

## Public Investments Fund

**Jaboticabal resisted the concession of the sewage treatment service to the private sector. In order to carry out the necessary investments for the construction of treatment plants, interceptors, exhaust systems and water supply networks, the municipality created a special fund monitored by civil society. A Sewage Treatment Plant (ETE) has been built on land donated by the Sao Paulo State University (UNESP), which restricted the concession to the continuation of sanitation services under public administration and the creation of conditions for research.**

Euclides da Cunha, the famous Brazilian writer, lived in Jaboticabal at the beginning of last century. As a public works engineer for the federal government, he built the first school complex and named a street in the city. Parallel to the street named by the author, *Os Sertoes* (The Inlanders), lies a stream that was cleaned in May 2000. Interceptors saved the waterway from around 600 litres of sewage per second.

Soon, these diverted effluents, part of the 600,000 cubic meters of domestic sewage generated monthly in Jaboticabal, will be integrally processed in the Sewage Treatment Plant that the Water and Sewage Autonomous Service built in an area of 12 Alqueires (1 Alqueire = 4.87 Hectares or 12.02 Acres). Sao Paulo State University donated part of the land, where the construction work of the exhaust system and the sewage treatment plant is already complete.

The land concession agreement signed between city hall and the University is pending approval by the Dean's office, limits the donation to the unrestricted access permission by the Public Authority to the Sewage Treatment Plant, for research development by the UNESP's Agrarian and Veterinary Sciences Faculty - Campus Jaboticabal. Another legal demand is that city hall exercise public administration of the sewage treatment service since the plant is located on public land.

### Jaboticabal, São Paulo

Population estimate, 2005: 72,592 inhabitants / Index of urban water service: 100% / Index of urban sewage service: 100% / Water consumption measurement index: 100% / Number of water connections: 22,659 / Number of sewage connections: 22,741 / Rate of analyses for the presence of coliforms outside the limit. After treatment, coliforms are not detectable in the water entering the supply network / Length of water supply network: 255.14km / Length of sewer collection network: 195.5km / Total cost of the service per m3 invoiced: R\$ 1.48 / Invoice Revenue Loss Index: 20% / Gross annual operational revenue (direct and indirect): R\$ 9,597,299.67 / Direct revenue: R\$ 7,800,061.18 / Investment Fund Revenue: R\$ 979,616.80 / Revenue through Agreements: R\$ 817,621.69 (FUNASA and Banco do Brazil) / Gross annual service cost: R\$ 7,379,267.35 / Annual utilisation cost: R\$ 4,093,302.92 / Source: SNIS 2003, IBGE 2000 and SAAE Jaboticabal 2005

### Athens of Sao Paulo

The first public water supply service of Jaboticabal was installed between 1914 and 1918 with the collaboration of state entities. The system was expanded during various periods of the municipality's history to cover the needs of the growing urban population. The city was known as the Athens of Sao Paulo due to its cultural and educational prestige. It was the municipality with the highest number of pianos per capita in the state of Sao Paulo.

Since the 20s, sanitation services addressed reasonably well the population needs of the municipal capital and the districts of Luzitania and Corrego Rico. Therefore, the municipal administration did not see the need to implement the National Plan on Basic Sanitation, which was the official policy of the Federal Government in the 70s.

## Public Ministry

Apart from the Sewage Treatment Plant, Jaboticabal's sewage disposal network includes 18 kilometres of central collection network and interceptors, which were installed in the streams of Cerradinho, Asylum, Hospital and Jaboticabal. Three kilometres of exhaust networks accompany the sewage to the treatment plant, which consists of up-flow anaerobic sludge blanket reactors (RAFA), followed by facultative ponds.

The Water and Sewage Autonomous Service of Jaboticabal (SAAEJ) estimates that the Sewage Treatment Plant will become operational in the first semester of 2006. This is strong proof that the municipality can carry out projects through self-financing.

