DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

ECUADOR

WATER SUPPLY AND SANITATION PROGRAM FOR CUENCA

(EC-L1019)

LOAN PROPOSAL

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CONTENTS

ANNEXES

APPENDICES

Electronic Links and References	
Basic socioeconomic data	**http://www.iadb.org/RES/index.cfm?fuseaction=externallinks.countrydata**
Status of loans in execution and loans approved	http://portal.iadb.org/approvals/pdfs/ECen.pdf
Tentative lending program	http://opsgs1/ABSPRJ/tentativelending.ASP?S=EC&L=EN
Information available in the RE3 technical files	http://idbdocs.iadb.org/wsdocs/getDocument.aspx?DOCNUM=751715
Annex II. Procurement plan	http://idbdocs.iadb.org/WSDocs/getDocument.aspx?DOCNUM=753828

ABBREVIATIONS

AWP	Annual work plan
BEDE	Banco Ecuatoriano de Desarrollo [Ecuadoran Development Bank]
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortization
EIRR	Economic internal rate of return
EMAAP-Q	Empresa Metropolitana de Alcantarillado y Agua Potable de Quito [Metropolitan Water Supply and Sewerage Company of Quito]
ETAPA	Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca [Municipal Telecommunications, Water Supply, Sewerage and Sanitation Company of Cuenca]
GAPS	Gerencia de Agua Potable y Saneamiento [Water Supply and Sanitation Division]
ICAS	Institutional Capacity Assessment System
ICB	International competitive bidding
ICE	Impuesto al Consumo Específico [Specific Consumption Tax]
LRMC	Long-run marginal costs
l/s	Liters per second
MEF	Ministry of Economic Affairs and Finance
MIDUVI	Ministry of Urban Development and Housing
NCB	National competitive bidding
O&M	Operation and maintenance
PEP	Program execution plan
PEU	Program executing unit
SELBEN	Sistema de Identificación de Usuarios de Bajos Ingresos [Low-income user identification system]
TC	Technical-cooperation operation

PROGRAM SUMMARY

ECUADOR
WATER SUPPLY AND SANITATION PROGRAM FOR CUENCA (EC-L1019)

Financial Terms and Conditions[1]					
Borrower: Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca [Municipal Telecommunications, Water Supply, Sewerage and Sanitation Company of Cuenca] (ETAPA)			Amortization period:	25 years	
Guarantor: Republic of Ecuador and Municipality of Cuenca			Grace period:	6 years	
Executing agency: ETAPA			Disbursement period:	6 years	
Source	**Amount (US$ million)**	**%**	Interest rate:	Variable	
IDB (Ordinary Capital/FFI))	61.25 (4.35/56.9)	67.6	Inspection and supervision:	0.00%	
Local	32.15	32.4	Credit fee:	0.25%	
Total	93.4	100.0	Currency:	U.S. dollars drawn on the Single Currency Facility	

Program at a glance

Program objective:

To meet demand for water supply and sanitation services from population groups in the city of Cuenca, particularly those in peri-urban and rural areas, efficiently and on a sustainable basis. The objectives are: (i) to prevent the population from self-supplying with poor-quality water, and so reduce the risk of water-related illnesses; (ii) to prevent a deterioration of water quality in the rivers that traverse the city of Cuenca, by ensuring appropriate wastewater disposal; and (iii) to help reduce the risk of flooding in various areas of the city during periods of torrential rainfall.

Special contractual conditions:

Conditions precedent to the first disbursement: (i) establishment of a program executing unit (paragraph 3.3); (ii) signing of the agreement and presentation of the Bylaw Reform Project (paragraph 3.15); (iii) approval of the Environmental Management System (paragraph 3.16); (iv) implementation of the program Operating Regulations (paragraph 3.17); (v) a revenue-use agreement between ETAPA and the Municipality (paragraph 4.14); and (vi) a fund restitution and trust fund agreement between ETAPA, the State, and the Central Bank (paragraph 4.15).

Conditions precedent to execution: (i) precedent to the commitment of funds for works contracting in stages two and three, fulfillment of the performance indicators set out in Table III-1 (paragraph 3.6); (ii) fulfillment of the environmental specifications in the respective documents and evidence that environmental oversight of works is being performed (paragraph 3.7); (iii) precedent to works contracting, obtaining of the environmental license to construct a sanitary landfill for final disposal of sludge from the Ucubamba wastewater treatment plant (PTAR) (paragraph 3.9); (iv) precedent to the commitment of funds for works contracting in stages two and three, implementation of studies on costs, rates and subsidies, updating of rates in the first year of execution, and introduction of a subsidy mechanism (paragraph 3.14); (v) commitment to operate and adequately maintain program works (paragraph 3.20); (vi) presentation of data for the evaluation of program effectiveness (paragraph 3.25); (vii) fulfillment of clauses on rates, borrowing, and separation of accounts (paragraph 4.11 and 4.36); and (viii) midterm reviews and technical and managerial auditing (paragraph 3.24).

Exceptions to Bank policies:

None.

Program consistent with country strategy: Yes [X] No [ ]

Program qualifies as: SEQ [X] PTI [ ] Sector [ ] Geographic [ ] Headcount [ ]

Procurement: See paragraph 2.8 on recognition of expenditures and retroactive financing, and paragraph 3.18 on the Procurement Plan.

Verified by CESI on: 24 March 2006

[1] The interest rate, credit fee, and inspection and supervision fee mentioned in this document are established pursuant to document FN-568-3 Rev. and may be changed by the Board of Executive Directors, taking into account the available background information, as well as the respective Finance Department recommendations. In no case will the credit fee exceed 0.75%, or the inspection and supervision fee exceed 1% of the loan amount.*

* With regard to the inspection and supervision fee, in no case will the charge exceed, in a given six-month period, the amount that would result from applying 1% to the loan amount divided by the number of six-month periods included in the original disbursement period.

I. FRAME OF REFERENCE

A. Water supply and basic sanitation sector

1.1 The 2001 census recorded Ecuador's population as 12.1 million inhabitants, of whom 7.4 million were living in urban areas. By 2010, the total is expected to have grown to 15 million people, of whom 10 million will be living in urban areas and 5 million in rural zones. This demographic pattern displays an urbanizing trend, which is reflected in the expansion of urban areas towards the outlying zones of cities. Coverage rates for water supply and sewerage services are 63% and 51% respectively. The cities of Quito, Guayaquil and Cuenca, with roughly 5 million inhabitants between them, have well-established service providers for water supply and sanitation services; but the situation of service providers in intermediate size cities is more precarious. In cities with fewer than 100,000 inhabitants, and in rural zones, the service is provided directly by the municipios or by local user boards, and is deficient in many cases.

1.2 Sector planning functions are undertaken by the Ministry of Urban Development and Housing (MIDUVI) whereas water supply and sanitation are a responsibility of the municipal authorities, who can set up service providers to deliver the corresponding services. Although there is no central regulator for the sector, the country's legal framework establishes organization, regulation, and oversight functions through the following instruments: the Political Constitution of Ecuador, the Consumer Protection Law, the Public Transparency Law, the Municipal Regime Law, the Health Code, the Law on Modernization of the State, the Law on Environmental Management, and Municipal Bylaws. The Bank has promoted actions to complement and integrate the legal framework through the formulation of a draft sector law that is currently under discussion. Under the existing framework, the Bank has financed successful operations in Cuenca, Quito and Guayaquil. In the latter case, a regulation by contract has been adopted.

B. Water supply and sewerage services in the City of Cuenca

1. Organization

1.3 The Municipality of Cuenca has delegated responsibility for providing the public utilities of water supply, sanitation, and telecommunications in the canton to Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento (ETAPA), which was established in 1968 as a decentralized body with managerial and financial autonomy. ETAPA provides water supply and sewerage services in the canton's urban core and in certain peri-urban areas, serving a population of about 305,000. In parish centers, areas bordering the city, and the rural sector, the service is provided either by ETAPA or by user associations (local water boards delegated by ETAPA) through independent systems. ETAPA is also responsible for the sewerage service in parish centers served by the water boards, as well as the protection and conservation of watersheds, control of residential and

industrial effluents, management of wastewater treatment systems, and administration of the Cajas National Park.

1.4 The bylaw setting up the firm establishes a Board of Directors comprised of the City Mayor (chair), a representative from the mayor's office, three councilors appointed by the Municipal Council, two civil society representatives (technical colleges and production chambers), and an employees' representative. The General Manager acts as Secretary General of the Board. The firm has three divisions: Water Supply, Sanitation, and Environmental Management; Telecommunications; and the Commercial Division, in addition to a General Planning Office and five offices (finance, management, human resources, information technology, and legal assistance).

1.5 With support from Empresas Públicas de Medellín [Public Enterprises of Medellín] and as the outcome of internal and external dialogue, ETAPA developed the 2005-2009 Strategic Plan with a view to consolidating the quality of its services. This plan revealed the need for institutional strengthening in the firm, which, in conjunction with the need to keep pace with the growth generated by the expansion of services, led to an ambitious program of operational and structural changes. Based on this, ETAPA asked the Bank to define the content of the business optimization program, and to finance it with a possible loan. This was done through consulting services that helped ETAPA prepare terms of reference for the corresponding activities, which included aspects relating to governance and regulation. The ETAPA board ratified its support for this program unanimously.

2. Service provision

1.6 In 2005 the canton of Cuenca had a population of roughly 445,000, living in an area of 3,124 km.^{2} Of these, 69% (305,000 people) were living in the urban zone and 31% (140,000) in rural areas. The city's consolidated urban area covers 49 km^2; in addition there are 74 km^2 of special influence zones, subdivided into 23 km^2 of developing urban areas, 41 km^2 of peri-urban zones with development potential, and 10 km^2 of rural parish centers), as well as the disperse rural area covering 3,000 km.^{2}

1.7 The water supply system is based on the Cebollar and Tixán plants, with a production capacity of 1,900 liters per second (l/s). The independent systems that provide the service in rural parishes and part of the special zones have a production capacity of 250 l/s. In addition, ETAPA is speeding up the construction of water supply plants in Yanuncay and San Pedro del Cebollar, with capacities of 460 l/s and 50 l/s. Since 2000, the firm has also been implementing a program to control unaccounted-for water use, which has succeeded in cutting losses from 58% to 36% as of mid-2005, thereby reducing water production from 4.2 million to 3.1 million m^3 per month.

1.8 The sewerage system, consisting of a system of collectors running parallel to the rivers that traverse the city, collects 80% of the water captured by the secondary system. Wastewater is taken by an outlet pipeline to the Ucubamba treatment plant, which has an average treatment capacity of 1,800 l/s. Given the shortcomings of the wastewater and storm collection systems in the 12 parishes, wastewater gets discharged into the rivers that cross the urban core, generating high levels of pollution in certain segments in the vicinity of the outfalls. The sewerage system has been developed in a haphazard fashion, in some places as a combined system and elsewhere as a sanitary system; and it has a large number of mistaken connections. Given the growth that is anticipated, shortcomings will be revealed in several of the existing collectors once their hydraulic capacity is fully used. Similarly, the absence of channeling in creeks such as El Salado causes populated areas to flood in periods of intense rainfall.

1.9 Some of the independent water supply systems have difficulty maintaining adequate levels of water quality (disinfection of 50% of water supplied and problems maintaining continuity of the water service), and long-term sustainability of the services. Coverage levels for water and sewerage services in the urban area for 2005 were 97% and 95%, respectively. In the independent systems, water supply coverage is estimated at 75% in the disperse rural area, while sewerage coverage through conventional systems is 30%, rising to 77% when individual solutions such as latrines are included.

1.10 The following problems have been detected in relation to the operation and maintenance of infrastructure: (i) inadequacy of information systems to support decision-making; (ii) activities to control unaccounted-for water are isolated from the rest of the organization; (iii) vagueness in the limits of the water supply service with independent systems; and (iv) inadequate macro-metering, instrumentation, and automation of the water main system.

3. Rates

1.11 ETAPA calculates rates following the guidelines of the Municipal Regime Law, which requires municipios to set prices to cover the full cost of the water supply service, whereas the rate charged for the sewerage service cannot exceed operating and maintenance costs. Pursuant to a municipal bylaw that expands on the Municipal Regime Law (Title VIII, Article 420), ETAPA finances investments in sewerage facilities using the special capital improvement contribution (CEM) revenue scheme. This distributes the cost of the investment among beneficiaries in proportion to property registry valuations and according to the terms of the funding used to finance the works. Bylaws issued by the City of Cuenca and ETAPA regulations both state that the rate should be calculated annually through a general cost study and approved by the board of directors.

