FLOOD CONTROL PROGRAM IN CAMPINAS

(BR-0234)

EXECUTIVE SUMMARY

BORROWER:	The Municipality of Campinas	
GUARANTOR:	The Federal Government of Brazil	
EXECUTING AGENCY:	The municipal government of Campinas (MGC) through the Department of Planning and Environmental Affairs	
AMOUNT AND SOURCE:	IDB:	US$19.8 million (OC)
	Local counterpart funding:	US$13.2 million
	Total:	US$33.0 million
FINANCIAL TERMS AND CONDITIONS:	Amortization period:	25 years
	Disbursement period:	3 years
	Interest rate:	variable
	Inspection and supervision:	1%
	Credit fee:	0.75%

OBJECTIVES: The main objective of the program is to reduce the damage caused by flooding in the city of Campinas, thus helping to improve the city's socioeconomic and environmental situation, particularly the living conditions of families residing along the banks of watercourses, while providing savings in travel time and costs for people who use the roads affected by flooding. The program will also help to regain the municipality's institutional and financial capacity over the medium term.

DESCRIPTION: The program consists of three projects. The first two correspond to each of the selected watersheds where civil and social works will be carried out, consisting of: (i) drainage, including the channeling of watercourses, storm sewers, basic sanitation and road works; (ii) improvements in shantytowns (*favelas*); and (iii) resettlement of families. The third project contains five components that include a series of special activities connected to the program in the areas of: (i) environmental education; (ii) rehabilitation of areas left vacant after the shantytown improvement and, primarily, the family resettlement activities; (iii) institutional and financial strengthening for the MGC; (iv) technical support for the improvement and resettlement plan (PUR); and (v) financial audit of the program. Each

of the projects in the program is summarized below and discussed in detail in chapter II of this loan proposal.

a. Project 1. Piçarrão watercourse (US$4,490,000): It consists of 2.6 kilometers of channeling along the watercourse, the installation of 900 meters of storm sewers, 320 meters of paving, and one bridge.

b. Project 2. Quilombo watercourse (US$13,460,800): It consists of the construction of about 2.2 kilometers of channels and 900 meters of storm sewers. It also includes basic improvements in three shantytowns and the resettlement of about 1,080 families in the new Santa Genebra development in northwestern Campinas.

c. Project 3. Special activities (US$4,235,000): These include environmental education, the reclamation of abandoned areas, financial recovery, and institutional and financial strengthening of the MGC in the areas of finances, human resources, planning and control of land use and the urban environment, technical support for the PUR, and financial auditing of the borrower.

ENVIRONMENTAL CLASSIFICATION: The Environment Committee, at its meeting of March 7, 1995, classified this as a Category IV operation. The program's environmental summary was approved on October 11, 1995.

POVERTY REDUCTION CRITERIA: As stipulated in the Eighth Replenishment document (AB-1704), it has been determined that the proposed program is targeted to low-income sectors (paragraph 5.53) and, being an environmental sanitation operation, it qualifies as a social program as established in paragraph 2.13 of document AB-1704.

PROCUREMENT OF CIVIL WORKS, GOODS, AND CONSULTING SERVICES: Bank procedures will be followed in procuring the goods and contracting the services to be financed from the loan proceeds. The thresholds above which procurement under this program will be made through international competitive bidding are US$350,000 for goods, US$3 million for works, and US$200,000 for consulting services (paragraph 3.32).

SIMPLIFIED PROCEDURE: Pursuant to Part III, Section 2(b), of the Regulations of the Board of Executive Directors and the guidelines approved by the Board of Executive Directors (document GN-1838-1), this operation meets the conditions for processing by the simplified

procedure, without prior consideration by the Committee of the Whole.

BENEFITS:

The drainage and road works will eliminate the damage and injuries caused by flooding, whose victims are mostly people living in risk areas. They will also help to significantly reduce the spread of water-borne diseases. In economic terms, the completed works will increase the value of urban property presently affected by flooding, which will have a positive impact on the municipality's finances. By rehabilitating roads that are currently subject to flooding, major savings will be obtained in terms of travel costs and time. Lastly, by controlling flooding, the MGC will no longer have to bear the extra emergency costs.

Urban improvements in the shantytown areas adjacent to the watercourses to be drained will help to raise the standard of living of the inhabitants. By connecting them to the municipality's urban infra-structure and public services system, as provided for under the program, these families will have better opportunities for socioeconomic development. The improvements will benefit about 633 families.

The resettlement of families that currently live in risk areas is one of the program's greatest social benefits. Aside from eliminating the property damage, injuries, and diseases they suffer as a consequence of flooding, they will be provided with better housing solutions than at present. This action in itself, combined with the provision of basic infrastructure and social services in the new resettlement areas, will improve the quality of life of about 1,100 families.

Reclamation of the areas that are abandoned when the families are resettled will prevent new illegal incursions and preserve native plant cover. The areas will be used for recreational purposes when the terrain permits. One positive feature of this reclamation the way it will be executed, inasmuch as the environmental education program, aside from sensitizing the groups affected and raising the awareness of civil society in Campinas as a whole, will organize and pay young people and adults from the shantytowns to plant trees in the abandoned areas. It will also encourage participation by community leaders and different NGOs in the city.

The different measures to be implemented for the financial and institutional strengthening of the

municipal government will help it to provide the local counterpart for the program and, in the medium term, to improve the efficiency of the services that the city delivers to the public and make financial resources available for municipal investments of other kinds. It will also improve the municipality's efficiency in tax billing and collection, and in planning and managing human, material, and financial resources, and boost its capacity to manage land use and the urban environment.

RISKS:

The main risks entail: (i) a change in city government after the 1996 municipal elections, which will take office in 1997 and may have different priorities; (ii) little or no economic growth in the region and the municipality of Campinas, which would have a negative impact on city income; and (iii) failure to begin the supplementary works involving the provision of potable water, sanitary sewers, and electricity in the areas where the 1,100 families are to be resettled.

The proposed operation includes the following measures to eliminate or attenuate these risks: (i) the presence of a program management firm, which is currently supporting the program's executive group, will make it virtually certain that execution will not be adversely affected by a change in municipal government; (ii) the fact that the chairman of SANASA – the water supply and sanitation company – will be a voting member of the special program supervisory committee will help to ensure that the contractual requirements are met and that the supplementary works are carried out; (iii) the institutional strengthening component has been designed to ensure that the municipal government will have the tools it needs to identify new opportunities for economic development, and improve its efficiency in tax administration and current and capital spending; and (iv) the contractual conditions to be complied with by the MGC and the program's performance indicators to be achieved by MGC.

EXCEPTIONS TO BANK POLICY:

The federal government will be guarantor for the loan. The guarantee would extend to cover repayment of the loan, including interest and fees, and obligations to perform that are the legal jurisdiction of the federal government. The borrower will be responsible for the local contribution. The financial analysis, together with fulfillment of the financial contractual conditions proposed in the draft contract, make it possible to establish that the borrower has sufficient financial capacity to provide

the counterpart resources needed to properly execute the program.

THE BANK'S COUNTRY AND SECTOR STRATEGY:

The program conforms to and is completely compatible with the Bank's operating strategy for Brazil for the 1995 to 1997 period. Although that strategy stresses actions to support State modernization and reform, the process of economic liberalization, and the reduction of socioeconomic imbalances and poverty, it also provides for support for government actions involving urban cleanup, environmental education and protection, rational management of natural resources, environmental sanitation, and strengthening of the public entities responsible for environmental control.

The Brazilian federal government places priority on solving environmental problems and has asked the IDB for support in this area. Thus far, the Bank has approved a total of US$2.293 billion in lending for sanitation and other environmental activities. In the coming years, operations similar to the one described here will be proposed for other municipalities such as Belo Horizonte, Recife, Salvador, Joinville, and the Federal District, as well as a regional sanitation program in the northeastern part of the country.

Discussions are currently under way with the national authorities on the operational strategy to be adopted to meet the growing demand for financing for municipal environmental sanitation projects more responsively and efficiently. A global multiple-works program is being envisioned, which would be administered by one or two national institutions. In addition, preliminary talks have taken place on the establishment of a fund to finance social infrastructure, which would conceptually be related to a fiscal adjustment program for the states (through eligibility criteria for access to the fund based on satisfactory results of fiscal measures and the states' borrowing capacity). Such a fund would focus on financing infrastructure works, primarily with state water and sanitation companies. It should be noted that the Bank is internally considering other ways to process municipal projects quickly, which would be proposed in future operations with the country.

SPECIAL CONTRACTUAL CONDITIONS:

The following must be presented prior to the first disbursement of the loan:

a. The municipal decree authorizing program execution and setting out the responsibilities of the executing agency and other entities participating in execution (paragraph 3.3).

b. Evidence that a technical team has been hired to support the MGC in executing the definitive urban development and resettlement plan for the program (paragraph 3.16).

c. Evidence that a special account has been set up, in accordance with terms agreed upon with the Bank, at a financial institution acceptable thereto, for the purpose of demonstrating that the annual local counterpart resources are available for program execution (paragraph 5.16).

d. Evidence that the MGC has paid all the advances against budget revenues operations contracted prior to the effective date of the loan contract in accordance with the terms agreed upon with the Bank (paragraph 5.17).

e. A municipal decree for cost recovery for the drainage works built in the municipality's jurisdiction and a timetable for implementation (paragraph 5.50).

Other special conditions to be included in the contract are:

a. Within six months of the effective date of the contract, and prior to the start of the works envisaged in the program, evidence is to be presented that the supervisory firm has been contracted (paragraph 3.8).

b. Within six months of the effective date of the contract, presentation of a plan to finance, operate, and maintain the municipality's drainage system (paragraph 3.25).

c. The first semiannual follow-up work plan is to be presented within six months of the effective date of the contract and subsequent semiannual follow-up plans are to be presented during program execution which, based on performance indicators and targets agreed upon with the Bank, are to include: (i) physical and financial progress in the execution of projects, subprojects, and

components; (ii) the program's environmental indicators; (iii) the extent to which proposed targets have been met; and (iv) adjustments made to attain the original targets. If program execution is found to be unsatisfactory, the borrower will present the corrective actions to be taken and a timetable for their implementation to the Bank within 60 days of receiving its recommendations (paragraph 3.22). Progress on the works on the trunk and intercepting sewers being built alongside the watercourses to be channeled under the program is to be reported in the semiannual work plans for a period of two years after the contract becomes effective (paragraph 3.11).

d. Prior to issuing calls for bids for consulting services for the institutional and financial strengthening component, the respective terms of reference are to be presented for the Bank's approval; and within eight months after the effective date of the contract, evidence is to be presented that the consultants for this component have been hired. Within 24 months after the effective date of the contract, the borrower is to present the results of the consultants' work and the plan to implement their recommendations (paragraph 4.34).

e. Prior to the resettlement of families, and at the latest within 30 months after the effective date of the loan contract, evidence is to be presented that the new housing conforms to the specifications contained in local legislation (paragraph 3.12).

f. Prior to beginning any work that might affect the dwellings of families resettled in the Quilombo watershed, evidence must be presented that the supplementary works to provide basic services in the Santa Genebra resettlement area have begun; and prior to beginning any work that could affect the dwellings of the families to be resettled in the aforementioned watershed, evidence is to be presented that (i) these families have already been resettled and (ii) the complementary works in Santa Genebra have been executed (paragraph 3.13).

g. Twelve and 24 months after the effective date of the loan contract, the borrower and the Bank will hold meetings to verify execution of the program works and the results obtained under the

component involving institutional and financial strengthening of the borrower (paragraph 3.22).

h. Twelve months after the effective date of the contract, evidence is to be presented that: (i) an internal auditing unit has been established in the municipal government, reporting directly to the mayor; and (ii) the unit has been adequately staffed and funded. Twenty-four months after the unit has been established, a report on its operations is to be presented based on the evaluation and recommendations of the firm of independent accountants to be hired to audit the program's financial statements (paragraph 4.11).

i. Eighteen months after the effective date of the contract, evidence is to be presented that the cost-recovery plan for the drainage works has been implemented, which should cover at least a five-year period for collection of the betterment levies introduced for that purpose (paragraph 5.50).

j. The Bank will recognize up to US$2.7 million equivalent from the local contribution spent on program preparation since January 31, 1995 (paragraph 3.35).

k. The financial statements relating to the program will be submitted annually during its execution and the borrower's financial statements during the life of the loan contract, audited by the State of São Paulo's Auditor General. The program's financial statements will be audited by the Federal Audit Department (paragraph 4.9).

OTHER CONSIDERATIONS:

The contribution of the project team to program preparation has led directly to the adoption of measures that have substantially improved the operation initially proposed. As originally conceived, the program placed special stress on flood control, while some social works and actions were included with parallel financing outside the program. As a result of the Bank's involvement, a social component (shantytown improvements and resettlement of low-income families living in risk areas and environmental education, health care, and transportation programs for the target population) has been included, in the amount of US$11 million or 60% of total direct costs. Considering the institutional and financial weakness of the municipal government, a major component has been included to boost the MGC's financial capacity over the medium term and to

optimize its organizational structure so that it can operate more efficiently. This will permit the municipality to improve the quality of the services it provides to its citizens and increase its capacity to make other investments to contribute to their well-being. The Bank's actions have also resulted in: (i) adjustments in the environmental impact studies that helped to identify critical flood points, develop the projects, and design environmental impact mitigation measures; (ii) socioeconomic studies that made it possible to determine minimum-cost alternatives and to reject subprojects that were not viable; (iii) hydrological and hydraulic studies to improve the quality of the projects and obtain savings on the order of US$5.8 million; (iv) provision for contracting a management firm to prepare the program and provide administrative and technical support for the executing agency during the project; (v) contracting of a firm to supervise the works which will include personnel specializing in slum improvement and resettlement; (vi) grouping of the civil works and the urban development and resettlement projects into two integrated bid packages that will facilitate international competitive bidding; and (vii) definition of an environmental education program.

