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From: The Secretary
Subject: Mexico. Proposal for a loan for the “Comprehensive Development Project for Water and Sanitation Utilities (PRODI)”

Basic Information: Loan typeGlobal Multiple Works Operation (GOM)
BeneficiaryUnited Mexican States
Amount up to US\$200,000,000
SourceOrdinary Capital

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Remarks: This operation is not included in Annex III of document GN-2805, “2015 Operational Program Report”, approved by the Board of Executive Directors on 15 April 2015. Therefore, the operation does not qualify for approval by Simplified Procedure.

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DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

MEXICO

**COMPREHENSIVE DEVELOPMENT PROJECT FOR
WATER AND SANITATION UTILITIES (PRODI)**

(ME-L1176)

LOAN PROPOSAL

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This document is being released to the public and distributed to the Bank's Board of Executive Directors simultaneously. This document has not been approved by the Board. Should the Board approve the document with amendments, a revised version will be made available to the public, thus superseding and replacing the original version.

CONTENTS

PROJECT SUMMARY

I.	DESCRIPTION AND RESULTS MONITORING	1
A.	Background, problem to be addressed, and rationale	1
B.	Objectives, components, and cost	6
C.	Key results indicators	9
II.	FINANCING STRUCTURE AND MAIN RISKS	9
A.	Financing instruments	9
B.	Environmental and social safeguard risks	10
C.	Fiduciary risks	11
D.	Other project risks	11
III.	IMPLEMENTATION AND MANAGEMENT PLAN	13
A.	Summary of implementation arrangements	13
B.	Summary of arrangements for monitoring results	15

ANNEXES	
Annex I	Development Effectiveness Matrix (DEM) – Summary
Annex II	Results Matrix
Annex III	Fiduciary Agreements and Requirements

ELECTRONIC LINKS	
REQUIRED	
1.	Multiyear execution plan
2.	Annual work plan (AWP)
3.	Monitoring and evaluation plan
4.	Environmental and social management report (ESMR)
5.	Procurement plan
OPTIONAL	
1.	Project economic analysis
2.	Project technical analysis
3.	Institutional and financial analysis
4.	Evaluation of public services policy compliance
5.	Draft Operations and Procedures Manual
6.	Draft technical cooperation document to support the program
7.	Draft terms of reference for the CDP

ABBREVIATIONS

AFS	Audited financial statements
ASF	Auditoría Superior de la Federación [Federal Audit Office]
BANOBRAS	Banco Nacional de Obras y Servicios Públicos [National Bank of Public Works and Services]
BANSEFI	Banco del Ahorro Nacional y Servicios Financieros [National Savings and Financial Services Bank]
CDP	Comprehensive development plan
CEA	Comisión Estatal de Agua y Saneamiento [State Water and Sanitation Commission]
CONAGUA	Comisión Nacional de Agua [National Water Commission]
ESMF	Environmental and social management framework
ICAP	Institutional Capacity Assessment Platform
ICAS	Institutional Capacity Assessment System
IMTA	Instituto Mexicano de Tecnología del Agua [Mexican Water Technology Institute]
O&M	Operation and maintenance
OIC	Órgano interno de control [internal control unit]
OPM	Operations and Procedures Manual
PATME	Programa de Asistencia Técnica para la Mejora de la Eficiencia del Sector de Agua Potable y Saneamiento [Technical Assistance Program to Improve the Efficiency of the Water and Sanitation Sector]
POD	Proposal for operation development
PROME	Programa de Mejoramiento de Eficiencia de Organismos Operadores [Water Utilities Efficiency Improvement Program]
PROSSAPYS	Programa para la Sostenibilidad de los Servicios de Agua Potable y Saneamiento en Comunidades Rurales [Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities]
SFP	Secretaría de la Función Pública [Civil Service Department]
SHCP	Secretaría de Hacienda y Crédito Público [Department of Finance and Public Credit]

PROJECT SUMMARY

MEXICO COMPREHENSIVE DEVELOPMENT PROJECT FOR WATER AND SANITATION UTILITIES (PRODI) (ME-L1176)

Financial Terms and Conditions				
Borrower: United Mexican States			Flexible Financing Facility ^(a)	
			Amortization period:	Bullet payment on 15 December 2024
Executing agency: National Water Commission (CONAGUA)			Original WAL:	Max. 9 years ^(b)
			Disbursement period:	5 years
			Grace period:	Bullet payment on 15 December 2024
Source	Amount	%	Inspection and supervision fee:	^(c)
IDB (Ordinary Capital)	US\$200 million	100%	Interest rate:	LIBOR-based
			Credit fee:	^(c)
Total	US\$200 million	100%	Currency of approval:	U.S. dollars from the Ordinary Capital (OC)
Project at a Glance				
Project objective/description: To support the National Water Commission (CONAGUA) in improving the quality of water and sanitation service in communities, preferably between 50,000 and 900,000 inhabitants, through the execution of short- and medium-term comprehensive projects by the utilities responsible for service delivery, to promote operational and financial sustainability.				
Special contractual conditions precedent to the first disbursement of the loan proceeds: Evidence will be provided that: (i) the mandate contract between the borrower, CONAGUA, and the National Savings and Financial Services Bank (BANSEFI) for program execution has been signed and is in force; and (ii) the Operations and Procedures Manual (OPM) agreed upon with the Bank for the program is in force, including an environmental and social management framework (ESMF) (see paragraph 3.4).				
Exceptions to Bank policies: None.				
Project classified as: ^(d) SV <input type="checkbox"/> PE <input type="checkbox"/> CC <input checked="" type="checkbox"/> CI <input type="checkbox"/>				

^(a) Under the terms of the Flexible Financing Facility (document FN-655-1) the borrower has the option of requesting changes to the amortization schedule and currency and interest rate conversions. The Bank will take operational and risk management considerations into account when reviewing such requests.

^(b) The original weighted average life (WAL) and grace period may be shorter, depending on the effective signature date of the loan contract.

^(c) The credit fee and inspection and supervision fee will be established periodically by the Board of Executive Directors as part of its review of the Bank's lending charges, in accordance with the relevant policies.

^(d) SV (Small and Vulnerable Countries), PE (Poverty Reduction and Equity Enhancement), CC (Climate Change, Sustainable Energy, and Environmental Sustainability), CI (Regional Cooperation and Integration).

I. DESCRIPTION AND RESULTS MONITORING

A. Background, problem to be addressed, and rationale

- 1.1 **Current status of water and sanitation services and sector institutional framework.** According to data from the Comisión Nacional del Agua [National Water Commission] (CONAGUA), the amount of renewable water per capita¹ in Mexico was 17,742 m³/inhabitant/year in 1950. By 1960 it had fallen to just under 11,000 m³/inhabitant/year; for 2013 it was estimated at 3,982 m³/inhabitant/year;² and by 2030 it is projected to diminish to 3,430 m³/inhabitant/year. Rising population in conjunction with increasing urbanization could cause a much more serious water shortage.³ According to the latest population and housing census (2010), Mexico has 112.3 million inhabitants, 77.8% of whom live in urban areas, and 22.2% in rural areas. It is estimated that by 2030, 80.4%⁴ of the population will be urban. A very large number of institutions are involved in the sector at the federal, state, and local levels. At the federal level, CONAGUA is responsible for the administration of water resources in Mexico and for running programs to build water and sanitation infrastructure. In addition, Banco Nacional de Obras y Servicios Públicos [National Bank of Public Works and Services] (BANOBRAS) and other national financial institutions are responsible for lending and onlending domestic and external resources to the states, municipios, and utilities with sector investment needs. The municipios or utilities are responsible for water and sanitation service delivery and infrastructure operation and maintenance. Through State Water and Sanitation Commissions (CEAs) or their equivalent, the states, jointly with the municipios or utilities, determine the priority of the works to be built. In general, the CEAs concentrate on planning and technical assistance activities or direct support to smaller municipios and to rural areas. Additionally, CONAGUA is active at state level, operating through 13 watershed authorities and 20 local departments responsible for works supervision and validating technical files on federally funded initiatives.
- 1.2 **Service management in mid-sized cities (50,000 to 900,000 inhabitants).** Since municipios are responsible for providing water and sanitation services, most have set up some form of specialized agency, a process that has led them to partner with other municipios. Alternatively, a state agency provides a service on behalf of the municipio. The utilities are decentralized municipal or state government agencies with separate legal status and their own assets, which are responsible for providing water, sewer, and sanitation services throughout the municipal district. However, in many cases they only cover urban areas, leaving service delivery in rural areas to water committees set up by members of the community.

¹ A country's renewable water per capita is the ratio of the total renewable resources to the number of inhabitants.

² Per capita water availability is much lower in Mexico than in countries such as Canada (82,485 m³/inhabitant/year), the United States (9,589 m³/inhabitant/year), and generally in South America as a whole, such as Brazil (43,157 m³/inhabitant/year); but it is slightly higher than in many European countries. Mexico ranks ninety-first out of 199 countries for which information is available ("Estadísticas del Agua en México" [Water Statistics in Mexico], CONAGUA, 2014 Edition).