1.12 At the present time, the average water rate is US$0.39 per $m,^3$ which is US$0.06 below the long-run average incremental cost. In the sewerage system, the average rate of US$0.19 per m^3 covers all operating and maintenance costs. Nonetheless, cross-subsidies between the industrial-commercial sector and the residential sector with consumption levels below 40 m^3 per month are high. ETAPA updated its scale of charges in 2001, based on a study of long-run marginal costs (LRMC) for each service—water, sewerage and sanitation. This study approximated by using long-term average incremental costs over 30 years (the average LRMC for that period), and attempted to establish a rates structure that would eliminate cross-subsidies between the industrial-commercial and residential sectors. This study proposed a change in the structure and a gradual increase in rates, to be implemented over three years. Although the corresponding increases were made in the first two years, the board of directors, having analyzed the firm's financial results, decided that it was unnecessary to raise rates again in the third year. During the structuring of the loan, it was decided to include adjustments based on LRMC in the rates regulation. Rates for above-basic consumption levels will be raised during the first year, and targeted subsidies will be provided for basic consumption by poor families from the third year onwards, as explained in paragraph 3.14.

4. Financial and commercial situation of ETAPA

1.13 An analysis of historical financial data for the last two fiscal years shows that the financial situation of ETAPA is satisfactory. In 2004 and 2005, earnings before interest, taxes, depreciation, and amortization (EBITDA) were equivalent to 25.6% and 27.2% of operating revenues, thereby making it possible to cover all asset depreciation and amortization charges. Operating revenues, at US$18.7 million in 2005, were up by 8.1% in relation to 2004, while operating costs rose by only 5.8%. In addition, income from the Special Consumption Tax (ICE) amounted to approximately US$3.4 million in 2005, which enabled the firm to maintain a solid cash position. Billing and collection levels average over 95%, and collection efficiency, taking into account the overdue portfolio, is 81%, with an accounts receivable turnover of roughly 90 days with bi-monthly billing periods.

1.14 In 2005, the firm's asset structure was 87.9% equity-backed, with liabilities representing 12.1% of total assets. ETAPA's main creditors are the Ecuadoran Development Bank (BEDE) and the Ministry of Finance. As a result of dollarization in 2000, liabilities backed by sovereign guarantee (including IDB loans 592/OC-EC and 843/SF-EC) were converted from sucres to dollars, which enabled ETAPA to reduce its debt from US$50 million to US$4.1 million.

1.15 On average over the last two years, ETAPA's net internal cash flow has financed more than 50% of its annual investment plan. The remaining investments have been funded mainly from the firm's cumulative cash flow surplus, and, in addition,

through disbursements from an US$11 million loan granted by BEDE to finance expansion of the Yanuncay water supply systems.

C. Bank support for Cuenca in the sector

1.16 In June 1990, the Bank approved a US$50 million loan (592/OC and 843/SF) to fund expansion of capacity and coverage in the water supply and sewerage systems and wastewater treatment in the City of Cuenca. The aims of that project were: (i) to increase the coverage of the water supply and sewerage systems: (ii) to intercept wastewater and treat it (at the secondary level); (iii) to improve the operational and commercial systems, including a program to reduce unaccounted-for water use; and (iv) to help the firm improve its marketing operations through a rates program that reflects the LRMC of water supply, to rationalize consumption and strengthen the firm's financial situation. Although the goals of increasing coverage and intercepting and treating wastewater were achieved, by the end of the project it had not been possible to reduce the ratio of unaccounted-for water use, nor were rates being set in line with LRMC. These aspects had an adverse effect on the firm up to 2000, at which point, guided by the Bank, it adopted corrective measures which will be consolidated and monitored in this program.

1.17 Starting in 1997, the Bank approved four technical-cooperation operations (TCs) for a total of US$1.9 million, to help ETAPA implement its master plan to expand services to peri-urban and rural areas. These TCs include: (i) ATN/II-5704 approved in September 1997 for environmental impact assessments; (ii) ATN/UE-5743 to prepare viability studies for the water supply and sewerage master plans; (iii) ATN/SI-6785 for the design of the Yanuncay water supply treatment plant; and (iv) ATN/JF-6682 for the final works design. These TCs produced the master plan, environmental studies, feasibility studies and works designs, which are the subject of this program.

D. Strategy of the Government of Ecuador in the sector

1.18 The government's strategy in the sector is to attain the Millennium Development Goals by 2015. This will require investment estimated at US$2.8 billion, together with service provider sustainability, for which several instruments have been developed to structure the sector: (i) the National Water Supply and Sanitation Development Plan (2003); (ii) the sector policy adopted through Decree 2766 (2002); (iii) a proposal for reorganization of the Subdepartment of Water supply and Basic Sanitation; (iv) preparation of a draft law in accordance with the government's sector policies; and (v) approval of guidelines for structuring and establishing rates for the water supply and sewerage services in keeping with the sector policy and development plan. The government supports service providers serving the cities of Quito, Guayaquil and Cuenca; and these have made headway in improving their efficiency and sustainability, to become eligible for IDB loans. ETAPA presented the government with a plan to achieve the Millennium

Development Goals and thus contribute to fulfillment of the goals of the government strategy through this program.

E. The Bank's strategy in the sector

1.19 **The Bank's strategy with the country**, approved in November 2004, defines two priority areas, aimed at: (i) helping to energize the productive structure; and (ii) promoting social development and protection for the most vulnerable population groups. It also defines more efficient governance as a crosscutting goal. The strategy, in turn, identifies six priority subareas that include making social expenditure more efficient and improving the coverage and quality of public utilities. **The Bank's strategy in the sector** states that it will help the government improve the performance of firms that provide water supply and sanitation services in the country's intermediate cities. The specific objectives are to: (i) achieve greater governance and management autonomy among such firms; (ii) adjust rates to levels that enable them to cover operating and maintenance costs, as well as depreciation; (iii) improve operating, commercial, and financial efficiency; (iv) increase private-sector participation; and (v) increase service coverage. This operation is consistent with the strategy, because it will: (i) strengthen the current ETAPA governance scheme to reduce political interference in technical decisions; (ii) regulate the methodology used to calculate rates on a long-run marginal cost basis; (iii) consolidate ETAPA sustainability by improving its operating and financial efficiency; and (iv) extend the coverage of water supply and sanitation services to peri-urban areas.

1.20 **Bank actions in the sector**: The Bank has chiefly supported projects benefiting the cities of Quito, Guayaquil and Cuenca, which have absorbed over 10 loan operations totaling US$400 million. An investment loan and several nonreimbursable TCs have been approved in the city of Cuenca, (see paragraph 1.16). Apart from this program, the Bank is also supporting: (i) preparation of a program for the intermediate cities of Ambato, Ibarra, Milagro and Durán; (ii) the second phase of the Environmental Sanitation Program for EMAAP-Q (the Quito service provider), and (iii) a sector study to review policy effectiveness and propose general guidelines for the Bank's strategy in the sector.

1.21 **Lessons learned.** The main lessons learned from the previous loan executed by ETAPA are as follows: (i) take account of the political viability of institutional reform decisions and rates issues; (ii) have final designs ready for the works to be funded with loan proceeds; (iii) hiring a single inspection firm for the whole project is not efficient; (iv) define performance indicators, targets to be met, and conditions for moving ahead in committing program resources; and (v) include at least one midterm review.

1.22 Execution of loans 823/OC and 1424/OC for EMAAP-Q, and loan 1026/OC for the Guayaquil Water and Sewerage Company, provided good results in terms of

introducing programs to downsize staffing, reduce water losses, optimize costs, and business accounting, and also in the creation of specific regulation and oversight schemes that made a significant contribution to the sustainability and efficiency of these firms. In the latter project, which EMAAP-Q is executing, the studies on long-run marginal costs and subsidy targeting are being updated, and the establishment of a fund is being proposed that would use ICE resources. That project was structured in phases, which has contribution to the achievement of its objectives. In addition, one good practice observed in the execution of loan 1199/OC-CO was the strengthening of corporate governance with a view to encouraging sound management and mitigating the risks of high management turnover in public companies. Such strengthening includes: (i) reforming corporate statutes; (ii) modifying the board of directors; (iii) implementing management contracts between the board and management of the company; and (iv) selecting persons for key senior management positions through calls for qualifications.

1.23 **Coordination with other bilateral and multilateral agencies**. Bank support for the sector is being complemented by the Rural and Small Towns Water Supply and Sanitation Program (PRAGUAS) in rural areas and municipios with fewer than 10,000 inhabitants, with funding from the World Bank. The Andean Development Corporation (CAF) has approved a US$40 million loan for the AGUASUR program, which finances the service providers in borders cities in the south of the country, and another for Porto Viejo. There is also bilateral funding for different cities.

F. Bank actions in Cuenca

1.24 At the present time, the Bank is supporting the Municipality of Cuenca in the preparation of two credit operations: (i) the water supply and sanitation program for Cuenca (second stage) (EC-L1009), being executed by ETAPA; and (ii) renewal of downtown areas and land management (EC-L1021). In addition to helping fulfill the objectives of the city's strategic plan and the guidelines established in the strategy agreed with the country, these operations also reflect the following elements: (i) the Bank's desire to support the growing trend in Latin America for participation by subnational governments in the execution of public investment; (ii) detection of governance and management capacity in the municipality in programs such as those mentioned; (iii) the generation of alternatives to ensure long-term sustainability within the municipal budget, for which the necessary analyses have been undertaken and demonstrate the municipality's solvency for implementing the operations in question; and (iv) the definition of schemes to recover the costs incurred by the respective programs. The above aims to ensure that these programs do not impose a future financial burden on the government.

G. Program strategy

1.25 The Cuenca City Council decided to expand the area of ETAPA service provision at the end of the last decade, by bringing 12 of the 18 parish centers, with a population of approximately 115,000, within the urban core. ETAPA was commissioned to undertake the necessary studies. The plan developed by the firm proposes to incorporate an area of roughly 200 km,^{2} raising the population to be supplied to 400,000, including peri-urban areas, 12 rural parish centers, and part of their disperse rural areas into the current supply system.

1.26 This operation will fund works from the master plan stretching ahead to 2030, covering the consolidated urban zone of the Cuenca canton and 12 rural parishes. It was also decided to support infrastructure growth with a program to optimize and strengthen business management, to give guidance to ETAPA in the pursuit of efficiency and long-term sustainability, and to pass efficiency gains on to users. To ensure the firm makes steady progress in its reform and long-term efficiency commitments, the program will be implemented in three stages (with triggers between each one) with works that are functionally independent from each other, and to monitor fulfillment of the targets agreed upon in the performance indicators matrix (Table III-1).

1.27 In the first stage, loan proceeds would be used to finance works totaling the equivalent of US$16.2 million, and the following actions would be taken: (i) implementation of an independent management scheme including amendments to the ETAPA municipal bylaw (statutes), based on good corporate governance practices; (ii) creation of an independent regulation scheme through a technical and management audit, to provide incentives for efficiency gains and their transfer to users, based on a performance agreement between the municipio and ETAPA; (iii) implementation of the regulations for calculating rates based on LRMC; (iv) structuring of a fund to subsidize basic consumption among poor families; (v) optimization of processes; and (vi) and fulfillment of the efficiency indicators in Table III-1. In the second stage, works totaling the equivalent of US$16.7 million would be financed, and the following actions would be taken: (i) implementation of the subsidy-targeting mechanism; (ii) introduction of the environmental and social management plan; and (iii) fulfillment of the efficiency indicators in Table III-1. In the third stage, US$15 million in works would be financed. In order to ensure comprehensive fulfillment of the basic conditions in OP-708, the program proposes carrying out the actions listed in Table I-1.

Table I-1: Basic Conditions OP-708

Policy condition	Measures for comprehensive compliance
Separation of roles (policy formulator, regulator, and entrepreneur).	Links between ETAPA and the municipality mitigated through: (i) implementation of an independent management scheme, including amendments to ETAPA statutes; and (ii) creation of a regulatory regime.
Adoption of a sound and adequate regulatory regime (favorable investment and credit climate, promotion of competition, prices for natural monopolies, subsidies and/or other forms of intervention, and promoting consumers interests).	This condition would be fulfilled by: (i) creation of a regulatory regime to provide incentives for efficiency gains and their transfer to users, which could be reinforced with a targets contract; (ii) approval of regulations for a rates calculation methodology based on LRMC; and (iii) creation of a fund to subsidize basic consumption by poor families.
Appropriateness of institutional vehicles for regulation.	This is fulfilled by the creation of a regulatory regime based on a performance contract between the municipio and ETAPA.

II. THE PROGRAM

A. Objectives

2.1 The purpose of the program is to meet demand for water supply and sanitation services from the population of Cuenca on a sustainable basis, especially people living in peri-urban areas and rural zones who currently have precarious service. Good-quality services are needed to prevent the population from self-supplying with poor-quality water, and so reduce the risk of water-related illnesses and avoid a deterioration of water quality in rivers that traverse the city of Cuenca, by ensuring appropriate disposal of wastewater, and helping to reduce the risk of flooding in various areas of the city at times of torrential rainfall.

