



# Technical Assistance Program (TAP) Aggregate Report: 2015-2017

June 2018



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**NORTH AMERICAN DEVELOPMENT BANK**  
**Technical Assistance Program (TAP)**  
**Aggregate Report: 2015-2017**

## **I. Introduction**

The North American Development Bank (NADB) provides technical assistance (TA) through grants to promote the development of high-quality, environmental infrastructure projects, support the long-term sustainability of projects and facilitate access to NADB financing. Technical assistance and capacity-building are key tools that NADB uses to strengthen its relationships and the capabilities of its customers, as well as to identify new business opportunities.

In 2014, NADB began coordinating its TA activities more closely with the Border Environment Cooperation Commission (BECC). In January 2015, these efforts culminated in a fully integrated program with shared operating guidelines and the establishment of a single committee to approve projects and oversee and administer all TA-related activities.

Technical assistance is currently provided through the following programs:

- *Technical Assistance Program (TAP)*, funded by NADB (and BECC prior to the merger), to support border communities and project sponsors in the development of sustainable projects, as well as strengthen their institutional capacities. As part of this program, the Utility Management Institute (UMI) was established to provide professional training aimed at reinforcing the administrative and financial capabilities of those responsible for operating water and wastewater utilities.
- *Project Development Assistance Program (PDAP)*, funded by the U.S. Environmental Protection Agency (EPA), to support the development and design of water and wastewater projects selected to receive a construction grant through the Border Environment Infrastructure Fund (BEIF).
- *U.S.-Mexico Border 2020 Program*, a binational program developed by EPA and the *Secretaría de Medio Ambiente y Recursos Naturales (SEMARNAT)*, to improve the environment and protect the health of residents within 100 kilometers of both sides of the U.S.-Mexico border. It focuses on initiatives for clean air, safe drinking water, reduced risk of exposure to hazardous waste and binational emergency response preparedness. The program is also funded by EPA.

The purpose of this report is to assess the cumulative results achieved only through the TAP program during the period 2015-2017, including outputs, outcomes, best practices and lessons learned. The results of the PDAP and the Border 2020 program are reported elsewhere.

## II. TAP Program

With the approval of the Board of Directors, NADB uses a portion of its retained earnings to fund technical assistance and capacity-building activities. Prior to the merger, BECC jointly financed these initiatives from its operating budget.

All technical assistance funded through this program falls into one of the following three categories:

- *Project development.* These studies are directly linked to a specific infrastructure project and are intended to help the project achieve certification within a year (e.g. final design, financial analyses and technical studies) or should help develop a specific project within three years after completion of the study (e.g. master plans).
- *Sector studies.* These studies are intended to identify needs for environmental infrastructure, promote sound public policy or generate knowledge about a new sector or technology.
- *Capacity building.* These initiatives are efforts undertaken to help potential sponsors improve their financial or technical capabilities or facilitate access to knowledge. This classification includes forums and training programs, such as UMI seminars, as well as knowledge management and information sharing efforts.

An annual TA work plan is developed at the beginning of each year to provide a clear strategy and promote accountability for the use of TA funds. The plan identifies the technical assistance needs to be addressed during the year and defines the funds budgeted for each potential project. The plan may be adjusted during the year as new needs arise or previously identified projects are determined to no longer be necessary. Likewise, unmet needs at year-end may be rolled over to the coming year.

As noted previously, a Technical Assistance Committee (TAC) was established to administer the program jointly prior to the institutional merger. Individual projects were reviewed and approved by the committee based on a detailed proposal presented by the respective project manager. Upon approval by the committee, TA funds were awarded and committed by one or both institutions to the project. Following the merger, a Technical and Environmental Review Committee will endorse the work plan for final approval by the Funding Committee.

