in several binational construction projects. The Treaty of 1944 provided for the two governments to construct diversion and storage dams on the Rio Grande and Colorado River. The dams provide the means for conservation and regulation of international river waters. In addition, the 1944 Treaty provides for flood control works on the Rio Grande, Colorado River, and Tijuana River. It also provided for both governments to give priority attention to border sanitation issues.

This appropriation provides funding for construction and major renovations along the U.S. – Mexico border that enables the storage, distribution, and delivery of international waters in the Rio Grande and Colorado River, affording protection of lives and property from floods in bordering communities. In addition, the appropriation provides for the preservation of the international boundary, and the improvement of the water quality on both sides of the border.

Border Sanitation

Under the authority of the 1944 Water Treaty between the U.S. and Mexico, the IBWC is entrusted to give preferential attention to border sanitation issues. Presently, residents in IBWC’s jurisdiction are facing a number of sanitation problems in the western land boundary region. These problems are mostly a result of trash, debris, and sewage entering into the U.S. from Mexico through rivers and storm water runoff. The IBWC is currently working toward addressing bi-national sanitation issues in the following areas: Nogales, AZ, Calexico, CA (New River), and in San Diego, CA (Tijuana River Valley, Estuary and coastal environment).

The inflow of trash, debris, and raw sewage from Mexico through the New River has for years created major health and sanitation concerns in Calexico. The U.S. Environmental Protection Agency (EPA) is currently working on a project to address the sewage issues across the border in Mexicali, and the IBWC

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

is working on addressing the trash and debris problem that affects residents in Calexico. The IBWC is working with the City of Calexico to develop defensive measures to eliminate or reduce the amount of trash and debris conveyed into the United States through the New River.

Congress authorized the construction of the South Bay International Wastewater Treatment Plant (SBIWTP) and ocean outfall in 1988. The purpose of the SBIWTP is to capture and treat Tijuana wastewater, which would otherwise flow into the United States through the Tijuana River and canyons, to secondary standards for discharge into the Pacific Ocean. In the interest of addressing public health and environmental concerns as expeditiously as possible, the USIBWC and EPA decided to construct the SBIWTP in stages and operate the advanced primary plant and discharge the effluent into the ocean prior to the construction of the secondary treatment facilities. The IBWC completed construction and initiated operation of the advanced primary treatment facilities and ocean outfall in 1999. The USIBWC constructed the secondary treatment plant components, excluding the sludge digesters, in 2011. This brought the plant into compliance with the Water Pollution Control Act and the Water Quality Act.

The City of Nogales, Mexico and the USIBWC jointly own the Nogales International Wastewater Treatment Plant (NIWTP). The NIWTP is operated by the IBWC, provides for the treatment of wastewater from both Mexico and the United States, and discharges the effluent into the Santa Cruz River. The original treatment plant, constructed in 1951, was a primary treatment facility, situated 1.5 miles north of the border in Nogales, Arizona. In 1972, the USIBWC and the City of Nogales, Mexico replaced the 1951 facility with a larger primary treatment plant located 8.8 miles north of the border in Rio Rico, Arizona. To meet current CWA discharge requirements, the USIBWC and Nogales upgraded the NIWTP in June 2009 by constructing secondary treatment facilities.

Flood Control

The USIBWC operates and maintains flood control systems along the Tijuana River and the Rio Grande. These flood control systems protect the lives and property of over 3 million U.S. residents. Each country owns and is responsible for the maintenance of flood control works in its respective territory.

Currently, the USIBWC is in the process of rehabilitating deficiencies that have been identified in numerous portions of its Rio Grande flood control systems, addressing a large portion with funds appropriated in the American Recovery and Reinvestment Act of 2009. The Canalization segment starts in southern New Mexico and ends at American Dam where the international segment of the Rio Grande begins. The rectification (in far west Texas), Presidio, and Lower Rio Grande (south Texas) segments are on the international portion of the Rio Grande River, which require coordination with Mexico; however, the work is limited to the U.S. portions of the flood control systems. The canalization segment (130 miles of levees on both side of river), authorized by law in 1935 to facilitate water deliveries to Mexico under the Convention of 1906 and to protect against Rio Grande floods, extends 106 miles from Percha Dam in south central New Mexico to American Dam in El Paso, Texas. The Lower Rio Grande Flood Control Project (270 miles of levee) and the Rectification segment (91 miles of levee) were both authorized by legislation in the 1930's and the Presidio segment (15 miles of levee) authorized by law in 1970. The Lower Rio Grande Project was authorized solely for flood control, while the Presidio and Rectification segments serve the dual purpose of flood control and boundary preservation.

