Options in Water Treatment For Paranoá Lake Part II

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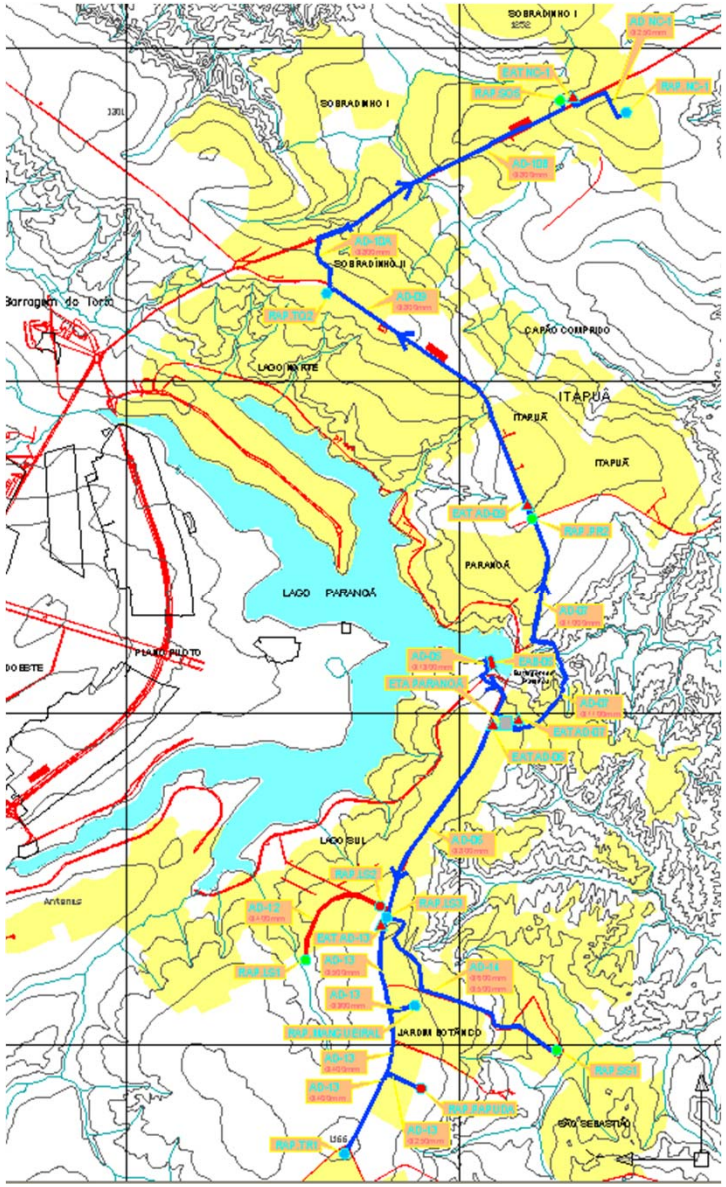
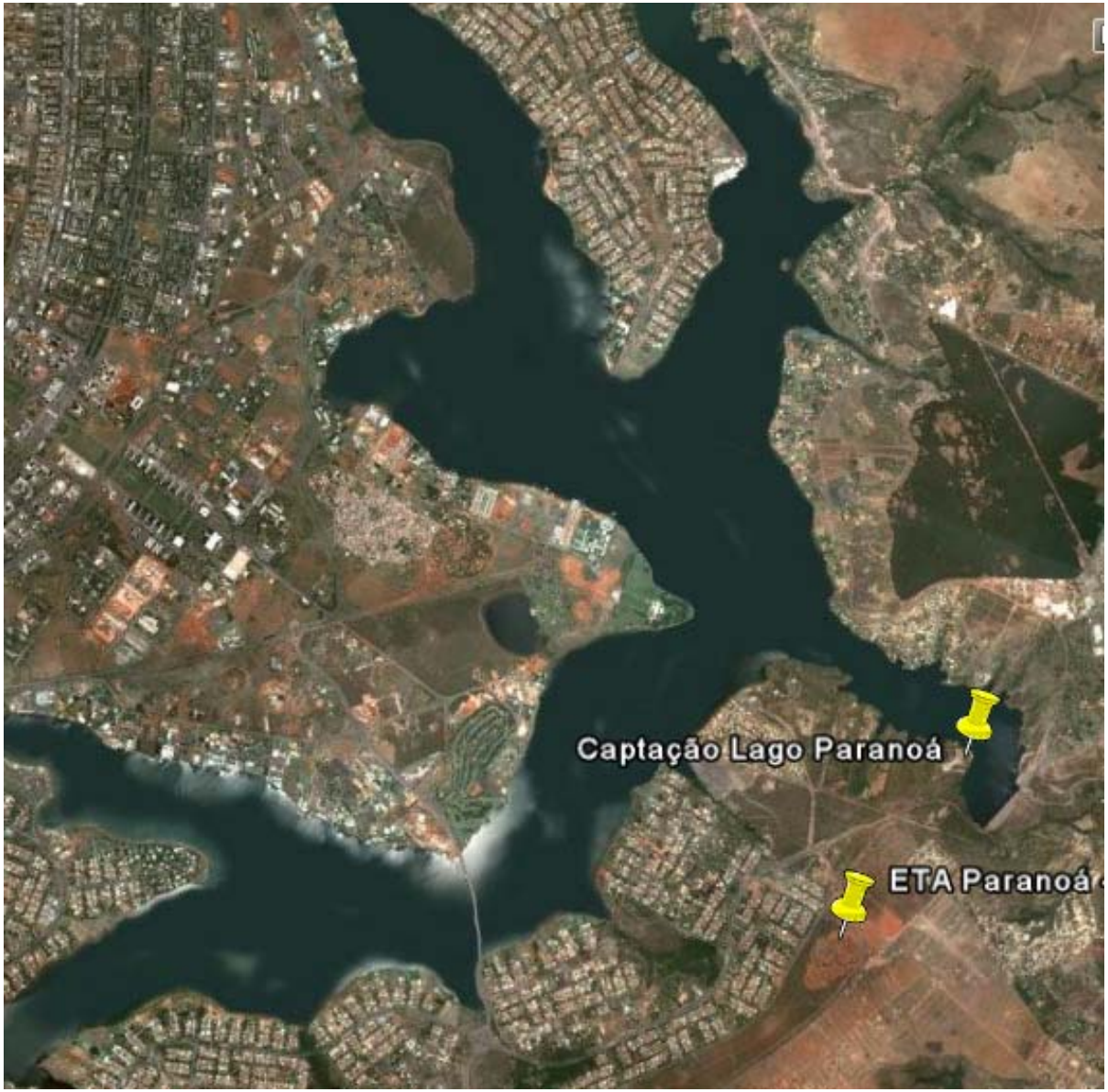
Paranoá Water Supply System