³ "Estadísticas del Agua en México" [Water Statistics in Mexico], CONAGUA, 2014 Edition.

⁴ Consejo Nacional de Población [National Population Council] (CONAPO).

- 1.3 An estimated 35% of the country's population (approximately 39 million people) lives in municipios with communities of between 50,000 and 900,000 inhabitants. These communities are found in 190 of the country's 2,440 municipios. 95% of the population has piped water on the property, and 88.8% have a connection to the sanitary sewer network.⁵ These municipios are served by approximately 160 decentralized public agencies with separate legal status and their own assets, known as "organismos operadores," or utilities. In other cases, services are provided directly by the municipio, or in a small portion of cases, there is a concession whereby a private company provides the service.
- 1.4 **Condition of utilities serving mid-sized cities.** Despite the progress made in recent years in terms of access to water service, no major improvements have been seen in the efficiency of service delivery. The most significant failings in the sector are discontinuity of service (percentage of hours per day during which customers receive drinking water at home), physical losses from distribution networks, commercial losses (unbilled customers, inaccurate metering of water use, or illegal connections), and operational inefficiencies (asset management, energy efficiency, staff training, and preventive maintenance). The utilities also have shortcomings in their information management (roster of users, billing systems, management software and hardware). Lastly, the low payment collections rates in some cases, resulting from low metering levels and obsolete business systems with out-of-date charging rates, due to the fragmentation of regulatory responsibilities⁶ and the absence of a rate structure that reflects the actual costs of operation, have had an impact on quality of service. The data from the Programa de Indicadores de Gestión de Organismos Operadores [Utility Management Indicators Program] (PIGOO),⁷ implemented by the Instituto Mexicano de Tecnología del Agua [Mexican Institute of Water Technology] (IMTA), shows the following information on utilities serving urban settlements of between 50,000 and 900,000 inhabitants: (i) only 16 of 29 utilities that reported commercial efficiency⁸ had a level above 70%; (ii) only 7 of 35 utilities that reported nonrevenue water⁹ had a level below 30%; (iii) at only 38 of 64 utilities that reported having house metering, does this apply to 50% of readings; (iv) at 21 of 35 utilities that reported service continuity data, service interruptions last 10 or more hours a day; (v) only 11 of 69 utilities that reported the indicator for employees per meter reading have four or fewer employees per thousand readings; and (vi) around 40% of 69 utilities that reported operating efficiency index

⁵ Population and housing census, 2010. Instituto Nacional de Estadística y Geografía [National Statistics and Geography Institute] (INEGI).

⁶ Given the autonomy and specific features of each state, different state water and sanitation laws have been published with regulations and instruments enforced by the CEAs. In addition to these laws, service delivery is covered under the municipal charters. At the municipal level, the operating regulations of the utilities constitute the principal legal framework. Rates are set as determined by each state water and sanitation law, and so may be approved by the utility boards, municipal councils, or state congresses.

⁷ Utility Management Indicators Program (PIGOO), www.pigoo.gob.mx.

⁸ Commercial efficiency is defined as the ratio of water for which payment is collected to water billed.

⁹ The nonrevenue water indicator is defined as the drinking water entering a distribution system that is not registered on users' household meters, mainly due to their inaccuracy (insensitivity to low flow rates), losses from the distribution network (leaks or fraudulent consumption), or illegal connections. It is calculated as the difference between the water billed and the water produced.

data¹⁰ had achieved values above 100%. These data are very different from other countries around the world.¹¹ In terms of the financial condition of the utilities, nationwide, it is estimated that only US\$69 of every US\$100 spent on operating water and sanitation systems is recouped through charges,¹² the deficit being covered with contributions from national and subnational government ([optional electronic link 3](#)).

- 1.5 **Water Utilities Efficiency Improvement Program (PROME).** In light of the problems mentioned in paragraph 1.4, in 2004 CONAGUA prepared the Pilot Program for Institutional Development in the Water Supply and Sanitation Sector (PRODDI) with the Bank's support. However, the Mexican government subsequently decided not to implement the program (loan 1540/OC-ME). One year later, jointly with the World Bank, CONAGUA prepared the Technical Assistance Program to Improve the Efficiency of the Water and Sanitation Sector (PATME), to address this same issue. This consisted of: (i) supporting the modernization of the water and sanitation sector by strengthening policies at the federal and state levels; and (ii) developing and replicating successful, sustainable models of water and sanitation service delivery by supporting selected service providers and municipios. The Water Utilities Efficiency Improvement Program (PROME) built on the experience of PATME, again with the support and financing of the World Bank. PROME pursued the same objective as PATME but on a larger scale, with funding of US\$100 million for technical assistance and investments in efficiency. Although PROME managed to improve some of the performance indicators of the participating utilities, CONAGUA found that the activities financed did not achieve the expected outcomes, as described in paragraphs 1.6 and 1.7.
- 1.6 **Results obtained.** IMTA¹³ conducted a desk review of 143 of the actions funded out of a total of 175 conducted over the period 2010-2013 at 27 utilities. This review found that only four utilities had carried out one action, and the one implementing the most actions was the Guadalajara utility, with 15. In other words, investments were distributed among the utilities on no particular criteria, and several utilities had made investments for fairly insignificant amounts. Additionally, 16 of the 27 utilities taking part in the program participated for only one year, and 15 of these participated during the last year of the evaluation. Thus, more than half of the utilities had no comprehensive investment programs, just isolated actions to meet specific needs. The study also found that 23 of the 175 actions were studies, and 38 involved the purchase and installation of meters. Although these were

¹⁰ Operating income/operating costs (%).

¹¹ In countries such as Brazil, Chile, and Poland service is continuous 24 hours a day. Nonrevenue water in Brazil is 39%, in Chile it is 33%, and in Poland 15%. The number of employees per thousand readings is 2.15 in Brazil, and 8.7 in Poland. (data obtained from [ib-net](http://www.ib-net.org) para for the most recent year available: www.ib-net.org). These countries have optimized their asset management process, resulting in significant improvements in service.

¹² Vazquez-Ahued, F. and R. Rodriguez, Mexico Water Companies, Moody's Investors Service, 8 April 2015.

¹³ See the draft report "Diagnóstico del Programa de Mejoramiento de Eficiencias de Organismos Operadores (PROME), e impacto de resultados en los organismos operadores participantes durante el periodo 2010-2013 y propuesta para su fortalecimiento" [Diagnostic assessment of the Water Utilities Efficiency Improvement Program (PROME) and impact of outcomes on participating utilities in the period 2010-2013, and proposal for strengthening them], IMTA, 2015.

considered efficiency control actions, they are not directly reflected in efficiency gains. This analysis therefore reveals that, when the investments are too small, or the utilities too large, for the program's investment capacity, it is not possible to see the outcomes reflected in the global indicators. Additionally, although the study finds that, in general, actions contributed to utilities' efficiency gains, it regards them as difficult to quantify due to the lack of reliable baselines for evaluation of improvements and action impacts. Their evaluation of the impact was therefore only qualitative.

- 1.7 **Lessons learned.** It may be concluded from the IMTA study that: (i) investment planning needs to be strengthened to make investments more strategic in the short and medium term; (ii) mechanisms need to be found to prioritize investments and sequence them logically; (iii) systems for generating indicators need to be strengthened, and a reliable baseline is needed so the impacts of project implementation can be monitored; and (iv) in order to obtain tangible results, minimum investments need to be made based on utility size. Additionally, through the experience gained by the Bank with the execution of the Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPYS) I, II, III, and IV,¹⁴ it has been identified that the annual periods for which federal resources are committed mean executing agencies cannot be certain that resources will be available for the following year, and for CONAGUA's part, there are no mechanisms to verify the sequence of investments beyond this period. The Bank's experience with utilities in other countries of the region has shown that, to guarantee the sustainability of interventions, it is necessary to support utilities with capacity-building programs. Also, to facilitate utilities' access to resources other than subsidies, support must to be provided for the development of mechanisms facilitating such access.¹⁵
- 1.8 **Project strategy.** Based on the gaps identified and the lessons learned described in paragraph 1.7, this program will be limited to the universe of interventions of utilities in communities of 50,000 to 900,000 inhabitants. Additional requirements will be established for utilities in communities of 500,000 to 900,000 inhabitants,¹⁶ and a minimum annual investment by utility size will be set, which will be established in the Operations and Procedures Manual (OPM) for the program. There was also found to be a need for a quick and easy planning document that identifies the utilities' specific challenges to achieving financial sustainability, and prioritizes the actions to be conducted. The program therefore envisages a comprehensive development plan (CDP) enabling packages of investments to be structured to address the obstacles preventing actions based on financial sustainability; the prioritization of packages of actions based on their financial

¹⁴ PROSSAPYS I (loan 1161/OC-ME); PROSSAPYS II (loan 1645/OC-ME); PROSSAPYS III (loan 2512/OC-ME); and PROSSAPYS IV (loan 3133/OC-ME).

¹⁵ A mechanism whereby utilities could access resources from a revolving fund was developed under operation RG-X1011.