The USIBWC's construction program is organized into four subprogram groups, which coincide with the agency's strategic goals: Boundary Preservation, Water Conveyance, Water Quality, and Resource and Asset Management.

- The Boundary Preservation Subprogram addresses all land and river boundary demarcation and delineation efforts, including mapping of the river boundaries;

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

- The Water Conveyance Subprogram consists of all mission activities related to the conveyance, distribution, diversion, storage, and accounting of boundary/transboundary river waters, including flood control and hydroelectric power generation;
- The Water Quality Subprogram involves the construction or rehabilitation of sewage treatment facilities or other infrastructure, improving the quality of river waters; and
- The Resource and Asset Management Subprogram provides capital assets that support mission operations, such as administration buildings, warehouses, heavy mobile equipment, and security enhancements at field office facilities;

To achieve its mission the IBWC will carry out projects under these subprograms, while exploring innovative and best practices in both the private and public sectors.

Justification of Request

The FY 2013 request of \$30.4 million represents an overall decrease of \$1 million below the FY 2012 estimate. This program supports high priority requirements for the agency to fulfill its mission regarding flood control, river water allocation, conveyance, and sanitation. It also protects stakeholders and employees by protecting infrastructure and restoring facilities. This level also reflects a realignment of the Heavy Equipment Program (\$1.2 million) and 18 USDH positions from USIBWC's Construction account to the Salaries and Expenses account in support of USIBWC administration, operations and maintenance.

Water Conveyance Program: \$22,500,000

Reconstruction of the American Canal: \$12,000,000

Funding to rebuild the American Canal, which is beyond its useful life, was initially received in FY 2010. The American Dam and Canal were built by the United States in 1938 to divert and convey the waters of Rio Grande allocated to the United States under the 1906 Convention for municipal and agricultural use. This canal, which is a vital source of water supply for the desert City of El Paso, is in very poor condition and at risk of failing. The canal lining contains many concrete panels with exposed and rusted rebar and cracked, crushed, separated, or overlapping sections. Soil voids have also formed underneath the canal lining, since waters have carried away embankment materials over time through the breaks and deteriorated weep holes. As a result, the canal lining may collapse and prevent the deliveries of Rio Grande waters to U.S. agricultural and municipal stakeholders.

The American Canal runs adjacent to the American Smelting and Refining Company (ASARCO), a century-old iron-ore and copper refinery that filed for Chapter 11 reorganization under the Federal bankruptcy code in 2005. Refinery operations have contaminated the adjacent canal embankment with dangerously high levels of lead and arsenic, and will require the environmental remediation of soil and groundwater during construction. In 2009, a bankruptcy court approved a settlement amount of \$22,370,833 for environmental cleanup of IBWC grounds at the American Dam field office, and along the Rio Grande and American Canal.

The American Canal is subdivided into three segments; each segment separated by a highway culvert. Although reconstruction of each segment will be phased-in over a three-year period, construction can only be performed during the non-irrigation season, which extends from mid-October to mid-February. FY 2013 funding is requested to construct the improvements for the lower segment of the canal. In addition, \$6 million of reimbursement funding is expected to be applied in FY 2013 for environmental remediation of soil and groundwater.