The contribution by the project team to the Bank consisted of: (i) deeper understanding of the urban, social, environmental, legal, institutional, and financial situation of Brazilian municipalities; and (ii) fine-tuning of the Bank's analysis methods for municipal sanitation projects in Brazil, which will make a substantial contribution to the design of operating regulations for a future global multiple-works program to serve the growing demand for financing by municipal governments to address their residents' needs for basic infrastructure and social services.

I. FRAME OF REFERENCE 1/

A. Program context

1. The state of São Paulo (see map 1)

1.1 Located in southeastern Brazil, the state of São Paulo occupies 247,000 square kilometers, or 3% of the country. It has an estimated population of 33 million, 2/ of whom 93% (close to 29.3 million) live in urban areas. The state contains 650 municipalities and its capital is São Paulo. With about 22% of the country's population, the state generates 32% of GDP from the industrial and service sectors, and also has significant agricultural production.

2. The metropolitan region of Campinas (see map 1)

1.2 The metropolitan region of Campinas lies 100 km to the northwest of the capital, and is currently the state's second-largest industrial region. Since the 1970s it has been the main focal point of economic growth in the interior of the state. The region includes 17 municipalities, covers 3,300 square kilometers, and has a population numbering close to 2 million, with 96% living in urban areas.

3. The municipality of Campinas (see map 1)

a. General description

1.3 The municipality of Campinas is divided into five districts, covers 801 square kilometers, and has a population of about 885,000, 97% of whom live in the urban zone. The economic transformation of the municipality, which began in the 1950s and focused on industrial progress and service clusters, had a strong impact on urban life. The city's population, which was 152,447 in 1950, had risen to 846,238 by 1991. Population density rose from 470 people per square kilometer to 1,056 over the period in question. The urban and urban expansion zones account for 453 square kilometers of the city's total area while the rural area, which predominated earlier, now occupies 347.7 square kilometers, or less than one half of the municipality. The population grew at an annual rate of 2.2% from 1980 to 1991.

1/ Document PR-2058 of August 3, 1995, presents a summary of the sanitation sector and the urban environment in Brazil.

2/ Source: *Sinopse Preliminar do Censo Populacional* [Preliminary report on the population census], Fundação Instituto Brasileiro de Geografia e Estadística (FIBGE).

1.4 The city has an international airport, two large universities (UNICAMP and the Pontifical Catholic University of Campinas), and a highway network that provides easy access to the capital and other cities in the region and the state. In the cultural field, Campinas has a symphony orchestra, ten theaters, eight museums, and six public libraries. For recreation it has several sports centers, three forests, and three parks. It has one of the best education and health care infrastructures in the country.

1.5 Campinas' rapid economic growth over the last 30 years has led to deep urban changes. While generating greater wealth and higher employment levels, development has led to an accompanying increase in the demand for public transport, waste collection and disposal, street cleaning, community facilities (day-care centers, schools, health posts, recreation areas), basic sanitation, housing, electricity, and drainage. These demands are difficult to meet as a whole owing to the municipality's limited capacity to generate the necessary funds over the short term.

b. Financial and institutional situation of the municipal government of Campinas

1.6 To a large extent, the recent financial and institutional situation of the municipal government of Campinas (MGC) has been marked by the consequences of administrative and financial decentralization in the Brazilian federal system pursuant to the 1988 constitutional reform. The reform granted greater independence to the municipalities in managing their own funds and federal government transfers for municipal infrastructure and social services. However this new independence requires additional reforms to enable the municipalities to manage their finances and responsibilities more efficiently, which means that their capacity must be strengthened in every regard.

1.7 The recent institutional and financial situation of the MGC can be taken as representative of what is happening in most of Brazil's 5,000 municipalities. Its financial situation is marked by: (i) high employment costs that increased in real terms by 65% between 1992 and 1995, while its current income rose by just 19% over the same period (city tax revenue fell by 10%); (ii) a floating debt at December 31, 1995, of US$45 million, including US$18 million related to short-term credit operations with high financial costs, used to finance part of its investments; (iii) a long-term debt with banks and the Social Security Authority of US$187 million at December 31, 1995; (iv) legal liabilities of US$59 million; and (v) an adequate debt repayment profile.

1.8 The MGC's organizational structure is complicated, with 19 departments that have overlapping functions. City employment has increased sharply in recent years, with 14.3 employees per 1,000 residents, when a reasonable ratio would be 10 to 1,000.

1.9 The MGC is aware that it must become more efficient and has been taking steps to increase its current income, cut spending, and improve the quality of the services it delivers to the community. In order to increase the tax base, it hired a company to perform an aerial photographic property survey which covered 120,000 of the 220,000 buildings in the urban area and updated the municipal service tax roll, tightening oversight of the largest taxpayers. It is preparing a plan to control spending through greater use of outsourcing and is introducing computerized information systems in municipal departments and providing training courses for city employees to increase the efficiency of services.

1.10 However, these steps are not enough to restore the MGC's financial health. The MGC needs to carry its institutional and financial strengthening activities further. Some of these activities involve measures and instruments to enable it to tap its full tax-collection potential, improve control over spending, increase efficiency in the use of human and financial resources and in planning for investments and urban land use in the municipality. In this way, it is hoped that not only will the quality of the services it provides to its residents improve but also its capacity to make more investments and construct more works like the ones proposed in this document.

1.11 Due to the financial constraints facing the borrower, particularly for 1996 and 1997, financing for the Campinas flood control program [Programa de Combate às Enchentes de Campinas – PROCEN] had to be reduced, practically by half, in terms of works. Nevertheless, and as a result of the Bank's participation, the MGC now has a master drainage plan that has been properly analyzed.

c. Current condition of urban infrastructure and services

(i) Water supply

1.12 The Water and Sanitation Company [Sociedade de Abastecimento e Saneamento S.A.] (SANASA) operates and manages the potable water system of the municipality of Campinas. Water is taken from the Atibaia River, 20 kilometers from the center of the city, and from the Capivari River, 22 kilometers to the south. It is treated at five plants and 95% of the population receives good quality service. Despite the large number of customers who are metered (99.7%), close to 40% of the water cannot be accounted for, which is a high figure. SANASA is trying to reduce that level to 30% over the medium term.

1.13 Funding from the World Bank, the Caixa Econômica Federal, and SANASA is being used in a project to expand and improve the Campinas water supply system at a total cost of US$90 million. With a rate of advance of over 85%, the works are expected to be finished by mid-1996.

(ii) Sewer connections and sewage treatment

1.14 SANASA is also responsible for operating and managing the sewerage system, which is about 2,420 kilometers long (sewer mains, trunk and intercepting sewers, outfalls or pumping stations) and has 157,000 residential connections that serve 82% of the city's population. Under a social action program in the sanitation sector approved by the Bank in 1991 for US$350 million, SANASA received funds from the federal government through the Ministry of Social Action for a two-stage sewerage system expansion and upgrading program amounting to US$2 million in 1993 and US$3.2 million in 1994. The second stage is now under way.

1.15 In the last four decades, 19 small wastewater treatment plants have been built for preliminary and primary treatment. The total capacity of the plants is 110 liters/second, which means they can handle less than 4% of the wastewater generated in the city. In the next two years SANASA plans to build six small wastewater treatment plants with a total capacity of 260 liters/second, which will raise its capacity to 12% by 1998.

1.16 An estimated US$90 million will be required from 1996 to 2000 to build and operate four larger treatment plants, which will increase wastewater treatment to 75% by the end of the decade. Since SANASA and the municipal government do not have the necessary funds they have decided to promote private sector participation under concessions.

(iii) Drainage system

1.17 There are about 1,058 km of watercourses in the municipality, with 331 km located in the urban area. By July 1995, the MGC had channeled 27 km of the downstream sections of watercourses with flows of over 20 m^3/second during the rainy season (December to March) which had been prone to frequent flooding. With the works to be built under the program proposed here, 4.8 km of streams will be channeled. Of these, 3 km will be new and 1.8 km will replace or expand existing channels. In addition, 1.8 km of storm sewers and the inlets needed to absorb rainwater will be built. In short, the planned works will channel close to 30 km of watercourses in the urban zone by the end of 1999, with partial or full channeling of the remaining 37 km left for future programs. Map 4 shows the current situation in Campinas, by watershed. Most of the low-income population of Campinas lives in the two watersheds of Quilombo and Piçarrão, where floods are most frequent.

(iv) Collection and final disposal of solid waste

1.18 Campinas has a solid waste disposal master plan drawn up by the Urban Sanitation Unit of the city's Department of Public Services. The plan consists of an integrated model for the treatment of residential, industrial, hospital, and civil construction waste.

Treatment is carried out in an area known as the delta complex, on the western outskirts of the city. The complex includes: (i) a sanitary landfill in operation; (ii) an industrial waste treatment plant operated under concession; and (iii) an integrated plant for recycling, composting, and incinerating domestic waste that is in the process of being let under concession. Garbage collection is performed adequately by private companies and by the municipality's Urban Sanitation Unit.

(v) Road system

1.19 Since services and businesses are chiefly concentrated in the downtown core, the road system is designed in a radial pattern, connecting the outskirts to the center. To deal with congestion on many of the principal arteries, the MGC has attempted to build beltways to improve traffic flow. Parts of the new beltways have already been built, but some sections have yet to be constructed.

(vi) Housing for low-income groups (see map 2)

1.20 Shantytowns began to spring up in Campinas in the 1960s when the city started down the path to becoming the most dynamic development pole in the state of São Paulo. The first substandard housing, generally built of wood, appeared at that time and spread to form shantytowns. They are caused by the same factors affecting other Brazilian cities with similar economic profiles: (i) rapid population growth in tandem with the pauperization of groups excluded from the economic process and therefore from the possibility of obtaining housing; and (ii) the inability of the government to address the needs of those groups in terms of housing, water and sanitation infrastructure, education, health care, and other urban services.

1.21 The shantytowns mushroomed in the 1970s, when the population growth rate in poverty-stricken areas soared to 30.6% a year, while growth in the city itself was just 5.8% a year. In the 1980s, the shantytowns' population grew by 5.8% a year, while the city's grew by 2.2%.

1.22 The shantytowns occupy public and private property that is generally unsuited for housing, such as land prone to flooding on the edges of watercourses and areas set aside for institutional uses. Current estimates suggest that at least 80,000 people are living in shantytowns containing about 16,000 dwellings.

1.23 To address the situation, the municipal government has been implementing a series of social programs targeted to low-income groups, in particular families living in shantytowns. The programs are based on studies of the areas and interaction of technical experts with shantytown dwellers. They take the form of projects targeted to specific families and special groups including

children, teens, women, and the unemployed. These programs will be applied under the proposed operation.

B. Problems to be addressed by the program

1. Causes of flooding

1.24 The frequency of flooding has been increasing gradually in recent years owing primarily to the following factors: (i) rapid paving over of agricultural land owing to the growth of the city (roads, housing, small properties with impermeable artificial foundations, and heavy population density); (ii) past deforestation in the headlands of watersheds which causes considerable erosion and the transport of sediment downstream; (iii) old storm drains too narrow to carry runoff; and (iv) large shantytowns in areas prone to flooding and along the watercourses, which have denuded the land of natural vegetation and raised flood levels as a result of trash being dumped into the streams.

1.25 Average annual rainfall in Campinas is 1,400 millimeters, distributed unevenly throughout the year. Almost 50% of total precipitation occurs in the three summer months (from December to February). The precipitation is marked by strong localized fronts which produce heavy showers lasting a short time. These adverse climate conditions, compounded by the factors mentioned above, lead to persistent flooding in the city.

2. Problems caused by flooding 3/

1.26 Aside from causing considerable material damage, major road blockages, and physical injury (particularly among the low-income groups living below the flood level), the floods are a significant vehicle for the propagation of water-borne diseases, particularly in shantytown areas. The municipality's compulsory reporting program indicates a significant increase in diseases of this kind after a flood. In 1994 the general rates for schistosomiasis and leptospirosis in the city were .56 and .02 cases per thousand respectively, while in the areas to be covered by the program, they are 7.8 and .35 per thousand. In August 1995 the general rates were .32 cases per thousand of schistosomiasis and .09 of leptospirosis, while the rates in the project areas were 7.5 and .8, respectively.

3/ On average between 1993 and 1995, 923 families have been affected by flooding: 355 have had to be relocated temporarily and 40 families have lost their houses and all their possessions. There are five main road arteries in the city which are flooded an average of 10 times a year.

3. Proposed solution

1.27 The situation described above has convinced the municipal authorities of the urgent need to design a flood control program (PROCEN) to minimize and even eliminate the adverse effects of flooding in urban areas. The program is based on a comprehensive strategy that includes the construction of works to rehabilitate and expand watercourses, either through construction of new channels or by widening existing ones; the construction of new storm sewers; sanitation and road infrastructure linked to the new channels; and above all, preservation of flood belts by resettling families living in risk zones, taking measures to prevent the reoccupation of those areas, and conducting urban renewal in areas outside the risk zones.

