

**Students' names:** Bieri Leonardo

**Company's name:** L&E S.A.

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## 1. Introduction

Hello, I'm Leonardo Bieri. I'm an Electromechanical Engineer and I have a Master in Environmental Engineering. I studied at UTN. I'm from Paraná. I work in "L&E S.A." Company, I organize and plan the tasks of cleaning. I'm Chief Operating Officer. I'm responsible for ensuring that the necessary work is done properly and on time. I have been doing it since 2015. I am in charge of the management department.

Hello, my name is Eric Berman. I am an Electromechanical Engineer also I am an Electronic Technician and superior Technician in Mechanics. I studied at E.E.T n44, UTN and IFAN. I was born in Alcaraz but I'm from Parana. I am the Maintenance and Mechanical Manager and my role in the Company is to check that all tools and machines work well, I also do site installations. I have worked here since 2016, and I have one year of previous experience as a mechanic. I'm in charge of the Maintenance Department.

"L&E S.A." is located in Nogoyá, Entre Ríos. "L&E S.A." offers cleaning and maintenance services of creeks and waterways.

You can communicate with us through this telephone number: 343 781 0456. Also you can communicate by sending an email to l&eSA@gmail.com.

The city's landmark we would want to address is Thompson Beach because there is a problem of pollution in a creek called "Las Viejas".

### **Our presentation is going to be organized this way:**

First we are going to talk about our company description. We are going to begin talking about our Markets and Services. Next we are going to describe the company organization and tell you who the leaders of each Department are. We are going to finish the company description telling you about the company history.

After talking about the company description, we are going to describe the project development. We are going to take a tour round the landmark. After this, we are going to state the problem in the landmark. Finally, we are going to describe the project.

## 2. Company Description

Next, I am going to move on to the Markets and Services we provide.

### 2.1 Markets and Services

“L&E S.A.” is in the cleaning business. We offer the services of cleaning and maintenance of the creeks and waterways at provincial level. “L&E S.A.” offers its services to private homeowners and state agencies.

The headquarters of “L&E S.A.” is in Nogoyá, Entre Ríos.

The services offered for the company are the following:

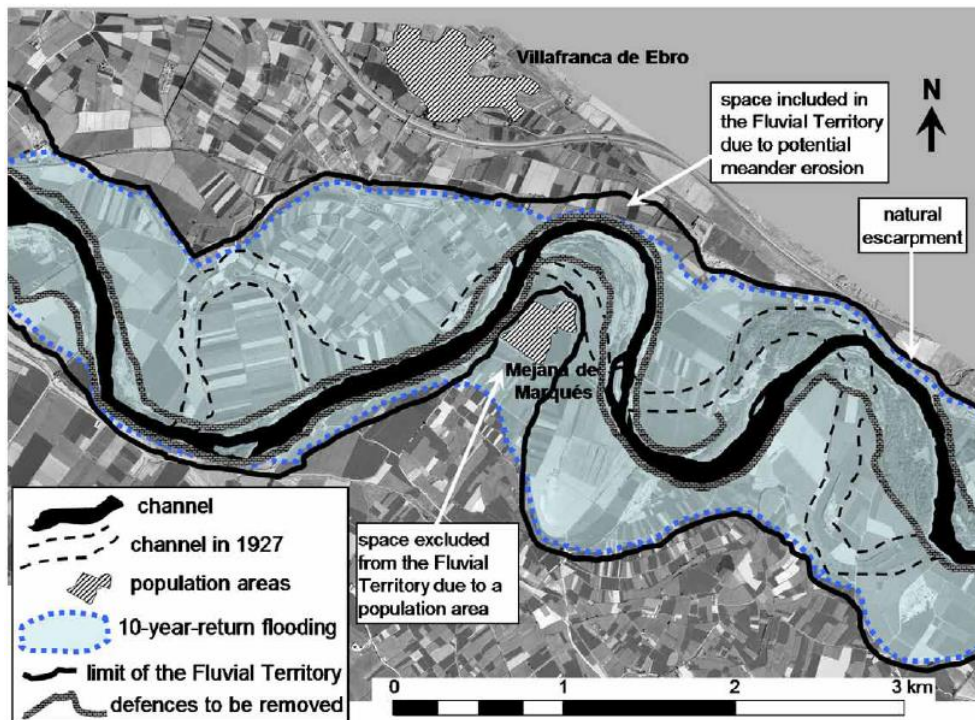
- Dredged: it consists in removing rocks and sedimentary materials.