B. Components

2.2 **Component 1: Water supply systems (US$44.4 million).** This includes expansion of production by 485 l/s in the Yanuncay and Culebrillas systems, expansion of storage capacity in the Tomebamba-Machángara, Machángara Sur, Culebrillas and Yanuncay systems, through the construction of 18 tanks with a capacity of 33,500 m^3, about 50 km of pipelines for treated water, with five pumping stations and distribution systems, and 26,000 metered household connections in the Tomebamba-Machángara, Machángara Sur, Yanuncay and Culebrilla systems. Sludge treatment systems will also be constructed for the water supply plants. In addition, US$1.5 million in funding will be provided for an unaccounted-for water program, and US$1 million to improve operation and maintenance.

2.3 **Component 2: Sewerage system and river clean-up (US$25 million).** This includes strengthening existing interceptors and building others to serve areas that currently are without the service (interceptors IX, XII-A section 1, XII-2, XII-3, XVI, XVIII, XIX and XX), with a length of roughly 40 km; optimization of the Ucubamba wastewater treatment plant and treatment of its sludge; construction of a final sludge disposal system; expansion of 67 km of collector systems; rehabilitation works on the system; and channeling work on the El Salado creek.

2.4 **Component 3: Business strengthening (US$2.5 million).** This component is expected to fund three key areas: (i) business optimization, over a two-year period with support from a consulting firm (US$1.5 million), for implementation of the ETAPA strategic plan. The expected outputs would be: (a) updating of the diagnostic study; (b) business analysis by sector and area; (c) development of process-based management; (d) identification and generation of indicators; and (e) a plan to support and manage change. (ii) implementation of organizational restructuring and good corporate governance practices (US$500,000), the outputs of which would be: (a) analysis of the organizational structure; (b) design of the new organizational structure; (c) regulation of the necessary bylaws; and (d) definition of human resources; (iii) design and implementation of an independent regulation structure at the canton level, including definition of oversight and regulation mechanisms (US$500,000). Technical and managerial audits performed by an independent entity will be used during program execution to assess fulfillment of the commitments established in the performance contract signed between the firm and the Municipio. That contract contains performance clauses based on the efficiency indicator set forth in Table III-1, on the basis of which the parties pledge to set efficiency rates.

2.5 The bylaw regulating the organization and functioning of ETAPA will be altered to: (i) balance the proportion of directors appointed on the basis of their political function, in relation to those that represent the interests of civil society and users; (ii) define a transparent procedure for selecting top management from a shortlist submitted by a specialist executive selection firm, on the basis of technical qualifications, specific experience, and suitability for the post; (iii) define planning and oversight powers and responsibilities in the board of directors, to oversee the performance of the executive staff; and define the manager's powers and responsibilities in terms of organization, leadership and senior staff selection. The ETAPA board of directors will ask the Council to approve these changes (scheduled for 8 June).

2.6 **Socioenvironmental management plan (US$4.5 million).** This plan includes crosscutting actions in the three program components, to finance: (i) actions to protect natural water sources and courses; (ii) preparation of an integrated water resource management plan; (iii) preparation of a risk management study; (iv) compensation and indemnification for rights of way ceded to the works and restoration of intervened areas; (v) training and citizen participation; and

(vi) environmental monitoring plan. It should be noted that the works budgets include actions to mitigate negative socioenvironmental impacts. Actions (v) and (vi) will improve ETAPA's institutional capacity to manage environmental issues.

C. Costs and financing

2.7 The total cost of the proposed program is US$93.4 million, of which US$61.25 million will be financed by a loan from the Bank, drawn from its Ordinary Capital, and US$32.15 million will be provided as counterpart funding. In addition to investments for the three components described in the previous section (US$76.4 million), including the actions in the environmental management plan, the program is expected to incur the following costs: (i) engineering and management expenses (US$7.8 million), which encompasses works inspection (8% of infrastructure investments), studies and designs, and the executing unit; (ii) associated costs (US$1.3 million); and (iii) financial costs (US$7.9 million).

2.8 ETAPA has requested recognition of expenditures charged against the local counterpart funding for a number of works that were undertaken while this operation was being prepared, for a total of US$7.5 million; and retroactive funding of expenses anticipated before the loan is considered by the Bank's Board of Executive Directors. As these are estimated at US$3 million, the Bank's procurement policies and procedures will be followed. The breakdown of costs by investment categories and funding sources is shown in the following table.

Table II-1: Costs and Financing

Categories	Contributions (US$ thousand)		Total cost (US$ thousand)	%
	IDB	Local		
1. Engineering and management	**3,840**	**3,980**	**7,820**	**8.3**
1.1. Inspection	3,840	1,330	5,170	5.5
1.2. Studies and design	0	550	550	0.6
1.3. Executing unit	0	2,100	2,100	2.2
2. Direct costs	**53,610**	**18,270**	**71,880**	**77.0**
2.1. Water supply works	28,100	16,270	44,370	47.57
2.2. Sewerage and treatment works	23,510	1,500	25,010	26.8
2.3. Business improvement program	2,000	500	2,000	2.7
3. Socioenvironmental management plan	**3,500**	**1,000**	**4,500**	**4.8**
4. Associated costs	**300**	**1,000**	**1,300**	**1.4**
4.1. Land and rights of way	0	1,000	1,000	1.1
4.2. Audits	300		300	0.3
5. Financial costs	**0**	**7,900**	**7,900**	**8.5**
5.1. Interest	0	7,150	7,150	7.7
5.2. Credit fee	0	750	750	0.8
5.3. Inspection and supervision fee	0	0	0	0.0
TOTAL PROGRAM COSTS	**61,250**	**32,150**	**93,400**	**100.0**

III. PROGRAM EXECUTION

3.1 The execution scheme presented below describes the program's institutional framework (borrower, executing agency, and PEU). This is followed by an outline of the execution scheme for the three program components, including details of works contracting groups and other activities to be funded with the program, and their state of readiness; and lastly, a description of the content and scope of the Operating Regulations. This covers procurement procedures for works, goods and consulting services, the revolving fund, policy for recognition of expenditures and commissioning external audits, and the program's monitoring and evaluation mechanism.

A. Institutional framework

1. Borrower, guarantor, and executing agency

3.2 The borrower and program executing agency will be ETAPA, which will be legally accountable to the Bank for ensuring the local contribution and for loan repayment. The guarantors will be the Government of Ecuador for repayment of principal, interest and fees; and the Municipality of Cuenca for fulfillment of the program's objectives and purposes and the local contribution obligations.

2. Program executing unit

3.3 ETAPA will implement the program through the Water Supply and Sanitation Division (GAPS), supported by the existing program executing unit (PEU). The PEU is currently executing the firm's investment projects, and previously satisfactorily implemented the water supply and sanitation project for Cuenca (592/OC and 843/SF) and four TCs for the preparation of master plans. Supported by the Planning, Management, and Environmental Management Department and the firm's functional units, GAPS will be accountable to the Bank for managing the loan proceeds, for program implementation and monitoring, and coordination with other institutions as established in the Operating Regulations. It would also be responsible for supporting bidding and contracting processes under the responsibility of the Procurement Department, along with works supervision under the PEU, and other activities necessary for program success. The loan contract includes, as a condition precedent to the first disbursement, that the borrower provide evidence that the PEU is in place.

3.4 The PEU will be staffed by a group of 14 professionals drawn from ETAPA's permanent staff. The PEU director will supervise the work of three functional departments: (i) technical coordination; (ii) programming and oversight; and (iii) environmental supervision. He/she will be responsible for coordinating program planning and implementation activities with other public or private

entities; reviewing and approving works engineering studies, preparing construction proposals and technical specifications; arranging and obtaining economic resources for program execution; overseeing the fulfillment of contracts and supervising works progress; periodically reporting to GAPS and to general management on the progress of the program and PEU activities; facilitating supervision and audit tasks undertaken by the Comptroller's office; helping the firm implement procurement processes for the program's works, goods and consulting services; and formulating and implementing the PEU work plan, which will make it possible to fulfill the firm's strategic plan.

3.5 The Technical Coordination Department will supervise works inspection; oversee the anticipated consulting services; facilitate supervision and audit tasks by the Comptroller and the Bank; review and adjust designs, specifications, and budgets; review and approve works and consulting service payrolls; and prepare the program's technical documentation. The main function of the Programming and Oversight Department will be to plan and program investment and other expenses envisaged for execution of the master plans; oversee the investment program through the contractors' spreadsheets; coordinate with the ETAPA financial department on the allocation of fund disbursements for program financing; define rules and forms, and issue instructions for programming and oversight of the program. The Environmental Supervision Department will mainly be responsible for ensuring fulfillment of the environmental oversight plan envisaged in the program's environmental studies, arranging to obtain program environmental licenses, and hiring and supervising environmental audits.

B. Execution scheme

3.6 Resources for the infrastructure works in components 1 and 2 will be committed in three stages, each consisting of subprojects (groups of works) that are functionally independent (i.e., they do not depend on other works that are financed in other stages). First-stage works are committed during the first two years of execution, totaling US$31.3 million excluding funding for contingencies or supervision. Of this, US$16.2 million is drawn on the financing and US$15.1 million on the local counterpart contribution. Execution of the investments in this stage is expected to be completed within 30 months. Investments to be committed in the second, third and fourth years of execution, once the second-year performance targets have been fulfilled, amount to US$18.2 million, of which US$16.7 million is financed by the loan and US$1.5 million by the local counterpart contribution. Investments funded in this works stage would be completed within 30 months. Third-stage works would be committed during the fifth and sixth year of execution for a total of US$15 million, drawn on the loan. Works in this stage would be completed within 24 months. Passing from one stage to another would depend on fulfillment of the indicators. The loan contract includes, as a condition precedent to contracting the works in stages two and three, that the performance indicators set out in Table III-1 for years 2 and 4 be met.

1. Water supply and sewerage (components 1 and 2)

3.7 Works execution in components 1 and 2 will be contracted through bidding processes with construction firms of recognized experience, in accordance with the Bank's procurement policies. In addition, financing will be provided for: (i) the unaccounted-for water program; and (ii) optimization of operation and maintenance processes. Program works inspection will be covered by hiring consulting firms specializing in the different types of works. The loan contract includes, as a condition for contracting the works, the contracting of the respective works inspection and environmental supervision and the submittal of evidence to the Bank, for its no objection, of the inclusion of environmental specifications in the bidding documents prior to calls for proposals for civil works. As noted above, execution of these components is subdivided into three stages, each containing several groups of works. The works groups to be financed with the program are:

a. Works groups in each stage

3.8 **First stage (US$31.3 million)**. The following works in the water supply component, amounting to US$10.3 million, will be financed out of the loan proceeds: (i) Yanuncay system distribution networks, first stage (US$3 million); (ii) pipelines for the Machángara Sur system; and (iii) rehabilitation of the Presedimentadores-El Cebollar untreated water canal. The following sewerage and treatment works are also expected to be financed from the loan, for a value of US$5.9 million: (i) interceptor IX (Milchichig river); (ii) interceptor XII-A (Machángara river); (iii) emerging wastewater system; (iv) rehabilitation and improvement works on interceptors; (v) Group 1 collector systems; and (vi) direction and channeling works in the El Salado creek. Counterpart funding will be used to execute the first phase of the Tixán sludge treatment plant, part of the rehabilitation of the Cebollar untreated water canal, and the Yanuncay and Culebrillas storage systems.

3.9 **Second stage (US$18.2 million)**. The following works from the water supply component, amounting to US$6 million, will be funded out of the loan proceeds: (i) reserve centers and the first phase of the distribution systems and the Machángara Sur system (US$900,000 and US$2.16 million, respectively); (ii) the first phase of the distribution systems in the Tomebamba-Machángara and Culebrillas systems (US$1.56 million and US$750,000, respectively); and (iii) reserve centers in the Tomebamba-Machángara system. The following works in the sewerage and treatment component are also envisaged, totaling US$10.7 million: (i) interceptor XVIII (Tomebamba river, left bank); (ii) interceptor XIX (Yanuncay river, left bank); (iii) interceptor XX (Yanuncay river, right bank); (iv) replacement of existing collectors (Avenida Loja, Tungurahua, Turuhuaico, González Suárez and Paseo los Cañaris); (v) Group 2 collector systems (US$1.3 million); and (vi) infrastructure improvement and sludge extraction and treatment works in the Ucubamba wastewater treatment plant.