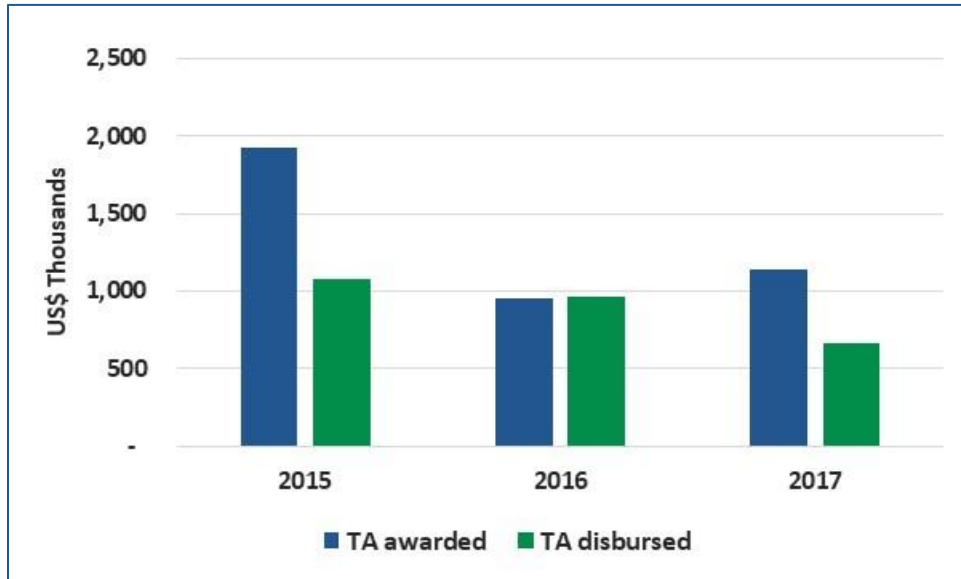
An electronic tracking tool was developed to follow up on TAP projects and their status. The tracking tool is also a database that facilitates aggregating results by indicator, sector and project category.

## III. Work Plan and Grant Awards

The TAP work plans for 2015, 2016 and 2017 identified 35, 15 and 10 potential projects, respectively. The funds budgeted to support those projects were estimated at \$2.071 million, \$928,676 and \$1.025 million, in the 2015, 2016 and 2017 workplans, respectively.

The trend in TAP funding awards for the three-year period reviewed in this report has been decreasing, but the percentage of funds disbursed during a calendar year vs. the budgeted (authorized) amounts has been increasing.

**Figure 1**  
**TAP FUNDING AWARDED VS. DISBURSED**  
**2015-2017**



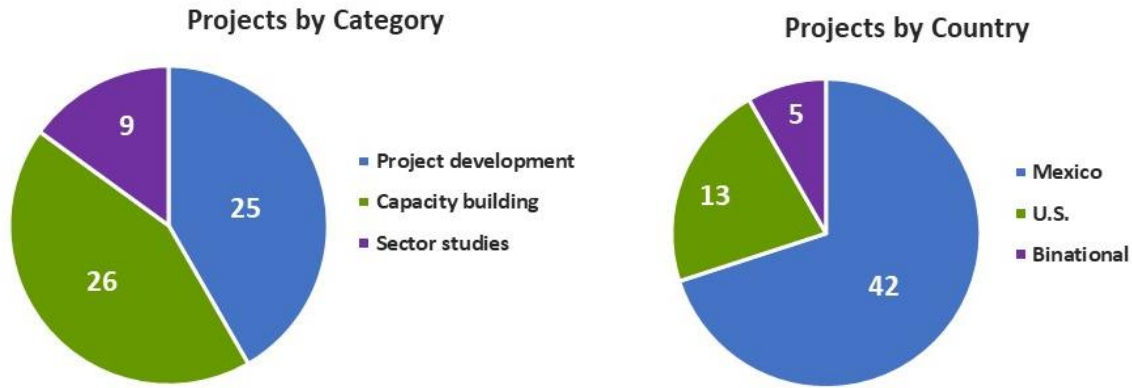
This decline in project funding can partly be explained by efforts to target assistance more strategically to activities that will directly lead to a certified project or open up a new sector for NADB financing. In addition, as part of its funds management strategy, NADB began setting annual disbursement caps on all its grant programs in 2017, which also curtails the amount of TA that can be awarded annually. The TAP work plan for 2018 contains less than 15 projects.

#### **IV. Portfolio of TAP Projects**

This report covers TAP projects authorized between 2013 and 2015 that were still active during 2015 (35 projects), projects approved during 2016 (15 projects) and projects approved during 2017 (10 projects). Of those 60 projects, 42% were classified as project development, 43% as capacity building and 15% as sector studies.