- Cleaning: it consists in reducing vegetation on the shores, and removing the trash.



- Recovery of fluvial territory: this consists in recovering space for the creek or waterway.
- Elimination of Barriers: removing everything that does not allow water to flow smoothly.



- Establishment of an environmental flow regime: limit water use.
- Prevention of overflows of river: it maintains river connectivity with floodplains.
- Buffer-strips setting: it sets an area of land maintained in permanent vegetation that helps to control air, soil, and water quality, along with other environmental problems.



- Rehabilitation of urban sectors.

Now, let me describe our company organization.

## 2.2 Company Organization

- ◆ Beth Hart leads the Finance Department. She is responsible for ensuring efficient financial management and financial control necessary to support all business activities.
- ◆ Edgar Perez is in charge of Human Resources. He is in charge of finding, screening, recruiting and training job applicants, and administering employee-benefit programs. Human Resources's responsibilities include compensation and benefits, recruitment, firing, and keeping up to date with any laws that may affect the company and its employees.
- ◆ I'm Leonardo Bieri, I'm in charge of the Management Department. This department organizes and controls the works of the Finance Department, Human Resources, Environmental Department and Hydrology Department for concluding the different projects.
- ◆ The Hydrology Department analyzes the water, the pollution in this and its flow. This Department decides the operations to be doing like:
  - Elimination of Barriers
  - Dredged
  - Prevention of overflows of river

The Hydrology Department with the Environmental Department plan buffer-strips setting, Recovery of fluvial territory and Establishment of an environmental flow regime.

Carlos Gonzales is in charge of the Hydrology Department.

- ◆ The Environmental Department plans buffer-strips setting, Recovery of fluvial territory and Establishment of an environmental flow regime, with the Hydrology Department.

The Environmental Department is responsible for:

- Rehabilitation of urban sectors.
- Cleaning: it consists in reducing vegetation on the shores, and removing the trash.

Silvina Fernández is in charge of the Environmental Department. She organizes the Rehabilitation of urban sectors in the projects.

- ◆ The Maintenance Department is responsible for keeping all the machines and tools running, also for doing more maintenance work on the company's premises.

I am Eric Berman, I am the maintenance boss. I am responsible for coordinating the employees in their jobs.