Counterpart funding of US$1.5 million will be used to finance the sludge disposal system. The loan contract includes, as a condition precedent to contracting the works to upgrade the Ucubamba wastewater treatment plant, that the environmental permit, required under national legislation, be obtained to execute construction works for the final sludge disposal landfill.

3.10 **Third stage (US$15 million)**. This includes the following works in the water supply component, totaling US$8.1 million: (i) treatment plants to treat the sludge generated in the Cebollar and Tixán water supply plants; and (ii) the second phase of the Yanuncay, Machángara Sur, Tomebamba-Machángara and Culebrillas distribution systems (US$2.2 million, US$1.4 million, US$2.3 million, and US$750,000, respectively); (iii) the second phase of the Tomebamba-Machángara and Culebrilla distribution systems (US$2.3 million and US$750,000, respectively); (iv) pipelines in the Tomebamba-Machángara system; and (v) rehabilitation of the Presedimentadores-El Cebollar untreated water canal. The following works from the sewerage and treatment component, amounting to US$6.9 million, are also included: (i) interceptor XII (La Compañía river), (ii) interceptor XII-3 (El Chorro creek), (iii) interceptor XVI (Tarqui and Yanuncay rivers), and (iv) encasement *(embaulamiento)* of the El Salado creek.

b. Incorporation of systems that are independent from ETAPA

3.11 Communities would only be incorporated into the ETAPA mains system when they apply to ETAPA for incorporation, and provided they are responsible for the managing their systems and are duly informed. During program preparation, ETAPA proposed a four-part methodology for incorporating these communities: (i) promotion; (ii) selection of the subsystems to be incorporated, based on a minimum number of requests for incorporation into the system; (iii) program preparation; and (iv) program execution. The firm has thus far made progress in executing the first three components and has signed letters of agreement and commitment to incorporate communities belonging to the 12 ETAPA parishes, which would eventually be financed out of the loan proceeds, and be included in the master plan. The corresponding minutes give details of a preliminary scheme for financing the investments and the cost recovery mechanism.

c. Component readiness

3.12 Design work on first-stage physical works in water supply and sewerage infrastructure is complete, except for rehabilitation of the pipeline taking untreated water to the El Cebollar plant, the design of which is expected to be completed during the first year of program execution. For the second and third stages, only 20% of the water distribution and wastewater collection system remains to be designed, and this should be completed during the first year of program execution. The Operating Regulations will require ETAPA to send the final designs and updated feasibility studies to the Bank for its no objection, before funds are

committed for these works. As the selection and contracting process for a number of first-stage works is expected to start during the first half of this year, the firm has requested up to US$3 million in retroactive financing and pledged to follow Bank procurement procedures and policies. The unaccounted-for water program (US$1.5 million) includes the procurement of materials and equipment to detect leaks in the water supply distribution system, and the program to optimize operation and maintenance processes (US$1 million) includes the hiring of consulting services to define its scope and the financing of the investments that they recommend and that are agreed on with the Bank.

2. Institutional strengthening (component 3)

3.13 The component will be implemented by hiring consulting services from firms of international experience, selected through competitive bidding in accordance with Bank policies. Execution of this component will be the responsibility of the General Planning Department; for this, it will hire a consulting firm with international experience; a technical and managerial audit will also be commissioned to oversee the agreement between the municipio and ETAPA. In the first stage, the following studies will be commissioned: (i) study for creating and establishing a fund to directly subsidize consumption by low-income users; (ii) updating of the costs and rates study to an LRMC basis; and (iii) study of operating and maintenance costs in storm drainage investment works. The rates to be updated based on the LRMC must be in place by the end of the first year, and the subsidy regime should be installed in the first year of stage two.

3.14 Based on the results of the cost and rates study, a mechanism will be implemented to target the subsidies on basic consumption by poor families. In principle, the mechanism would be managed by the firm and the Municipio. Funding will be obtained from the municipal budget, with ICE funds being used at the start and while available. The criterion for gaining access to the fund will be based on the beneficiaries' ability to pay, established using SELBEN data. This is expected to be 3% of family income for water supply service and 5% for water supply and sanitation service. The study needs to be completed during the first stage, and the mechanism should be operating during the second stage. As the funds will be used to pay the investment portion of the basic consumption rate, the subsidy scheme is consistent with the Water and Sports Law which requires ICE resources to be earmarked for investment in water supply works. The loan contract includes as contractual conditions: completion of the cost and rates study and updating of rates during the first year of program execution; and implementation of the subsidy mechanism during the second stage.

3.15 **Component readiness**. At the present time, draft terms of reference exist for the studies and for the technical audit. All the studies in this component, for which the terms of reference are included in the Operating Regulations, would need to be contracted during the first year of execution. Consulting services for business

optimization will be contracted before the end of this year. It should be noted that the firm has decided to extend the scope of business optimization to include the telecommunications area. During the analysis mission, ETAPA presented a draft performance contract, a draft of bylaw reforms, and terms of reference for their regulations. Signature of the agreement and presentation of the bylaw reform bill will be conditions precedent to the first disbursement; passage of the bill should be obtained in the first six months of program execution and regulation thereof during the first stage.

3. Social and environmental management plan

3.16 With support from the Environmental Management Department and the firm's other functional units, the PEU will be responsible for implementing the environmental and social management plan, as agreed upon with the Bank. The PEU director will: (i) coordinate activities for planning and implementing the socio-environmental programs included in the environmental and social management plan with other public and private entities; and (ii) oversee fulfillment of works contracts, particularly as regards implementation of their environmental oversight measures. The loan contract stipulates, as a condition precedent to the first disbursement, that the borrower is to demonstrate that the ETAPA board of directors has approved the environmental management system proposed in the environmental and social management plan.

C. Operating Regulations

3.17 The program will be governed by Operating Regulations containing eligibility criteria, the main program guidelines, and the organization, operating procedures and responsibilities of the PEU and the participating entities. A draft of the Operating Regulations was reviewed by the project team. The Operating Regulations include: (i) program description, purpose, objectives, and components; (ii) the legal framework in relation to governance, regulation, area of influence, current rates regulation, etc.; (iii) the structure and functional organization of ETAPA and the PEU, including its organizational chart, competencies and procedures, for which flow diagrams and decision-making levels will be included. The corresponding flows will be described in narrative form, and proforma models of the main documents will be included; (iv) financing terms and conditions, which include funding sources, use of resources, financing constraints, rules on bidding, procurement and disbursement; (v) the monitoring and evaluation system; and (vi) provisions on duration and amendment. The annexes to the Operating Regulations include terms of reference for commissioning the studies mentioned above and interinstitutional agreements, among other items. As a condition precedent to the first disbursement, the loan contract requires ETAPA to demonstrate to the Bank's satisfaction that the Operating Regulations are in force.

1. Procurement

3.18 Procurement of goods and services, civil works and consulting services financed by the program will be conducted in accordance with Bank policies (documents GN-2349-6 and GN-2350-6). Goods procurements for more than US$250,000 will use international competitive bidding (ICB) procedures. Those between US$50,000 and US$250,000 will use national competitive bidding (NCB), and those for less than US$50,000 will use the shopping method (comparison of at least three valid quotes). In the case of works, the threshold for ICB is US$3 million, while works procurements for between US$3 million and US$100,000 will use NCB; and contracts for smaller amounts will use the shopping procedure. Consulting services from firms for US$200,000 or more will be procured from a shortlist obtained from an international request for expressions of interest, whereas for smaller amounts international publicity will not be required. Program procurements will be subject to prior review. After six months of program execution the review method will be reassessed in the light of the firm's procurement performance. The executing agency's capacity will be evaluated annually, and an opinion will be expressed by the procurement specialist at the Country Office. Pursuant to the procurement policy, during the loan negotiations with the Bank, ETAPA will agree on a Procurement Plan (see Annex II) giving details of procurements in the first 18 months of program execution. All procurements to be undertaken in a given period should be included in the procurement plan as approved by the Bank, and abide by the methods and ranges established therein.

2. Revolving fund

3.19 The Bank will establish a revolving fund for up to 5% of the loan amount, after the conditions precedent to the first disbursement have been fulfilled. The corresponding funds will need to be managed in a Bank account in the name of the program. ETAPA will submit consolidated reports on the status of the fund to the Bank within 60 days following the end of each calendar half-year.

3. Operation and maintenance

3.20 Program works will be operated and maintained by ETAPA. Although this firm has the technical staff and means needed to do this satisfactorily, the program will strengthen its operation and maintenance (O&M) activities. To ensure the state of conservation of the works is properly monitored, ETAPA will prepare an annual O&M plan for systems funded by the program, which will be presented to the Bank during the first quarter of each calendar year, and for a 10-year period after completion of the first program work. The O&M plan will include a report on the previous year's activities in this area, and on the conservation status of the systems in question. The loan contract includes a clause outlining the operation and maintenance obligations.

4. External audit

3.21 ETAPA will submit annual financial statements for the program and the entity during program execution. The external audit will be performed by a firm of independent auditors acceptable to the Bank, pursuant to Bank policies and requirements (AF-100 and AF-300), and will be contracted in accordance with the procedures established in the document on bidding for external audits (AF-200), and the terms of reference previously agreed upon by the Bank (AF-400 and AF-500). These audits will be fully funded from the Bank loan. The auditors will be hired for a period of at least three years. The external audit will cover financial and operational issues, and will require the presentation of an annual report within the first 60 days of the year during the program execution period, and a semiannual report of a "provisional nature". Audited annual financial statements for the program and ETAPA will be filed within 120 days following the end of each fiscal year, starting with the fiscal year in which program execution begins and throughout the life of the loan contract. The program's closing financial statements will be presented within 120 days following the last disbursement.

D. Monitoring and evaluation

3.22 The monitoring and evaluation system is composed of: (i) the Program Execution Plan (PEP), which includes the procurement plan and a performance matrix for monitoring the indicators established in the logical framework (Annex I); (ii) the annual work plans (AWPs), which include actions agreed upon and necessary to mitigate the risks identified in the Institutional Capacity Assessment System (ICAS) and the risk analysis, which the Bank will review periodically; (iii) semiannual reports describing progress in the AWP, the results obtained from execution of the activities, and the plan of action for the following six months in aspects that require corrective measures to improve the performance of the program and ETAPA; and (iv) a supervision plan focusing on the achievement of results and evaluation of program performance.

1. Performance evaluation

3.23 Program progress will be evaluated through the logical framework indicators (Annex I). The achievement of business management results will be measured through the performance indicators contained in the logical framework (Table III-1). Fulfillment of these indicators (values at each calendar year-end) during a given stage would allow funds to be committed for the following stage. The attainment of indicators and benchmarks will be verified through a review for this purpose.

3.24 Two reviews are planned to verify fulfillment of performance indicators and general progress in program execution. The first will be performed no later than 24 months from the date on which the contract enters into force, or when the firm

has demonstrated fulfillment of the first-stage indicator targets. The second review will be undertaken 48 months after the contract enters into force. Fulfillment of indicators established for the fourth year will allow the firm to commit third-stage funds. As contractual conditions, the loan contract stipulates that the fulfillment of indicators will be verified annually through technical and managerial audit reports and that passage from one stage to the next will be approved in midterm reviews. Should the firm fail to achieve a given indicator, it will prepare a plan in agreement with the Bank to enable it to achieve the target in the next 12 months.

Table III-1: Performance Indicators

Indicators and targets (amounts at end of each calendar year)	Stage I		Stage II		Stage III	
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
DIRECT WORKS COSTS						
Loan, works component (US$ million)	6.6	9.6	7.1	9.6	8.6	6.4
Local contribution, works (US$ million)	10.3	4.8	0.6	0.9		
EFFICIENCY, 98% fulfillment of the average of:						
1. Operating margin (%)	20	20	23	25	27.5	27.5
2. Collection efficiency (%)	80	80	82.5	82.5	85	85
3. Micromeasurement (%) (read, age < 10 years)	94	94	96	96	97	97
4. Employees per 1,000 connections	7	6	6	5	5	4
5. Unaccounted-for water ratio (%)	36	35	34	33	32	31
CORPORATE GOVERNANCE						
6. Bylaws and regulations	I	I	I	I	I	I
7. Human resources policy	P,A	I	I	I	I	I
RATE						
8. Valuation of fixed assets	C	I	I	I	I	I
9. Rates regulation and subsidies	P,A	I	I	I	I	I
10. LRMC tariffs applied	100%	100%	100%	100%	100%	100%
11. Subsidy targeting	P	A	I (90%)	I (100%)	I	I
REGULATION						
12. Technical and management audit	C	C	C	C	C	C
ENVIRONMENTAL						
13. Environmental and social management plan	P	A	I	I	I	I
COVERAGE						
14. No. of new connections	5,755	5,887	2,193	6,503	5,908	2,633
15. No. of new sewerage connections	n.a	2,480	6,127	9,336	10,205	11,713

P: prepared, A: approved; I: implemented; C: completed; n.a: not applicable

2. Data collection and ex post evaluation

3.25 *Ex post evaluation and data collection.* The borrower will collect the data needed to assess fulfillment of the program's targets, so as to allow for a future evaluation of program efficiency and effectiveness in achieving the established objectives and to take advantage of lessons learned. The executing agency will present a file to the Bank on two occasions: the first, before the works are constructed, and the second, one year after the constructed systems have entered into service. The files will contain the following information: (i) total number of families; (ii) number of water supply and sewerage connections; (iii) average water consumption per connection; and (iv) statistics on the incidence of waterborne diseases and child mortality. The baseline to measure program effectiveness was compiled during program preparation. ETAPA will hire a firm to collect data evaluating INEC participation. As a contractual condition, the loan contract calls for the presentation of data for evaluation of the program.