¹⁶ The experience gained under PROME showed that projects targeted on specific large-scale works are needed in communities of more than 900,000 inhabitants. In communities with less than 50,000 inhabitants few utilities are decentralized, requiring different support to consolidate their structure and subsequent focus on improving efficiency. Utilities serving communities of 500,000 to 900,000 inhabitants, where the biggest investments will be made, will need to meet additional requirements in order to ensure closer monitoring and supervision of progress and outcomes.

returns; and definition of a timetable for achieving tangible results in the short and medium term ([optional electronic link 7](#)).¹⁷ The CDP will also establish a number of measures to guarantee the sustainability of the investments made. Also, in view of the lack of continuity in the actions normally financed with federal resources, in order to ensure financing of each utility over the duration of the program, and commit the utilities, as far as possible, to following the route marked out by the comprehensive development plans, a coordination agreement will be signed, establishing the will of both CONAGUA and the utility to fulfill the terms of the comprehensive development plan. Given the uncertainty of the information the utilities provide to CONAGUA, the comprehensive development plan will include a diagnostic analysis to establish the baseline for the selected indicators. Progress will then be reviewed based on both the annual reports from the utilities and the intermediate and final reviews of the loan operation. Lastly, a component will be included in the program to test new mechanisms allowing utilities to access alternative sources of finance or sources to complement the federal funding.

- 1.9 **Complementarity of Bank programs in Mexico.** The Bank has worked with CONAGUA on the financing of PROSSAPYS (I, II, III, and IV), which focused on addressing water and sanitation issues affecting the country's rural communities. With this new operation, the Bank will again partner with CONAGUA to address the water and sanitation issues of urban communities. This will, in turn, be complemented by the experience gained from Bank technical cooperation operation ATN/OC-13596-ME, which seeks to develop financing mechanisms for energy efficiency projects in water and sanitation.
- 1.10 **Technical cooperation.** Technical cooperation operation ME-T1300 is currently being developed, to strengthen the design and implementation of the Comprehensive Development Project for Water and Sanitation Utilities (PRODI). It will: (i) support the formulation of investment plans to improve the first utilities; (ii) certify the first utilities using the AquaRating tool; (iii) identify technical, operational, and regulatory monitoring and supervision mechanisms for the program; (iv) prepare program guides and onboarding and training courses on specific technical, financial, and institutional issues; (v) design the consultant training scheme; (vi) lay the groundwork for implementation of program Component III; and (vii) produce program dissemination documents. The amount of technical cooperation operation ME-T1300 is US\$300,000, to be financed from AquaFund resources. The operation is expected to be approved in December 2015. The execution period will be 24 months, and at CONAGUA's request the executing agency will be the Bank, so that it can better monitor the development of the tools to be used under the program, and ensure the technical expertise necessary to meet the operation's objectives ([optional electronic link 6](#)).
- 1.11 **Priorities and strategies of the Government of Mexico.** The Plan Nacional de Desarrollo [National Development Plan] (PND) 2013-2018¹⁸ seeks to implement

¹⁷ The effectiveness of the proposed interventions for the achievement of physical, commercial, and financial efficiency is broadly demonstrated in various studies, such as Fanner, P., "[The NRW contract in Bahamas, Challenges and Lessons Learned](#)," Water Loss Conference, Vienna, 2014. European Bank, "[Documentation of best practices in non-revenue water management in selected Mediterranean countries Algeria, Israel, Jordan & Morocco](#)," 2013.

¹⁸ <http://pnd.gob.mx/>.

sustainable water management so that all Mexicans can have access to this resource by: assuring a sufficient supply of water fit for human consumption to guarantee food security; increasing the coverage and improving the quality of water and sanitation services; strengthening the development and the technical and financial capabilities of utilities to provide better services, and strengthening the water supply, sewer and sanitation sector's legal framework. The Programa Nacional Hídrico [National Water Program] (PNH) 2014-2018¹⁹ stresses the commitment to ensure that everybody has access to drinking water, drainage, and sanitation services. The program will make a direct contribution to achieving objectives 2 and 3: "Strengthening the water supply and access to water, sewer, and sanitation services" and "increasing the sector's technical, scientific, and technological capabilities."

- 1.12 **Strategic alignment.** The program is aligned with the Bank's country strategy with Mexico (2013-2018) (document GN-2749) in terms of regional development, particularly as it relates to urban development, seeking to narrow the infrastructure and utility gap, specifically concerning water. The program will contribute to the lending program priority target of the Ninth General Capital Increase (GCI-9) (document AB-2764) for "Climate change, renewable energy, and environmental sustainability initiatives," since it involves investments to optimize management of water resources by rationalizing extraction from water resources and improving energy efficiency in infrastructure operation. It will also contribute to the regional development goal of "Infrastructure for competitiveness and social welfare" and the output contribution of "households with new or upgraded water supply," as defined in the Results Framework. Furthermore, the program is aligned with: (i) the Sustainable Infrastructure for Competitiveness and Inclusive Growth strategy (document GN-2710-5), as it contributes to: (a) promoting access to infrastructure services; and (b) supporting the construction and maintenance of sustainable social and environmental infrastructure; and (ii) the dimensions of success and lines of action of the Water and Sanitation Sector Framework Document (document GN-2781-3) for universal access and improved service quality, efficient and sustainable management, and social and environmental sustainability.
- 1.13 **Consistency with Bank policies.** The proposed program and the country sector objectives are consistent with the principles of the Public Utilities Policy (document GN-2716-6) ([optional electronic link 4](#)) and meet the financial sustainability and economic evaluation conditions, inasmuch as that the utilities selected for the financial viability analysis have enough income to fully cover their operation and maintenance (O&M) costs (see paragraph 2.11). The works to be financed through the project are also viable from the socioeconomic standpoint (see paragraph 2.8). To ensure that the program is in line with the policy's principles, the OPM will establish that, in order to analyze financial sustainability, a comprehensive development plan for the utility must be presented demonstrating that it has enough income to fully cover its O&M expenses (see paragraph 1.21).

B. Objectives, components, and cost

- 1.14 **Objective.** To support the National Water Commission (CONAGUA) in improving the quality of water and sanitation service in communities, preferably between

¹⁹ <http://www.conagua.gob.mx/conagua07/contenido/documentos/PNH2014-2018.pdf>.

50,000 and 900,000 inhabitants, through the execution of short- and medium-term comprehensive projects by the utilities responsible for service delivery, to promote operational and financial sustainability.

- 1.15 **Component 1. Institutional support (US\$300,000).** The objective of this component will be to develop classroom-based and online training programs for utilities, develop management and self-assessment support tools, and promote the exchange of know-how between utilities. The component may support the following activities, which will be part of the project OPM: (i) preparation of studies on the water and sanitation sector; (ii) preparation of documents to analyze and disseminate good practices; (iii) design of computer systems for information processing, management, and analysis; (iv) organization of events, lectures, and seminars; (v) development and delivery of onboarding and skills-building courses for CONAGUA and utility staff on strategic issues contributing to the comprehensive development of the utilities; (vi) development of online self-assessment tools and courses; and (vii) development of courses for sector consultants.
- 1.16 **Component 2. Investment in comprehensive actions (US\$199,300,000).** This component will focus on comprehensive development plans and actions for infrastructure, and has three subcomponents.
- 1.17 **Subcomponent 2.1. Comprehensive development plans (US\$700,000).** This component may support: (i) formulation of comprehensive development plans (CDPs); (ii) monitoring of CDP progress and implementation and improvements made; (iii) monitoring and use of the AquaRating²⁰ tool (usage license and certification) and support in its use. The CDP will contain: (a) a diagnostic assessment of the condition of the utility, with a dashboard of operational indicators; (b) areas of improvement; and (c) action programs and investments to perform in the short and medium term, to ensure the financial sustainability of the utility ([optional electronic link 7](#)).
- 1.18 **Subcomponent 2.2. Comprehensive development actions (US\$3,300,000).** This subcomponent may support actions, preferably included in the CDP, such as: (i) design and implementation of structural actions to improve the institutional apparatus and corporate governance of the utilities, reform the legal framework, and improve organizational structure, etc.; (ii) design of a rate calculation mechanism and setting short- and long-term rates that support the utility's financial viability;²¹ (iii) design and implementation of blueprints for better management; (iv) preparation of technical files and terms of reference, and execution plans for

²⁰ AquaRating is a rating system that evaluates the performance of water and sanitation service providers in a comprehensive way. It was developed by the IDB in partnership with the International Water Association (IWA) and is currently managed by the AquaRating agency. <http://www.aquarating.org/en/>.