4. Definition of the program

a. Criteria for the inclusion of works

1.28 The urban area of Campinas is divided into several watersheds, the principal ones being those of the Atibaia River, Córrego do Samambaia (tributary of the Atibaia), Ribeirão Anhumas, Ribeirão Quilombo, the Capivari River, and Córrego de Piçarrão (tributary of the Capivari). Based on studies conducted by the MGC in 1991 (the first stage in the master drainage plan), 44 critical flood points were identified along the watersheds in question. More detailed studies, including environmental studies, were conducted to prepare an action plan for drainage works to address the situation, which pinpointed 30 areas as priorities (see map 3).

1.29 Using its own resources, the MGC is building flood control works at eight of the 30 points. Of the remaining 22 points given priority, 11 will be controlled under the project proposed here: seven in the Piçarrão watershed and four in the Quilombo watershed. The remaining 25 areas would be dealt with in one or more subsequent stages.

1.30 The main criteria for determining the priority of the critical points to be included in the program were the frequent damage caused by the floods and the number of people affected, and it was decided to focus on the Anhumas, Piçarrão, Capivari, and Quilombo basins, which together cover over 90% of the city's population (see map 4). However, because of the financial constraints facing the MGC and taking into account social and environmental factors, in terms of impact, the watersheds of Piçarrão and Quilombo, which together cover over 50% of the population, were selected.

1.31 The project excluded critical points in the two watersheds in rural areas with sparser populations, and those that would require isolated actions that would have less social impact and whose economic feasibility was questionable. Based on these criteria, a socioeconomic viability study was conducted which, in addition to determining the environmental and family resettlement components

discussed below, also pinpointed the works to be built under the program. It is estimated that the project will protect about 62 hectares of the 130 hectares that are flooded almost every year.

b. Environmental impact studies

1.32 The environmental impact studies and the respective environmental impact report contributed to program design and helped to identify critical flash points and develop the projects. A number of mitigation measures were identified and included in the program, based on the recommendations of the Bank and the Department of Environmental Affairs of the State of São Paulo, which optimized the projects in the program. The environmental impact studies were supplemented and updated on the basis of cartographic information, aerial photographic surveys, and additional overflights of all the areas where works are planned and their surroundings, particularly areas where shantytowns are slated for basic improvements and/or resettlement.

1.33 The core projects were designed after the environmental studies were prepared, making it possible to perform an initial comprehensive evaluation of the environmental impact of the works, identify measures to mitigate that impact, and structure the components involving environmental education and the rehabilitation and conservation of green areas. The environmental summary for the program, which has been approved by the Bank's Environment Committee, describes the general and specific impact of the program, mitigation measures, and recommendations.

c. Core projects

1.34 The program's core projects were designed on a level of detail that permitted services and works to be quantified in order to prepare a budget for the works to be tendered. The hydraulic studies served as the basis for the final solution adopted and for the economic analysis of alternatives, especially in relation to the drainage, shantytown improvement, and resettlement works.

1.35 The Bank's recommendation to the municipal authorities advising them to perform the hydrological studies required to determine the impact on the downstream sections of watercourses to be included in the program led to the contracting of a specialized agency (Fundação Centro Tecnológico de Hidráulica) that is part of the Engineering University of São Paulo. The studies, conclusions, and recommendations pertaining to three of the four watersheds in Campinas made it possible to reduce the downstream impact of larger flows and higher velocities, prepare basic designs for the drainage projects (concrete structures) and for the shantytown improvement and resettlement projects, determine the optimum capacity of the channels, the number of families to be resettled as a nonstructural solution, the channeling of watercourses, and the type of section and materials to be used to line the channels.

1.36 This led to significant financial savings, on the order of US$3.1 million, by reducing the sections and volumes of material to be dredged and hauled, eliminating the construction of two pipelines, and optimizing existing sections to increase their capacity by rehabilitating their intake and carrying volumes. A further savings and economic benefits in the amount of US$2.7 million resulted from the increase in the net present value of the modified projects. The results of this analysis are presented in chapter V.

1.37 Based on geotechnical and hydraulic studies, sounding tests, excavations, and the cadastral contour mapping, projects were prepared for: (i) channeling and drainage; (ii) roads; (iii) shantytown zoning; (iv) shantytown improvements; and (v) the provision of basic services in resettlement areas, including the construction of core housing.

d. Shantytown improvement and family resettlement plan

1.38 The program's shantytown improvement and family resettlement plan (PUR) is based on an understanding of the causes of flooding and the problems it creates. The environmental impact study has shed more light on the social problems that need to be solved under the program, aside from the environmental aspects.

1.39 The studies mentioned above outlined impact mitigation measures and recommendations to: (i) improve the shantytowns located above the flood level of the watercourses to be dealt with under the program; (ii) remove and resettle families living in risk areas, i.e. those currently prone to flooding, and those areas affected by the channeling and drainage works; (iii) rehabilitate the landscape of the remaining areas along the edges of the canals to be built and of the green spaces; and (iv) design and implement an environmental education program as part of each activity.

1.40 These measures and recommendations were used by the MGC's authorities and experts to establish the objectives of the PUR, strategies to assist the affected population, and the targets and results to be achieved, including: (i) improvements in shantytown areas outside the risk areas to link them to the urban system through the provision of basic infrastructure and public services; (ii) contribution to the well-being of the families to be resettled through the most permanent housing solutions possible, facilitating their access to basic infrastructure (water, sewerage, and electricity) and social services (education and health care); and (iii) support for the development and consolidation of community organizations, encouraging community leaders to participate in the process of ameliorating living conditions.

1.41 The PUR conforms to Bank resettlement policy and proposes permanent solutions, including basic housing, in three shantytowns of the Complexo São Marcos (São Marcos, Santa Mônica and Campineiro),

located on the banks of the watercourse that is part of the Quilombo watershed. Approximately 7,546 people – 1,714 families – representing 9.4% of the population living in shantytowns in Campinas will be affected.

1.42 The actions and strategies of the PUR, in the context of the larger program, have political backing. The plan includes mechanisms to ensure participation by representatives of the different agencies involved and community leaders and representatives. The PUR will be supported by staff that works exclusively on the social programs now being carried out by the Campinas municipal government.

1.43 The following chapters describe the program which, from the conceptual and feasibility standpoints, provides a comprehensive solution to the demands and needs stemming from persistent flooding in the municipality of Campinas. The channeling, drainage, road, and improvement works in the areas bordering the watercourses affected will eliminate flooding at priority critical points and restore the urban environment for thousands of people.

C. The Bank's strategy

1.44 The proposed program is compatible with the overall strategy designed during the 1995 programming mission, when it was agreed that the 1995 to 1997 program would place priority on actions to reform and modernize the State, liberalize the economy, and reduce socioeconomic imbalances and poverty. The strategy also provides for government actions to support environmental cleanup and protection, natural resource management, and the strengthening of public institutions responsible for the environment. The program proposed here is consistent with that strategy.

1.45 The Brazilian federal government attaches priority to solving environmental problems and has asked the Bank for support in this endeavor. Thus far, the Bank has approved loans for the country in the areas of sanitation and environmental activities totalling US$2.293 billion. It is expected that the program proposed in this document will be approved in 1996. In the coming years operations similar to this one will be proposed for the municipalities of Belo Horizonte, Recife, Salvador, Joinville, the Federal District, and a regional operation for the northeastern part of the country.

1.46 Discussions are being held with Brazilian authorities on an operating strategy to respond more swiftly and effectively to the growing demand for financing for municipal environmental sanitation projects. A global multiple-works program to be administered by one or two national institutions is being considered. In addition, preliminary talks have taken place on the establishment of a fund to finance social infrastructure, which would conceptually be related to a fiscal adjustment program for the states (through eligibility criteria for access to the fund based on satisfactory results of fiscal measures and the states' borrowing capacity),

which would focus on financing infrastructure works, primarily with state water and sanitation companies. It should be noted that the Bank is internally considering other ways to process municipal projects quickly, which would be proposed in future operations with the country.

II. THE PROGRAM

A. Objectives

2.1 The main objective of the program is to reduce the damage caused by flooding in the city of Campinas, thus helping to improve the city's socioeconomic and environmental situation, particularly the living conditions of families residing along the banks of watercourses, while providing savings in travel time and costs for people who use the roads affected by flooding. The program will also help to boost the municipality's institutional and financial capacity over the medium term.

B. Description

2.2 The program consists of three projects. The first two involve the Piçarrão and Quilombo watersheds, where civil and social works will be carried out, consisting of: (i) drainage, including the channeling of watercourses, storm sewers, basic sanitation, and road works; (ii) improvements in shantytowns; and (iii) resettlement of families. The third project contains several components that include special activities connected to the program in the areas of: (i) environmental education; (ii) rehabilitation of land left vacant after the shantytown improvement and particularly the resettlement activities; (iii) institutional and financial strengthening for the municipal government of Campinas (MGC); (iv) hiring of technical staff for the shantytown improvement and family resettlement program; and (v) financial audit of the program. Each of the projects in the program, including the related subprojects and components, is described below.

1. Project 1 – Piçarrão watercourse – US$4,490,000 (see map 5)

2.3 This project includes drainage works, consisting of the construction of approximately: (i) 1.7 km of open channels and 470 m of closed channels over the Piçarrão; (ii) 885 m of storm sewers; (iii) 420 m of dredging; (iv) 2,600 m^2 of asphalt paving over a distance of 320 m; and (v) a bridge over the watercourse with a 13-m base, 4.7-m height, and 42.5-m length.

2. Project 2 – Quilombo watercourse – US$13,460,800 (see map 7)

a. Subproject 1 – Drainage works – US$2,430,000

2.4 This project includes construction of approximately: (i) 35 m of open channels and 865 m of closed channels; (ii) 930 m of storm sewers; and (iii) 1.3 km of dredging.

b. Subproject 2 - Improvements in shantytowns - US$1,511,700

2.5 The São Marcos complex includes the shantytowns known as Santa Mônica, São Marcos, and Campineiro, covering an area of 21.4 hectares, where 1,714 families, or close to 7,546 people, live. This subproject will improve approximately 10.6 hectares, benefitting 633 families. The other 1,081 families living below the flood level will be moved to an area known as Santa Genebra, leaving 10.8 hectares of abandoned land which will be reclaimed (see paragraph 2.10).

c. Subproject 3 - Resettlement - US$9,519,100

2.6 Santa Genebra, which extends over about 35.1 hectares, will be used to resettle 1,081 families from the São Marcos complex, which is adjacent to the new area. The plan is to provide 1,100 lots with a minimum area of 126 square meters, and housing units 26 square meters in size. The infrastructure will include laying out blocks and lots, building streets and integrating them into the existing road system, and providing water, sanitary sewerage, electricity and public lighting, and trash collection services. Public facilities will not be required since they are already available in the aforementioned complex. There will be a green space and recreation area covering approximately 13.1 hectares.

3. Project 3 - Special activities - US$4,235,000

a. Environmental education component - US$1,000,000

2.7 A series of educational activities has been designed to inform, sensitize, and encourage civil society in Campinas to participate in different stages of the program, in order to raise awareness regarding its different environmental and social aspects.

2.8 The main activities and goals of this component are to: prepare educational materials and general information on the program; conduct courses to train environmental education agents; hold workshops and events; organize young people and adults into groups (paid work) to assist in reclaiming the abandoned areas; establish preliminary thematic goals; prepare a familiarization plan targeted to those preliminary goals; define environmental action goals and evaluation parameters; and design environmental action plans for the different areas.

b. Green area rehabilitation component - US$635,000

2.9 The purpose is to prevent reoccupation and rehabilitate the land to be abandoned by the families that presently live along the water-courses to be channeled and dredged. The plant cover destroyed by the floods and human occupation will be replaced, and recreation areas will be established where the terrain permits. These

activities will be supported by an environmental education component.

2.10 Resettlement of 1,081 families in the São Marcos complex will leave an abandoned area of about 10.8 hectares which will be rehabilitated to include green spaces, a soccer field and volleyball court, and playgrounds. In the Santa Genebra resettlement area, which is adjacent to the complex, a 5.8-hectare area has been set aside for a park, an exercise area, a walking and jogging trail, and playgrounds.

c. Institutional strengthening component - US$1,500,000

2.11 This component includes activities to improve the efficiency of the MGC in billing and collecting taxes, fees, and levies, optimize its organizational structure, increase its efficiency in contracting and managing human, material, and financial resources, and delivering services to the public. It will also permit better investment planning and control over land use and the urban environment.

d. Technical support for the improvement and resettlement program - US$800,000

2.12 Additional technical staff will be hired to ensure timely and efficient implementation of the shantytown improvement and family resettlement program in the Quilombo watershed.

e. Financial audit of the borrower - US$300,000

2.13 This component provides the resources necessary to hire independent auditors in case the Auditor General of the State of São Paulo is unable to audit the borrower's financial statements in a timely way.

C. Total cost

2.14 The program will cost an estimated total of US$33 million equivalent, distributed by source of financing and investment category as shown in the following table.