A breakdown of these projects by category and country is shown in Figure 2.

**Figure 2**  
**TAP PROJECTS BY CATEGORY AND COUNTRY**  
**(2015-2017)**



As of December 31, 2017, forty-seven (47) of those projects had been completed and the remaining 13 were in progress in accordance with their original implementation schedules. Of the 47 projects completed, 59% was carried out in Mexico, 27% in the U.S. and 16% in the binational border region. A closeout factsheet for 43 of the completed projects has been completed and will be posted on the NADB website. Table 1 presents the status of the projects by category.

**Table 1**  
**STATUS OF TAP PROJECTS**  
**AS OF DECEMBER 31, 2017**

Project Type	Total Projects	In process	Completed	Completed with Closeout Fact Sheet
Project development	25	6	19	15
Capacity building	26	4	22	22
Sector Studies	9	3	6	6
<b>Total</b>	<b>60</b>	<b>13</b>	<b>47</b>	<b>43</b>

The geographic distribution of the 47 completed TAP projects is detailed in Table 2.

**Table 2**  
**GEOGRAPHIC DISTRIBUTION OF COMPLETED TA PROJECTS**  
**(2015-2017)**

Region / State	Completed projects	TAP Funding		
		Authorized	Disbursed	% Disbursed
<b>Mexico</b>				
Baja California	4	\$ 216,300	\$ 182,711	84%
Chihuahua	1	24,400	20,000	82%
Coahuila	4	172,600	138,607	80%
Nuevo Leon	2	164,000	132,888	81%
Sonora	9	271,000	165,855	61%
National Level	2	70,000	70,000	100%
Regional	9	493,000	447,364	91%
<b>Subtotal Mexico</b>	<b>31</b>	<b>\$ 1,411,300</b>	<b>\$ 1,157,425</b>	<b>82%</b>
<b>United States</b>				
Arizona	2	\$ 145,000	\$ 145,282	100%
New Mexico	2	120,000	119,872	100%
Texas	8	353,730	284,442	80%
<b>Subtotal U.S.</b>	<b>12</b>	<b>\$ 618,730</b>	<b>\$ 549,596</b>	<b>89%</b>
<b>Mexico and U.S.</b>				
<b>Border-wide</b>	<b>4</b>	<b>\$373,676</b>	<b>\$327,616</b>	<b>88%</b>
<b>Total</b>	<b>47</b>	<b>\$2,403,706</b>	<b>\$2,034,637</b>	<b>85%</b>

In terms of the financial status, of the US\$4.03 million in TAP grants approved to fund the 60 projects, approximately 67% (US\$2.71 million) had been expended by the close 2017, as shown in Table 3.

**Table 3**  
**FINANCIAL STATUS OF TAP PROJECTS**  
**(US\$)**

Project Type	Projects	TAP Funding			% of approved disbursed
		Approved	Contracted	Disbursed	
Capacity Building	26	\$ 1,593,906	\$ 1,014,136	\$ 946,899	59%
Project Development	25	1,458,300	1,173,506	999,787	69%
Sector Study	9	973,000	863,938	766,647	79%
<b>Total</b>	<b>60</b>	<b>\$ 4,025,206</b>	<b>\$ 3,051,580</b>	<b>\$ 2,713,332</b>	<b>67%</b>

The actual investment in the 60 projects was US\$2,713,332, and the population potentially benefited by those projects is 33 million residents.<sup>1</sup>

## V. Results Measurement Framework

During the past few years, NADB has moved from an “implementation-based” to a “results-based” evaluation model that focuses on whether completed projects were generating the expected results. To that end, a Results Measurement System was developed for certified projects financed by NADB. Similarly, NADB has begun to track and evaluate the effectiveness of its Technical Assistance Program to ensure that the funds are used efficiently to advance the mission and objectives of NADB and its stakeholders.