E. Execution period and disbursement schedule

3.26 The program execution period will be six years. The deadline for the start of works will be three years from the entry into force of the contract. Box III-1 contains the expected disbursement schedule.

Box III-1: Tentative disbursement schedule (in thousands)

Year \ Source	IDB	Local	Total	%
1	10,744	19,361	30,105	32.23
2	11,376	3,176	14,552	15.58
3	12,136	3,138	15,274	16.35
4	10,965	2,233	13,198	14.13
5	9,975	3,192	12,167	13.03
6	6,054	3,050	8,104	8.68
TOTAL	61,250	32,150	93,400	100.0
%	65.58	34.42	100.0%	

IV. VIABILITY AND RISKS

A. Institutional viability

4.1 The program's institutional viability is founded on the commitment of the ETAPA management and its board of directors to: (i) strengthen corporate governance in ETAPA to ensure that technical and managerial criteria prevail in business decisions; (ii) adopt an independent regulation mechanism that promotes efficient and sustainable service provision; (iii) enter into a performance contract between the municipio and ETAPA that incorporates the setting of rates based on the efficiency indicators and a matrix of indicators that would make it possible to monitor management performance and efficiency levels; and (iv) implement the business optimization program enabling ETAPA to adopt best operational and organizational practices to improve its efficiency. Important aspects relating to institutional viability include: design of a new organizational structure; definition of a human resources policy; preparation of bylaws and regulations to ensure separation of policy formulator (government and municipality), regulation, and entrepreneurial functions (ETAPA); definition of oversight and regulation systems; and an annual external technical and managerial audit. Although the institutional framework governing the sector in the country is improvable, this has not prevented successful implementation of previous Bank operations, from which lessons can be drawn.

4.2 The results of the institutional capacity assessment revealed areas for potential improvement, for which actions have been defined as follows: (i) in terms of administrative organization, the business optimization governance component includes activities to improve processes and training, while the Operating Regulations define specific processes relating to the program; (ii) on personnel management, the governance component also defines a human resources policy for the firm; (iii) the business optimization component involves reviewing aspects of internal oversight, and expanding them to operational aspects by tracking performance indicators; and (iv) for external oversight, the firm is committed to implementation of an annual technical and managerial audit, and financial audits by firms of auditors acceptable to the Bank.

B. Financial viability

4.3 The viability analysis presented below confirms that ETAPA has the capacity to finance the local counterpart contribution during the program execution period, and to service all its debts during the lifetime of the loan. ETAPA's sources of operating revenue enable it to cover all its operating and maintenance expenses, in addition to its capital costs and debt service on all its liabilities during the life of the loan, as established by policy OP-708. The Municipality of Cuenca is also in a position to guarantee the local counterpart contribution as established in OP-303.

4.4 Financial analysis of ETAPA was undertaken using a model developed internally by EN3, with projections for the loan period in constant December 2005 dollars. The financial evaluation is integral and includes an assessment of the water and sanitation and telecommunications sectors. The financial model includes historical data from the last three years, projections for income and operating costs, capital investments, external financing, fixed assets, and working capital, based on which the ETAPA financial statements were projected. The analysis and sensitivity evaluations performed show the firm to be financially solvent, with an average profit during the first six years of the projection of US$3.4 million, an average cash balance of US$9.3 million, and adequate efficiency indicators (operating margin of 25%, collection efficiency of 85%, liquidity of 4.4, and borrowing of 20.6%). The financial capacity of the Municipality of Cuenca to cover the local counterpart contribution guarantees was also analyzed.

1. Income statement

4.5 In 2006 the firm is projected to have more than 69,000 customers on its books, and will bill approximately 23.5 million m^3 at an average charge of US$0.75/$m^3$ (US$0.44 water, US$0.21 sanitation, and US$0.10 for special capital improvement contribution). In the first six years, operating revenues are expected to grow by an average of 2.4% per year, largely reflecting the incorporation of some 33,500 new connections. Of these, 29,500 would be done during the program: 15,200 in 2007 and 14,300 in 2010. The baseline case of the financial projections, anticipating the inclusion of new users with lower water consumption patterns,[1] projects a reduction in average residential consumption on the order of 7.5%, with this consumption level remaining constant for the first five years.

4.6 Operating and maintenance expenses rise by an average of 3% per year. The average cost per m^3 between 2005 and 2006 rises from US$0.56 to US$0.62, reflecting the incorporation of new users; nonetheless, in the sixth year the cost is projected to drop to US$0.53, as a result of the business optimization program. The firm's 7.45 employees per 1,000 connections is considered high compared to the industry average. The financial model does not alter ETAPA staffing.

4.7 Operating profits calculated as earnings before interest, taxes, depreciation and amortization (EBITDA) show that the firm's own resources are sufficient to cover its operating and maintenance costs, including depreciation. In 2006, the profit

[1] The ETAPA customer register for 2010 includes 13,900 new connections in Yanuncay, 5,100 in Culebrilla and 14,500 in Machángara. The register is divided into: parish center and consolidated urban, and special zone and rural zones. The financial model assumes supply per inhabitant-day of 174 liters in the consolidated urban area, 134 in the parish centre, 158 in special zones and 113 in rural zones, which remain constant during the first five years.

margin falls from 29.7% to 23.6%, as the combined effect of falling incomes and increasing costs; but from 2007 onwards, EBITDA displays a stable upward trend.

4.8 The firm's annual profit, net of other incomes and expenses, averages US$3.4 million during the first six years. Financial expenses from the fifth year of projection onwards rise considerably as a result of borrowing from the Bank and BEDE. ICE tax revenues, amounting to around US$3.5 million, are a major source of funding for the firm, part of which are projected to finance a subsidy-targeting mechanism as from 2007.

2. Flow of funds

4.9 The main sources of financing for the firm during the next six years are operational cash flow and external borrowing (US$110.7 million). The operational cash flow of US$47.3 million is sufficient to ensure timely financing of the local counterpart contribution. The main sources of external financing are the Bank program and US$11 million in funding from BEDE to finance the Yanuncay project. Disbursements on this loan started in 2005 and are expected to conclude by mid-2007. The firm's internally generated resources are used mainly for the investment program (US$73.5 million), and amortization of debts contracted by the firm (US$23.5 million), which include liabilities with BEDE, the Ministry of Economic Affairs and Finance (MEF) and Intercompañías.

4.10 Operational cash flow during the projection period is sufficient to cover ETAPA's financial obligations. The debt service coverage ratio is 2.4 in the first six years and 2.0 during the program period. Operational cash flow, net of debt service, is sufficient to finance 32.4% of the investments during the first six years.

Cash Flow

	2006	2007	2008	2009	2010	2011	2012 …	2007-2012
	0	1	2	3	4	5	6	1-6
Operating cash flow	8,249	7,774	7,103	7,164	7,691	7,826	7,834	45,393
Working capital	(467)	98	167	261	(213)	328	306	946
Cash flow before capital investment	**7,781**	**7,872**	**7,270**	**7,425**	**7,478**	**8,154**	**8,140**	**46,340**
Water supply	11,892	11,420	5,714	5,252	5,604	5,603	5,459	39,052
Sanitation	2,337	3,663	4,657	7,400	5,030	4,450	3,260	28,461
Improvement programs	105	1,439	1,693	1,464	675	368	412	6,052
Capital investments	**14,334**	**16,523**	**12,064**	**14,117**	**11,309**	**10,422**	**9,132**	**73,566**
Cash flow before financing	(6,553)	(8,651)	(4,794)	(6,692)	(3,831)	(2,267)	(992)	(27,226)
External borrowing	3,189	15,202	12,320	12,787	12,179	7,600	4,351	64,440
Long-term liabilities	5,205	5,842	6,480	6,480	2,837	1,276	638	23,554
Reserve fund	0		500	500	1,000	1,000	2,000	5,000
Financing	**(2,015)**	**9,360**	**5,340**	**5,807**	**8,342**	**5,324**	**1,713**	**35,886**
Cash flow for fiscal year	(8,568)	709	546	(885)	4,511	3,057	722	8,661
Balance at fiscal year end	**4,718.1**	**5,427.3**	**5,973.6**	**5,088.6**	**9,600.0**	**12,657.1**	**13,378.7**	**13,378.7**

Income Statement

	2005	2006	2007	2008	2009	2010	2011	2021	2031
	-1	0	1	2	3	4	5 ...	15 ...	25
Billings: Water supply	12,107.7	11,870.3	12,303.3	12,634.9	13,099.7	13,679.0	14,081.6	16,848.6	19,956.4
Billings: Sewerage	5,916.0	5,796.6	6,042.0	6,147.6	6,370.3	6,662.7	6,813.6	7,989.8	9,409.6
Other operating income	1,391.2	1,159.8	1,409.7	1,447.0	1,152.1	1,709.7	1,732.6	1,603.0	1,927.6
Operating income	**19,414.9**	**18,826.7**	**19,755.1**	**20,229.5**	**20,622.2**	**22,051.3**	**22,627.9**	**26,441.5**	**31,293.6**
Growth %	*10.8%*	*-3.0%*	*4.9%*	*2.4%*	*1.9%*	*6.9%*	*2.6%*	*1.8%*	*2.0%*
Labor	4,716.3	5,025.5	5,106.6	5,186.1	5,265.7	5,471.4	5,566.0	6,640.0	7,696.7
Supplies and materials	2,622.7	2,697.1	3,014.9	3,186.5	3,263.4	3,635.3	3,822.9	5,162.2	6,433.2
Administration expenses	3,247.1	3,425.9	3,446.9	3,466.1	3,484.6	3,585.0	3,611.1	3,901.8	4,137.2
Commercial expenses	3,058.3	3,226.8	3,246.5	3,264.6	3,282.0	3,376.6	3,401.2	3,675.0	3,896.7
Operation and maintenance	**13,644.5**	**14,375.4**	**14,814.9**	**15,103.2**	**15,295.7**	**16,068.4**	**16,401.1**	**19,379.1**	**22,163.8**
Growth %	*5.8%*	*5.4%*	*3.1%*	*1.9%*	*1.3%*	*5.1%*	*2.1%*	*1.4%*	*1.4%*
EBITDA	**5,770.4**	**4,451.3**	**4,940.1**	**5,126.3**	**5,326.5**	**5,983.0**	**6,226.8**	**7,062.4**	**9,129.8**
EBITDA margin	*29.7%*	*23.6%*	*25.0%*	*25.3%*	*25.8%*	*27.1%*	*27.5%*	*26.7%*	*29.2%*
Depreciation	(3,764.9)	(3,724.9)	(4,056.7)	(4,312.7)	(4,578.2)	(4,853.7)	(5,076.7)	(6,167.5)	(7,073.7)
EBIT	**2,005.5**	**726.4**	**883.5**	**813.6**	**748.3**	**1,129.3**	**1,150.1**	**894.9**	**2,056.1**
Other income/(expenditures)	1,305.7	1,008.4	1,028.6	1,048.1	1,067.0	1,085.1	1,102.5	1,236.0	1,365.3
ICE	3,401.5	3,435.5	3,469.8	3,504.5	3,539.6	3,575.0	3,610.7	4,008.2	4,427.6
Subsidies fund			(600.0)	(1,200.0)	(1,206.0)	(1,212.0)	(1,218.1)	(1,280.4)	(1,345.9)
Financial expenses	(319.3)	(646.6)	(1,064.8)	(1,375.5)	(1,562.7)	(1,739.9)	(1,895.7)	(4,577.4)	(870.5)
Profit for fiscal year	**6,393.5**	**4,523.7**	**3,717.1**	**2,790.8**	**2,586.2**	**2,837.5**	**2,749.5**	**281.4**	**5,632.6**

4.11 The loan contract includes the following contractual conditions: (i) the executing agency must update the financial model annually during the execution phase; (ii) the rates and the special capital improvement contribution for the water supply and sewerage services must generate sufficient revenues to cover all administration, operating, maintenance and depreciation expenses; (iii) revenue from net internal generation must be sufficient to service all of the borrower's obligations on a timely basis and contribute 20% of the financing for its expansion program; and (iv) the indicator, EBITDA/financial interest, must be less than 1.5; if it is not, the borrower and the Municipality will take the steps to obtain the additional resources required, which could include adjusting costs and/or rates based on the efficiency parameters agreed to with the Bank; (v) loans greater than US$5 million, or for smaller amounts when the debt coverage ratio is below 1.5, require the Bank's no objection; and (vi) accounting records for water supply and sanitation and telecommunications are to be kept separate.