Campinas municipal government
Flood control program
(in thousands of U.S. dollars)

CATEGORY	TOTAL BY SOURCE			
	IDB-OC	LOCAL	TOTAL	% TOTAL
1. Engineering and administration	1,300	2,450	3,750	11.4
1.1 Management and technical support	0	1,830	1,830	5.5
1.2 Supervision of works	1,300	0	1,300	3.9
1.3 Administration	0	185	185	0.6
1.4 Studies	0	435	435	1.3
2. Direct costs	15,158	2,792	17,950	54.4
2.1 Piçarrão works	3,900	590	4,490	13.6
2.2 Quilombo works	11,258	2,202	13,460	40.8
3. Associated costs	0	4,980	4,980	15.1
3.1 Expropriation	0	745	745	2.3
3.2 Land rehabilitation	0	635	635	1.9
3.3 Institutional strengthening and environmental education (PEA)	0	2,500	2,500	7.6
3.4 Technical support (PUR)	0	800	800	2.4
3.5 Financial audits	0	300	300	0.9
Subtotal	16,458	10,222	26,680	80.9
4. Unallocated	3,144	993	4,137	12.5
4.1 Contingencies	1,058	993	2,651	8.0
4.2 Cost escalation	1,486	0	1,486	4.5
5. Financial costs	198	1,985	2,183	6.6
5.1 Interest	0	1,756	1,756	5.3
5.2 Credit fee	0	229	229	0.6
5.3 IDB inspection	198	0	198	0.6
TOTAL	19,800	13,200	33,000	100
Percentage source/program	60	40	100	

D. Financing plan

2.15 The program will be financed through a Bank loan for US$19.8 million in foreign exchange from the ordinary capital, and US$13.2 million equivalent from the local counterpart to be provided by the municipal government of Campinas out of its own budget.

2.16 The following terms and conditions are proposed for the prospective Bank loan:

Amount (source):	US$19.8 million (OC)
Amortization period:	25 years
Grace period:	3.5 years
Disbursement period:	3 years
Interest:	variable
Credit fee:	0.75% of the undisbursed balance
Inspection and supervision:	1% of the loan

III. PROGRAM EXECUTION

A. The executing agency

3.1 The municipal government of Campinas (MGC) will execute the program in accordance with the plan described below.

1. Special program supervisory committee

3.2 On August 18, 1995, an executive decree 4/ established a special supervisory committee to lay down general guidelines for the program and to ensure close interaction among the different parts of the municipal government. The committee, which is chaired by the mayor, draws its members from all the municipal departments involved in program execution, including the head of SANASA. Its main task will be to coordinate the program and determine the policy actions required to fully attain its objectives.

2. Program executive group

3.3 Linked to the committee, a program executive group was also established which, under the coordination of the Department of Planning and Environmental Affairs, is composed of experts in each of the program's areas. These experts, who are appointed by the mayor, are also the representatives of the departments involved in the program, i.e.: Planning and Environmental Affairs, Works, Finance, Housing, Administration, and the Eastern and Northern Regional Action Departments. This executive group will be the interlocutor with the Bank and will be responsible for complying with the contractual obligations and executing all the planned activities on schedule and within budget. Accordingly, it is recommended that the MGC present the decree authorizing program execution and setting out the responsibilities of the executing agency and the other participating entities, as a condition precedent to the first disbursement of the Bank loan.

3. Management firm

3.4 To complete the basic projects in line with the Bank's comments and recommendations, prepare the detailed designs and obtain technical and administrative support in program preparation and execution, the MGC hired the services of a management firm, through local competitive bidding in accordance with procedures acceptable to the Bank. The firm began work in April 1995, and some of its costs will be recognized from the local contribution prior to loan approval (see paragraph 3.35).

4/ Decree 34695 published in the Official Gazette of the Municipality of Campinas.

3.5 During the program, this firm will be responsible for technical coordination and management. It will present management reports to the coordinator of the executive group, containing all the information required to ensure that the program is carried out in an integrated and comprehensive fashion according to plan, and to enable the group to take timely corrective actions.

3.6 Its principal activities will consist of: (i) finalizing the detailed designs for the program and monitoring, evaluating and working out any changes in technical solutions adopted in the original plans that may be required during execution of the works; (ii) exercising fiscal and financial control over the projects, subprojects, and components; (iii) supporting the executive group in the preparation of the bid documents, with regard to technical specifications, terms of reference, methods and criteria for evaluating the bids, environmental mitigation measures, etc.; (iv) supporting the executive group in directing and carrying out the shantytown improvement and resettlement plan; and (v) monitoring and supervising compliance by the companies to be contracted with regard to the scope of the works, technical conditions, terms, and costs.

4. Supervisory firm

3.7 Supervision and control over execution of the program's works and services will be performed by a consulting firm. The Bank's financing will be used to hire the firm through international competitive bidding, for services costing an estimated US$1.3 million.

3.8 This firm, with support from the management firm, will provide the executive group with data and information to permit continuous program monitoring and evaluation. It should be noted that the bid documents include a requirement that interested firms must have staff and/or consultants specializing in urban improvements and resettlement. The firm is slated to start work in the second half of 1996, and therefore it is recommended that it be contracted within six months after the prospective loan contract becomes effective, and prior to the initiation of the works.

B. Program execution

1. Civil works

3.9 The civil works involving channels, storm sewers, roads, bridges, intercepting sewers, improvements to shantytowns and resettlement areas, and the construction of core housing will be performed by contractors. The works have been grouped into two packages that will involve international competitive bidding.

3.10 The two bid packages in the works program have been divided by watershed: one for Piçarrão and the other for Quilombo. The

number, amount, and schedules for the bids are considered satisfactory, with costs ranging from a low of US$4.5 million to a high of US$13.5 million in the Quilombo watershed, which includes 100% of the core housing construction, worth US$6.2 million. The detailed bid schedule is attached as an annex.

2. Complementary works

3.11 The MGC and SANASA signed contracts with two Brazilian construction companies in 1991 and 1992, respectively. The contracts for installing intercepting and trunk sewers are financed with resources from the MGC, SANASA, and the Caixa Econômica Federal. The works are complementary to the program's and are necessary to ensure that the drainage systems for Piçarrão and its tributaries operate properly. Therefore, and since the works are being built on the edges of the watercourses where the program will be implemented and are being funded by other sources, it is recommended that the MGC be required to present evidence of the progress made in those works in the semiannual work plans to be presented to the Bank for two years after the loan contract becomes effective.

3.12 The works in the shantytowns and resettlement areas, including parcelling and the construction of core housing, will be carried out by contractors to be overseen by the supervisory firm. To ensure that the housing complies with all the legal requisites and is inhabitable prior to the resettlement of the families, it is recommended that the MGC present evidence within no more than 30 months after the loan contract becomes effective that these requisites have been fulfilled. Follow-up on this activitiy will be conducted through semiannual work plans to be submitted to the Bank (see paragraph 3.22).

3.13 It is recommended that, prior to beginning any work affecting the dwellings of families to be resettled in the Quilombo watershed, the MGC present evidence that complementary works have been started to ensure availability of basic services in the Santa Genebra resettlement area. In addition, prior to beginning any work affecting the dwellings of families to be resettled in the aforementioned watershed, the MGC must submit evidence that: (i) the families have already been resettled; and (ii) the complementary works in Santa Genebra have been executed.

3. Shantytown improvements and family resettlement

3.14 To monitor and manage the social actions included in the program, which are divided into several stages and include social work with the communities to be affected, the municipal government established a management plan for the program's executive group. The plan sets up direct links between the program's executive coordinator (the Department of Planning and Environmental Affairs), officials from the institution directly involved in the drainage

and channeling works (the Municipal Works Department), and the institutions responsible for the shantytown improvement and resettlement works (Department of Housing, Eastern and Northern Regional Action Departments and Companhia de Habitação [housing company]). Aside from their responsibilities and actions under the program, this group of officials will sit on a consultative committee that will serve as liaison with community leaders and representatives of the groups to be affected, and civil society in Campinas.

3.15 The mayor issued an executive decree on September 23, 1995, making provision for the MGC's financial and human resources that will be necessary to provide education, health care, and public transportation services for the groups to be affected by the program. 5/ It should be noted that the Santa Genebra resettlement area, adjacent to the São Marcos complex, and the areas slated for shantytown improvement already have education and health care facilities available.

3.16 Based on the Bank's guidelines and recommendations, the MGC has designed a shantytown improvement and resettlement plan whose main social work activities will be carried out in close cooperation with all the agents involved in the program. In addition to the human resources assigned by the municipal government, it will be necessary, prior to the first disbursement of the loan, to hire a team of 20 people, including 10 professionals (three architects and/or engineers, six social workers, and one sociologist). This team will work with the technical and professional members of the group responsible for executing the PUR.

3.17 The timetable for execution of the PUR was prepared to adapt to program requirements covering the phases during which the areas prone to flooding will be vacated, so that drainage works, shantytown improvement and family resettlement can get under way.

4. Environmental education

3.18 Since the chief objective of this component is to inform and sensitize civil society regarding the program's environmental aspects and encourage participation by the affected communities, the environmental education program will be coordinated by the program executive group, through an environmental education group. The latter will be supported by the Departments of Municipal Services, Housing, Education, Health Care, and Culture, individual consultants, community leaders, and NGOs. Regional teams will be set up, linked to the Eastern and Northern Regional Action Departments, to work in the Anhumas and Quilombo areas.

5/ Program for the provision of public services and facilities and social support for the flood control program.

5. Rehabilitation of vacant areas

3.19 The first step in rehabilitating areas below flood level on the banks of the watercourses will be to relocate families at risk. The contractors selected through the bid process will then fence off the areas in order to prepare the terrain to bring in their equipment for the drainage works. As the work progresses, the contractor and the supervisory firm will determine when the environmental education group can become involved in reclaiming the area by planting trees and setting up playgrounds where the terrain permits.

3.20 The environmental education group will organize and remunerate young people and adults from families living above flood level in areas to be improved under the program. They will be educated and trained in tree planting and conservation of vegetation and in the construction of playgrounds. As mentioned earlier, these groups will be supported by the regional environmental education groups, experts from the Regional Action Departments, and NGO volunteers and staff. The same approach will be used in the resettlement areas once the infrastructure and housing have been built.

6. Institutional strengthening

3.21 The different activities in this component will be carried out by four consulting firms contracted to: (i) prepare an economic profile of the municipality; (ii) determine the municipality's tax potential to evaluate the efficiency of its tax administration and propose actions to increase the efficiency of the collection apparatus; (iii) evaluate the organizational structure of the municipal government and prepare a proposal to optimize that structure, assess the coverage and quality of services provided by the municipality for its residents, evaluate efficiency in the use of human, physical, and financial resources, propose actions to improve that efficiency, and determine parameters for measuring it; and (iv) procure and introduce a geographic information system. Individual consultants will also be hired to coordinate and support this component.

C. Semiannual work plans

3.22 To ensure that the program is closely and comprehensively monitored, it is recommended that the municipal government present semiannual work plans during program execution which, based on performance indicators and targets agreed upon with the Bank, are to include: (i) physical and financial progress in the execution of projects, subprojects, and components; (ii) the program's social and environmental indicators; (iii) the extent to which targets have been met; and (iv) any adjustments made to attain the original targets. If program execution is found to be unsatisfactory, the MGC will be required to present plans for corrective actions to the Bank within 60 days of receiving its recommendations, and a

timetable for their implementation. In addition, the work plans will serve as a basis for the interim reviews of the program that the Bank will conduct with the MGC 12 and 24 months from the effective date of the contract. The following table summarizes the main program indicators envisaged for the execution period. The program's logical framework, attached as an annex, will provide greater details on the program indicators, including social impact indicators.

MAIN INDICATORS	END OF YEAR 1	END OF YEAR 2	END OF YEAR 3	TOTAL
1. Channeling (meters)	2,080	3,200	1,339	6,619
2. Roads (meters)	-	320	-	320
3. Bridges (units)	-	1	-	1
4. Shantytown improvements (%)	20	40	40	100
5. Family resettlement (%)	30	40	30	100
6. Housing construction (units)	340	450	340	1,130
7. Land rehabilitation	10	45	45	100
8. Environmental education activities (%)	20	40	40	100
9. Institutional strengthening (consulting units)	-	4	-	4

D. Operation and maintenance

3.23 Insufficient funds have been budgeted for maintaining and cleaning the 67 km of channeled and natural watercourses in the municipality's urban area. The Regional Action Departments perform only limited maintenance work, most of it therefore with equipment and operators contracted from private companies. The cost of third-party contracts accounts for close to 70% of the entire maintenance budget and is expected to rise in future since the municipality has not planned to procure its own equipment in the short or medium terms.

3.24 The possibility of the MGC letting concessions to private firms to maintain the channels to be built under the program in the two watersheds was examined. However, since about one half of the channeling works are replacements or expansions of current channels, which are relatively modest in width and length, it is considered that maintenance should continue to be performed over the short and medium terms as it is at present, i.e., hiring dredging and hauling equipment and operators from private firms which are supervised by the four Regional Action Departments.

3.25 Notwithstanding the above, and in view of the investments in watercourse channeling that the MGC has already made and intends to make under the program, adequate maintenance is indispensable if flooding is to be controlled. Therefore, it is recommended that

the MGC present a plan for the financing, operation, and maintenance of the Campinas drainage system within six months after the loan contract becomes effective. The plan is to include the cleaning and maintenance of 4.8 km of channels and 9.7 km of the respective receiving waters and tributaries of the streams to be channeled in the program's watercourses. The plan should define annual maintenance activities, sources of available budget resources and an evaluation of expenditures at the end of each year.

E. Program preparation status

3.26 The municipal government has basic projects for the drainage works (12 subprojects), road works (two subprojects), shantytown improvement (one subproject), and family resettlement (one subproject), which will permit it to begin the bid process in keeping with the timetable agreed upon with the Bank. The management firm that has been contracted is continuing to prepare the detailed designs of the entire program, which are expected to be ready in the first half of 1996.