To document the results of each TAP-funded project and evaluate the effectiveness of the program as a whole, a factsheet is now developed upon completion of each project, which provides the opportunity to confirm that its fundamental objective was achieved—to the extent to which physical targets (outputs) were met—and that the intended results (outcomes) were obtained, as well as to seek feedback for improved practices (lessons learned) through on-site observation and direct dialogue with project sponsors (see Annex A). The objectives of the factsheet are:

- Compare actual results to those projected when the project was approved. Key questions to consider include:
  - Were the uses and sources of funds modified?
  - Was the anticipated outcome achieved?
- Document success factors and/or determine the causes for any project deviations (lessons learned), such as insufficient funding, fluctuating costs, or unanticipated difficulties or conditions.
- Create a feedback loop to identify if the lessons learned can be applied to future projects.

A menu of typical indicators was developed for each TA category. Each indicator was selected based on its appropriateness for representing the change in status of the conditions addressed by the TAP project, as well as its simplicity, representativeness, feasibility and verifiability. Appendix B summarizes the indicators defined for each TA category.

## VI. Results

This report evaluates the results of the 43 completed projects for which a factsheet has been completed: 31 in Mexico and 12 in the United States. It was compiled using the indicators defined in Appendix B and based on all available data, including BECC and NADB records, as well as some interviews with key stakeholders. A summary of the results for each TA category are presented in the following tables.

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<sup>1</sup> The estimated population considers the potential state-wide benefits of the climate action plans for five of the Mexican border states.



## Project Development

### Master plans

- 1 Master plan completed: Arizona Sonora Environmental Strategic Plan 2017-2021
- 1 High-level discussion conducted. Binational discussions on local, federal, and international policies affecting the energy sector. Memorandum of Understanding between Sonora and Arizona Governors
- 15 Projects proposed. The Arizona-Sonora Strategic Plan lists 15 prioritized binational projects in water, air, waste management and wildlife

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### Planning, environmental and preliminary engineering

- 1 Financial / technical model developed and implemented. Financial e-model to simulate cash flow by varying revenue and expenditures for utilities, developed for the Plan for Efficiency Improvements and Investments in Piedras Negras, COAH.

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### Final designs

- 14 Final design reports completed:
  - ✓ 10 for energy efficiency improvements in water utilities;
  - ✓ 2 for rehabilitation and improvements in wastewater collection systems;
  - ✓ 1 international outfall interceptor; and
  - ✓ 1 aqueduct: Rio Colorado-Tijuana Aqueduct (RCTA).
- 2 Workshops conducted as part of the design process to identify energy saving opportunities and advanced towards implementation of improvements in the Colorado River-Tijuana aqueduct.
- 1 Certification y financing proposal completed as result of final design work done. Drinking water system improvements in Whetstone, AZ, advanced for certification to receive a Community Assistance Program (CAP) grant.
- 4 Opportunities for energy savings identified as result of final design work done:
  - ✓ Energy efficiency improvements in the Colorado River Aqueduct (Tijuana);
  - ✓ Energy audit recommendations for the WWTP upgrade in Anthony, NM; and
  - ✓ Improvements of water utilities in Tamaulipas and Coahuila.
- 2 Applications for funding to NADB as result of final design work done.
- 2 Applications for funding to other institutions:
  - ✓ *Energy Audit Recommendations for WWTP Upgrades in Anthony, NM*, applied to the New Mexico Finance Authority (NMFA); and
  - ✓ *McAdoo Acres Subdivision, Lower Valley Water District, El Paso County, TX*, applied to the Texas Water Development Board (TWDB)

## Sector Studies

### Strategic planning

- 5 Strategic plans developed:
  - ✓ 3 climate action plans for Mexican border states: one to identify mitigation policies in Tamaulipas and two socio-econometric analyses of prioritized mitigation policies in Chihuahua and Coahuila
  - ✓ 1 solar energy strategic plan for the solar industry in Mexico
  - ✓ 1 pilot test of the Sustainable Cost Manual for Water Utilities in Mexico developed by the Mexican National Water Commission (CONAGUA) and the Inter-American Development Bank (IDB) in Piedras Negras, COAH.
- 4 Advanced econometric models developed and implemented:
  - ✓ 3 socio-econometric equilibrium models were applied and donated to the state universities in Baja California, Chihuahua and Coahuila. The U.S. Agency for International Development (USAID) and EPA complemented TAP funds; and
  - ✓ 1 econometric model of solar energy costs and savings for the border region as part of the *Tonatiuh* Solar project.
- 15 Infrastructure projects identified that could be certified and financed by NADB.<sup>2</sup>