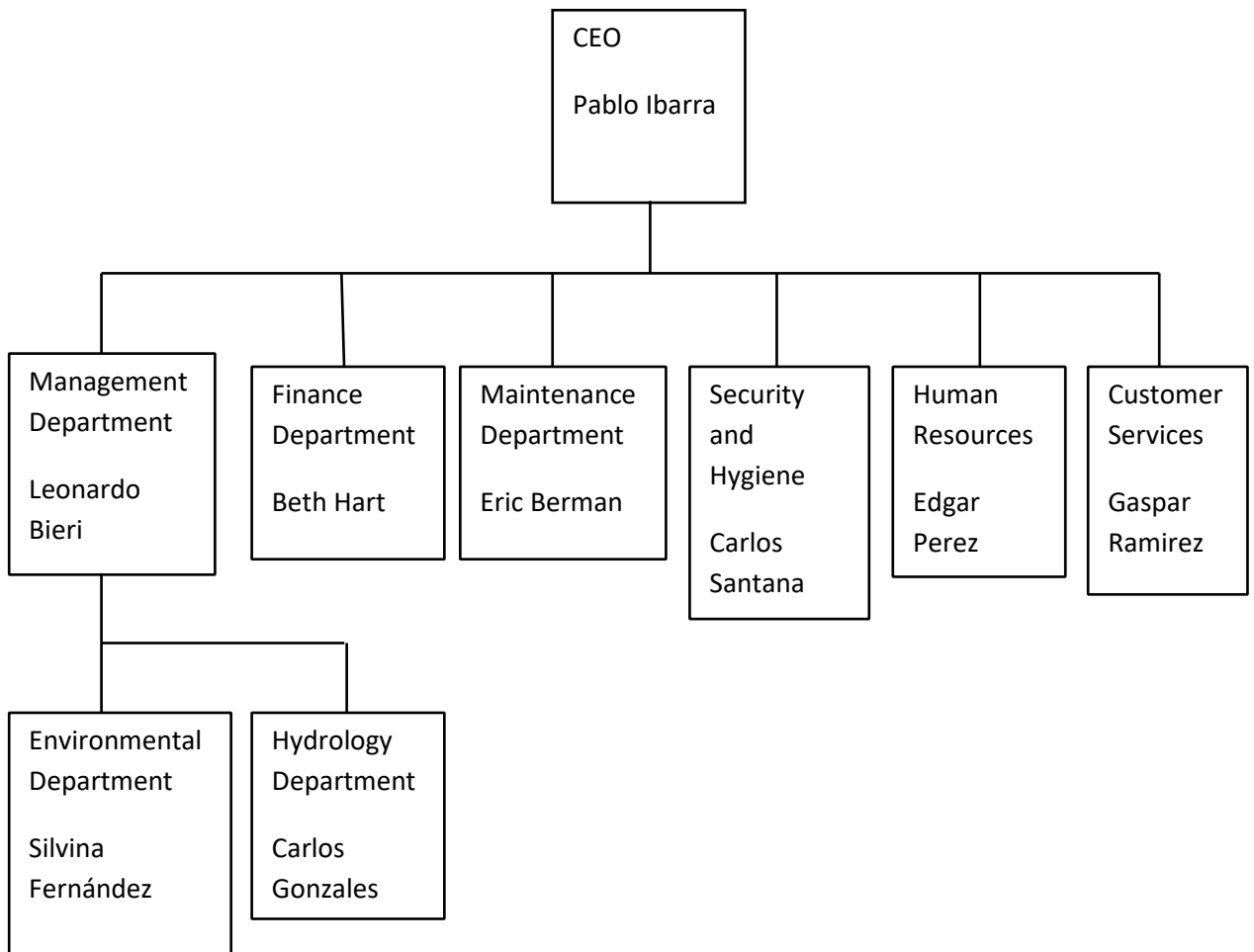
- ◆ The Security and Hygiene Department is responsible for allowing people to carry out their tasks without deteriorating their health or compromising their personal safety.

Carlos Santana is the head of Security and Hygiene and is in charge of checking that the security standards are complied.

- ◆ Customer Service is in charge of reporting on the service offered by the company; it is responsible for receiving complaints and customer questions, and for selling the services.

Gaspar Ramirez is in charge of Customer services.

- ◆ Pablo Ibarra is the CEO in L&E S.A.. He is responsible for determining the strategic direction of the company and ensuring that strategy is implemented through functional steps.



At this point, I am going to tell you our company's history.

## 2.3 Company History

### Timeline

2003 Pablo Ibarra founds "Naturaleza Argentina".

2005 "Naturaleza Argentina" begins to work in cleaning creeks.

2006 Pablo Ibarra hires Beth Hart.

2010 "Naturaleza Argentina" acquires a building in Nogoyá - Entre Ríos.

2011 "Naturaleza Argentina" hires Silvina Fernández and Gaspar Ramirez.

2012 "Naturaleza Argentina" changes its name to "L&E S.A."

2015 “L&E S.A.” acquires machines and hires more employees.

2016 “L&E S.A.” works only in cleaning and maintenance of creeks.

## **Narration**

In 2003 “Naturaleza Argentina” was founded by Pablo Ibarra, an entrepreneur from Buenos Aires. “Naturaleza Argentina” was in the maintenance of nature resources business. Pablo Ibarra hired people and companies to clean and maintain the different nature resources.