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

Rio Grande Flood Control System Rehabilitation: \$7,500,000

This project, initially funded in 2001, is a multi-year effort that includes the evaluation of approximately 510 miles of existing Rio Grande levees, and rehabilitation or improvement of deficient levee segments and related flood control structures in the United States. These levees contain about 440 miles of river and interior floodway channel along three unique Rio Grande Flood Control Systems. These three flood control systems are identified as the Upper Rio Grande, Presidio Valley, and Lower Rio Grande Flood Control Systems. The Upper Rio Grande Flood Control System protects one million U.S. residents in the metropolitan statistical areas of Las Cruces, New Mexico and El Paso, Texas with its 225 miles of levees. The fifteen-mile long Presidio Valley Flood Control System provides flood protection to nearly 5000 people in Presidio, Texas. The Lower Rio Grande Flood Control System, with its 270 miles of river and interior floodway levees, protects one million U.S. residents in the following metropolitan statistical areas of Brownsville-Harlingen and McAllen-Edinburg-Mission in south Texas.

Deficient levee segments will be improved in order of priority by risk, population, and development. The USIBWC is currently working together with the Department of Homeland Security and other stakeholders to address the flood control deficiencies jointly with border fence initiative. In FY 2013, the USIBWC will use the request and prior year unobligated balances to construct environmental enhancements to mitigate for project impacts, and to construct 1.1 miles of floodwalls and levee improvements along the east riverbank, and reestablishment of channel within right-of-way at Vado, New Mexico.

Safety of Dams Rehabilitation: \$3,000,000

The SOD program addresses infrastructure deficiencies identified during inspections conducted by the Joint Technical Advisors, which includes the U.S. Army Corps of Engineers (USACE). The Joint Technical Advisors inspected the Amistad, Falcon, Anzalduas, and Retamal Dams in April 2007. These four dams were rated in accordance with the risk-based action classification system used by the USACE. The safety inspection yielded urgent and high priority deficiencies at three of the four dams, which required in-depth assessments given the criticality of the findings. The Amistad Dam received a category rating of Dam Safety Action Class (DSAC) II, "urgent, potentially unsafe." The Falcon and Retamal Dams received a DSAC III rating, "high priority, conditionally unsafe," while the Anzalduas Dam received a DSAC IV rating, "priority, marginally safe." Therefore, the IBWC initiated and completed a preliminary study and risk analysis of the Amistad Dam, and is currently conducting a Dam Modification Study, which is expected to be completed by November 2013. The results of this study will assist in developing strategies to address these deficiencies. A preliminary study for the Falcon Dam has been completed, and a risk analysis is underway, with completion expected to be by April 2012.

FY 2013 funding is requested to implement specific assessments recommendations based on risk from both the Amistad Dam Modification Study and the Falcon Risk Analysis. The implementation of the recommendations will be achieved in a phased approach, given the estimated high costs of the recommendations. The recommendation also addresses the sinkhole problems on the foundations and embankments of the Amistad Dam. The study recommendations will involve implementation of sonar surveys, willow-stick surveys, exploratory borings, seepage explorations, and development of viable remediation alternatives. Completion of the recommendations is expected to continue in the out-years until all high-risk findings have been addressed.

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

Resource and Asset Management Program: \$5,900,000

Critical Infrastructure Protection: \$2,500,000

The USIBWC is requesting funds to continue a multi-year project, initially funded in FY 2009, to improve security at its facilities, which includes the critical infrastructure: Amistad and Falcon International Storage Dams and Power Plants, and the South Bay and Nogales International Wastewater Treatment Plants. This project will assist the agency in countering potential threats to its critical infrastructure and deter illegal activity away from these facilities. This project is consistent with the Department of Homeland Security initiatives (Homeland Security Presidential Directives 7 and 13), the Critical Infrastructure Protection (CIP) Framework Agreement between the U.S. and Mexico, and the USA PATRIOT (Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism) Act. The U.S. – Mexico CIP Program specifically states that both nations will: conduct bi-national vulnerability assessments of trans-border infrastructure and communications and transportation networks to identify and take required protective measures.

The FY 2013 funding requested for Critical Infrastructure Protection will be used to address the continued threats and vulnerabilities identified through assessments conducted at all field locations. It will focus on the installation of deterrents, controls, and detection systems at the San Diego, Mercedes, Nogales, and Yuma Field Offices as detailed below. The \$2.5 million will be used to continue with the implementation of assessment recommendations at Amistad Dam. The FY 2013 request for the Resource and Asset Management Program reflects an increase of \$3.4 million for a multi-year program that began in FY 2010. The increase will fund the programs identified below.