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### Impact assessments

- 1 Study in Baja California, assessing 18 projects certified and implemented between 1997 and 2014 in Tijuana, Playas de Rosarito, Tecate and Mexicali.
- 3,409 Survey questionnaires applied to document the perception that communities have of their quality of life after the implementation of infrastructure projects

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### Technical manuals and guidelines

- 4 Technical manuals and guidelines developed, published and disseminated:
  - ✓ Under green infrastructure initiatives technical manuals and guidelines were developed for implementation of municipal projects; y
  - ✓ In partnership with CONAGUA, guidelines were developed for energy savings in water systems.

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### Legal frameworks

- 6 Municipal urban regulations updated to allow Mexican municipalities to incorporate green infrastructure elements in infrastructure project in Tijuana, Nogales, Ciudad Juarez, Saltillo, Hermosillo and Monterrey.

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### Public Policies

- 76 Public policies proposed. Various studies, activities and workshops generated public policy proposals on different topics, i.e. renewable energy, energy efficiency, public transportation, low impact urban development, etc.
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<sup>2</sup> These 15 infrastructure projects are related to the five public policies for mitigating greenhouse gas emissions, at the state level, and have the greatest potential for reducing emissions and the best cost-benefit ratio in their implementation.

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### Workshops and meetings

- 35 Workshops with experts and interested audiences. Many of the TAP initiatives required workshops to address complex issues with specialists and disseminate information to the border communities (*i.e.* energy audits in water utilities, regional climate change action plans, green infrastructure initiatives, etc.).
- 31 Working meetings held with 1,150 active participants:
- ✓ As part of the development of the state climate change action plans, meetings were held with chambers of commerce, professional and business organizations, academics and communities in nine regions of the states of Chihuahua, Tamaulipas and Coahuila; and
  - ✓ Outreach meetings with government officials to sensitize and coordinate with sponsors and local authorities, such as city mayors, utility directors and state government officials.
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## Capacity Building

### Forums and conferences

- 7 Forums and conferences held with 1,180 attendees:
- ✓ 3 in Mexico: *Finanzas Subnacionales* in Mexico City with other financing organizations, Consequences of Climate Change and Green Infrastructure;
  - ✓ 2 in the U.S.: Green Urban Infrastructure Workshop and Energy Forum; and
  - ✓ 2 binational events: Border Energy Forum and Green Infrastructure Forum.
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### Training sessions

- 19 Training sessions delivered with 311 attendees:
- ✓ UMI Modules I to IV on water utility management;
  - ✓ Business management for water utilities in Hermosillo, Sonora;
  - ✓ Lower Rio Grande Utility (NM) water audit;
  - ✓ Solid waste management and climate change seminars in collaboration with Tecnológico de Monterrey (ITESM);
  - ✓ Workshops based on the World Bank climate change webinar; and
  - ✓ Green infrastructure training in Sonora and Coahuila.
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### Public access to information

- 9 Cases of access to information facilitated to strengthen the capabilities and knowledge of stakeholders, government officials, academia, non-governmental organizations (NGOs) and general public.
- 14 High-level discussions facilitated. Attendees engaged in high-level discussions on local, federal, and international policies for different sectors: Mexico (9), U.S. (3) and border-wide (2).
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The ratio between the actual cost and the amount budgeted on an individual basis ranges between 0.75 and 0.93.

## VII. Aggregate Results

The aggregate results of the indicators for each TA category are presented in Appendix C. Some indicators do not have any records yet since the projects included in this report do not pertain to the sectors being tracked by those indicators. The tables in Appendix C will be updated on an ongoing basis as more projects are completed.

Because of the relatively low number of TA projects completed to date and their dispersion in various sectors and categories, it is not yet possible to identify tendencies that can be considered for improvements or success factors.

## VIII. Conclusions

Below are some general conclusions that can be drawn from the completed TAP projects, including what worked well (best practices) and areas of improvement (lessons learned).