Two years later, “Naturaleza Argentina” started cleaning and maintenance of creeks business, when Pablo Ibarra saw the problems in the creeks and rivers and recognized a great source of work there.

In the winter of 2006, Pablo Ibarra hired Beth Hart in “Naturaleza Argentina”. Beth Hart helped Pablo Ibarra to analyze economically the different projects. In this time, Pablo Ibarra kept hiring companies to clean and maintain the nature resources.

Pablo Ibarra and Beth Hart searched a building in the Litoral region, because this region contains many rivers and creeks. They wanted to relate “Naturaleza Argentina” more with the cleaning and maintenance of creeks business. In 2010 “Naturaleza Argentina” acquired a building in Nogoyá - Entre Ríos.

One year later, they hired Silvina Fernandez, who helped doing the environmental studies in the different projects, and they hired Gaspar Ramirez who worked offering the services of the company. Nine months later, in 2012, the company changed its name to “L&E S.A.”.

After “L&E S.A.” had a big increase since the great source of work, in 2015 the company bought the necessary machines to do the maintenance and cleaning of rivers and creeks, and the company stopped hiring other companies to clean and maintain the creeks and rivers. At that moment the company hired many more employees.

One year later the company began to work only in the cleaning and maintenance of creeks and rivers.

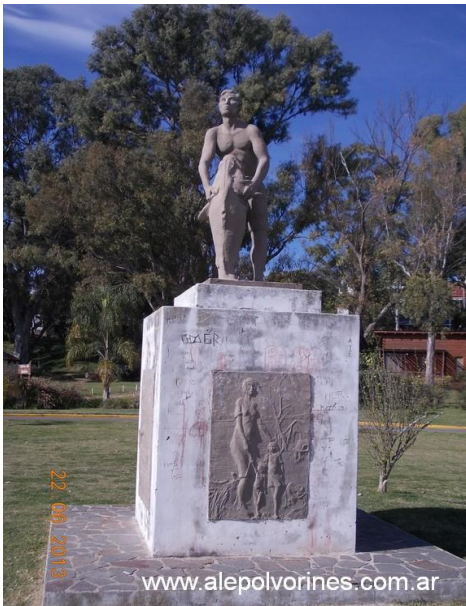
## **3 Project Development**

Now, let me give you a tour round Thompson Beach.

### **3.1 Tour round the landmark**

The Thompson Beach is located between the Paraná river and the “Camping Municipal Paraná”, “Plaza para los Niños del Thompson” and “Cabañas del Thompson”.

Between “Cabañas del Thompson” and the Thompson Beach there is a monument to the fisherman, in a small roundabout.



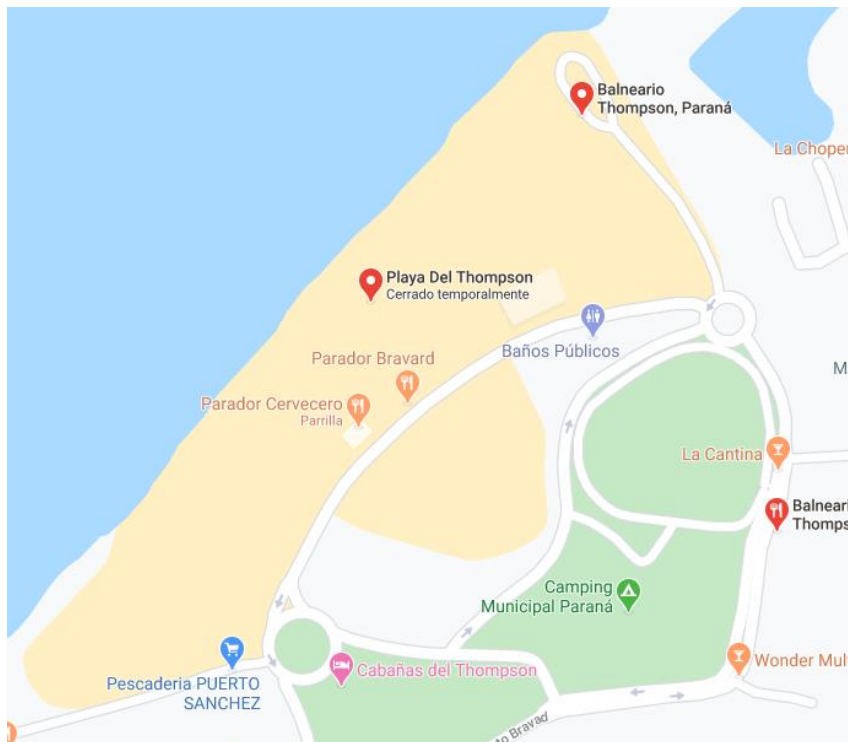
This roundabout communicates with a street that crosses the Beach, called “Pescador del Paraná 4”.