²¹ This activity includes the generation of the necessary legal documents and support until the necessary endorsements are obtained.

infrastructure measures; and (v) development of tools to help utilities access other sources of finance.²²

- 1.19 **Subcomponent 2.3. Investment in infrastructure and operational improvement (US\$195,300,000).** This subcomponent will support actions, preferably included in the CDP, for investment in the business, financial, administrative, and technical areas of utilities, as established in the program Operations and Procedures Manual, such as: (i) renovation of water mains and/or distribution networks; (ii) source interconnection; (iii) renovation of drinking water pumping stations and sumps; (iv) hydraulic optimization;²³ (v) telemetry systems; (vi) leak detection and repair; (vii) repairs or upgrades to improve energy efficiency of motors, pumps, and electrical equipment; (viii) updating the census of networks and infrastructure; (ix) procurement and installation of bulk meters; and (x) other activities to improve commercial, administrative, and/or physical efficiency.
- 1.20 **Prioritization and eligibility criteria.** CONAGUA will determine whether the utilities meet the following conditions, to be eligible: (i) the utility serves a community of preferably between 50,000 and 900,000 inhabitants; (ii) the utility is a decentralized agency, and (iii) the utility has not concessioned of the assets used for the delivery of water and/or sewer services, in whole or part. Priority will be given to: (i) utilities' actions that are progressing as established in their CDP; and (ii) projects with a better cost/benefit ratio.
- 1.21 Utilities meeting the eligibility criteria must, in turn, meet the following requirements: (i) a coordination agreement has been signed between the state and federal governments; (ii) the utility has formally applied to the PRODI project, agreeing to abide by the program guidelines and prepare a CDP to guide the actions to be executed; (iii) the utility has signed a participation agreement for PRODI with a commitment to adhere to the CDP, ensuring the sustainability of the investments to be made (see paragraph 2.11); (iv) the utility has provided all the information necessary for program monitoring; and (v) the AquaRating tool is used for utilities serving communities of more than 500,000 inhabitants.
- 1.22 The actions supported each year must be included in the CDP, which will be formalized through signature of a participation agreement.
- 1.23 **Program cost and financing.** The total cost of the program will be US\$200 million from the Bank's Ordinary Capital resources. Table 1 shows the breakdown of projected costs.

²² In the future these mechanisms may become autonomous, so that the level of external financing can be increased, and the utilities given incentives to improve performance. This type of innovative instrument was implemented recently by the Bank under operation RG-X1011, "Testing a Prototype Caribbean Regional Fund for Wastewater Management (CReW)," which instituted four revolving funds to finance sanitation infrastructure works.

²³ Sectorization of the distribution network, pressure control, storage capacity optimization.

Table 1. Program Costs and Sources of Financing (US\$000)

Category/Component	IDB	%
I. Components	199,600	99.8%
1. Institutional support	300	0.15%
2. Investment in comprehensive actions	199,300	99.65%
II. Audits, monitoring, and evaluation	400	0.20%
Total cost	200,000	100%

C. Key results indicators

- 1.24 **Expected outcomes.** The main indicators and expected outcomes of the program are shown in Table 2. The Results Matrix is given in Annex II.

Table 2. Key Indicators

Outcome indicators	Baseline	Target
Utilities serving communities of between 50,000 and 900,000 inhabitants, whose staff took part in exchange of know-how or training events.	0	60
Households with upgraded access to drinking water in communities of between 50,000 and 900,000 inhabitants. ²⁴	4,000,000 households	4,238,000 ²⁵ households
Utilities with commercial efficiency of over 70%.	50%	70%

II. FINANCING STRUCTURE AND MAIN RISKS

A. Financing instruments

- 2.1 The program is a multiple works operation, since it will finance physically similar works that are independent from one another. A representative sample has therefore been selected from among the universe of interventions. The program will be executed following the Operations and Procedures Manual (OPM), which establishes the project eligibility and selection criteria (see paragraph 3.5), the program cycle, as well as other matters.
- 2.2 **Disbursement schedule.** The tentative disbursement schedule is given in Table 3.

²⁴ Upgraded access is understood to mean households with a water supply for an average of more than ten hours a day.

²⁵ The impact on the number of households with upgraded access is not as large as would be expected considering the amount of the loan, since the CDP will prioritize actions based on cost/benefit, and in many cases operational/financial and cost reduction actions are expected to be given priority over physical infrastructure actions.

Table 3. Tentative Disbursement Schedule (US\$ millions)

Source	Year 1 2016	Year 2 2017	Year 3 2018	Year 4 2019	Year 5 2020
IDB	10	45	45	55	45
Local contribution	0	0	0	0	0
Percentage	5%	22.5%	22.5%	27.5%	22.5%

- 2.3 **Review of disbursements.** Based on the Bank's experience implementing the Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPYS) I, II, III, and IV (loan 3133/OC-ME, now in execution), the National Water Commission (CONAGUA) has effective controls and record-keeping to identify the expenses of each program or operation. The findings of the Institutional Capacity Assessment System (ICAS) for loan 3133/OC-ME and updated for this operation, as also shown by the pilot of the Institutional Capacity Assessment Platform (ICAP) platform, show CONAGUA to have an adequate level of development. Accordingly, disbursements will be subject to ex post review. Moreover, relying on the country systems, controls established by the Department of Finance and Public Credit (SHCP) and CONAGUA, this operation will also apply the simplified expense reporting system, i.e., disbursement requests will be supported by the accounting records of the transfers to the states, the coordination agreements, and the technical and execution annexes signed by CONAGUA annually with each state. CONAGUA will keep the details of each contract in its database.

B. Environmental and social safeguard risks

- 2.4 Consistent with the principal points of Operational Policy OP-703 the proposed operation was classified as category "B," as it may be expected to cause only short-term, localized adverse environmental impacts, including associated social impacts, for which there are effective, commonly used mitigation measures to mitigate the identified risks. The program is expected to have a positive environmental and social impact, as it will contribute to optimization of water resource use in the project area and improve the quality of water and sanitation services, although it could have some short-term, localized adverse environmental and social impacts. These relate primarily to the limited capacity of certain utilities, possible archaeological finds, and projects implemented in indigenous communities.
- 2.5 As part of program preparation, an environmental and social analysis was conducted, and an environmental and social management framework (ESMF) was formulated for the program, based on analysis of a sample of projects under the Water Utilities Efficiency Improvement Program (PROME) similar to those to be financed under this Comprehensive Development Project for Water and Sanitation Utilities (PRODI). Measures to mitigate the direct environmental impacts will be included in the project budgets and in the bidding documents and conditions for works. These measures will be the direct responsibility of the contractor, under the supervision of the contracting entity, and may be monitored by the Bank. The indirect environmental impacts will be mitigated through implementation of the ESMF, which will indicate the measures to be taken and responsible parties.

C. Fiduciary risks

- 2.6 **Fiduciary risks.** CONAGUA has many years of operating experience with both the IDB and the World Bank and has the support of the National Savings and Financial Services Bank (BANSEFI), designated by the SHCP under a mandate contract as financial agent and official liaison for this lending operation. BANSEFI has experience in this role going back to 2003 and is highly familiar with the Bank's policies and procedures. The level of development of its fiduciary systems is considered to be satisfactory. Consequently the level of risk for program implementation is deemed to be low. The results of the ICAS update and the results of the ICAP pilot show that CONAGUA has a sufficient level of development and so represents a low risk for program implementation. Ex post review is recommended for disbursements and procurement, except when the [procurement plan](#) states otherwise for specific processes. The principal fiduciary risks identified are delays in, or inability to complete, procurement processes, and an insufficient budgetary allocation. For the first case, training workshops on procurement will be held; and for the second, CONAGUA will apply sufficiently in advance for the amount needed to implement the activities.

D. Other project risks

- 2.7 **Other risks.** The principal risks identified at the risk workshop attended by CONAGUA and BANSEFI staff involved in program implementation are: (i) improvised financial, technical, and environmental reports: to address this a process flow will be developed for incorporation into the OPM, including all the actors and estimating time frames for activities. Working meetings will be held with the Bank for the first technical reports; (ii) lack of coordination between the actors involved: to mitigate this risk, the roles of each participant will be defined in the OPM for the operation. Monitoring will also be strengthened through the financial agent and follow-up meetings; (iii) political interference in the administration of human resources (staff turnover): to address this, the comprehensive development plan (CDP) will define actions enabling processes to be institutionalized; (iv) unreliable data for monitoring: to mitigate this risk, the CDP will establish the baseline for each utility. Additionally, information quality will be reviewed during inspection visits; and (v) lack of continuity in execution of the CDP: for which an information system will be designed that allows effective monitoring of the CDP and the capabilities of CONAGUA for effective monitoring will be strengthened.
- 2.8 **Socioeconomic viability.** The program will be implemented as a global multiple-works program. A cost/benefit analysis was done on a sample of 32 projects stratified by utility size, and representing approximately 37% of the investment. Given the types of projects to be financed (small, low-cost), the sample analyzed is considered representative of the universe of interventions. To build this sample, the following factors were taken into account: (i) size of the utility; and (ii) type of project (commercial efficiency, physical efficiency, etc.). Of the projects evaluated, 31 (97%) are socioeconomically viable, with economic internal rates of return (EIRR) of between 13.5% and 315.6% ([optional electronic link 1](#)). Given the nature of the program, conducting a cost/benefit analysis on each project carried out within the CDP will be an eligibility criterion, and only projects with an EIRR of over 12% will be financed by the program. The methodology to be used for the cost/benefit analysis will be described in the project OPM. Lastly, for those utilities

in the sample, the average payment made by water service users is, for an average household, between US\$7.2 and US\$27.6 a month, representing between 0.6% and 2.9% of average household income. In almost all cases there is a discounted rate for low-income households, such that they pay a monthly amount of between US\$2.9 and US\$8.7, representing between 0.2% and 3.4% of average household income. These values are acceptable by international standards.