### Internal Process Perspective:

- ✓ For internal tracking purposes, all projects should be identified by consistent project name, component (output) title or ID number.
- ✓ It is important to identify, document and continue applying the best practices that have prevented the cancellation of TAP projects during the three-year period analyzed.
- ✓ UMI and other capacity-building initiatives need to go beyond the traditional “classroom” model applied in the past and include other municipal services.
- ✓ To better respond to the actual needs, desires and aspirations of border stakeholders, closer and more timely coordination and information sharing among NADB departments is needed.

Technical Perspective: Better results measurement mechanisms and tools need to be developed to evaluate the efficiency and impact of the TAP program on an ongoing basis.

### Financial Perspective:

- ✓ Less than 48% of the TAP funds were allocated to project development activities. It is important to review the distribution of available funds among the three TA categories to foster projects that will eventually be certified and financed by NADB.
- ✓ The requirement to provide matching funds upfront and in cash by the sponsor generally discourages their participation. It is difficult to assure the match; therefore, a better way to incorporate the financial participation of sponsors and their level of engagement in the project needs to be considered.
- ✓ Increasing partnerships with other institutions to fund TA projects jointly would leverage the effectiveness of the program. Possible candidates include EPA, the Inter-American Development Bank (IDB), the World Bank, the German company GIZ, the U.S. Agency for International Development (USAID), the Mexican National Water

Commission (CONAGUA), Mexican National Science and Technology Council (Conacyt), the Mexican development bank (Banobras), Rockefeller Foundation, etc.

Schedule / Time Perspective:

- ✓ Project sponsors must demonstrate proper legal authority to obtain funding.
- ✓ Strong candidates for project certification must have priority for TAP funding.

Communication Perspective: Effective public participation contributes to the readiness of the population to receive the project and/or to mitigate obstacles as early as possible.

## Appendix A: Sample TAP Project Fact Sheet



### TECHNICAL ASSISTANCE PROGRAM PROJECT FACTSHEET

<b>Project Name</b>	<b>International Outfall Interceptor (IOI) Meter Placement Study &amp; Installation Design for Nogales, Sonora</b>		
<b>TAP Number</b>	2108	<b>Start Date</b>	03/28/16
<b>Project Location</b>	Nogales, Sonora	<b>Completion Date</b>	12/16/16
<b>Project Sponsor</b>	CILA	<b>Closeout Report Date</b>	07/07/17
<b>TA Fundamental Objective</b>			
<p>Per IBWC/CILA Minute 276, a capacity to support a maximum annual flow of 434 LPS (9.9 MGD) from Mexico has been reserved for treatment at the Nogales International Wastewater Treatment Plant (NIWWTP) at a fixed price; the cost of excess flows conveyed to the US have a considerable cost increase. An effective metering system was required to confirm the volume of WW generated by Nogales, Son.</p>			
<b>TA Scope</b>			
<p>CILA (Mexican Section of IBWC), in coordination with OOMAPAS Nogales and CONAGUA, proposed to install meters at the IOI prior to crossing the US-Mexico border, to strengthen the institutional capacity of the OOMAPAS and improve its management of WW flows and assure a fair assessment of treatment costs at the NIWWTP.</p>			
<b>Results</b>		<b>Location</b>	
<b>Outcomes</b>		<b>TA Funding (US\$)</b>	
<p>Placement of a meter on the International Outfall Interceptor (IOI) for OOMAPAS to have accurate WW flow and volumes measurements conveyed from Mexico to the NIWWTP. CILA committed to implement the study's recommendations.</p>		<b>TA Approved</b>	\$80,000.00
		<b>Contracted</b>	\$20,650.20
		<b>Disbursed</b>	\$20,650.20
<b>Outputs</b>		<b>Sources of Funding</b>	
<ul style="list-style-type: none"> <li>• Final Design (FD) for WW flows meter placement, including civil site improvements</li> <li>• FD Specifications &amp; Bid Documents</li> </ul>		<b>JTAP</b>	\$20,650.20
		<b>Other Funds</b>	N/A
<b>Benefited Population</b>	212,533 residents		
<b>Project Site</b>			