San Diego Project: \$1,400,000

The resources provided will fund critical San Diego project requirements to include threat and vulnerability assessments at the South Bay International Wastewater Treatment Plant (SBIWTP). Further focus will be placed on deterrence and delay measures, such as barriers, fences, gates, signs, buoys, etc., to improve safety and protection of USIBWC personnel and critical infrastructure.

Nogales Project: \$1,000,000

The resources provided will fund critical Nogales project requirements to include threat and vulnerability assessments at the Nogales International Wastewater Treatment Plant (NIWTP). Further focus will be placed on deterrence and delay measures, such as barriers, fences, gates, signs, and lighting. In addition to the deterrence and delay measures controls and detection systems such as video surveillance, alarms, sensors, access and controls will be implemented to improve safety and protection of USIBWC personnel and critical infrastructure.

Mercedes Project: \$1,000,000

The resources provided will continue to fund critical Mercedes project requirements to include threat and vulnerability assessments at Anzalduas, and Retamal Dams. Further, focus will be placed on deterrence and delay measures, such as barriers, fences, gates, signs, etc. In addition, controls and detection systems such as video surveillance, alarms, sensors, access controls, etc., will be implemented to improve safety and protection of USIBWC personnel and critical infrastructure.

INTERNATIONAL BOUNDARY AND WATER COMMISSION CONSTRUCTION

Water Quality Program: \$2,000,000

Nogales International Outfall Interceptor Replacement: \$2,000,000

This is a multi-year project, initially funded in FY 2010, for replacing the Nogales International Outfall Interceptor (IOI). The IBWC and the City of Nogales are co-owners of the NIWTP, which is located in Rio Rico, AZ, and provides treatment of sewage for both Nogales, Arizona, and Nogales, Sonora. The IOI is the infrastructure that conveys wastewater from Nogales, Sonora, Mexico and Nogales, AZ to the NIWTP. The treated effluent is discharged into the Santa Cruz River, where it provides a perennial surface water source to recharge groundwater levels and sustain riparian habitat.

The pipeline, which was placed into operation in 1972, has lost approximately half of its thickness due to erosion and developed many cracks. Excessive amounts of groundwater water infiltrate the pipe through these cracks, significantly increasing the volume in the wastewater system. This increased volume results in higher than normal operations and maintenance costs for treatment of the wastewater at the NIWTP. The USIBWC will work with the City of Nogales and other stakeholders to jointly replace the deteriorated IOI pipeline and rehabilitate/replace any necessary IOI manholes. Since the IOI runs underneath and alongside the Nogales Wash, which is a concrete-lined storm water conveyance system, replacement of the IOI will require removing and reconstructing some, if not all, of the Wash.

Project alternatives are still being considered and evaluated. Preliminary estimates suggest that the cost for this project could be approximately \$100 million phased-in over several years. The FY 2013 budget and prior year unobligated balances will be used to initiate the first phase of improvements. The IOI project will be phased in over the out-years by sections, and will be prioritized based on risk and fiscal resources.

Staff by Program Activity

(\$ in thousands)

International Boundary and Water Commission, El Paso, Texas	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Increase / Decrease
IBWC-Construction	18	18	0	(18)
Water Quality Program	2	2	0	(2)
Water Quantity Program	16	16	0	(16)
Total	18	18	0	(18)

Funds by Program Activity

(\$ in thousands)

Activities	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Increase / Decrease
IBWC-Construction	26,447	31,453	30,400	(1,053)
Resource and Asset Management	4,726	5,621	5,900	279
Water Quality Program	1,244	1,479	2,000	521
Water Quantity Program	20,477	24,353	22,500	(1,853)
Total	26,447	31,453	30,400	(1,053)

**INTERNATIONAL BOUNDARY AND WATER COMMISSION
CONSTRUCTION**

Funds by Object Class
(\$ in thousands)

	FY 2011 Actual	FY 2012 Estimate	FY 2013 Request	Increase / Decrease
2500 Other Services	26,447	31,453	30,400	(1,053)
Total	26,447	31,453	30,400	(1,053)