F. Land

3.27 Most of the land where the drainage works are to be undertaken belongs to the MGC. The shantytown improvement projects will be carried out on public land affected with a public interest belonging to the city. To proceed with the improvement process, in December 1995 the MGC began proceedings to change the legal status of that land, to allow it to be put to private use for reasons of social interest. This would allow the city to convey and tax the land.

3.28 The legal status of all the municipal land (shantytowns) to be improved (Complexo São Marcos) has been changed, and the MGC is in the process of conferring real land-use rights on residents in these areas.

3.29 With regard to the resettlement component, the city government has completed expropriation of part of the properties in Fazenda Santa Genebra (35 hectares), where the improvements will be made and the low-cost housing built. The process was carried out under an expropriation decree issued by the mayor, which provides for amicable agreements on the value of the property between the owner and the city. The MGC completed the process at the end of 1995 and is currently in legal possession of the tract of land.

G. Execution and investment timetables

3.30 The program will be executed over three years once the loan contract becomes effective. This period is compatible with the scale of the program, the types of activities involved, the possibility of providing the local counterpart for program works

(particularly the construction of core housing), and associated costs and program management costs.

3.31 The investment schedule, summarized below, has been based on the execution period and the programming of the executive group.

In US$ thousands or equivalent

	YEAR 1	YEAR 2	YEAR 3	TOTAL	%
IDB loan (OC)	3,078	9,736	6,986	19,800	60.0
Local contribution (MGC)	4,663	5,017	3,520	13,200	40.0
Total	7,741	14,753	10,506	33,000	100.0
Percentage	23.5	44.7	31.8	100.0	

H. Bidding procedures and schedule

3.32 Goods and construction works will be procured in accordance with Bank procedures, which will be stipulated in Annex B of the loan contract. The consulting services for the institutional strengthening component will be procured through local bidding, since they are financed with counterpart funds.

3.33 The thresholds above which international competitive bidding will be required are US$350,000 for goods, US$200,000 for consulting services, and US$3 million for construction works. This last figure is justified since the construction works have been divided geographically into two groups, which will make the bid packages more attractive. Furthermore, the nature of the construction and the average volume of the works are large enough to attract international interest.

3.34 Calls for bids involving lesser amounts will be subject to Brazilian legislation, which requires competitive bidding — and does not exclude international firms — for contracts worth more than US$100,000 equivalent limited bidding for lower amounts, which is compatible with Bank procedures.

I. Cost recognition

3.35 The MGC made expenditures of approximately US$2.7 million in accordance with procedures acceptable to the Bank and national legislation, for the preparation of: (i) environmental impact and socioeconomic studies costing US$232,282; (ii) hydrological and hydraulic studies of the different watersheds where the program will be executed, for US$158,991; (iii) updating and supplementing the basic studies for all the subprojects and making a start on the detailed designs, for US$1,644,737; and (iv) two payments for a total of US$745,000 for the land in Santa Genebra to resettle

families. It is therefore recommended that costs incurred prior to approval of the Bank loan, up to the equivalent of US$2.7 million, be recognized from the local contribution.

J. Environmental aspects

1. Environment Committee

3.36 At its meeting on March 7, 1995, the Bank's Environment Committee (CMA) classified this program as a category IV operation in view of its future impact on the social environment, particularly the number of families to be resettled. The CMA considered and approved the environmental summary on October 11, 1995.

2. Environmental impact assessment and permits

3.37 The environmental impact assessment was made available to the public before the program analysis began. On August 23, 1995, the environmental authorities of the State of São Paulo unanimously approved the environmental impact study and report. On the basis of that authorization, a program permit was issued, which allowed the MGC to proceed with the call for bids and to obtain the construction license needed prior to beginning the works. An operating license will be issued when the works have been completed and inspected.

K. Bank supervision

3.38 The reports by the Country Office on the status of loans in execution will describe any problems that arise during execution of this program and the solutions implemented. A summary of these matters will be included in the annual portfolio report prepared at the start of each calendar year.

3.39 The Bank will evaluate the results of the program within 90 days after the final disbursement of the loan and will prepare the respective project completion report.

L. Ex post evaluation

3.40 The borrower does not consider it necessary to perform an ex post evaluation of the program, since a series of technical, economic, financial, environmental, and social indicators have been defined in conjunction with the Bank which will make it possible to measure and evaluate program performance and results.

IV. THE BORROWER AND THE EXECUTING AGENCY

A. The borrower and the executing agency

4.1 The borrower will be the Municipality of Campinas, which will also provide the local counterpart funding. The municipal government of Campinas (MGC) will be the executing agency, through the Municipal Planning and Environmental Affairs Department.

B. Institutional analysis of the MGC

1. Organizational structure

4.2 Under Brazil's Constitution, municipalities are headed by mayors who exercise executive powers. Legislative functions are performed by the municipal council. The mayor and councilors are elected directly by popular vote for a four-year term. The next elections will be in October 1996.

4.3 The current organization of the MGC was laid down in Act 7721 of December 15, 1993. The government is composed of the mayor and his cabinet – which is responsible for coordinating relations with the legislative branch 6/ – and councils on government, urban development, social development, administrative facilities and special programs, the office of the public advocate, and 19 municipal departments.

4.4 The Water Supply and Sanitation Company (SANASA), the Supply Center (CEASA), the Municipal Development Corporation of Campinas (EMDEC), the Housing Company – low-cost housing – (COHAB), the municipal information systems company [Informática de Municipios Associados S.A.] (IMA), the Technical Services Company (SETEC), CIATEC, a company promoting the establishment of an advanced technology center in the Campinas region, the Municipal Savings and Loan Bank, the Municipal Social Security Administration (IPMC) 7/ and the municipal hospital also report to the MGC. As is apparent, the organizational structure of the MGC is very complex, and there is redundancy in functions, particularly among the 19 departments.

4.5 In July 1995, the municipal staff numbered 13,080 (40% in operations, 23% in administration, and 37% in professional and/or management positions), an increase of 21% over 1990. The highest

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6/ Also reporting to the mayor's cabinet is a department responsible for planning and coordinating civil defense in Campinas.

7/ A municipal law of August 1995 eliminated the IPMC and established a municipal insurance system.

growth was in professional and management staff (31%). Of MGC staff, 80% (10,439) is permanent and 20% (2,641) temporary.

4.6 The growth in the number of employees in recent years has resulted in a significant increase in costs. There are 14.3 MGC employees per 1,000 citizens, which is high in comparison to the general standard of 10:1,000. National reforms would be required to reach that level. Brazil's Constitution guarantees the job stability of public employees, which makes it impossible to bring public employment in the federal, state, and municipal governments down to efficient levels. If constitutional reforms are introduced to allow municipal governments to cut back on staff, Campinas would be in a position to design and implement a plan to streamline its personnel.

4.7 Until that time, and with a view to improving the quality and efficiency of the services provided by the MGC to the community, thereby reducing current spending and increasing the funds available for investments, it has been decided to finance a series of studies under the institutional strengthening component to optimize the city's organizational structure and staff and, under its own planning, to determine the efficiency parameters to be achieved each year and the actions needed to help the MGC attain the efficiency levels defined under that component.

2. Internal and external auditing

4.8 The municipality's financial statements are audited by the Auditor General of the State of São Paulo, which issues an opinion. The financial statements are also submitted to the Campinas municipal council, which may appoint independent auditors to certify them.

4.9 The most recent opinion of the State's Auditor General on the MGC's financial statements for 1991 was issued on April 26, 1995 (it was favorable). Considering this delay and the need to have timely financial reports on the borrower, it is recommended that, during the period that the prospective loan contract is in force, the MGC's financial statements be audited by a firm of independent public accountants in the event that the State's Auditor General is unable to conduct its audits within the deadlines required by the Bank. The program includes an item for US$300,000 from the local counterpart to engage public accountants during execution. It is recommended that the MGC present the annual financial statements for the program, to be audited by the Federal Audit Department of the Ministry of Finance.

4.10 The MGC does not have an internal auditing unit with the necessary independence to do its work efficiently. The Accounting and Budget Office of the Municipal Department of Finance is responsible for conducting internal audits and responding to requests for information made by the Auditor General.

4.11 The fact that the city does not have internal auditors with the independence necessary to ensure that adequate procedures are applied and reliable information produced is a problem that must be dealt with immediately. It is crucial to establish an internal auditing unit with sufficient independence, that reports directly to the mayor. Accordingly, it is recommended that, within 12 months after the loan contract is signed, the MGC present evidence that it has established an internal auditing unit that is independent and staffed with a minimum of one chief auditor, two senior auditors and three junior auditors. Two years after the unit has been established, the independent auditors hired to examine the financial statements for the program are to evaluate the internal auditing unit and present recommendations on its operations.

3. Outsourcing policy

4.12 The MGC began its outsourcing policy by leasing vehicles and equipment to maintain city infrastructure. At present, 163 of the 358 vehicles used for maintenance are leased from private companies. Last year, 319,000 hours of different equipment were leased, or 60% of the total equipment hours used by the MGC. All residential, industrial, and hospital solid waste collection is contracted out to private parties. Arrangements are also well advanced to contract out street cleaning and maintenance to the private sector. However, the MGC needs to improve its contracting efficiency to reduce the final cost of these services, without affecting their quality.

4. Information services

4.13 The MGC has an information systems company (IMA) that processes data and supports the local government with regard to computer equipment and programs. The MGC should examine whether it could reduce the cost of those services through competitive bidding.

4.14 The MGC currently has 257 personal computers, while the target for the end of 1995 was 464. Projects are under way to establish local area networks in the departments for the use of information resources in public schools and for planning and control in municipal health care services. The institutional strengthening component includes funds to procure a geographic information system and to train personnel in its operation. The system will boost the MGC's efficiency in the planning and control of urban land use and municipal tax billing and collection.

5. Conclusions

4.15 Although the organizational structure and staffing of the MGC are very complex and there are currently federal restrictions on cutting back the staff of public agencies, the proposed operation includes the studies required to begin reforms in this area during

the program. It also proposes measures for improving the borrower's internal auditing.

C. Historical financial analysis of the MGC

1. General aspects

4.16 The Brazilian Constitution contains rules governing the establishment, functions, and sources of funds of municipal governments. Municipal resources come mainly from municipal taxes and charges, mandated transfers from the state and federal governments, investments of municipal cash surpluses on the financial market, and internal and external credits from suppliers, banks, and development agencies.

4.17 The main municipal taxes are: (i) the urban property tax (IPTU); (ii) the service tax (ISS); (iii) the tax on the inter vivos sale or transfer of real estate (ITBI); and (iv) the fuel tax (IVVC). The municipality may also establish and collect betterment levies. The Municipal Department of Finance is responsible for collecting these taxes, levies, and fees.

4.18 Constitutionally mandated transfer payments are made through the Municipal Participation Fund and include a share of certain federal taxes, i.e.: (i) the rural property tax; (ii) the income tax; and (iii) the tax on gold sales. The municipalities also receive a share of some state taxes: (i) the tax on sales of goods and transport and communications services (ICMS); (ii) the tax on processed products; and (iii) the vehicle tax.

2. Historical financial performance

4.19 The analysis of the MGC's historical financial performance was based on its budget execution from 1990 to 1994. The following table presents a summary of the MGC's flow of funds for 1992 to 1994.

BUDGET EXECUTION
(Millions of U.S. dollars at January 1996)

		1992	1993	1994
1.	Current income	328.8	301.7	304.1
	IPTU	72.8	57.9	56.4
	ISS	53.4	40.7	44.3
	Municipal taxes and betterment levies	16.2	14.1	13.1
	ICMS	112.6	114.0	120.4
	Other	73.8	75.0	69.9
2.	Current expenditures	244.3	222.3	257.2
	Personnel	103.9	106.1	125.3
	Third-party services	82.0	70.8	82.5
	Other	58.4	45.4	49.4
3.	Current savings	84.5	79.4	56.9
4.	Debt service	25.7	25.2	26.1
5.	Net savings	58.8	54.2	20.8
6.	Capital earnings	12.7	2.6	1.0
7.	Credit operations	12.8		
8.	Receipts available for investment	84.3	56.8	21.8
9.	Investments	77.7	7.6	16.9
10.	Other capital costs	6.3	1.0	2.1
11.	Profit (loss) from inflation	(45.4)	(74.8)	(46.6)
12.	Annual surplus (deficit)	(45.1)	(26.8)	(43.8)

4.20 The budget deficits in the period are mainly due to the fact that all surpluses at the end of each month were invested in the financial market at interest rates lower than inflation.

4.21 In the period under consideration, the taxes and fees collected by the MGC accounted for 44% of its total current income (the IPTU and ISS averaged 20% and 15% of that figure, respectively) and transfers to the municipality of its share of the ICMS accounted for 37%, indicating that the MGC depends heavily on federal government transfers.

4.22 The MGC's current income has fallen by 7.5%, from US$329 million in 1992 to US$304 million in 1994. Most of the drop was the result of reductions in the IPTU and ISS of 23% and 17%, respectively. The main causes were high inflation and a slowdown in the economy.

4.23 Current spending grew from US$224 million in 1992 to US$257 million in 1994 owing to a 21% increase in personnel costs. The MGC reported that wages had been increased to keep them competitive

with the private sector, allowing it to hire and keep qualified, motivated employees. The cost of third-party services fell by 14% in 1993 but rose to US$82 million in 1994, returning to 1992 levels.