## Appendix B: TAP Output and Outcome Indicators

Outputs Indicators	Outcomes indicators
<b>Project Development</b>	<b>Project Development</b>
<u>Master Plans</u> <ul style="list-style-type: none"> <li>▪ Approved TA projects (Qty)</li> <li>▪ Reports produced (Qty)</li> </ul>	<u>Master Plans</u> <ul style="list-style-type: none"> <li>▪ Strengthened governance and transparency</li> <li>▪ Commitment to develop short-term priorities</li> <li>▪ Advancement to technical development</li> <li>▪ Public policies and projects proposed</li> <li>▪ Potentially benefitted population</li> </ul>
<u>Planning and Preliminary Engineering:</u> <ul style="list-style-type: none"> <li>▪ Approved TA projects (Qty)</li> <li>▪ Reports produced (Qty)</li> <li>▪ Financial / technical models (Qty)</li> </ul>	<u>Planning and Preliminary Engineering</u> <ul style="list-style-type: none"> <li>▪ Strengthened governance and transparency</li> <li>▪ Advancement towards implementation</li> <li>▪ Potentially benefitted population</li> </ul>
<u>Final Design</u> <ul style="list-style-type: none"> <li>▪ Approved TA projects (Qty)</li> <li>▪ Reports produced (Qty)</li> <li>▪ Workshops (Qty)</li> </ul>	<u>Final Design</u> <ul style="list-style-type: none"> <li>▪ Advancement towards implementation</li> <li>▪ Potentially benefitted population</li> </ul>
<b>Sector Studies</b>	<b>Sector Studies</b>
<u>Work meetings (Qty)</u> <ul style="list-style-type: none"> <li>▪ Approved TA projects</li> <li>▪ Workshops with experts and interested public</li> <li>▪ Meetings with government officials</li> <li>▪ Attendees</li> </ul>	<u>Knowledge management and transfer</u> <ul style="list-style-type: none"> <li>▪ Beneficiaries (Qty)</li> </ul>
<u>Analytical tools (Qty)</u> <ul style="list-style-type: none"> <li>▪ Surveys</li> <li>▪ Advanced models</li> </ul>	<u>Strengthened governance and transparency</u> <ul style="list-style-type: none"> <li>▪ Public access to studies and reports (Qty of cases)</li> <li>▪ High-level discussions (Qty of events)</li> </ul>
<b>Capacity Building</b>	<b>Capacity Building</b>
<u>Improvement of intellectual capital (Qty)</u> <ul style="list-style-type: none"> <li>▪ Approved TA projects</li> <li>▪ Forums and conferences</li> <li>▪ Training events</li> </ul>	<u>Reports (Qty)</u> <ul style="list-style-type: none"> <li>▪ Strategic plans (including climate action plans)</li> <li>▪ Impact assessment studies</li> <li>▪ Guides and manuals</li> </ul>
	<u>Knowledge management and transfer</u> <ul style="list-style-type: none"> <li>▪ Legal instruments (modification to existing regulations)</li> <li>▪ Public policies proposed</li> <li>▪ Potential infrastructure projects identified</li> </ul>



## Appendix C: Aggregate Results to Date

### Project Development

#### Master Plans

Output Indicators			Outcome Indicators		
Master Plans		Quantity	Master Plans		Quantity
Approved technical assistance projects		1	Strengthened governance & transparency (public outreach)	1. Public access to the reports	0
Reports produced		1		2. High-level discussions (local, federal, international)	1
<b>Input Indicators</b>			Commitment to develop short-term priorities <sup>1</sup>	1. Funding (application)	0
	<b>Authorized</b>	<b>Disbursed</b>	Advance to technical development	1. Funding commitment	0
TAP grant funds (US\$)	\$38,676	\$28,814		2. Scope of work development	0
Investment ratio (actual \$ / authorized \$)	0.75		Public policies and projects proposed	1. Projects proposed	15
				2. Strategic environmental plans	1
			Population potentially benefitted (residents) <sup>2</sup>		9,668,330

<sup>1</sup> "Commitment to develop short-term priorities" refers to an expected action reflecting the sponsor's commitment to obtain funding to address needs detected in the master plan.

<sup>2</sup> Includes the population benefitted by the binational Arizona-Sonora plan.