3. Balance sheet

4.12 The projected balance sheet shows average liquidity indices of 4.5, a level of borrowing of 20.5% during the first six years; and the average cash balance during this period is maintained at US$9.3 million. The annual billing/collection ratio is 95%; and collection efficiency is 85.4% and projected to be on the order of 85% from the sixth year onwards. The firm's long-term borrowing needs for the projection period would consist of: IDB: US$61.25 (25-year term, six year grace period and 3.4% interest on US$56.9 million and 4.1% on US$4.3 million); BEDE and others: US$14.2 (seven-year maturity, one year grace period and 6.5% interest), to finance investments over the next 10 years. The firm would need US$47.1 million of additional borrowing from 2016 onwards projected at a 15-year term, with a three-year grace period, and at 7.5% interest.

4. Guarantee of local counterpart contribution and debt repayment

4.13 The local counterpart contribution of US$32.5 million has assured funding of up to US$15.3 million through a loan extended by BEDE (US$11.3 million), and through the firm which will execute works charged against the local counterpart funding for US$4.3 million. The local counterpart contribution for 2006 is funded from internally generated resources. The outstanding funding balances between 2007 and 2012 amount to US$16.85 million, which is strongly backed by a cash balance of US$13.3 million at December 2005.

4.14 The financial analysis of the Municipality of Cuenca, guarantor of the loan in respect of local counterpart contribution obligations, indicates that the Municipality currently has sufficient debt-free capacity to guarantee the outstanding funding contributions in this operation. The loan contract stipulates, as a condition precedent to the first disbursement, that ETAPA and the Municipality are to sign an agreement whereby the firm would use the income it receives from the ICE to underwrite financing for the local counterpart contributions. A draft of this agreement is contained in the Operating Regulations. Income from ICE averages US$3.6 million per year.

4.15 **Guarantee of debt repayment.** ETAPA will sign a fund restitution agreement and a trust fund agreement for operating incomes, with the Republic of Ecuador and the Central Bank of Ecuador respectively, to enable the government to provide the guarantee to ETAPA, pursuant to the regulations to the Organic Law on Fiscal Accountability, Stabilization and Transparency of the Republic of Ecuador, of 12 October 2005. The loan contract includes the signature of this agreement as a condition precedent to the first disbursement.

C. Technical viability

4.16 **Status of readiness and programming of program execution.** The physical works are fully designed except for about 20% of the water distribution and wastewater collection systems and works to rehabilitate pipelines carrying untreated water to the El Cebollar plant, the designs for which should be completed during the first year of execution. The works have been programmed in accordance with the needs of each system and each service, prioritizing works of rapid impact and infrastructure optimization in the early years, including the unaccounted-for water control program. The works in each of the three stages of the funding commitment are mutually independent and generate benefits individually. The cost of investments currently being executed to extend supply systems to new zones in the first stage is borne by the local counterpart; and coverage expansion works will be undertaken as agreements are reached to incorporate new users (guaranteed affiliation to the firm of at least 70% of users in each zone). The execution schedule reflects the deadlines required to undertake the envisaged activities and works, given that the expected construction methods are widely used in the country and

minimize negative socioenvironmental impacts. The six-year deadline proposed for disbursements is considered realistic and feasible, in view of the executing agency's previous experience in projects with the Bank.

4.17 **Design standards and technical viability** The technical evaluation included an analysis of the balance between supply (installed capacity) and demand (consumption by the population) over a 30-year planning horizon, for each of the main components of the systems, together with an analysis of alternatives to solve coverage and quality problems, and the technical parameters used in the final engineering designs for the program works. The results of this analysis show that support studies have generally followed the provisions of the National Constructions Regulation, which are consistent with the parameters recommended by international agencies to guarantee safe provision of services; and they have been undertaken by consulting firms with renowned international experience. Cost calculations are based on real unit costs from the international and national market, with reasonable provisions taken to cover contingencies. The engineering works involved in the program do not involve special complexities. The assessment between supply and demand made by the team demonstrated to the firm the benefits of postponing to a later phase works to expand the Tixán plant, interconnection between this and the Cebollar plant, and the extension of distribution systems to remote areas of low population density, thereby generating value added in the firm's investment planning and significant savings in its investments. Programming the works in this way will also give the firm time to verify the population growth expected in the expansion zones, and to channel investments into areas that will really develop in the future.

4.18 **Operation and maintenance of infrastructure and services.** ETAPA will be responsible for execution of program works and their subsequent operation and maintenance. The firm has sufficient qualified staff to mitigate operational risks. The good state of maintenance of the systems and works executed with previous Bank funding was verified during preparation of the operation. Moreover, with the unaccounted-for water and business modernization programs, the firm will have efficient tools to optimize systems operation and maintenance, as well as information systems to support the firm's decision-making.

D. Socioeconomic viability, benefits, and beneficiaries

4.19 The lowest-cost expansion alternative was submitted to cost-benefit analysis, for which the baseline data, estimated econometric models of demand, projections of demand and population, and the results of running the models are available in the RE3 files. An evaluation showed that subprojects costing US$64.6 million (out of a total of US$100 million) were viable for financing over the next six years. The remainder of the projects were also viable, but would have taken more than seven years.

1. Water supply component

4.20 *Analysis:* A cost-benefit evaluation was made at December 2004 prices, using shadow prices calculated by the Ecuadoran Development Bank (BEDE) and including incremental investment costs and O&M expenses. The benefits considered were the resource saving for users who do not have the service (purchase of water in tanks and transport); the current and future costs of systems to be replaced; and the increase in consumption resulting from making up the rationing that exists in these latter systems.

4.21 *Demand:* To estimate the benefits, current and future potential consumption was calculated from the demand curve, population and current connections served by ETAPA and independent systems, and population projections prepared in the master plans. The demand curve was estimated using an econometric model based on household surveys. The significant elasticities are -0.23 with respect to price and 0.5 with respect to income.

4.22 *Results:* The Public Works Simulation Model (SIMOP), developed by the Bank, was used to calculate the economic return on the water projects. Based on the cost-benefit analysis, the Machángara Norte will not be funded in this stage.

4.23 *Sensitivity analysis:* Sensitivity analysis was performed on the investment costs (15% increase) and the price-elasticity of demand (15% reduction in benefits) for the viable projects. The results were found to be robust for the viable investments except for the Culebrillas project. In this case, the economic internal rate of return (EIRR) falls to 11.3% when costs rise by 15% and the benefits are reduced by the same amount. Bearing in mind that costs are at the design level, it is unlikely they would rise more than 8%; therefore the project is viable, and it is recommended that the distribution system be financed.

2. Sewerage and environmental sanitation component

4.24 In locations where it is intended to build combined sewerage (sanitation and rainfall) installations, the current solutions for wastewater disposal are latrines, septic tanks, and direct discharge into public areas or streams, thereby degrading the environment and the health of local residents. Moreover, rainwater tends to flow directly along highways creating flooding that impedes transit.

4.25 Both public and private benefits are generated from the construction of systems for the collection and disposal of wastewater and rainwater. The private benefit stems from the welfare increase implicit in an improved environment for each home and people's health. The public benefits relate to improvement and conservation of the environment in the program area and the reduction in traffic congestion during heavy rainfall periods.

4.26 The direct benefits of the system were calculated using a contingent valuation methodology that estimated willingness to pay for these services. To develop the econometric model, a representative survey was conducted (500 observations) in the neighborhoods that would benefit from the works, using referendum-type (yes/no) replies. The calculated values for willingness to pay averaged US$11.49 per month per family for sewerage, and US$3.64 for river cleanup.

4.27 *Analysis:* As a result of this analysis, most of the collectors were segmented, and upstream segments that collected wastewater from low density areas were postponed for a future intervention. Financing will be provided for collectors downstream of IX, XII-2, XII-3, XII-A segment 1, XVI, XVIII, XIX and XX and the emerging zone. A sensitivity analysis was performed on the viable projects, using the same methodology as in the water projects, and the results were found to be robust except for collectors XII-2 and XII-3, which would be constructed in the third stage, provided they are economically viable.

3. Beneficiaries

4.28 According to the projects analyzed, this program does not qualify as a poverty-targeted investment. Using the poverty line of the Bank for Ecuador (income equivalent to US$41.4 per capita per month at December 2004 prices) the proportion of poor beneficiaries is 16.2%. In terms of payment capacity, 8% of the new consumers would be unable to pay at the current rate.

4.29 With a rates structure based on long-run marginal costs, the monthly consumption bill would be US$12.45; and at this level 30.1% of the population would be unable to pay in full for basic consumption of 15 m^3 per month. The average subsidy would be US$3.41 per family per month. Accordingly, 28,000 should receive this subsidy, making a total annual subsidy cost of US$1.2 million. In the first stage, a subsidy-targeting study would be prepared and implemented, which would initially be funded from ICE transfers. The cost and rates study will also be updated, and the calculation methodology based on LRMC will be implemented before passing to the second stage.

E. Environmental and social impact

4.30 The water supply and sanitation program for the City of Cuenca generates mainly positive environmental impacts, by expanding coverage of the water supply and sewerage system, incorporating new, already-urbanized areas, such as urban expansion zones, parish centers, and both semi-disperse and disperse rural communities that do not have reliable water supply sources at the present time. In addition, the demand generated by population growth up to the program horizon (2030) needs to be satisfied, covering an area of roughly 25,000 hectares.

4.31 The program involves construction of water supply pipelines, reserve tanks, water supply systems, sewerage systems, interceptors, treatment plants for liquid waste and sludge from the Tixán water supply treatment plant, and optimization of the capacity of the Ucubamba wastewater treatment plant, which will help conserve the environment and water quality in the rivers. All program works are included in water supply and sanitation master plans that were prepared under Bank supervision as part of a previous operation. The evaluation of alternatives and program impacts used a water quality model that was calibrated and validated for local conditions. This made it possible to ensure that socioenvironmental aspects were appropriately considered in all phases of preparation of the operation.

4.32 During the program preparation phase, ETAPA held wide-ranging public consultations, which were designed and executed by sociologists with expertise in cultural, linguistic, social and organizational issues in the affected and/or beneficiary communities. This process sought to ascertain the concerns of the potential beneficiary population that currently uses systems operated by local water boards, and to provide all information needed for the population to adequately evaluate the benefits and costs of adherence to the new system operated by ETAPA. People who will be directly affected by the works were also consulted. The consultation program will continue during execution, in accordance with Bank policies. The environmental studies carried out were made available to the public for comments.

4.33 The direct negative impacts associated with the works are not significant, and mitigation measures are of low complexity and easily implemented. All mitigation measures and/or environmental programs have designs and/or specifications that permit their execution, as well as budgets, timetables, and the institutional mechanisms needed for execution.

4.34 Important issues such as (i) management of natural disaster risks; (ii) management of water resources; and (iii) protection of natural water sources and courses, were adequately considered in the framework of the program, which will yield significant additional benefits to the beneficiary communities. This clearly shows the value added by Bank participation in the projects it finances. The program's social and environmental management report contains details of the impact evaluation and a description of the environmental compensation programs (see RE3 files).

F. Risks

4.35 Risks potentially affecting program execution were identified using the risk analysis methodology, supported by interviews with stakeholders and validation workshops held with the firm's senior management and the PEU. The most significant risks and their mitigation measures are set out below.

4.36 **Financial risks**: (a) Delay in, or elimination of the ICE subsidy, which is transferred to ETAPA by the MEF. Currently the transfer is not being made on a timely basis, and there is an initiative in the MEF and MIDUVI to redistribute the proceeds of this subsidy, which could affect the financial position of ETAPA in the long term. The financial impact of eliminating 50% of the subsidy from 2008 onwards was modeled, and it was found that the water rate would need to rise by 12% in 2008 to maintain current levels of financial solvency; (b) Financial mismatch between the firm's financial obligations and its sources of operating income, for which it was agreed with the firm (i) to include, in the rates calculation methodology regulation, provisions for both inflation and exchange-rate effects to be passed on to users; and (ii) to establish a reserve fund/trust for up to the equivalent of US$5 million, as from the second year of program execution. This amount is equivalent to annual debt service. The loan contract includes the establishment of this fund/trust as a contractual condition.