4.24 Debt service over the period averaged US$23 million. At the end of 1994, the city had a floating debt of US$63.5 million equivalent, composed of balances payable of US$42.5 million and US$21 million of short-term debt incurred as advances on current income. Its long-term liabilities were US$208.9 million and its main creditors were Banco do Brasil, Caixa Econômica Federal, the Mitsubishi Bank, and the Federal Social Security Authority.

4.25 Aside from those liabilities, there were court cases pending against the city, some with judgments amounting to an estimated US$70 million equivalent. The claims were mostly due to MGC expropriations, in which the plaintiffs demanded a monetary correction differential higher than the one used by the city. The municipality based its payments on the official coefficients contained in the Bresser and Collor I and II economic plans. The Court of São Paulo agreed with the plaintiffs' arguments that a higher monetary correction coefficient should be used. The rulings are still under appeal by the MGC.

4.26 The initial estimate of outstanding claims was US$95 million, and the city paid US$25 million between 1990 and 1994. 8/ Together with the other liabilities described earlier, the MGC's total debt was US$342.4 million at December 31, 1994.

4.27 Investments of US$102 million over the period were not distributed uniformly. In 1992 (a mayoral election year), US$78 million was spent on investments. In 1993 and 1994, investments accounted for US$7 million and US$17 million, respectively. The drop in investments in 1993 can be put down to the fact that it was the first year of the current mayor's term and to the difficulty of obtaining long-term financing in Brazil.

3. Conclusions

4.28 The analysis of the flow of funds shows that the MGC ran deficits of US$45 million in 1992, US$27 million in 1993, and US$44 million in 1994. The 1994 deficit deepened mainly because of the rise in personnel costs and because current income levels remained low, particularly the property tax which was hit hardest by inflation. The situation points to poor tax administration and spending

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8/ In 1995, the MGC paid US$10.8 million, leaving pending claims of an estimated US$59.2 million at December 31, 1995. The MGC estimates that final settlements could amount to US$32.4 million which would be paid in equal amounts in 1996 and 1997 using a municipal bond issue.

management, which made it impossible to maintain adequate investment levels.

4.29 The annual budget deficits correspond to balances payable that the MGC chiefly covers with income from the following year and with surpluses at the close of each year. In 1994, short-term loans of US$21 million were used to cover the deficits.

4.30 Based on the foregoing analysis, it was considered necessary to include an institutional and financial strengthening component in the program, in order to support the MGC to: (i) boost its tax billing and collection efficiency; (ii) optimize its organizational structure with a view to increasing administrative efficiency and lowering operating costs, mainly related to personnel and third-party services; (iii) prepare financially feasible medium- and long-term investment plans; and (iv) improve the efficiency and effectiveness of urban land use planning and control.

D. Institutional and financial strengthening component

1. General features

4.31 The MGC has been making a significant effort to increase its current income and improve the quality of the services it delivers to the community. It hired a company to perform an aerial photographic property survey which covered 120,000 of the 220,000 buildings in the urban area. At the end of 1995, the re-registration of properties, aerial photographic surveying, and graphic reconstruction were well advanced. The rolls for service taxes were updated and control over the largest taxpayers was tightened. Computer systems were introduced in the municipal departments and personnel was trained and motivated to boost the efficiency of municipal services. However the MGC still has no estimates of its tax collection potential or parameters for better planning and control over spending. It has no tools to make major improvements in the efficiency of its economic planning or land use in the municipal area.

4.32 As was mentioned earlier, the government's organizational structure is complicated owing to the excessive number of departments, which contributes to duplication and overlapping of functions. City employment rolls have also grown significantly in recent years although accurate staffing needs for the efficient delivery of services have not been determined.

4.33 A municipal strengthening component has been included in the program for an estimated total cost of US$1.5 million to make the municipal government more efficient in billing and collecting taxes, fees, and levies, administering human, material, and financial resources, delivering services to the community, and planning and controlling urban land use.

4.34 In view of the importance of proper and timely execution of the institutional strengthening component, it is recommended that a clause be included in the loan contract requiring the MGC to: (i) present the respective terms of reference for the consulting services to the Bank for approval prior to issuing calls for bids; (ii) within eight months after signature of the prospective loan contract, present evidence that the consultants for this component have been hired; and (iii) within 24 months after signature of the loan contract, present the results of the consultants' work.

2. Description of activities in the institutional strengthening component

4.35 This component includes a number of activities: (i) preparation of an economic profile of the municipality of Campinas; (ii) determination of its tax, fee, and levy potential; (iii) evaluation of the efficiency of the MGC in tax billing and collection and recommendations regarding mechanisms and actions to improve that efficiency with a view to attaining the calculated potential; (iv) evaluation of the MGC's current organizational structure in order to optimize it; (v) evaluation of the coverage and quality of the services the MGC provides to the population to determine parameters for developing and introducing a method or system to evaluate and control the quality of its services; (vi) evaluation of the MGC's efficiency in the use of human, material, and financial resources to determine parameters for developing and introducing a method or system to measure and monitor its efficiency in the use of those resources; and (vii) identification and evaluation of GIS alternatives in order to procure the one best suited to the MGC's current and future needs, implementation, and training of staff in its operation and maintenance.

4.36 Specialized consulting firms and individual consultants will be hired for this component following Bank procedures. The total estimated duration of the institutional strengthening component is 16 months.

V. PROGRAM FEASIBILITY

A. Technical feasibility

5.1 The program is technically feasible and fully justifiable on the basis of the following considerations:

a. It responds to an urgent need to reduce the number of key urban areas that are flooded almost every year in Campinas, based on priorities presented by the municipal government (MGC) which the Bank considers to be acceptable.

b. Basic engineering plans are available for all the subprojects, which allows for adequate costing and preparation of the bid documents. A consulting firm is preparing the detailed designs, which will be completed in the first half of 1996.

c. The execution schedule adequately reflects the time required for all the activities planned, and the proposed three-year period is realistic and feasible.

d. The MGC, through its Departments of Works, Public Services, and Regional Administration, has sufficient experience in designing channeling, road construction, and flood protection works, and in their supervision, as is evident from the many similar works both completed and under way, funded with city resources and contributions from the Caixa Econômica Federal. The Municipal Housing Department and the management firm have significant experience in the shantytown improvement and family resettlement processes that will be carried out in coordination with the channeling, road construction, and flood protection works. The supervisory firm to be hired through international competitive bidding will also have staff specializing in these activities.

B. Institutional feasibility

5.2 Based on the analysis, the MGC is considered to have sufficient institutional capacity to carry out the program successfully. Despite its current organizational structure, the MGC will be able to attend to its normal activities and the program satisfactorily. Moreover, the support of a consulting firm to manage the program will help to ensure its feasibility. An institutional strengthening component has been included to boost the MGC's efficiency in tax billing and collection, optimize its organizational structure, tighten its control over current spending, and improve its investment and land-use planning.

C. Financial feasibility

1. General aspects

5.3 The MGC's financial projections for 1995 to 2006 are expressed in January 1996 values. The financial information used includes budget execution up to October 1995, preliminary data for November, and estimates for December, including projections of balances payable, and has shed light on several of the effects of economic stabilization on MGC finances during 1995.

5.4 The parameters used for 1996 to 2006 reflect economic trends and their impact on MGC income, the behavior of federal government transfers, recent efforts to improve municipal tax collection, personnel costs and social security contributions, and the expected results of the institutional strengthening activities already under way and those to be introduced under the program. Long-term debt service calculations (excluding legal liabilities - see paragraph 5.8) have been based on the balance at December 31, 1995, the debt from loans considered during the period, and potential partial Bank financing for the program. The provisions of Resolution 11/94 of the Brazilian Senate establishing debt limits for states and municipalities have also been taken into account.

2. Results of the financial projections

a. 1995

5.5 In 1995, current income improved significantly - 28% over 1994 - but current spending rose higher - 29%. Current income was marked by a 33% rise in the ICMS (from US$120 million to US$159 million), while municipally-generated income rose by just 17% (from US$114 million to US$133 million). With more efficient tax administration, city income could be higher. In current spending, personnel costs rose by 38% (from US$125 million to US$172 million), which absorbed much of the increase in current income.

5.6 Although current savings in 1995 were expected to total US$60 million, debt service of US$38 million 9/ would leave a liquid sum of US$22 million for investments. However, investments are expected to be US$44 million, and just US$11 million in long-term credit has been secured from the Caixa Econômica Federal, leaving a gap of US$11 million whose impact will mainly be to increase the balances payable to US$48 million.

5.7 The floating debt at December 31, 1995, was expected to reach an estimated US$66 million, including US$18 million of short-term

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9/ High debt service includes interest of US$13 million for short-term loans.

credit contracted as advances against current income (ARO operations – or advances against budget revenues) and US$48 million in balances payable. The long-term debt would total US$187 million and legal liabilities US$59 million. Total liabilities would therefore reach US$312 million.

5.8 Outstanding legal liabilities as of December 31, 1995, were an estimated US$59 million. The MGC estimates that final settlements could be US$32.4 million which would be paid in equal installments of US$16.2 million in 1996 and 1997 through a municipal bond issue. The MGC has authorized this bond issue under a municipal law which has been approved by the Central Bank and the Brazilian Senate.

5.9 The MGC believes it can sell these bonds on the country's capital markets, either through banks and/or pension funds, at a five-year term and a real interest rate of 15% a year. Capital and interest payments would be made when the bonds expire in 2000 and 2001.

5.10 The analysis of 1995 indicates that the MGC's financial situation is marked by: large short-term liabilities that are partly used to finance physical investments but which charge steep interest rates; and high personnel and third-party service costs, which accounted for 70% of current income in that year.

b. 1995 to 2006

5.11 The following table contains a summary of the MGC's flow of funds for the period from 1995 to 2001.

FLOW OF FUNDS, 1995-2001
(Millions of U.S. dollars at January 1996)

	1995	1996	1997	1998	1999	2000	2001
1. Current income	390.5	413.9	423.2	435.3	448.9	462.3	476.4
IPTU	64.6	75.2	76.7	78.2	79.8	81.4	83.0
Increase in IPTU resulting from the program					0.5	0.5	0.5
ISS	54.3	57.1	59.3	61.7	64.2	66.8	69.4
Municipal taxes and betterment levies	14.0	18.5	18.9	19.2	19.6	20.0	20.4
Program-related betterment levies					1.0	1.0	1.0
ICMS	158.7	177.3	184.4	191.8	199.5	207.4	215.7
Other	98.9	85.8	83.9	84.0	84.2	85.2	86.3
2. Current expenditures	330.8	367.4	378.0	388.2	398.0	407.6	416.6
Personnel	171.5	207.4	210.5	213.7	215.8	218.0	220.1
Third-party services	93.7	90.4	92.6	95.0	97.8	100.7	103.8
Other	65.6	69.6	74.9	79.5	84.4	88.9	92.7
3. Current savings	59.7	46.5	45.2	46.7	50.9	54.7	59.8
4. Debt service	37.6	41.3	26.3	18.4	18.7	50.2	50.2
5. Net savings	22.1	5.2	18.9	28.3	32.2	4.5	9.5
6. Capital earnings	1.4	1.7	1.8	1.8	1.9	1.9	2.0
7. Credit operations	11.2	20.9	22.6	8.4	3.5		
IDB		1.5	6.4	8.4	3.5		
Other		19.4	16.2				
8. Receipts available for investment	34.7	27.8	43.3	38.5	37.6	6.4	11.5
9. Investments	44.0	10.6	19.4	23.7	16.7	12.0	12.0
Program	0.0	2.4	9.4	11.7	4.7		
Other investments	44.0	8.2	10.0	12.0	12.0	12.0	12.0
10. Other capital costs	11.1	16.2	16.2				
11. (Losses) inflation	(10.3)						
12. Annual surplus/(deficit)	(30.6)	(1.1)	7.7	14.8	20.9	(5.6)	(0.5)
12a. Accumulated surplus/(deficit)	(30.6)	(29.5)	(21.8)	(7.0)	13.9	8.3	7.8

5.12 Incremental income from the IPTU generated from higher property assessments in the program's area of influence will be an estimated US$4 million by 2006. In addition, a betterment levy to cover the cost of the channel works will bring in an estimated US$5 million.

5.13 Estimated current savings in 1996 is estimated at US$47 million, which is lower than the 1995 figure of US$60 million owing to the impact of the wage increase of 13.8%, mandated by municipal law, effective on January 1, 1996.

5.14 Debt service will rise to US$41 million in 1996, mainly because the MGC will repay the ARO short-term loans in order to discontinue that costly financing mechanism, which it had been using systematically, even to finance capital expenditures.

5.15 As a result of the above, net savings in 1996 will fall to US$5 million, which will be sufficient to cover the local counterpart for the proposed program in that year, but will limit the MGC's capacity to make other similar or larger investments. If the financial projections are correct, 1996 will end with virtually no deficit, which means that there will not be any new balances payable. This situation will give the MGC more flexibility to incur incremental balances payable in the event that the assumptions regarding income and expenditures fail to materialize. Starting in 1997, net savings will gradually rise to levels that will give the MGC greater leeway to pay the local counterpart and carry out other investments.

5.16 On the basis of the above and in order to ensure that the program is executed without interruptions, it is recommended that, as a condition precedent, the MGC submit evidence that it has opened a special account, pursuant to the terms agreed upon with the Bank, at a financial institution acceptable thereto, for the purpose of showing the availability of local counterpart funds for such execution on a yearly basis.