#### Planning and Preliminary Engineering

Output Indicators			Outcome Indicators		
Planning and preliminary engineering		Quantity	Planning and preliminary engineering		Quantity
Approved technical assistance projects		1	Strengthened governance & transparency (public outreach)	1. Participation of NADB Board of Directors <sup>1</sup>	0
Reports produced		2		2. Public access to the reports	0
Financial / technical model (cash flow)		1		1. Environmental compliance/clearance	0
<b>Input Indicators</b>			Advance towards project implementation	2. Funding application <sup>2</sup>	0
	<b>Authorized</b>	<b>Disbursed</b>		3. Possibility of improving drinking water services	1
TAP grant funds (US\$)	\$100,000	\$91,945		4. Final design initiated	0
Investment ratio (actual \$ / authorized \$)	0.92		Population potentially benefitted (residents)		159,507

<sup>1</sup> This outcome refers to the eventual participation of NADB's Board of Directors.

<sup>2</sup> "Funding application" refers to an outcome that includes applications for funding from NADB and other institutions.



## Final Design

Output Indicators	
Final Design	Quantity
Approved technical assistance projects	13
Reports produced	14
Workshops	2

Input Indicators		
	Authorized	Disbursed
TAP grant funds (US\$)	\$636,730	\$480,748
Investment ratio (actual \$ / authorized \$)	0.76	

Outcome Indicators		
Final Design		Quantity
Advance towards project implementation	1. Certification <sup>1</sup>	1
	2. Funding commitment	0
	3. Identification of energy saving opportunities	3
	4. Possibility of improving drinking water services	3
	5. Possibility of improving wastewater collection services	4
	6. Possibility of improving wastewater treatment (reduce discharges)	2
	7. Funding application for NADB grant	2
	8. Funding application to other institution	2
Population potentially benefitted (residents)		4,054,388

<sup>1</sup> Advancement towards certification of drinking water projects for low-income communities, to be financed with a grant from NADB's Community Assistance Program.

## Sectorial Studies

Output Indicators		
Sector studies	Quantity	
Approved technical assistance projects	6	
Work meetings	1. Workshops with experts/public	35
	2. Meetings with government officials	31
	3. Active participants (persons)	1,150
Analytical tools	1. Survey questionnaires applied	3,409
	2. Advanced econometric models <sup>1</sup>	4
Input Indicators		
	Authorized	Disbursed
TAP grant funds (US\$)	\$498,000	\$462,571
Investment ratio (actual \$ / authorized \$)	0.93	

Outcome Indicators		
Sector studies		Quantity
Reports (assessment of existing conditions and needs)	1. Strategic plans	5
	2. Impact assessments	1
	3. Guidelines and manuals	4
	4. Legal instruments <sup>2</sup>	6
Knowledge management & transfer (internal / external)	1. Potential infrastructure projects identified	15
	2. Public policies proposed	76
Population potentially benefitted (residents) <sup>3</sup>		21,716,995

<sup>1</sup> Includes cost and savings analyses, econometry, etc.

<sup>2</sup> Amendments to existing regulations to implement green infrastructure projects.

<sup>3</sup> Includes the population of the six Mexican border states.

## Capacity Building

Output Indicators			Outcome Indicators			
Institutional Capacity Building		Quantity	Institutional Capacity Building		Quantity	
Approved technical assistance projects		22	Knowledge management & transfer (internal / external)	1. Forum & conference beneficiaries (persons)		1,180
Improvement of intellectual capital	1. Forums & conferences	7		1.1 Average cost per capita (US\$)		\$177
	2. Training events	19		2. Training beneficiaries (persons)		311
			1.1 Average cost per capita (US\$)		\$1,918	
Input Indicators			Strengthened governance & transparency (public outreach)	3. Meetings with NADB Board participation		1
	Authorized	Disbursed		4. Public access to studies/reports (cases)		9
TAP grant funds (US\$)	\$962,300	\$817,204	5. High-level discussions (local, federal, international)		14	
Investment ratio (actual \$ / authorized \$)	0.85		Population potentially benefitted (residents) <sup>1</sup>			1,491

<sup>1</sup>The beneficiaries are the population with access to training, forums and conferences.