The Sewage Treatment Plant complies with the Conduct Adjustment Accord (TAC), signed with the Public Ministry, demanding the complete treatment of the sewage produced in the municipality.

In order to meet the TAC's requirements, the municipal administration started between 1993 and 1995, the construction of 10 kilometres of sewage interceptors along the Cerradinho Stream that crosses with one of the main roads of the city, the Marginal Avenue.

The then municipal government saw the concession of the sanitary sewage service to the private sector as the only chance to fulfil TAC's requirements. In 1996, the then mayor requested from the Legislative Authority the authorisation to proceed with the concession of sewage treatment, including the construction of exhaust and interceptors.

## An auto-financing case

Finally, the privatisation proposal was not approved. In order to follow the chronogram set jointly with the public ministry, the municipal authority created a Special Investments Fund, with input mainly from the 15% overtax paid by all taxpayers, which was calculated based on the amount of their water bills. The proposal for a public fund was forwarded to the city council and transformed into law n° 2.550 in July 1997. According to the law, the resources are applied exclusively to sanitary sewage works. It is not possible, under any circumstances, to include these resources for the budget of Autonomous Service.

Since its institution, the fund generated resources of around R\$ 6,342,854.82. Up to November 2005, according to SAAEJ's records, the works cost around R\$ 5,281,660.14. In 2005, the average monthly revenue of the fund was R\$ 81,635.14. Even with the 15% tariff increase, the over tax did not affect the delinquency index of the service, which historically averaged 7%, according to SAAEJ's data. The fund is assessed monthly by an advisory and monitoring council, formed by representatives of city hall, city council, the Brazilian Bar Association, the Commercial and Industrial Association, and the Regional Council of Engineering, Architecture and Agronomy. The accountability and financial transactions follow the guidelines of the Court of Auditors of the state of Sao Paulo (TCE). According to the president of SAAEJ, Ricardo Bellodi Bueno, "the population is in direct communication with the team, acting as an important supervisor of the services. In every situation the population is alerting us immediately, and equally swift is the response of SAAEJ's employees. This relationship contributes to the continuous improvement of the services. Furthermore, the professional administration of resources allows the execution of specific interventions, defined by the specific characteristics of the public-user. For example, people support the Special Investments Fund because they have sympathy for SAAEJ approaches and understand the need for actions to improve sanitation, water

### Working with the population

Several meetings took place between city hall and the property owners of the areas where the work would be carried out.

The municipal authority explained each stage of the work step by step. Many saw the cleaning of the streams as an opportunity to increase the value of their properties and commercial establishments, and as a prospect to improve quality of life by eliminating the smell of the polluted watercourses.

resource management and conservation of natural resources. Issues related to the fund are widely discussed with society. The initiatives of the Autonomous Service, therefore, are understood and supported by all in the municipality”.

## **Responsible water supply**

Jaboticabal’s SAAE eliminated the chronic water shortages by instituting deep reforms in the distribution networks and expanding storage capacity. In 1990, SAAEJ incorporated the water supply system of one of the larger armed concrete reservoirs in Brazil.

At the time of its construction, that project alone increased the water storage capacity by 40%. Today, the Autonomous Service has storage self-sufficiency, equivalent to 24 hours of maximum consumption demand, which is well above the eight hours required by ABNT (Brazilian Association of Technical Norms). The water storage capacity allows SAAEJ to interrupt water pumping during peak hours (from 18:00 to 21:00), exactly when electricity is more expensive. This adjustment allowed for the reduction of electricity expenses, corresponding to 15% of revenue on average.

This year, SAAEJ is building reservoirs to meet the needs of two densely populated residential complexes. The current storage capacity of 250,000 litres will be increased to 1,250,000 litres, since it is insufficient to attend to the needs of the four thousand people in the area.