5.17 To establish the terms and conditions that will facilitate initiating the MGC's financial recovery process, as a condition precedent it is recommended that the MGC pay off the ARO operations which amounted to US$18 million as of December 31, 1995, and not use that costly financing mechanism again.

3. Performance indicators

5.18 The following set of performance indicators were developed to monitor the MGC's financial recovery:

(i) municipally-generated per capita tax collection; 10/

(ii) municipal efficiency in tax collection, which is the expression, as a percentage, of the ratio between the municipally-generated taxes actually collected and the amount billed;

10/ Collection of the IPTU, ISS, ITBI, and other taxes for which the MGC is directly responsible.

(iii) tax potential, which is the expression, as a percentage, of the ratio between the amount billed and the amount that could potentially be billed; 11/

(iv) ratio between current savings and current income (expressed as a percentage); and

(v) ratio between net savings and current income (expressed as a percentage).

5.19 The indicators mentioned in (i), (ii) and (iii) will make it possible to monitor and evaluate the MGC's efficiency in managing its tax collection apparatus. The indicator mentioned in (iv) will track the MGC's efficiency in managing its operating costs, and the indicator presented in (v) will allow it to dependably monitor indebtedness (principally for investment financing).

5.20 The values for the indicators mentioned in (i) and (iv) have been obtained directly from the financial projections for the period 1995 to 2006 and are the minimums that the MGC should attain.

4. Conclusions

5.21 The proposed financial and institutional management measures to be adopted during program execution are expected to lead to a substantial improvement in the MGC's financial situation and will permit it to execute the program according to its execution timetable, make timely debt service payments, and obtain annual surpluses that can be used for other capital investments. By acting on the variables over which the MGC has control, the program places special stress on the following to reduce possible risks: (i) actions by the MGC to increase its tax revenues; (ii) special actions included in the institutional strengthening component; (iii) spending control, particularly with regard to personnel; and (iv) maintenance of a healthy borrowing policy over the short and medium terms.

5.22 Since the program was limited to the works with the highest social impact, it was possible to increase the Bank's financing matrix (60%), thereby reducing the MGC's annual local contributions. Under this format, the proposed operation is considered viable from the financial standpoint.

5.23 The measures recommended will make it possible to manage the risks associated with the 1996 municipal elections, in terms of a reduction in tax revenues, increases in personnel and investment costs, and the practice of resorting to short-term loans regardless

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11/ One of the activities in the institutional strengthening component is designed to determine the tax billing potential of the municipality of Campinas.

of their financial costs. The measures also take into account the lawsuits the MGC is involved in, with regard to the amounts of its legal liabilities and timetable for paying them, and provide for mitigation of the risks linked to placing municipal bonds on the market to settle those liabilities.

D. Economic feasibility

5.24 Despite the fact that only the projects of two watersheds will be financed in this phase, the Bank analyzed the economic viability of the program's entire master drainage plan.

5.25 The works have been grouped into 12 subprojects (eight drainage – two per watershed – and four shantytown improvement – one per watershed) for the purposes of the socioeconomic analysis. The resettlement subprojects were included in the drainage or improvement groups, depending on their objectives.

5.26 The following socioeconomic aspects were analyzed for each component: (i) alternatives; (ii) benefit-cost; and (iii) beneficiaries, including potential beneficiaries' ability to pay. The results are presented in efficiency prices (consumer spending) in constant April 1995 values. Based on the analysis, changes were made to the projects, saving the MGC US$5.8 million – US$3.1 million from lower-cost solutions and US$2.7 million from increases in the net present value of the projects modified, thanks to the benefit-cost analysis. (Of this last total, US$1 million involves works in the watersheds to be financed by the Bank.) Support documents containing the methodology and detailed results of the analysis can be found in the files of Region 1.

5.27 To verify whether the problems mentioned in chapter I are resolved with this program, certain purpose indicators were designed that appear in the annexed logical framework for the program. These indicators show the frequency of property losses and bodily injury to inhabitants, road blockages, and disease rates resulting from the floods in the program area's watercourses.

1. Analysis of alternatives

5.28 Three aspects were reviewed: (i) optimum capacity of the drainage channels (optimum recurrence interval); (ii) optimum combination of the number of persons resettled as a nonstructural solution and the channeling of the watercourses; and (iii) type of cross-section and lining for the channels.

a. Channel capacity

5.29 The MGC's policy is to channel the watercourses for flows with a 25-year probability of occurence. To determine whether the policy is reasonable, an analysis was conducted maximizing the present value of the net benefits for channels with flood capacity in

recurrence intervals of 10, 25, and 50 years. The analysis was performed for channels designed for flows of over 100 cubic meters per second, which corresponds to the Anhumas and Piçarrão subprojects. The study found that the optimum design capacity is a 25-year recurrence interval.

b. Channeling versus resettlement

5.30 The possibility of resettling the population affected by flooding was studied as an alternative to channeling the watercourses. It was found that it was more economical to resettle the population in Parque São Quirino than to channel the section of the Anhumas that floods in that area. In the Quilombo watershed, the most economical alternative was an intermediate solution in which part of the population would be resettled and part of the river would be dredged to increase its capacity and to avoid having to resettle the entire population. The modification was included in the design of the subproject. Channeling the remaining flood points was found to be the least-cost solution.

c. Channel cross-sections and lining

5.31 The plans are based on technically feasible least-cost solutions. Alternatives for cross-sections, lining, and expansion of existing channels or just dredging were considered. Most of the subprojects have space restrictions since the watercourses lie between roads that run parallel to them. In these cases, the least-cost solutions were open or closed rectangular channels, or expansion of existing channels by adding a new cell.

5.32 For watercourses without space restrictions, the least-cost solutions were lined trapezoidal channels, rectangular gabion channels, and dredged channels with no lining. The least-cost analysis included operating and maintenance costs, which are high in the case of dredging (needed every five years).

2. Benefit-cost analysis

a. Drainage

5.33 The benefits of the drainage subprojects were considered to be the increase in the value of housing that is currently exposed to flooding at recurrence intervals of under 25 years, the difference between the market value of new housing for the families to be resettled and that of the housing they would leave behind, the savings in costs for vehicles that use the roads in the area, and the value of the savings in time for users of those roads as a result of the subprojects. To determine the value of the housing, an econometric model was prepared which included the possibility that a dwelling would be flooded as an independent variable. It was found that the average increase in property value would be 15%.

5.34 The opportunity cost of the funds needed to ensure that the benefits materialize was included as an economic cost. Resettlement costs, including the opportunity cost of the land (the land was exchanged for permits for the urban development of other land) and the costs of social services (day-care nurseries, schools, community centers, and recreational facilities) were included in the investment costs. The incremental operating and maintenance costs for the channels and the resettlement works were also included. Fourteen percent for engineering and administration and 10% for contingencies was added to the direct investment costs. The economic costs of the drainage works average US$4,800 per dwelling.

5.35 As a result, it was found that the subprojects are feasible in densely-populated areas where the channeling costs are low. In cases where the subprojects were not feasible, the scope of the works was narrowed to cover only densely-populated areas. The results are as follows:

NAME	WATERSHED	ECONOMIC COST (U.C.$ thousands)	ECONOMIC BENEFIT (US$ thousands)	BENEFIT-COST RATIO	EIRR%
ANHUMAS	Anhumas	15,992	27,317	1.71	31.6
VILA BRANDINA	Anhumas	535	596	1.11	24.8
QUILOMBO	Quilombo	12,337	12,658	1.03	15.8
VILA EULINA	Quilombo	696	1,433	2.06	130.5
PIÇARRÃO	Piçarrão	4,794	10,572	2.21	57.2
FRAY ANGELIS	Piçarrão	251	582	2.32	159.9
CAPIVARI	Capivari	3,362	3,614	1.07	14.1
VILA AEROPORTO	Capivari	1,029	1,128	1.10	17.8

b. Shantytown improvements

5.36 The benefits from the shantytown improvement subprojects were considered to be the increase in the value of the dewellings that will be left standing in the shantytowns and the difference between the market value of the new housing for families to be resettled and that of the housing they will abandon. The urban development projects with family resettlement did not turn out to be viable and therefore do not appear in the master drainage plan.

5.37 To determine the increase in the value of the housing, a survey was taken of shantytowns with and without essential public services and an econometric model was designed to show the increase in value stemming from each activity. The model determined that the value of each dwelling would rise by US$7,047 or US$54 per square meter as a result of program activities, which is considered high.

as a result of program activities, which is considered high. However, the sensitivity analysis showed that if the value of the housing rises by just US$40 per square meter, the subprojects would still be feasible.

5.38 Investments in potable water and sewerage were considered as economic costs, including: (i) the costs to be incurred by SANASA for expanding services which are not included in the project; (ii) investments in electric power; and (iii) the investment, operating, and maintenance costs of the roads and resettlements, including the opportunity cost of land in the new areas.

5.39 The economic indicators for the viable projects are:

NAME	WATERCOURSE	ECONOMIC COST (US$ thousands)	ECONOMIC BENEFIT (US$ thousands)	BENEFIT-COST RATIO	EIRR%
São Marcos	Quilombo	2,009	2,914	1.45	61
São Quirino	Anhumas	399	903	2.26	126
Vila Brandina	Anhumas	981	1,999	2.03	128

3. Sensitivity analysis

a. Drainage

5.40 Property appreciation, savings in vehicular traffic costs, and investment, operating and maintenance costs for the drainage subprojects were subjected to a sensitivity analysis. The results for the subprojects are robust with regard to the benefits from appreciation. Such results would have to drop by 30% to make the weakest subproject nonviable, which has a low 15% probability of occurrence.

5.41 If savings in vehicular traffic costs are not included in the benefits, one of the subprojects would not be feasible. In this case, the vehicular traffic benefits cannot drop by more than 10%. However, since the benefits of the traffic generated have not been considered, the feasibility of this subproject is considered robust.

5.42 If the costs of the subprojects in the São Marcos complex in the Quilombo watershed, Campos Eliseos, and Vila Aeropuerto in the Capivari watershed were to increase by 10%, they would not be feasible. However, since the analysis used 10% contingency costs, the risk of nonfeasibility is low.

b. Shantytown improvements

5.43 A benefit and cost sensitivity analysis was performed for the shantytown improvement subprojects. Their feasibility is robust since the benefits would have to drop by 25%, i.e., the value of the dwellings would have to increase by less than US$4,000, or the costs would have to increase by more than 45% for the projects to become unfeasible, which is unlikely.

4. Selection of the watersheds to be financed

5.44 To select which economically viable projects would be financed, the following criteria and restrictions were taken into account: (i) execute all the works in the selected watersheds; (ii) consider the budget restriction arising from the financial analysis; (iii) benefit the largest total number of families; and (iv) benefit the largest number of low-income families. As a result of the analysis, the works in the watersheds of the Quilombo and Piçarrão watercourses were selected, benefiting 4,112 families of which 2,617 (65%) are low-income families. In the watersheds of the Anhumas and Capivari watercourses, there are 2,888 families, of which 1,194 (41%) are low-income families.

E. Analysis of the beneficiaries

1. Cost recovery

5.45 The municipality of Campinas will recover the investment as follows: (i) the investment in drainage will be paid by the direct and indirect beneficiaries over three years after the works are completed, and the operating and maintenance costs will be paid through property taxes; (ii) the investments in improving the shantytowns will not be recovered, and only the operating and maintenance costs of the water, sewerage, and electricity systems will be recovered through charges; (iii) the beneficiaries of resettlement will pay the cost of the investment over 25 years.

5.46 The direct and indirect beneficiaries of the drainage investments are considered to be families living within 400 meters of a regulated watercourse. The costs of the subprojects would be allocated in inverse proportion to distance and in direct proportion to the increase in property value. This cost distribution is based on the econometric model for appreciation, which makes payments equitable in each subproject.

5.47 The MGC avers that it will not charge for the investments in shantytown improvements, since the residents live on public land affected with a public interest and cannot gain legal possession of the property. For the resettlement subprojects, the costs of infrastructure (developed area), land, and housing will be recovered from the beneficiaries through payments made to Fundo de Apoio à População de Sub-Habitação Urbana [Fund to support

residents in substandard urban housing] (FUNDAP) or COHAB. 12/ The debts will be repaid in monthly installments over 25 years. The installment amounts are updated using the price index for the housing sector determined by the government, and the interest rate will be 6% per annum. Temporary, focused subsidies will be given to beneficiaries whose repayments amount to more than 20% of family income. The money collected will not be used to repay the Bank loan, but will be used to finance similar projects for low-income communities.

2. Ability to pay

5.48 The MGC presented a tentative plan for a betterment levy to be paid by the beneficiaries of the drainage projects, based on the proposed legislation described below. According to the proposal, the drainage costs would be split among the beneficiary households. These costs dropped when the proportionate costs attributed to vehicular traffic benefits were discounted.

5.49 The payments originally proposed were compared to family income by assessment area: it was found that 87% of the population would pay less than 3% of their monthly income, 8.6% would pay between 3% and 5%, and 4.4% would pay over 5%. It is likely that families having to pay over 3% of their monthly income would encounter difficulties. The municipality would not have financial problems if it did not collect that income.

5.50 The municipality is currently considering an amendment to the current law on betterment levies. Since the subject is important and directly linked to the program, it is recommended that prior to the first disbursement, the MGC present a municipal decree containing provisions for cost recovery for the drainage works located in its jurisdiction, including the timetable for implementation. Within 18 months after the prospective Bank loan is signed, the MGC will be required to show that it has implemented the cost recovery scheme for the drainage works, which should cover a minimum of five years of betterment levy payments.