(This photo is old).

As you walk through this street, you can see two restaurants on the left side of the street, called “Parador Cervecero ” and “Parador Bravard”. Walking down the street, there is a restaurant called “Selenio Restaurante y Resto Bar” on the left side of the street and there are bathrooms on the right side of the street.





Walking down the street, we can see a Restaurant called “Carribar “San Jorge”” on the right side of the street and a Beach resort on the left side of the street, later we can see that the street finishes in another small roundabout.



This small roundabout communicates with another street. The Thompson beach finishes in this other street. As we walk through this street toward the river, we can see that on the opposite side of the street to the Thompson Beach there is the “Las Viejas” creek.



“Las Viejas” creek

## 3.2 Problem statement

Now, let me show you the problem.

### 3.2.1 Description of the scenes that help picture the problem

In Thompson Beach there is a pollution problem in a creek called “Las Viejas”.

In the center of the picture we can see a lot of waste. This waste interrupts the flow of the creek.



This photo shows a substance on the water. It could be the consequence of industrial waste.



In this picture there is a lot of plastic waste and tires. We can see that the fluvial territory needs a cleaning. We need to do a rehabilitation of this urban sector.



All the waste going to the Parana river, just on the right of the Thompson beach.



These pictures show the works of the “Municipalidad de Paraná”. Although work is done recurrently, the problem never finishes.