- 2.9 **Technical viability.** The proposed technical solutions satisfy the need to improve water service for the segment of utilities selected. The projects and interventions identified in the utilities' comprehensive planning diagnostics that will be updated by means of the CDPs fully comply with the technical requirements for works of this type. Studies of engineering configurations and options were performed and compared, to find the most feasible option. The parameters for the size of the facilities are in line with national and international engineering recommendations. The options were costed and compared, to evaluate the economically feasible solution, with cost values in line with local and regional prices. The technologies involved are widely known in Mexico and fully mastered by the utilities. Moreover, the utilities have procedures and practices necessary to operate and maintain new assets during their service life. These will be strengthened by the activities to be conducted under this program ([optional electronic link 2](#)).
- 2.10 **Institutional viability.** An evaluation was done of the legal and institutional framework in effect for the utilities and CONAGUA's fiduciary capacity. CONAGUA will be the project's executing unit, acting through the Office for the Strengthening of Utilities, under the Office of the Deputy Director General for Water, Drainage, and Sanitation. Based on the institutional capacity assessment using the ICAS methodology, we can state that the programming and organization, execution, and internal and external control capabilities have a satisfactory level of development, creating a low level of risk for the activities to be conducted by the executing agency. CONAGUA's capacity and execution experience are supported by a number of IDB-financed programs.²⁶ CONAGUA also has a complete, reliable and up-to-date database enabling it to monitor projects effectively and control the technical and financial aspects of the program. The utilities are responsible for the delivery of water and sanitation services. They report to the municipios and are in charge of infrastructure operation and maintenance (O&M). Some utilities were visited during preparation and found to have an organization with an appropriate division of functions and responsibilities. They were also found to have accounting, billing, and collection systems that enable them to monitor income and expenses relating to service delivery ([optional electronic link 3](#)).
- 2.11 **Financial viability.** For the financial analysis, since the program will be demand-driven and a small number of utilities are expected to participate,²⁷ a representative sample was selected for the type of utility that will access the program. Thus, three

²⁶ PROSSAPYS I, II, III and loan 3133/OC-ME (ME-L1147), now in execution.

²⁷ It is estimated that, given the type of comprehensive interventions, around 15 utilities may participate.

utilities were selected²⁸ as being representative of their size, serving different population ranges, and having comprehensive investment plans, including investments eligible for the program. A detailed financial analysis of historical and projected data was done for these utilities, to analyze the impacts of these investments in physical and commercial efficiency on their financial sustainability.

- 2.12 The analysis shows that, with these investments, revenue is sufficient to cover total O&M costs, and that operating margins and long-run financial sustainability will improve. The requirement that a CDP be prepared for each beneficiary utility will be included in the OPM and will be an eligibility criterion. This CDP will include financial viability studies demonstrating that sufficient funds will be generated to cover O&M costs of systems related to the operation (see paragraphs 1.21 and 3.5). If subsidies are granted, a determination will be made as to whether their allocation and use is transparent and subject to frequent and effective accountability mechanisms (see paragraph 1.13) ([optional electronic link 3](#), [optional electronic link 4](#)).

III. IMPLEMENTATION AND MANAGEMENT PLAN

A. Summary of implementation arrangements

- 3.1 **Implementation arrangements.** The borrower will be the United Mexican States, represented by the Department of Finance and Public Credit (SHCP), which will transfer to the National Water Commission (CONAGUA) an amount equivalent to the loan proceeds. The National Savings and Financial Services Bank (BANSEFI) has been designated by the Government of Mexico as the program financial agent. BANSEFI will be the federal government's legal representative in dealings with the Bank and is responsible for supporting CONAGUA and monitoring implementation, procurement procedures, and submitting disbursement requests and project reports to the Bank.
- 3.2 As the executing agency, CONAGUA will be the institution responsible for technical coordination of the program. It will transfer the Bank loan proceeds to the states or directly to the utilities as grants or subsidies. It will also be in charge of contracting auditors and consultants for program evaluations. The State Water and Sanitation Commissions (CEAs) or their equivalent, or the utilities themselves, will contribute the additional resources necessary to complete the project financing, as established in the Operations and Procedures Manual (OPM). The CEAs or their equivalent, or the utilities, will be in charge of project execution. Execution will be monitored by CONAGUA through the bodies established for such purpose in the program OPM. The mechanisms for coordination between each of the actors and the commitments of each are established in the coordination agreements and the technical and implementation annexes signed by CONAGUA, the states, and the utilities.

²⁸ The Organismo Operador Municipal del Sistema de Agua Potable, Alcantarillado y Saneamiento de La Paz (247,242 inhabitants); the Organismo Público Descentralizado para la Prestación de los Servicios de Agua Potable, Alcantarillado y Saneamiento del Municipio de Atlacomulco (104,843 inhabitants); and the Organismo Público Descentralizado para la Prestación de los Servicios de Agua Potable, Alcantarillado y Saneamiento del Municipio de Tlalnepantla (698,378 inhabitants). The eligible investments for these three utilities over the next five years come to US\$61.8 million.

- 3.3 Actions will be executed under a comprehensive development plan (CDP) prepared specifically for each utility. General terms of reference will be established setting out the minimum requirements to be included in the CDP. Consequently, the CDP will contain a diagnostic assessment and the investments that the utility is to make over a five-year period. The aim of the CDP is to guide the utility toward achieving its comprehensive development.
- 3.4 **Special contractual conditions precedent to the first disbursement of the loan proceeds:** Evidence will be provided that: (i) the mandate contract between the borrower, CONAGUA, and BANSEFI for program execution has been signed and is in force; and (ii) the OPM agreed upon with the Bank for the program is in force, including an environmental and social management framework (ESMF).
- 3.5 **Operations and Procedures Manual (OPM).** The program will be executed according to the provisions of the OPM, which will establish the eligibility criteria for beneficiaries and projects, and the criteria for allocating resources to the utilities ([optional electronic link 5](#)). The OPM will also include the responsibilities, rules, and procedures related to the programming of activities and preparation of the annual work plans (AWPs); review and approval of projects; procurement; handling and retention of supporting documents for bidding processes; financial and accounting management; performance of audits; and the program's monitoring and evaluation system. The OPM will be updated based on the PROME manual. Attached to the manual as an annex will be an ESMF detailing the strategy for mitigating any adverse environmental and social impacts caused by project implementation, together with monitoring and oversight measures. The OPM's entry into force, on the terms agreed upon with the Bank, will be a condition precedent to the first disbursement of the loan, and any substantive amendment to it shall require the Bank's no objection.
- 3.6 **Retroactive financing.** The Bank may retroactively finance, as a charge against the loan proceeds, up to US\$40 million (20% of the proposed loan) in eligible expenditures²⁹ incurred by the borrower prior to the loan approval date in any of the investment categories, provided that requirements substantially similar to those of the loan contract have been fulfilled. Such expenditures must have been incurred on or after 17 July 2015 (project profile approval date), but in no case shall expenditures be included, if incurred more than 18 months prior to the loan approval date.
- 3.7 **Program financial and accounting management.** CONAGUA will be responsible for the program's financial management, for which it will: (i) keep separate accounts and budgets for management of the loan funds, reflecting the amounts transferred to the states, as specified in the execution agreements; (ii) maintain an auxiliary system for administering, recording, and authorizing payments for works contracts and procurement of goods and consulting services; (iii) deliver the program's financial reports in a timely manner, and make available to the Bank and to the external auditors any accounting, financial, and other information the Bank may require; (iv) maintain records of disbursement requests; and (v) maintain an

²⁹ Eligible expenditures are similar to those described under each project component in paragraphs 1.16 to 1.21.

effective record-keeping system for supporting documentation for eligible expenditures, for verification by the Bank and the external auditors. The executing agencies at the state or municipal level, as the case may be, will meet the conditions described in the OPM, and will: (i) prepare and deliver, in a timely manner, accounts of the use of program resources and any other information CONAGUA requires to submit its reports, through BANSEFI, to the Bank; (ii) employ supervision mechanisms, including site visits to constructed works; and (iii) retain the original supporting documentation on the use of program funds in an accessible records system.