5.51 Property taxes will rise an average of US$68 a year per dwelling, for a total of US$1.7 million. This value is acceptable since it represents less than five per thousand of family income.

5.52 As for the operating and maintenance costs of the improvements in the shantytowns, they will be recovered through charges for

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12/ FUNDAP, established under a municipal law in 1980, is responsible for financing a basket of construction materials for families living in shantytowns that are undergoing improvements or in new resettlement areas. This fund is financed by 0.5% of SANASA's and 1% of SETEC's income, and may also obtain resources from the municipal budget and other public and private sources.

electricity, potable water, and sewerage. The cost will range from 1.1% to 2% of monthly family income, which is considered adequate.

3. Focus on low-income groups

5.53 A method agreed upon with the Social Programs Division was used to independently calculate the percentage of low-income families in the drainage and shantytown improvement subproject areas and the values were subsequently weighted with respect to the costs of the subprojects.

5.54 In the drainage subprojects, whose direct cost is US$18.1 million including all the resettlement costs, the percent of low-income families that will benefit directly is 58.5%. In the shantytown improvement subprojects, whose direct cost is US$2 million, 96% of the direct beneficiaries are low-income families. The weighted average is 62%. Therefore, the project can be considered as targeted to low-income groups.

F. Environmental feasibility

5.55 The program's environmental impact is highly positive, particularly with respect to the following points: (i) the population affected by the shantytown improvement and resettlement process will benefit from better sanitation, health, housing, and general well-being; (ii) the areas to be reclaimed along the banks of the watercourses will check, and to some extent reverse, the deterioration that has been going on for many years; and (iii) the environmental education program will afford an opportunity to raise the environmental awareness of the public in general and to involve it, together with the groups affected by the program, in finding solutions to the different problems.

5.56 The program is environmentally feasible because its positive benefits and a series of measures to mitigate its negative environmental impact during the execution and operating stages were identified during preparation. These measures were evaluated and approved by the environmental authorities of the State of São Paulo and made available to the public. They are described in the environmental impact assessment and the environmental impact report and will form part of the bid documents. In short, they consist of: (i) implementation of a management and supervisory system; (ii) legal measures and contractual conditions relating to environmental impact mitigation; (iii) analysis of alternatives; (iv) the shantytown improvement and resettlement program; (v) environmental programs; (vi) contingency plan; and (vii) additional future actions.

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
Greater well-being for the population of Campinas		Official statistics Statistics from business associations in Campinas on sales of goods and services	The country's economy grows at rat to historical levels or better There are no shifts in the current development poles
Purpose			
To reduce flood damage	Numbers of times a year the population is affected by flooding is reduced on average from: 1995 1999 Piçarrão: 17 times/year to 1/25 years Quilombo: 17 times/year to 1/25 years Anhumas: 20 times/year to 1/25 years Capivari: 23 times/year to 1/25 years	Civil defense statistics	The Campinas economy grows at ra to historical levels or better Immigration to Campinas does not i
	Number of vehicular traffic interruptions from flooding of watercourses channeled along the roads, sections P1 and P2 of Piçarrão, Lauro Sodre, and J.B. Dunlop, decreases from an average of 17 times per year to once per year	Civil defense statistics	
To improve conditions for low-income groups living on the banks of the watercourses	Water consumption increases from an average of 5m³/family/month in 1995 to an average of 13m³/family/month in 1999	SANASA	
	Schistosomiasis and leptospirosis occurrence rates equal to or below those for the municipality (in 1994, there were 7.8 and .35 cases per 1,000 inhabitants in the program area and .56 and .02 per 1,000 in the municipality as a whole)	Municipal Health Department	
To boost the efficiency of the government in tax administration and resource management	Tax collection per person IPTU collected/IPTU billed Tax billed/collection potential Current savings/current income Net savings/current income	Municipal Finance Department	The institutional strengthening comp the municipal government is execut satisfactorily

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
OUTPUTS			
Drainage			
Channels operating up to design flows	4.8 km of channels built 1.8 km of storm drains built 1 bridge built 2,560 m^2 of paved roads, with 0.32 km built	Works certified by the supervisory firm and the program executing unit	The channels are adequately maint Annual rainfall remains within aver The assumptions regarding soil per are correct
Slum improvements			
1. Basic sanitation coverage increased	26.7 km of water pipes installed 1,460 water connections installed 15.6 km of sewers installed	Works certified by the supervisory firm and the program executing unit and accepted by SANASA	All the basic infrastructure is adequ maintained
2. Housing legally connected to the electric grid	21 km of power lines strung and 1,460 connections made	Works certified by the supervisory firm and the program executing unit and accepted by the CPFL	The community continues to be or
3. Better vehicle access to shantytowns	Trash collection by trucks	Department of Public Services	
4. Beneficiaries in possession of permits to occupy their houses	1,130 families with permits by December 1997	Department of Housing through the Public Registrar	
Resettlement			
Resettlement areas ready to be occupied by families	1,130 housing units inhabited by the end of the first quarter 1999	Certification that the premises are fit for occupation from SEHAB and SMO	
Land reclamation			
Along the banks of the channeled or dredged watercourses	12.2 hectares rehabilitated by the end of the first half of 1999	Program executing unit	
Environmental education			
1. Population affected is more aware of environmental and sanitation aspects	253 people trained in communications and environmental sensitization by the end of the first quarter of 1997	Program environmental education group	
2. Shantytown dwellers are more aware of environmental and sanitation problems	11,500 people reached	Program environmental education group	
3. Larger number of community leaders	30 community environmental agents identified and trained by June 1996	Program executing unit	

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
OUTPUTS (cont.)			
Institutional strengthening			
Economic profile of Campinas defined	Economic activities, their share in the GDP of Campinas, growth rate, and future prospects identified	Report of the program executing unit	The municipal government will cont have qualified staff
Tax collection potential defined	Indicators identified and calculations to sustain them		
Efficiency level of the government in tax billing and collection defined			
Coverage and quality of public services in Campinas identified			
Parameters to measure municipal efficiency in the delivery of services defined			
Efficiency level of the government in use of human, physical, and financial resources determined			
Parameters to measure the efficiency of the government in its use of resources defined			
Systems to monitor efficiency in operation			
GIS procured and installed. Staff trained in its operation	Updating of the urban property roll and use of the GIS for environmental planning and control	Municipal Department of Works and Department of Finance	

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
ACTIVITIES			
1. Drainage works			
Channeling of watercourses	Year 1: 1.2 km built Year 2: 2.5 km built Year 3: 1.1 km built Total: 4.8 km built	Program executing unit and supervisory firm	There are no cost overruns Climate conditions do not change
Road paving	Year 2: 320 m Total: 320 m		The complementary works by SANA executed on time
Bridges	Year 2: 1 Total: 1		
Dredging	Year 1: 16,400 m^3 Year 2: 18,600 m^3 Total: 35,000 m^3		
2. Shantytown improvements			
Potable water system construction	Year 1: 5.3 km Year 2: 10.7 km Year 3: 10.7 km Total: 26.7 km		There are no cost overruns SANASA and the CPFL execute the complementary works on time
Residential water, sewer, and electricity connections	Year 1: 400 Year 2: 800 Year 3: 260 Total: 1,460		
Sewer system construction	Year 1: 4.0 km Year 2: 8.1 km Year 3: 3.5 km Total: 15.6 km		
Electric power installation	Year 1: 7 km Year 2: 10 km Year 3: 4 km Total: 21 km		
Terracing, new streets, surveying of blocks and lots over an area of 183,563 m^2	Year 1: 30% Year 2: 70% Total: 100%		There are no cost overruns

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
ACTIVITIES (cont.)			
3. Resettlement works			
Legal possession of land	Signature of public deeds by the first semester of 1996	Public registry	Community acceptance
		Program executing unit and the improvement and resettlement plan group	Community leaders identified
Slum improvements	Year 1: 60% Year 2: 40% Total: 100%		Complementary works by SANASA CPFL are completed
Construction of 1,130 housing units	Year 1: 30% Year 2: 40% Year 3: 30% Total: 100%		Education facilities are built in Jardir The consultative committee to guide improvement and resettlement plan *functioning*
4. Civil society activities for shantytown improvements and resettlement			
Community organization	Organization of five groups of leaders per shantytown	Program executing unit through the Regional Action Departments with support from SEHAB	
Register of families	100% of families registered in the second half of 1996		
Negotiations with families	100% of negotiations concluded by October 1996		
Transfer of families	100% of transfers made by the second quarter of 1998		
Signature of documents for:			
– Property use concessions	100% of concessions granted by the end of 1997		
– Property titles	100% of titling completed by the end of 1998		

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
ACTIVITIES (cont.)			
5. Environmental education			
Preparation of educational materials	80 videotapes recorded 53,750 booklets 5,000 posters 8,500 educational games 506 maps 5 videotapes on land use 25 information workshops 32 cultural events 3,000 T-shirts 24 sets of recreation equipment 24 community talks 76 teachers hired 38 schools identified 30 community leaders identified 82 people identified for community work groups	Program executing unit	The beneficiaries are interested in t program The new municipal government co the program
6. Reclamation of abandoned areas	14.8 ha reclaimed 1997: 1.5 ha 1998: 6.7 ha 1999: 6.6 ha 103 trees planted 182 people identified for tree planting teams 3 recreation areas built 3 playgrounds 2 small soccer fields 2 walking and jogging trails 2 gymnastics areas 1 volleyball court 300 m^2 of grass seedbeds	Program executing unit	The areas are not reinvaded The green spaces and recreation ar adequately maintained The families in the areas improved program have assimilated the inform environmental protection
7. Institutional strengthening			
Preparation of an economic profile of Campinas	Presentation of the interim report in June 1997 and the final report in January 1998	Program executing unit	The new government (in January 19 the results
Determination of tax collection potential and calculation methodology	Presentation of the final report in March 1998		
Evaluation of the organizational structure of the city government and proposal for its optimization	Presentation of the interim report in April 1997 and the final report in September 1998		

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
LOGICAL FRAMEWORK

Objectives	Indicators	Means of verification	Assumptions
ACTIVITIES (cont.)			
Evaluation of the efficiency of the municipal government in tax billing and collection	Presentation of the final report in May 1997		
Development of measures to improve the efficiency of the municipality in tax billing and collection	Presentation of the interim report in June 1997 and the final report in May 1998		
Evaluation of the coverage and quality of the services provided by the municipality	Presentation of the final report in October 1997		
Evaluation of the municipality's efficiency in the use of human, material, and financial resources	Presentation of the final report in May 1997		
Determination of efficiency parameters	Presentation of the final report in February 1998		
Procurement and installation of the GIS	Personnel trained, system installed and in operation by March 1998		

BID SCHEDULE

YEAR/ACTIVITY	1				2				3				TOTAL
QUARTER 1/	III	IV	I	II	III	IV	I	II	III	IV	I	II	
Supervision of the works	I	I	E	E	E	E	E	E	E	E	E	E	1,300
Works													
Piçarrão basin	I	I	E	E	E	E	E	E	E				4,490
Quilombo basin		I	I	E	E	E	E	E	E	E	E		13,460
Rehabilitation of abandoned areas						N	E	E	E	E	E		635
Environmental education					N	E	E	E	E	E	E		1,000
Institutional strengthening													
GIS				N	E	E	E	E	E				350
Consulting services		N	E	E	E	E	E	E	E				1,150

1/ Starting in the 3rd quarter of 1996

Key: I = International competitive bidding
N = Local competitive bidding
E = execution

FLOOD CONTROL PROGRAM IN CAMPINAS (BR-0234)
PROCUREMENT OF GOODS AND SERVICES

Main program procurements	No. of lots	% financing		Methods	Prequalification	Estimated date of publication of the SPN semester/year
		IDB	Local			
A. Civil works						
1. Channeling, roads, and bridge in Piçarrão (US$4.5 million)	1	62	38	ICB	YES	II/95
2. Channeling, shantytown improvement, and low-cost housing in Quilombo (US$13.5 million)	1	62	38	ICB	YES	II/95
B. Consulting services						
1. Consulting firm to prepare execution and management projects (US$1.8 million)	1	0	100	LCB	NO	II/94
2. Supervisory firm (US$1.3 million)	1	100	0	ICB	YES	II/95
3. Technical support for the shantytown improvement and resettlement plan (US$800,000)	1	0	100	LCB	YES	II/96
4. Environmental education, consulting units (US$680,000)	17	0	100	LCB	YES	II/96
5. Institutional strengthening: Consulting units Consulting firm: preparation of economic profile of the city Consulting firm: procurement of GIS and training Various consulting services (US$1.5 million)	4	0	100	LCB	YES	II/96

ICB – international competitive bidding
LCB – local competitive bidding
SPN – special procurement notice

LEG-BR-0234
Original: English

PROPOSED RESOLUTION

BRAZIL. LOAN /OC-BR TO THE MUNICIPALITY OF CAMPINAS
CAMPINAS FLOODING CONTROL PROGRAM

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 Municipality of Campinas, as Borrower, and the Federative Republic of Brazil, as Guarantor, for the purpose of granting to the former a financing to cooperate in the execution of Campinas Flooding Control Program. Such financing shall be for the amount of US$19,800,000 or its equivalent in other currencies, except that of the Federative Republic of Brazil, which are part of the Ordinary Capital resources of the Bank. The financing shall be subject to the "Special Contractual Conditions" and the "Terms and Financial Conditions" of the Executive Summary of the Loan Proposal.