SAAEJ has been investing in the technical education of the team working directly with water treatment. Of the seven operators of the Water Treatment Plant, two completed the technical course in chemistry, three the technical course on environment and one graduated from high school. Furthermore, there was one more technician trained on the environment and another one as a works supervisor

## **Basin diagnostic is carried out in partnership with the University**

SAAEJ developed, in partnership with the Faculty of Agrarian and Veterinary Sciences of UNESP - Campus Jaboticabal, a diagnostic project of the upstream hydrographical basin of the Rico Stream, which supplies 70% of the municipality’s population. The project is financed by the Research Foundation of the State of Sao Paulo (FAPESP) and promotes a participative discussion process with all social actors using or occupying the basin. Among the project’s main objectives are the orientation of rural farmers on appropriate planting techniques, recovery of native plant species and education on the sustainable forms of compost use and water reuse for irrigation. The resulting data will be considered in designing the Rural Master Plan of Jaboticabal.

It was the strategic importance of this water source for the municipality that motivated the signing of an agreement with UNESP-Jaboticabal, also including the participation of the Integrated Technical Assistance Coordination (CATI) of the State Secretary of Agriculture in order to develop this project.

The diagnostic will evaluate the quality of water resources and study the soil quality, occupation and use. All stages of the project will be accompanied by environmental education activities directed to the rural population. Through the diagnostic, the researchers intend to organise the information on use and occupation of soil and the indicators of water quality in a Geographic Information System. At a second stage they intend to develop a recovery plan for ciliary forests and other native ecosystems and a plan for the management of the Rico Stream Basin.

For the first phase, October 2004 to March 2005, R\$ 26,000 were invested. For the second phase, which started in September 2005 and is expected to finish in September 2007, the investment will be R\$ 242,400.

## SAAEJ creates Water Display Centre

With the recovery of the Estiva Spring, one of the oldest water sources of the city, SAAEJ created the Water Display Centre to assist in educational projects for the city's students.

The Autonomous Service has been working for the recovery of the ciliary forest. In September of 2005, the "Reforestation of the Springs" Project started, which was a partnership of SAAEJ, the city hall of Jaboticabal, Environmental Police, the State Secretary of Agriculture and Provisioning, Rotary Club, Sugarcane Planters Cooperative of Guariba (COPLANA), UNESP and rural producers. The objective is to promote proper management of water resources through the preservation of the springs.

With widespread social participation, various entities contributed to the analysis and selection of the areas to be reforested, in the technical project of the reforestation, seedling supply and assisted helped in planting. The rural producers committed themselves to take care of the seedlings and monitor their development.

The students receive information on the project and later visit the reforestation areas to get to know the local species and plant the first seedlings.

The expectation is to reforest one area per month in the municipality of Jaboticabal. This project is a continuous effort and a working model to be copied by other municipalities.

## Partnership

This phase saw the strengthening of partnership among the involved bodies. Furthermore, visits took place to start analysing the profile of soil use and occupation in the hydrographical basin. Water samples were collected from the spring of the stream to the point where the water is pumped.

The diagnostic produced in the first phase of the Public Policies Project of FAPESP allowed the selection of this area for the implementation of a project from the State Secretary of Environment, which received R\$ 350,000 from the Global Environmental Facility to be used for reforestation and recovery of ciliary forests.

### Monitoring of rainwater collection

In order to combat the issue of improper collection of rainwater in residences, the Water and Sewage Autonomous Service of Jaboticabal implemented a Monitoring Programme of Rainwater Connections in the Sewage Network, utilising an inspection team to visit all premises.

The idea is to prevent disease transmission and reduce the volume of effluents arriving in the Sewage Treatment Plant, allowing the Sewage Treatment Plant to provide only sanitary sewage.

During the visits, the employees of SAAEJ check the rainwater drainage mechanisms. In the houses where there is a connection of the rainwater drainage system to the sanitary sewage system, the team notifies the owner and gives a 30-day period to disconnect it. After this 30-day period, the team returns to the places with registered irregularities.