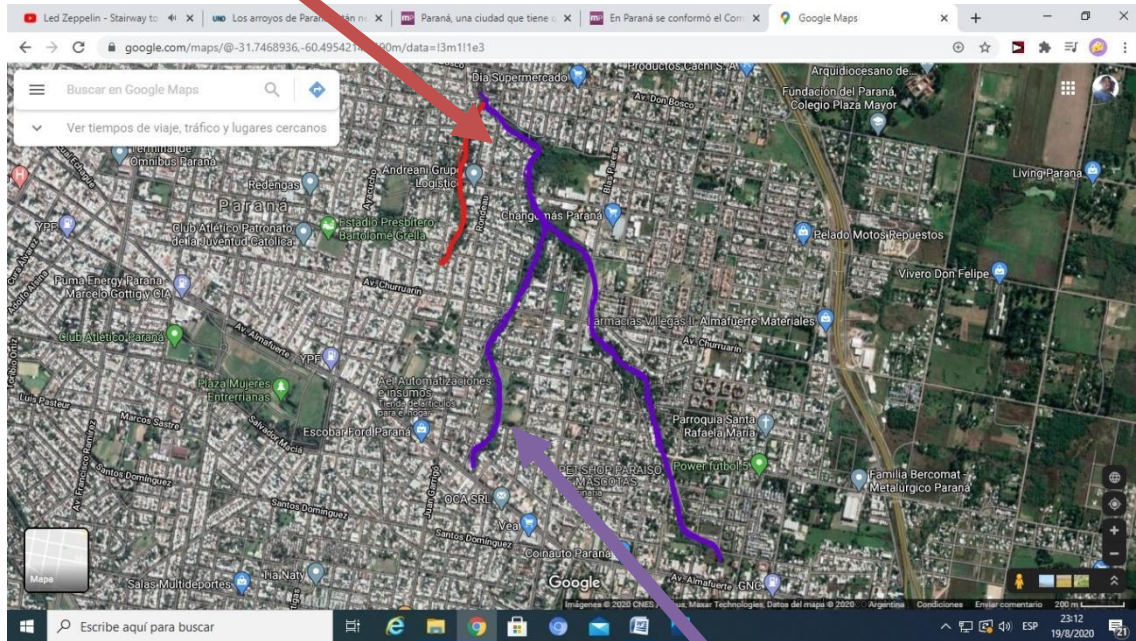


Next, I am going to analyze the factors that give rise to the problem

### 3.2.2 Analysis of the factors that give rise to the problem

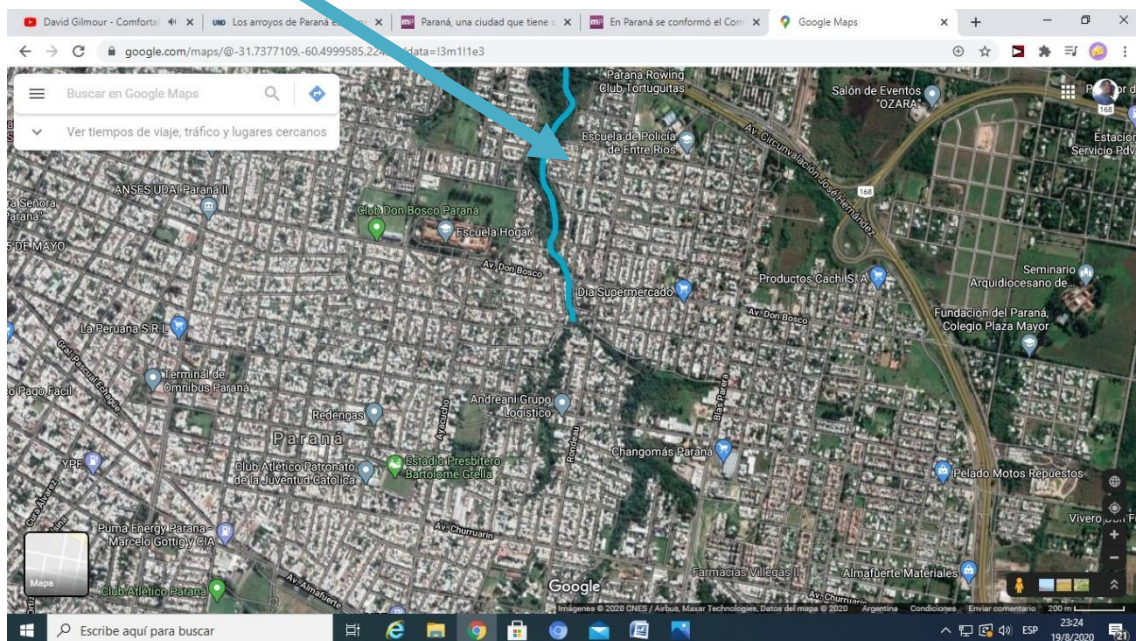
“Las viejas” is a creek that goes through part of Parana City, and it is the junction of two creeks called Colorado and Culantrillo. Also Colorado and Culantrillo go through part of Parana City.

“Culantrillo” creek



“Colorado” creek

“Las viejas” creek



Although a factor of the pollution of “Las viejas” is the industrial waste, the main factor that exacerbates the problem is the urban solid waste.



In the city there are many sewers that lead to the creeks illegally.

The problem of the urban waste begins in Culantrillo creek and Colorado creek. These creeks lead to Las viejas creek, and Las viejas creek leads to Parana river, so the problem of pollution increases when you approach the Parana river.

The Colorado creek has been considered legal since 2018, but Culantrillo creek is not considered legal yet.



Organizing the needed actions isn't possible since there aren't committees for the creeks "Las Viejas" and "Culantrillo". Meanwhile the problem increases as the population increases.

Apart from this, another factor is that there isn't a political decision for financing the projects.