4.37 **Conflicts over water use**: The Cuenca river watershed has several users, including ETAPA, the electric power company, and the parish water supply and irrigation boards. At the moment there is no conflict, but disputes over water use are likely arise in dry periods during the next 10 years. To mitigate this risk, during program execution the necessary studies will be conducted to prepare the Water Resource Management Program for the watershed, which the environmental authority will use to assign water resources efficiently and equitably.

4.38 **Institutional risks:** Notwithstanding the good performance recorded by the firm, its current governance and management structure makes it vulnerable to decision-making that departs from strictly technical criteria aimed at promoting sustainability in service provision. To mitigate this risk, it has been agreed to implement an independent and transparent regulation scheme, starting in the first year of execution, and to improve the firm's governance and management scheme. The risk of these measures not being implemented with the program is mitigated by the commitment of the current municipal government to instituting governance and management reforms prior to program execution, and also by executing the loan in stages that depend on the fulfillment of performance indicators.

LOGICAL FRAMEWORK
WATER SUPPLY AND SANITATION PROGRAM FOR CUENCA

PROGRAM GOAL	To improve health among population groups living in peri-urban and rural areas.		
PROGRAM PURPOSE	To satisfy economic demand for water supply and sanitation from population groups living in peri-urban and rural areas efficiently and on a sustainable basis.		
PROJECTS	**PURPOSE 1**	**PURPOSE 2**	**PURPOSE 3**
1. Water supply. 2. Provision of sanitation and storm drainage services. 3. Improvement of the technical, commercial, and economic efficiency of water and sanitation services.	To satisfy demand for potable water in the peri-urban and rural zone.	To satisfy demand for wastewater collection-disposal and storm drainage services.	To improve the technical, commercial, and economic efficiency of ETAPA water and sanitation services.
	OUTPUTS OF PROJECT 1	**OUTPUTS OF PROJECT 2**	**OUTPUTS OF PROJECT 3**
	1.1 Water supply system built and functioning.	2.1 Expansion of collector networks implemented and operating.	3.1 Tactical plan implemented.
	1.2 Population informed on hygiene practices and appropriate water use.	2.2 Individual solutions constructed.	3.2 Business transformation plan ready to be put into operation.
	1.3 Campaign implemented to promote ETAPA water supply services.	2.3 Treatment capacity of the Ucubamba wastewater treatment plant expanded.	3.3 Strategy implemented to integrate rural areas and areas served by local water boards.
	1.4 Study to define the system's service area prior to execution of infrastructure and agreements with local water boards.	2.4 Interceptors constructed and operating.	3.4 Maintenance plan prepared and implemented.
		2.5 Plan presented for managing streams with intermittent flows.	3.5 Project implemented to reduce unaccounted-for water.
			3.6 Appropriate rates policy designed and discussed with stakeholders.
			3.7 Study presented that proposes: (a) the most transparent, objective and effective way to separate the operational and regulatory functions; (b) a draft bill to implement the proposal; and (c) legal regulations for the proposed solution, if relevant.
			3.8 Indicator monitoring and data collection method defined, baseline compiled, and monitoring agreements or contracts implemented.
			Activities

Component 1: Water supply

Narrative summary	Indicator	Means of verification	Assumptions
GOAL 1. To improve health among the peri-urban population.	Incidence of acute diarrheal disease (ADD) and pathologies transmitted by water and food (food poisoning, hepatitis A) reduced in relation to the baseline. (Table 12 and 3 see attached file "Copy of report") 2005, 2008, 2010.	Files of parish health subcenters and MSP health areas	
	General mortality and mortality among infants under one year of age showing a downward trend in relation to the baseline in the parishes involved and in the control parish (Tables 16 and 17). Mortality ranking of parishes in the Cuenca Canton (Tables at 16 and 17), see attached file "Copy of report."	INEC publications from 2004 to 2010: Annual register of births and deaths. Ranking by rate.	
PURPOSE To satisfy demand for water supply in peri-urban and rural zones.	1.1 Connections previously served by local water boards in the peri-urban area to be consuming water supply provided continuously by ETAPA and paying the corresponding rate. Year # Families Cumulative 2007 2,054 2,054 2008 501 2,555 2009 617 3,172 2010 1,620 4,792 2011 349 5,141 2012 369 5,510	1.1 Record of replacement of ETAPA connections in the local water boards' service area. Record of service payments.	No resistance to the master plan among local water boards.
	1.2 New connections in the periurban area not served by local water boards to be consuming water supply supplied continuously by ETAPA and paying the corresponding rate. Year # Families Cumulative 2007 5,755 5,755 2008 5,887 11,642 2009 2,193 13,835 2010 6,503 20,338 2011 5,908 26,246 2012 2,633 28,879	1.2 Record of new ETAPA connections in the project's area of influence. Record of service payments.	No conflicts on water use between ETAPA and other users such as ElecAustro.

Narrative summary	Indicator	Means of verification	Assumptions
	1.3 Families in rural areas that did not have a water connection pay the connection and service charges and receive continuous water supply service. Year # Families Cumulative 2007 4,162 4,162 2008 837 4,999 2009 1,028 6,027 2010 6,540 12,567 2011 835 13,402 2012 891 14,293	1.3 Record of new ETAPA connections in the project's area of influence. Record of service payments.	Families in peri-urban and rural areas adopt the practices recommended in the hygiene campaign as from 2007.
	1.4 Continuity of the water supply service in the project's areas of influence to be above 98% by the end of the project. This will be measured with the following indicator: T_s (%) = (1- (Sum(N_i x T_i)) / (T x N)) x 100 where: T_s = Continuity of service Sum = Sum of the product of the number of users affected by the duration of interruptions in a given period (calendar year) N_i = No. of users in zones affected by each interruption T_i = Hours of service interruption in the zones affected by each interruption T = Period evaluated (calendar year) N = Total number of users served by the firm (at respective year end)	1.4 Record of hours of service interruption and population affected in ETAPA areas of influence.	
	1.5 100% of samples of the index of the quality of water distributed (which measures the degree to which water satisfies standards of color, turbidity, pH, residual chlorine, and total coliforms), to be showing good quality (index > 71), in all analyses performed during the period.	1.5 Annual report on water quality, by service zones.	

Narrative summary	Indicator	Means of verification	Assumptions
	Year # Samples # Satis. 2005 828 48 2006 1,200 1,200 2007 1,200 1,200 2008 1,200 1,200 2009 1,200 1,200		
	1.6 SEQ minimum number of families with unmet basic needs connected to the project. Year # Families Cumulative 2013 2,300 2,300 2014 2,350 4,650 2015 880 5,530 2016 2,600 8,130 2017 2,360 10,490 2018 1,050 11,540		
OUTPUTS 1. Water supply system constructed and operating.	1.1 Tomebamba-Machángara water supply system: Rehabilitation of Paquitranca catchment; construction of 22.5 km of pipeline to the El Cebollar and Tixán plants and between them, with diameters of 600 mm, 700 mm and 1,400 mm; Construction of treatment station for waste material produced by water treatment processes in Tixán and El Cebollar; construction of 54 km of pipeline between the Tixán treatment plant and reserve tanks with diameters between 80 mm and 700 mm HD; construction of five pumping stations and their respective impulsion lines 11.5 km long and with diameters between 80 mm and 150 mm; construction of 40 reserve tanks with 22,766 m^3 capacity; construction of distribution grids and household connections to be completed by late 2007 and satisfying technical specifications. 1.2 Yanuncay water supply system: construction of catchment unit with 828 l/s capacity; construction of 970 m of pipeline to the plant, with diameters of 600mm and 700 mm; construction of treatment plant in	1.1 Certificate of acceptance of works and physical inspection by COF/CEC.	The State does not support alternative projects for service providers unrelated to ETAPA. As from 2007, 90% of families in the project area that will be served by ETAPA networks during the following 12 months apply for household connections. Before the first disbursement, the National Water Resources Commission awards water rights to ETAPA to provide water supply to new customers.

Narrative summary	Indicator	Means of verification	Assumptions
	Sustag with 460 l/s capacity; construction of station to treat waste material produced by water treatment processes; construction of 23.44 km of pipeline between treatment plant and reserve tanks with diameters between 150 mm and 700 mm HD; construction of five reserve tanks with 19,230 m^3 capacity; construction of distribution grids and household connections; completed by late 2007. 1.3 Culebrillas water supply system: construction of catchment unit with capacity of 160 l/s, and 7,410 m of piping to the plant with diameters of 300 mm and 400 mm, improvement of the existing treatment plant in San Pedro del Cebollar and expansion of treatment capacity from 26 l/s to 50 l/s, 8.19 km of pipeline between the treatment plant and reserve tanks with diameters between 110 and 250 mm HD, two reserve tanks with capacity of 1,450 m^3, distribution grids and household connections, constructed by late 2007, satisfying technical specifications.		
2. Population informed on hygiene practices and appropriate water use.	2.1 Radio campaigns on personal and family hygiene and appropriate water use implemented in six local radio stations, lasting six months each. Year # Campaigns 2006 1 2007 1 2008 1	2.1 Copy of the transcript of the campaign and copy of the invoice(s) of the radio station(s).	
	2.2 Leaflets on water use and basic sanitation distributed in schools in the project area. Year No. 2007 1,500 2008 2,000 2009 2,000	2.2 Copy of the leaflet and copy of the printing invoice.	
	2.3 Two videos on appropriate water use, personal hygiene, and basic sanitation produced in 2007.	2.3 Copy of the video.	

Narrative summary	Indicator	Means of verification	Assumptions
3. Campaign to promote ETAPA water supply and sanitation services implemented.	3.1 30,000 triptychs and 2,000 posters on water and sanitation services delivered to users of rural water systems and new users in the project area. 2006: 10,000 triptychs, 600 posters 2007: 10,000 triptychs, 700 posters 2008: 10,000 triptychs, 700 posters	3.1 Copy of the triptych and invoice for printing the total number.	
4. Study to define the system's service area prior to execution of infrastructure and agreements with local water boards implemented before issuing invitations to tender.	4.1 In 2006, ETAPA to sign nine agreements for the provision of water and sanitation services with the local water boards of Agua de Viola-Auzhangata, Peñasol, Paccha, Nulti, San Miguel, Aguacolla, Llacao, San Joaquin, and San Pedro.	4.1 Copy of the study and agreement with each water board.	
	4.2 In 2007, ETAPA to sign eight agreements for the provision of water and sanitation services with the local water boards of Nero, Baños, Sinincay, Sayausí, San Andrés, Checa, Chiquintad, and Narancay.	4.2 Copy of the study and agreement with each water board.	
ACTIVITIES			Before the first disbursement for investments in each market, agreements are reached with other providers on the definition of service areas.
			Before the first disbursement for investments in each market, participatory meetings are held with communities to confirm that they do not oppose works construction.

Component 2: Provision of sanitation and storm drainage services

Narrative summary	Indicator	Means of verification	Assumptions
GOAL 1. To improve health among the peri-urban population.	Incidence of acute diarrheal disease (ADD) and pathologies transmitted by water and food (food poisoning, hepatitis A) reduced in relation to the baseline. (Table 12 and 3) see attached file "Copy of report" 2005, 2008, 2010.	Files of parish health subcenters and MSP health areas.	
	General mortality and mortality among infants under one year of age showing a downward trend in relation to the baseline in the parishes involved and in the control parish (Tables 16 and 17). Mortality ranking of parishes in the Cuenca Canton (Tables at 16 and 17), see attached file "Copy of report."	INEC publications from 2004 to 2010: Annual register of births and deaths. Ranking by rate.	
2. To improve water quality in rivers and streams.	2.1 RIO MACHANGARA at station MA4 quality indexes to improve from DBO5 =9.29 mg/l, OD=7.41 mg/l; to DBO5 < 5 mg/l, OD>80% >6 mg/l; turbidity 20 NTU; industrial, aesthetic use. RIO TOMEBAMBA at station TB2, to improve from DBO5 =22.42 mg/l, OD=5.13 mg/l; to DBO5 < 5 mg/l, OD>80% >6 mg/l; turbidity 20 NTU; fecal coliforms 1,000 NMP/100 ml; recreational, secondary aesthetic contact uses. RIO YANUNCAY at station Y2, from DBO5 =4.43 mg/l, OD=7.1 mg/l; to DBO5 < 5 mg/l, OD>80% >6 mg/l; turbidity 20 NTU; fecal coliforms 1,000 NMP/100 ml; agricultural, recreational, secondary aesthetic contact uses. RIO TARQUI, at station TA5 from DBO5= 21.12 mg/l, OD=4.48 mg/l; to DBO5 < 5 mg/l, OD>60% >6 mg/l; turbidity 20 NTU; aesthetic uses. QUEBRADA EL SALADO at station V1 to have the following parameters:DBO5 < 5 mg/l, OD>60% >6 mg/l; turbidity 20 NTU; aesthetic uses. Following project execution.	2.1 Annual reports on river water quality issued by monitoring stations.	