- 3.8 **Procurement.** All procurements of works, goods, and nonconsulting services and the selection and contracting of consulting services for the program will comply with Bank policies for the procurement of goods and works (document GN-2349-9) and the policies for the selection and contracting of consulting services (document GN-2350-9) financed by the IDB, in the framework of the harmonized procurement documents agreed upon between the Bank and the Civil Service Department (SFP) of the United Mexican States, available at: <http://www.funcionpublica.gob.mx/unaopspf/credito/normace.htm>. For the purposes of loan execution, CONAGUA will provide the Bank with the consolidated procurement plans for all of the states for each budget period (12 months). These plans will specify the review method to be used for the respective procurements. In February 2013, the Bank's Board of Executive Directors accepted the increased use of Mexico's public procurement and contracting system (adoption of the Mexican Public Contracting System), pursuant to the provisions of the updated country strategy (document GN-2595-3). The system may be used once the corresponding implementation agreement with the Government of Mexico has been signed.
- 3.9 **Financial reports.** Through the financial agent, CONAGUA will deliver the program's audited financial statements (AFS) annually, issued in accordance with the terms of reference agreed upon with the Bank and the SFP. Given the decentralized nature of the program, and consistent with the previous operation, it is recommended that the period for AFS delivery be extended to 180 days after the close of the fiscal period. The last such report will be delivered within 180 days after the date stipulated for the last loan disbursement. The cost of audits may be financed with the loan proceeds. CONAGUA will also deliver unaudited financial reports and procurement reports on a six-monthly basis, within 60 days after the end of each calendar semester.

B. Summary of arrangements for monitoring results

- 3.10 **Monitoring and evaluation plan.** CONAGUA will prepare reports on the progress and outcomes of the activities for which it is responsible. The monitoring and evaluation system will include: (i) the procurement plan (PP); (ii) the multiyear project execution plan (PEP); (iii) annual work plans (AWPs); (iv) annual verification of fulfillment of targets set in the Results Matrix; and (v) six-monthly reports containing: (a) activities carried out during the period, progress on execution, problems arising and how they were solved; (b) evaluation of the Results Matrix, PP, AWP, and risk analysis; and (c) analysis of the project monitoring report (PMR), for which fulfillment of output indicator targets and Results Matrix outcomes will be evaluated. Execution during this period and planning for the following six-month period will be evaluated.

- 3.11 A consulting firm acceptable to the Bank and engaged by the borrower will conduct a midterm evaluation once 50% of the loan amount has been committed, and a final evaluation once 90% has been committed, based on the indicators agreed upon with the Bank in the Results Matrix, and including an ex post economic evaluation. The terms of reference and selection process will be approved in advance by the Bank ([required electronic link 3](#)).

Development Effectiveness Matrix				
Summary				
I. Strategic Alignment				
1. IDB Strategic Development Objectives		Aligned		
Lending Program	-Lending to support climate change initiatives, renewable energy and environmental sustainability			
Regional Development Goals	-Incidence of waterborne diseases (per 100,000 inhabitants)			
Bank Output Contribution (as defined in Results Framework of IDB-9)	-Households with new or upgraded water supply			
2. Country Strategy Development Objectives		Aligned		
Country Strategy Results Matrix	GN-2749	Promote the orderly, safe, and sustainable growth of cities.		
Country Program Results Matrix		The intervention is not included in the 2015 Operational Program.		
Relevance of this project to country development challenges (If not aligned to country strategy or country program)				
II. Development Outcomes - Evaluability		Evaluable	Weight	Maximum Score
		7.7		10
3. Evidence-based Assessment & Solution		7.9	33.33%	10
3.1 Program Diagnosis		3.0		
3.2 Proposed Interventions or Solutions		2.4		
3.3 Results Matrix Quality		2.5		
4. Ex ante Economic Analysis		8.5	33.33%	10
4.1 The program has an ERR/NPV, a Cost-Effectiveness Analysis or a General Economic Analysis		4.0		
4.2 Identified and Quantified Benefits		1.5		
4.3 Identified and Quantified Costs		1.5		
4.4 Reasonable Assumptions		0.0		
4.5 Sensitivity Analysis		1.5		
5. Monitoring and Evaluation		6.7	33.33%	10
5.1 Monitoring Mechanisms		1.8		
5.2 Evaluation Plan		5.0		
III. Risks & Mitigation Monitoring Matrix				
Overall risks rate = magnitude of risks*likelihood		Low		
Identified risks have been rated for magnitude and likelihood		Yes		
Mitigation measures have been identified for major risks		Yes		
Mitigation measures have indicators for tracking their implementation		Yes		
Environmental & social risk classification		B		
IV. IDB's Role - Additionality				
The project relies on the use of country systems				
Fiduciary (VPC/FMP Criteria)	Yes	Financial Management: Budget, Treasury, External control, Internal Audit. Procurement: Information System.		
Non-Fiduciary				
The IDB's involvement promotes additional improvements of the intended beneficiaries and/or public sector entity in the following dimensions:				
Gender Equality				
Labor				
Environment				
Additional (to project preparation) technical assistance was provided to the public sector entity prior to approval to increase the likelihood of success of the project	Yes	The Bank has supported the Government trough technical cooperation ME-T1300.		
The ex-post impact evaluation of the project will produce evidence to close knowledge gaps in the sector that were identified in the project document and/or in the evaluation plan				

The overall objective of the program is to support operating entities serving populations between 50,000 and 900,000 inhabitants, in a process of transformation to improve the quality of the drinking water provision service offered to users. This will be achieved by financing short and medium term integrated projects that promote the operational and financial sustainability.

The project contains a complete diagnosis of the problems that the intervention is intended to address. However, it lacks empirical evidence to demonstrate, in a causal manner, the potential contribution of the proposed interventions to the expected results. In terms of the results matrix, it is would have been necessary to specify more some of the indicators presented in order to differentiate those that correspond to a desired outcome versus those that are direct outputs of the intervention.

The economic analysis could be strengthened with a greater justification for the assumptions adopted when calculating certain benefits. The monitoring plan is solid, but more consistency is needed between the annual costs of outputs presented and those outputs reported in the results matrix.

The evaluation plan proposes the use of an ex post cost-benefit analysis as well as a reflexive methodology. The risks identified are sound and include mitigation measures and metrics for monitoring their progress.

RESULTS MATRIX

Project objective:	To support the National Water Commission (CONAGUA) in improving the quality of water and sanitation service in communities, preferably between 50,000 and 900,000 inhabitants, through the execution of short- and medium-term comprehensive projects by the utilities responsible for service delivery, to promote operational and financial sustainability.
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EXPECTED OUTCOMES

Expected outcomes	Unit of measure	Baseline		Intermediate		Targets ¹		Means of verification	Remarks
		Value	Year	Value	Year	Value	Year		
EXPECTED OUTCOME									
Households with upgraded access to drinking water in communities of between 50,000 and 900,000 inhabitants. ²	Households with service more than 10 hours/ day.	4,000,000	2015			4,238,000	2020	Final evaluation report	
Percentage of households with upgraded access to drinking water in communities of between 50,000 and 900,000 inhabitants. ³	% of households with service more than 10 hours/ day.	40	2015			42	2020	Final evaluation report	
Utilities serving communities of between 50,000 and 900,000 inhabitants, whose staff took part in skills development events.	Number of utilities	0	2015			60	2020	Final evaluation report	
Utilities with annual commercial efficiency of over 65%.	Water paid / water billed (%)	50	2013			70	2020	Final evaluation report	
Utilities with a percentage of nonrevenue water below 40%.	(Water produced – water billed)/water produced (%)	45	2013			55	2020	Final evaluation report	

¹ The indicator baselines and targets will be validated during execution of the operation.

² Upgraded access is understood to mean households with a water supply for an average of more than ten hours a day.

³ Upgraded access is understood to mean households with a water supply for an average of more than ten hours a day.

Expected outcomes	Unit of measure	Baseline		Intermediate		Targets ¹		Means of verification	Remarks
		Value	Year	Value	Year	Value	Year		
Utilities for which electric power accounts for less than 20% of operating costs.	Electric power costs/operating costs (%)	30	2013			40	2020	Final evaluation report	
Utilities with annual operating margin of more than 100%.	(operating income/operating costs)(%)	36	2013			50	2020	Final evaluation report	
Utilities accessing an alternative source of financing.	Number of utilities	0	2015			2	2020	Final evaluation report	

OUTPUTS

Outputs	Estimated cost (US\$)	Unit of measure	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification
Component I: Institutional support										
Skills development and exchange of know-how events and workshops. Definition of workshops and events: (i) events, lectures, and seminars; (ii) classroom and online induction and skills development courses for CONAGUA and utility staff on strategic issues contributing to the comprehensive development of utilities; and (iii) courses for sector consultants.	250,000	Event	0	3	3	3	3	3	15	Six-monthly reports
Institutional support actions other than skills development. Definition: (i) preparation of studies relating to the water supply and sanitation sector; (ii) preparation of good practices analysis and dissemination documents; and (iii) design of computer systems for information processing, management, and analysis.	50,000	Action	0	0	0	0	1	1	2	Six-monthly reports