It is time now to describe our Project to solve the problem of Pollution in Las Viejas creek

### 3.3 Project description

Now, let me tell you the first steps in the project.

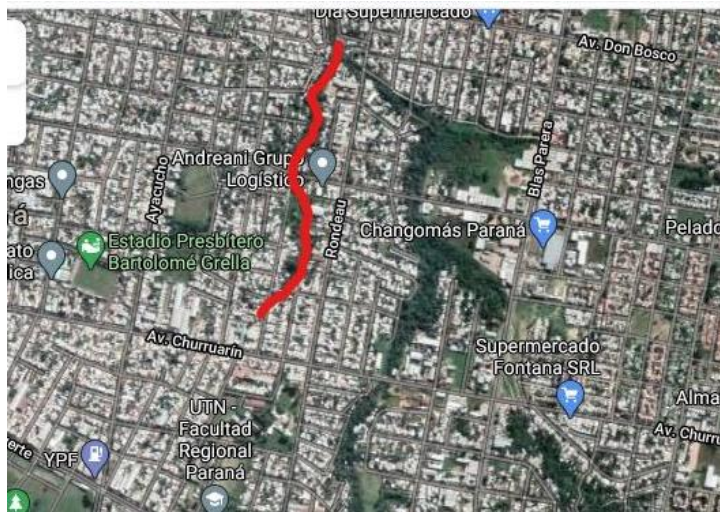
#### 3.3.1 Stage 1

Area of work

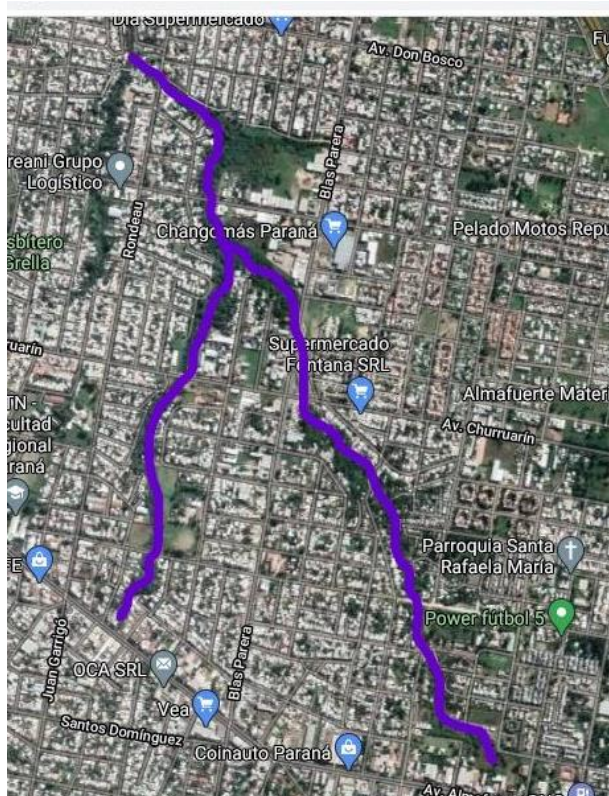
The area of work consists in three parts:



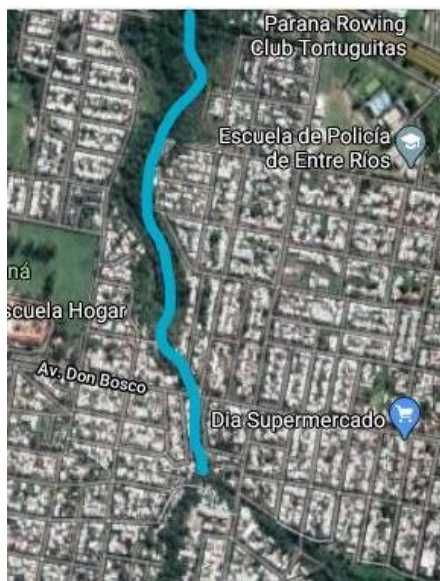
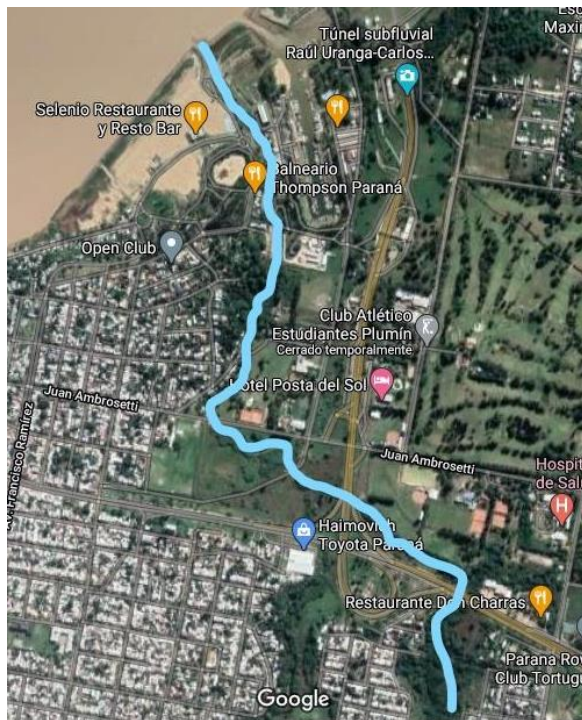
- **Area C1:** This region is the area that surrounds the Culantrillo creek. This area is the smallest of the three areas.



- **Area C2:** This region that surrounds the Colorado creek.



- **Area LV:** This area surrounds the Las Viejas creek.



## Initial steps

The first step is to analyze simultaneously the three regions that compose the area of work. In the analysis we are going to determine the different zones, and we are going to decide the works to be done in each zone.

Then we are going to specify in detail the financial analysis.

Finally, we are going to do a hydrology analysis and an environmental analysis more precise and exact.

It is time now to describe the main works.

### 3.3.2 Stage 2

#### Works

##### *Cleaning:*

We are going to clean the three creeks completely, Las Viejas, Culantrillo and Colorado.

First we will remove the solid waste. After removing about 70% of the solid waste, we will begin removing the industrial waste.

We will do part of this work using a backhoe. The rest will be made manually.

##### *Elimination of Barriers:*

After finishing the removal of industrial waste, we will remove the barriers. This work will be made mainly by backhoes. This part of the project will take long, because we must work in one section at a time. We will begin in the Las Viejas creek and we will move towards the Colorado creek and Culantrillo creek.

##### *Buffer-strips setting:*

After the elimination of barriers we will set an area of land maintained in permanent vegetation that helps to control air, soil, and water quality, along with other environmental problems.

This work must be made manually, so we will spend about 2 months in this part of the project too.

##### *Rehabilitation of urban sectors:*

We will concentrate work in the urban sectors. We will clean the urban sectors completely, and we will clean beyond the shores to enable complete cleaning of these sectors.

The buffer-strips will be set with more care and more detail than in the remaining sectors.

As these works progress, at the same time we will do financial corrections and we will take safety measures in each work. Silvina Perez will be the person in charge of these corrections and Carlos Santana will be the person in charge of the safety measures.

Now, let me tell you that we have insurance against problems and we thought of ways to solve some problems if they happen to occur.

### **3.3.3 Contingency Plan**

Many families live near creeks, the creeks are part of their gardens.

The culantrillo creek isn't legally recognized, so it is possible that many families will be against us cleaning the creek in the sectors that are near their houses. In that case, we will just clean the remaining sectors and we will achieve very good results.

Our backhoe needs maintenance from time to time. If our backhoe has a problem, we won't be able to do the elimination of barriers and the cleaning. In that case we will rent three or more Backhoes.

Also if we happen to have an injured employee, we will have to reorganize the working scheme in order to be able to meet deadlines.

## **4 Conclusion**

We are sure of the success of our work. We are a Company specialized in this type of work. Other Companies are big but their experience in this type of work is null.

Our prices are very competitive. Also, we finish the work in much less time than the other Companies.