Narrative summary	Indicator	Means of verification	Assumptions
	2.2 Total number (**313**) direct discharges into the rivers reduced: in the Yanuncay river **39**; segment from the three bridges sector to the east as far as the bridge crossing to Misicata to the west. 2007 19 2008 20 On the La Compañía River **32**, segment starting at the junction with Machángara in the east as far as the San Vicente sector in the North; 2009 32 In the Machángara river 15, segment between the junction with the Tomebamba to the east as far as the Tiopamba sector to the north; 2007 15 In the Tarqui river **87**, segment from the Tarqui-Yanuncay-Tomebamba junction to the east as far as the bridge on the Circunvalación Sur bypass to the west; 2007 40 2008 47 In Quebrada El Chorro **12**, segment from the junction with the river Cuenca to the east as far as the sector of the Ricaurte cemetery to the north; 2008 6 2009 6 On the Tomebamba river **41**, segment from the junction with the Machángara to the east as far as the crossing at Av. Américas to the west; 2008 20 2009 21 In the Milchichig river **87** segment from Av. Américas to the east as far as the bridge on the road to Carmen to the west; 2007 87 Once the project has been implemented.	2.2 Annual reports on river water quality issued by monitoring stations.	

Narrative summary	Indicator	Means of verification	Assumptions
PURPOSE To satisfy popular demand for wastewater collection/ disposal and storm drainage services.	1.1 No. of connections requested and paid for: Year — No. 2008 — 2,480 2009 — 6,127 2010 — 9,356 2011 — 10,205	1.1 Record of new ETAPA connections in the project's area of influence. Record of service payments.	Household hygiene habits improve from 2007 onward. Hand washing before eating and preparing food, adequate water storage, adequate use of latrines or basic toilet unit.
OUTPUTS 1. Expansion of collection networks implemented and operating.	1.1 **69.4 km.** of collector networks for sanitary and combined sewerage constructed by late 2011, as indicated below: Year — Length (km.) 2007 — 19,351 km. 2008 — 17,372 km. 2009 — 23,019 km. 2010 — 6,086 km. 2011 — 3,601 km.	1.1 Certificate of acceptance of works and physical inspection by COF/CEC.	All users requesting water services are connected to the network during the first year of its installation. Plan for oversight of land use and occupation implemented by the municipio and Cuenca before 2007. All those connected to be paying for the service at the time of installation. Year — # Connected — # Paid 2008 — 2,480 — 2,480 2009 — 6,127 — 6,127 2010 — 9,356 — 9,356 2011 — 10,205 — 10,205
2. Individual solutions built.	2.1 Individual solutions (basic toilet units), covering 20% of the population not served by constructed sewerage networks: Year — No. 2007 — 550 2008 — 650 2009 — 700	2.1 Memorandum of reception of works and physical inspection by COF/CEC.	
3. Treatment capacity of the Ucubamba wastewater treatment plant expanded.	3.1 A sludge evacuation and dehydration station with a capacity to extract 60 m^3 of sludge per day with a solids concentration of 25%, constructed and operating in 2007. 3.2 24 High inefficiency horizontal aerators that can operate as mixers or mixer-oxygenators, implemented and functioning in 2007.	3.1 Memorandum of reception of works and physical inspection by COF/CEC.	

Narrative summary	Indicator	Means of verification	Assumptions
	3.3 A system for extracting stone materials in pretreatment structures, consisting of a bucket dredger, pump and gravel grader, constructed and operating in 2007. 3.4 **2,500 m** of carbon steel netting for sludge evacuation installed and operating in 2007.		
4. Interceptors constructed and operating.	4. 48 km of marginal interceptors with diameters between 30 mm and up to 1,100 mm in PVC piping to transport wastewater to the Urubamba treatment plant constructed. **4.1 Interceptor IX 3,600 m:** 3,247 m D= 35/40 PVC piping; 233 m D= 150/250 HD piping syphons; 120 m D= 350 HD elevated segments. **4.2 Interceptor XII-A:** 3,400 m D= 35/70 PVC piping. **4.3 Interceptor XII-2, 3,590 m:** 3,500 m D= 35/40 PVC piping; 90 m D= 315/355 PVC piping under-river segments. **4.4 Interceptor XII- 3, 2,778 m:** 2,433 m D= 35/35 PVC piping; 345 m D= 300/400 HD piping under-river segments. **4.5 Interceptor XVI 8,168 m:** 7,930 m D= 30/75 PVC piping; 238 m D= 500/700 HD piping underwater steps; 387 m D= 200/400 HD piping cross-siphons. **4.6 Interceptor XVIII 9200 m:** 8,300 m D= 55/100 PVC piping; 40 m D= 900 HD piping under-river segments; 850 m D= 500/600 HD piping and 70/75 PVC piping segment under pressure. **4.7 Interceptor XIX:** 2,800m D= 30/55 PVC piping; 86 m D= 300 HD piping cross-siphon. **4.8 Interceptor XX:** 5,100 m D= 30/55 PVC piping.	4.1 Memorandum of reception of works and physical inspection by COF/CEC.	
ACTIVITIES			

Component 3: Improvement of ETAPA operating, administrative, and managerial efficiency

Narrative summary	Indicator	Means of verification	Assumptions
GOAL 1. Water supply and sanitation services financially sustainable in the long-term.	1.1 Operating profit calculated by dividing EBITDA (earnings before interest, taxes, depreciation and amortization), by operating revenues which at December 2006 is 19.8%. With execution of the works of the Master Plan phase II, the following results are expected: Year EBITDA/OI 2007 20% 2008 20% 2009 23% 2010 25% 2011 27.5% 2012 27.5%	1.1 Audited financial statements, 2007-2012.	
PURPOSE 1. ETAPA operating, administrative and managerial efficiency improved on a sustainable basis and brought into line with business objectives.	1.1 External customer satisfaction improved: • Proportion of customers rating the quality of the water supply service as good or very good, held at 80% with a variation of ± 5% in the period 2007-2012. • Proportion of customers rating the quality of the sewerage service as good or very good, held at 80% with a variation of ± 5% in the period 2007-2012.	1.1 Results of the semi-annual business image survey.	
	1.2 Number of personnel working on water supply and sewerage services activities (including the proportional share of the corporate area) for every 1,000 water supply connections, is below the Latin American average (4), with the following trend: Year #staff/1,000 connections 2007 7 2008 6 2009 6 2010 5 2011 5 2012 4	1.2 ETAPA operating data.	

Narrative summary	Indicator	Means of verification	Assumptions
	1.3 Unaccounted-for water index Year Percentage 2007 36% 2008 35% 2009 34% 2010 33% 2011 32% 2012 31%	1.3 Annual technical and managerial audit.	
	1.4 Ration between total revenue collected during the year and total portfolio to improve from: 81.3% in 2005 and 82.5% in 2006, to 85% by 2012. Year Collection efficiency 2007 80% 2008 80% 2009 82.5% 2010 82.5% 2011 85% 2012 85%	1.4 ETAPA operating data.	
	1.5 LRMC rates implemented on the basis of the results of the updating study (progression allows for partial implementation. Real amount invoiced/ amount calculated (LRMC). (Figures confirmed by technical and managerial audit) as per timeframes established in directives. Rates regulation (t) and subsidies(s) Year Progress 2007 Study undertaken and approved 2008 Implemented, t 2009 Implemented, t,s 2010 Implemented, t,s 2011 Implemented, t,s 2012 Implemented, t,s	1.5. Rates regulation and subsidies. LRMC tariffs applied.	

Narrative summary	Indicator	Means of verification	Assumptions
	LRMC rates applied based on existing study: Year Progress 2007 100% 2008 100% 2009 100% 2010 100% 2011 100% 2012 100%		
	1.6 Application of the results of the subsidy targeting study, if feasible. Year Progress 2007 Project 2008 Approved 2009 Implemented (90%) 2010 Implemented (100%) 2011 Implemented 2012 Implemented	1.6 Subsidy targeting study.	1.6 Funds available to the firm allow for implementation of subsidies.
	1.7 Presentation of financial statements audited by a firm certified by the Bank within three months following the end of the fiscal year. Year Progress 2007 Done 2008 Done 2009 Done 2010 Done 2011 Done 2012 Done	1.7 Results of the financial audit.	
OUTPUTS 1. Business optimization project implemented.	1.1 Business optimization project under execution based on the established timetable.	1.1 Quarterly project supervision reports, after contract signing.	1.1 ETAPA board of directors and Canton Council approve proposals and methodologies resulting from the corresponding analysis, within the country's current law. Project timetable and evaluation attached.

Narrative summary	Indicator	Means of verification	Assumptions
	1.2. The functional/organizational structure of ETAPA and its board of directors to be reviewed in the light of the results obtained from the corresponding analysis process, within the country's current laws. Year Progress 2007 Project approved 2008 Implemented 2009 Implemented 2010 Implemented 2011 Implemented 2012 Implemented	1.2. ETAPA directive.	1.2. ETAPA board of directors and Canton Council approve the proposals.
	1.3 Implementation of an oversight scheme through a technical and managerial audit; or board/management agreement; or supervision by a technical commission (or a combination of these two alternatives). Technical and managerial audit Year Progress 2007 Done 2008 Done 2009 Done 2010 Done 2011 Done 2012 Done Regulation scheme if approved Year Progress 2007 Project 2008 Approved 2009 Implemented 2010 Implemented 2011 Implemented 2012 Implemented	1.3 Regulation scheme, results of the technical and managerial audit.	1.3 ETAPA board of directors and Canton Council approve the proposals.
2. Operation and Maintenance Department strengthened.	2.1 Operation and maintenance equipment procured and/or renewed by late 2007. 2.2 Two operation and maintenance workshops for technical staff held by late 2007.	2.1 Operational audit held by late 2008. 2.2 Certificates delivered, attendance control.	

Narrative summary	Indicator	Means of verification	Assumptions
	2.3 Four operation and maintenance workshops for field staff held by late 2007.	2.3 Certificates delivered, attendance control.	
3. Program to control unaccounted-for water implemented.	3. 100% of program to control unaccounted-for water implemented by late 2010 based on the established timetable: Year Percentage 2007 30% 2008 60% 2009 85% 2010 100% 3.2 Meters installed less than 10 years ago to be read monthly as follows: Year % micromeasurement 2007 94 2008 94 2009 96 2010 96 2011 97 2012 97	3. Yearly investment progress index: $IAI = \frac{\text{Inv. Executed}}{\text{Inv. Programmed}}$ 3.2 Micromeasurement index (Mi): Mi = No. of meters operating that were installed less than 10 years ago/total No. water supply connections.	
4. Program for protection of natural water sources and courses implemented.	4. 100% of program implemented in late 2011 based on the established timetable: Year Percentage 2007 30% 2008 55% 2009 80% 2010 90% 2011 100%	4. Yearly investment progress index: $IAI = \frac{\text{Inv. Executed}}{\text{Inv. Programmed}}$	

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/06

Ecuador. Loan ____/OC-EC to the Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA)
Potable Water and Sanitation Program for Cuenca

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 Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA), as Borrower, and with the Republic of Ecuador and the Municipality of Cuenca, as Guarantors, for the purpose of granting the Borrower a financing to cooperate in the execution of a potable water and sanitation program for Cuenca. Such financing will be for an amount of up to US$61,250,000 from the Single Currency Facility of the Ordinary Capital resources of the Bank, and will be subject to the Financial Terms and Conditions and the Special Contractual Conditions of the Project Summary of the Loan Proposal.

LEGIII/EC-751421-06
EC-L1019

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK

PROPOSED RESOLUTION DE-___/06

Ecuador. Partial Payment of Interest on Loan ____/OC-EC to the Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA) Potable Water and Sanitation Program for Cuenca

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 as administrator of the Intermediate Financing Facility Account (the "Account"), to enter into such contract or contracts as may be necessary with the Empresa Pública Municipal de Telecomunicaciones, Agua Potable, Alcantarillado y Saneamiento de Cuenca (ETAPA), as Borrower, and with the Republic of Ecuador and the Municipality of Cuenca, as Guarantors, and to adopt other pertinent measures to use the resources of the Account to pay a portion of the interest due by the Borrower on outstanding balances of up to US$56,900,000 of loan authorized by Resolution DE-__/06, in accordance with the provisions set forth in Document FN-263-2, as amended, approved by the Board of Executive Directors on December 21, 1983.

LEGIII/EC-755803-06
EC-L1019