Outputs	Estimated cost (US\$)	Unit of measure	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification
Component II: Investment in comprehensive actions										
Comprehensive development plans (CDPs) formulated	700,000	Plan	0	5	10	20	15	0	50	Six-monthly reports
Activities linked to the use and certification of the AquaRating tool. Definition of activities: (i) purchase of user license; (ii) certification; and (iii) support on use of the tool.	280,000	Action	0	0	5	5	10	10	30	Six-monthly reports
Structural change studies conducted. Definition of structural change study: (i) corporate governance studies; (ii) improvement in organizational structure; and (iii) study of costs and rates and updating processes.	1,400,000	Studies	0	0	4	4	5	5	18	Six-monthly reports
Management support studies conducted. Including: (i) development of management control, planning, and budget systems; and (ii) preparation of technical files, terms of reference, and detailed designs.	1,400,000	Studies	0	0	4	4	5	5	18	Six-monthly reports
Commercial actions conducted: Definition of commercial actions: (i) procurement and installation of household meters; (ii) procurement and installation of hardware and software to optimize commercial processes; (iii) updating of the user roster; (iv) procurement of reading, billing, and charging equipment; and (v) actions linked to improved customer care (payment for service, complaints and claims, service requests).	47,250,000	Action	0	10	40	40	50	40	180	Six-monthly reports
Financial and administrative actions conducted. Definition of financial and administrative actions: (i) procurement and installation of accounting systems; (ii) procurement and installation of financial planning systems; and (iii) integration of commercial and financial systems.	42,770,000	Action	0	10	40	40	50	24	164	Six-monthly reports

Outputs	Estimated cost (US\$)	Unit of measure	Baseline	Year 1	Year 2	Year 3	Year 4	Year 5	Final target	Means of verification
Physical actions conducted: Definition of physical actions: (i) refurbishment of water mains and/or distribution networks; (ii) improvement of sources; (iii) refurbishment of pumping stations and sumps, motors, and electrical equipment; (iv) measurement systems including telemetry and monitoring, bulk metering, SCADA; and (v) updating of the inventory of networks and infrastructure, and generation of the information system and hydraulic modeling.	105,000,000	Action	0	5	20	25	30	20	100	Six-monthly reports
Financing mechanisms designed	500,000	Mechanism	0	0	1	1	0	0	2	Six-monthly reports

FIDUCIARY AGREEMENTS AND REQUIREMENTS

Country: United Mexican States

Project: ME-L1176. Comprehensive Development Project for Water and Sanitation Utilities (PRODI)

Executing agency: National Water Commission (CONAGUA)

Prepared by: Gloria Coronel, Lead Financial Management Specialist; Victor Escala, Fiduciary Specialist in Procurement; Uriel Barrios, Fiduciary Consultant.

I. EXECUTIVE SUMMARY

- 1.1 The general objective of the Comprehensive Development Project for Water and Sanitation Utilities (PRODI) is to support the National Water Commission (CONAGUA) in improving the quality of water and sanitation service in communities, preferably between 50,000 and 900,000 inhabitants, through the execution of short- and medium-term comprehensive projects by the utilities responsible for service delivery, to promote operational and financial sustainability. The program will have the following scope: (i) developing business plans with a three- to five-year horizon and annual investments generating short-term impacts and improving the operational and commercial efficiency of the utilities; and (ii) developing a methodology to prioritize comprehensive packages of actions including annual investment plans.

II. FIDUCIARY CONTEXT OF THE EXECUTING AGENCY

- 2.1 The executing agency will be CONAGUA, acting through the Office for the Strengthening of Utilities with the support of the Office of International Cooperation and the Office of Financial Resources. Execution of the program is decentralized at the national level, with the participation of local departments, utilities, and municipios, as well as CONAGUA. In coordinating with the Bank, PRODI will also have support from the National Savings and Financial Services Bank (BANSEFI), in its role as financial agent designated by the Department of Finance and Public Credit (SHCP).

III. FIDUCIARY RISK EVALUATION AND MITIGATION MEASURES

- 3.1 In September 2013, during preparation of loan 3133/OC-ME (ME-L1147), the Bank's Country Office in Mexico applied the Institutional Capacity Assessment System (ICAS) tool to CONAGUA (see IDBDOCS#38328010), resulting in a weighted evaluation of 95.08%, indicating a satisfactory level of development (see table below).

Consolidation results capacities	Quantification			Develop ment (ND, ID, MD, SD)	Risk level (RA, RS, RM, RB) Rating %
	Rating %	IR %	Weighted %		
CPO	96.67	25	24.17	CPO	96.67
EC	90.91	45	40.91	EC	90.91
CC	100.00	30	30.00	CC	100.00
TOTAL		100	95.08	TOTAL	

3.2 Moreover, when this operation was being prepared, the Bank was in the process of developing the Institutional Capacity Assessment Platform (ICAP), a new institutional assessment tool, which PRODI was selected to pilot. In July of this year, with the Bank's support, the C-230 consulting firm applied the ICAP to CONAGUA, yielding incomplete results as the subexecuting agencies module is still in development. Considering the above and the results of the aforementioned 2013 ICAS assessment, the Bank's Country Office in Mexico conducted interviews with a number of CONAGUA officials, who confirmed that the fiduciary execution systems for this operation had been maintained. Therefore, CONAGUA is regarded as having "sufficient development" and at low risk for program execution. In light of the foregoing, ex post review is recommended for disbursements and procurement, except when the procurement plan states otherwise for specific processes.

3.3 Considerations for the Special Provisions of the loan contract:

- a. Entry into force of the mandate contract designating BANSEFI as the financial agent.
- b. The Bank may retroactively finance, as a charge against the loan proceeds, up to US\$40 million (20% of the proposed loan) in eligible expenditures incurred by the borrower prior to the loan approval date in any of the investment categories, provided that requirements substantially similar to those of the loan contract have been fulfilled. Such expenditures must have been incurred on or after 17 July 2015 (project profile approval date), but in no case shall expenditures be included, if incurred more than 18 months prior to the loan approval date.
- c. The exchange rate for accountability purposes will be the Banco de México rate on the last business day of the month immediately preceding the date on which the proceeds are transferred, and payment made, to the federal government.
- d. Delivery of the program's annual audited financial statements (AFS), prepared in accordance with the terms of reference agreed upon with the Bank and the Civil Service Department (SFP), within 180 days after the close of the fiscal period. The last such report will be delivered within 180 days after the date stipulated for the last loan disbursement.
- e. Delivery of unaudited six-monthly reports within 60 days following the close of each calendar semester.
- f. Prior to the start of any requests for proposals or award of any contracts, the executing agency will submit the proposed procurement plan for the Bank's

review and approval, in accordance with the provisions of the Bank's procurement policies. This plan is to be updated every twelve months during program execution, or more often if the project so requires, and each updated version will be submitted to the Bank for review and approval. The plan will specify which contracts are subject to ex ante review, and which are subject to ex post review.

IV. AGREEMENTS AND REQUIREMENTS FOR PROCUREMENT EXECUTION

- 4.1 The program calls primarily for procurement of works and, to a lesser extent, goods and nonconsulting services, and contracting consulting firms and/or individual consultants. The Bank policies for the procurement of goods and works (document GN-2349) and the policies for the selection and contracting of consulting services (document GN-2350-9), both of 2011, will apply to such procurements. If these policies are amended, the new version may be applied with the written consent of the executing agency.
- 4.2 Contracts for works, goods and nonconsulting services generated under the project and subject to international competitive bidding (ICB) or national competitive bidding (NCB) will be executed using bidding documents harmonized between the Civil Service Department (SFP) and the Bank. These are available online at: <http://www.funcionpublica.gob.mx/unaopspf/credito/normace.htm>.
- 4.3 Consulting services contracts generated through the project will be executed using the standard request for proposals (SRP) agreed upon by the Bank and the SFP, which may be consulted via the link given in the preceding paragraph.
- 4.4 Contracts for consulting services with individual consultants will be executed using the standard contract for individual consultants, also agreed upon by the Bank and the SFP, which may be consulted via the link in paragraph 4.2.
- 4.5 In February 2013, the Bank's Board of Executive Directors accepted the increased use of Mexico's public procurement and contracting system (adoption of the Mexican Public Contracting System), pursuant to the provisions of the updated country strategy (document GN-2595-3).¹ The system may be used once the corresponding implementation agreement with the Government of Mexico has been signed.
- 4.6 **Direct contracting.** Direct contracting of AquaRating is planned. AquaRating is an agency that rates the performance of water and sanitation service providers based on operational indicators and practices. It sets an international benchmark based on information verified by accredited independent auditors, having acquired the license to use the online evaluation platform and to certify the results. Purchase of the relevant license and certification for the sum of up to

¹ Mexico's federal public contracting system can be used for all amounts up to the threshold established by the Bank for international competitive bidding for the procurement of works (reference figure: US\$15 million), and for goods and services (reference figure: US\$3 million). Bank policy documents GN-2349-9 and GN-2350-9 will apply above these amounts. Use of the system does not include the following: (i) contracts for consulting services; (ii) PEMEX contracts; (iii) contracts concluded pursuant to state or municipal government regulations; and (iv) direct contracting between public entities (interagency contracts). Moreover, the provisions of the federal system regarding the exclusion of foreign entities and degree of national integration do not apply.

US\$15,000 per participating utility using the tool may be secured by single-source selection. Such single-source selection is justified on the grounds envisaged in paragraph 3.6(c) of policy GN-2349-9: “the required equipment is proprietary and obtainable only from one source” (AquaRating), since it is patented/trademarked.

- 4.7 The state and/or utility may commence the works selection and contracting process when resources from all the sources have been received. In some instances this may be cause for a delay between the start of the contractor selection process and the corresponding works.

Table 2. Threshold Amounts (US\$)

Works			Goods ²			Consulting services	
ICB	NCB	Shopping	ICB	NCB	Shopping	International publicity – Consultants	Short list 100% national
> 15,000,000	< 15,000,000 and > 500,000	< 500,000	≥ 3,000,000	<3,000,000 ≥ 100,000	< 100,000	> 200,000	< 500,000

- 4.8 **Procurement supervision.** Given the low level of fiduciary risk associated with the project and the experience gained in prior operations, reviews will be conducted on an ex post basis, except as otherwise determined in writing in the procurement plan for specific contracts. There will be one inspection visit per year. Ex post review of procurements will be performed by an external audit firm, which will submit a special file with the procurement report, pursuant to the terms of reference agreed upon by the Bank and the Civil Service Department (SFP).
- 4.9 **Threshold for ex post review.** Works: US\$15,000,000; Goods: US\$3,000,000; Consulting services: US\$500,000 (firms) and US\$100,000 (individuals).
- 4.10 **Records and files.** The files must be available for any procurement reviews as the Bank deems relevant.

V. FINANCIAL MANAGEMENT AGREEMENTS AND REQUIREMENTS

A. Programming and budget

- 5.1 The Department of Finance and Public Credit (SHCP) is the agency responsible for coordination and preparation of the budget and monitoring of budget execution. CONAGUA signs execution and technical annexes with state governments annually, on the basis of which it transfers resources to the respective administration and finance departments and/or utility.
- 5.2 Once the loan has been signed, expenditures chargeable against the loan must be identified for budget purposes as being charged to external credit resources (digit 2). All expenditures prior to the contract period are registered with digit 1 as federal resources, and in accordance with the law, may be submitted for reimbursement by retroactive recognition.

² Includes nonconsulting services.

B. Accounting and information systems

- 5.3 The program will be executed in a decentralized manner by the eligible utilities. Program accounting will use the country systems at federal level in CONAGUA, and in each of the participating utilities and/or municipios at state level. Execution and technical annexes are currently signed with state governments and/or utilities. The cash flows for the authorized works are agreed, and CONAGUA transfers resources to the state and/or utility, and the federal budget is executed at the time when this transfer is registered. Each federative entity and/or utility is responsible for registering and accounting for the transfers received and for project expenses incurred. PRODI will require the states and/or utilities to make a local contribution (according to the proposal for operation development it will not be a contractual requirement to provide evidence of the expenditure to the IDB; this is reflected in the cost table). CONAGUA's resources will be deposited in exclusive bank accounts for PRODI. Changes in the implementation arrangements per project and/or amount must be authorized in advance by CONAGUA at the end of the fiscal year. Any remaining resources must be repaid to CONAGUA.
- 5.4 CONAGUA has an integrated administration system for country-level monitoring of the investment resources that the CONAGUA head office distributes to the states, utilities, and/or municipios, on contracts approved, based on the execution and technical annexes. The details of payments with these resources are kept and registered on the systems of the state, utility, and/or municipio to which the resources were transferred.
- 5.5 Each utility is responsible for sending CONAGUA, through the local offices, reports on the physical and financial progress of execution on a quarterly basis with an annual summary. The format and frequency of the reports is specified in the OPM.

C. Disbursements, cash flows, and substantiation of expenditures

- 5.6 For this operation, like other operations with the Mexican government, disbursements of loan proceeds are expected to be on a "reimbursement of expenditures" basis.
- 5.7 During field visits effective controls were found to exist in the states and at CONAGUA for the purpose of its monitoring role, to enable resource verification and registration of resources. Consequently, based also on the experience the Bank has gained from the execution of the Program for the Sustainability of Water Supply and Sanitation Services in Rural Communities (PROSSAPYS) I, II, III and the current loan 3133/OC-ME (ME-L1147) with CONAGUA, the Bank has proposed a simplification to the documentation for expense accounting and greater reliance on the country system and controls. Considering that for PRODI, CONAGUA will execute the loan resources chargeable to the federal budget in the same way as for PROSSAPYS, substantiation of PRODI expenditures recognized by the IDB will be backed by the transfers of funds to the finance departments of the states and/or utilities for the execution of the technical and execution annexes signed by CONAGUA and the states and/or participating utilities, deducting 15% of the total for possible repayments and/or ineligible expenses.

- 5.8 CONAGUA has a control and monitoring system (PROME) (similar to SISBA in the PROSSAPYS project) to monitor the works built by the utilities. This system is administered by the Office for the Strengthening of Utilities, allowing the technical area to monitor the actions implemented under PRODI, tracking the dates of the actions recorded at each stage of the bidding, contracting, and execution processes for the relevant contracts, and the estimated and final execution amounts of each contract. CONAGUA will strengthen this system with the associated technical cooperation resources.
- 5.9 The exchange rate used to convert U.S. dollars into payments in Mexican pesos will be the Banco de México rate on the last business day of the month immediately preceding the date on which the proceeds are transferred, and the expense incurred by the federal government.

D. Internal control and internal audit

- 5.10 At central level, the Civil Service Department (SFP) is the agency responsible for internal oversight and internal audits through the internal control units (OICs). At each department or agency there are at least three executives who are SFP civil servants under the terms of the Act Establishing the Federal Public Administration, who are supported by department employees assigned to the OIC to fulfill the work plan approved by the SFP annually. The OIC is also responsible for working with external auditors and monitoring implementation of the recommendations made by its own and external auditors. These organizational arrangements for the oversight of internal control are also applicable at state level.

E. External control and reports

- 5.11 The Federal Audit Office (ASF) is the legislative branch agency responsible for performing governmental external audits. By law, the ASF formally begins its oversight of the executive's public accounts for a given fiscal period in May of the following year, and delivers its report to the legislative branch in February of the year following the start of its work. Its report is therefore delivered 14 months after the close of the fiscal year. The ASF does not perform the financial audits contractually required by the Bank. However, in accordance with its work plan, it has conducted operational audits on a number of projects financed in part by the Bank. The results of these reports have been used in the supervision of operations.
- 5.12 The Act Establishing the Federal Public Administration provides that the SFP, acting through the External Audit Office (SFP/DGAE), is responsible for selecting the external auditing firms to audit projects with international lending agencies, as well as to audit decentralized and deconcentrated entities such as CONAGUA, a task involving more than 350 external audits. In 2012 the Bank signed a technical memorandum of understanding with the SFP and the World Bank, harmonizing the terms of reference for audits, as well as the models for delivery of six-monthly and annual financial statements. The program will submit an annual, as well as a final, audited financial report. Given the decentralized nature of the program, and consistent with the previous operation, it is recommended that the period for audited financial report delivery be extended to 180 days after the close of the fiscal period. The last such report will be delivered within 180 days after the date

stipulated for the last disbursement. The cost of audits may be financed with the loan proceeds.

F. Financial supervision plan

Table 3. Financial Supervision Plan

Supervision activity	Supervision plan			
	Nature and scope	Frequency	Responsible party	
			Bank	Third party
Financial	Ex post review of financial support of disbursement requests	Periodic	Fiduciary/financial specialist	External auditor with AFS
	Fiduciary inspection visit/ analysis of internal oversight and control environment for payments and procurement	Annual	Project Team Leader, fiduciary, financial and procurement specialist	
	Annual allocation of budgetary resources required for project implementation	Annual	Project Team Leader with support of financial/fiduciary specialist	Executing agency
Compliance	Delivery of financial statements	Annual and final	Project Team Leader with support of financial/fiduciary specialist	Executing agency
	Conditions precedent to the first disbursement	Once	Project Team Leader and fiduciary team	Executing agency

G. Execution mechanism

- 5.13 The proposed execution mechanism is decentralized and coordinated by CONAGUA through its local offices. Based on the execution and technical annexes, CONAGUA will channel resources to the state governments or utilities for them to execute. PRODI will require the states and/or utilities to make a local contribution. According to the POD, it will not be a contractual requirement to provide evidence of the expenditure to the IDB; this is reflected in the cost table. The OMP will be updated for this program to reflect the simplification of accountability to the Bank (see above).

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/15

México. Loan ____/OC-ME to the United Mexican States
Comprehensive Development Project for Water
and Sanitation Operators (PRODI)

The Board of Executive Directors

RESOLVES:

That the President of the Bank, or such representative as he shall designate, is authorized, in the name and on behalf of the Bank, to enter into such contract or contracts as may be necessary with the United Mexican States, as Borrower, for the purpose of granting it a financing to cooperate in the execution of the Comprehensive Development Project for Water and Sanitation Operators (PRODI). Such financing will be for the amount of up to US\$200,000,000 from the resources of the Bank's Ordinary Capital, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

(Adopted on ____ 2015)