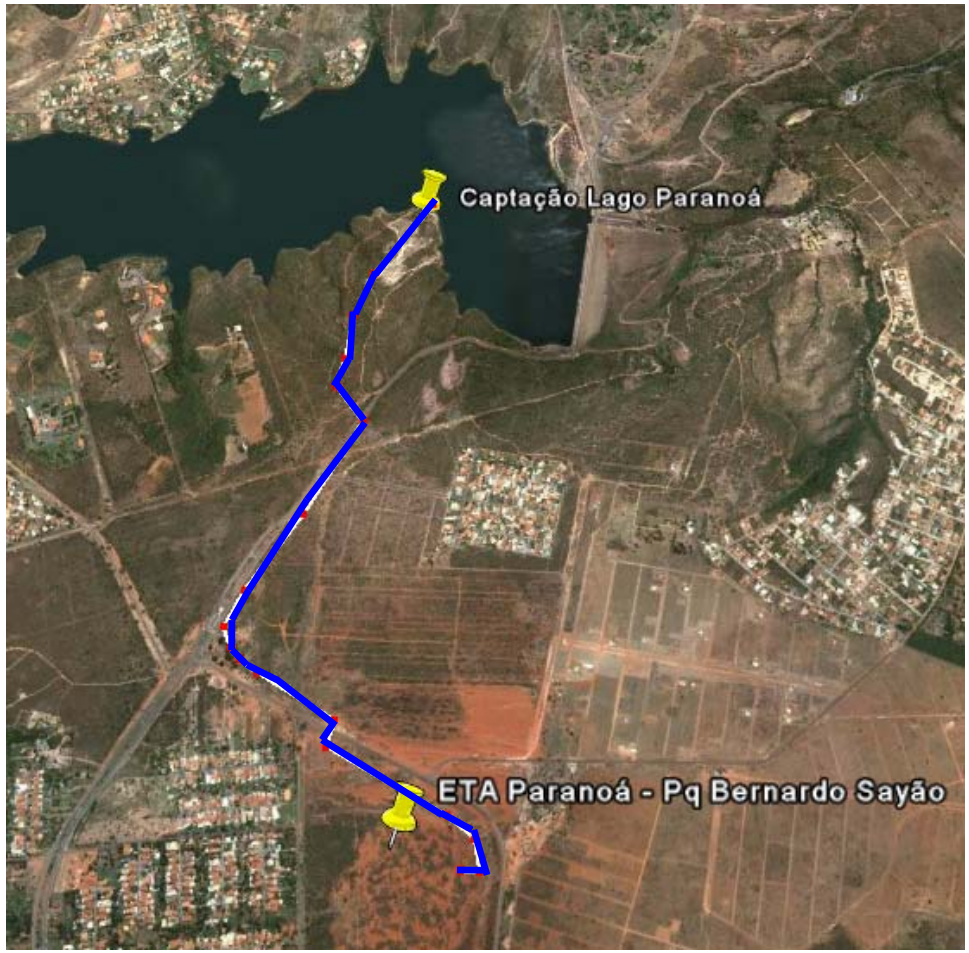


1. Uptake and Raw Water Pumping Station;
2. Raw Water Pipeline;
3. Water Treatment Plant – ETA;
4. Treated Water System (treated water pipelines, reservoirs and pumping stations).

Paranoá Water Supply System



Raw Water Pipeline



Characteristics:

Flow = 2,8 m^3/s

Extension: ~3 Km;

Material: welded steel

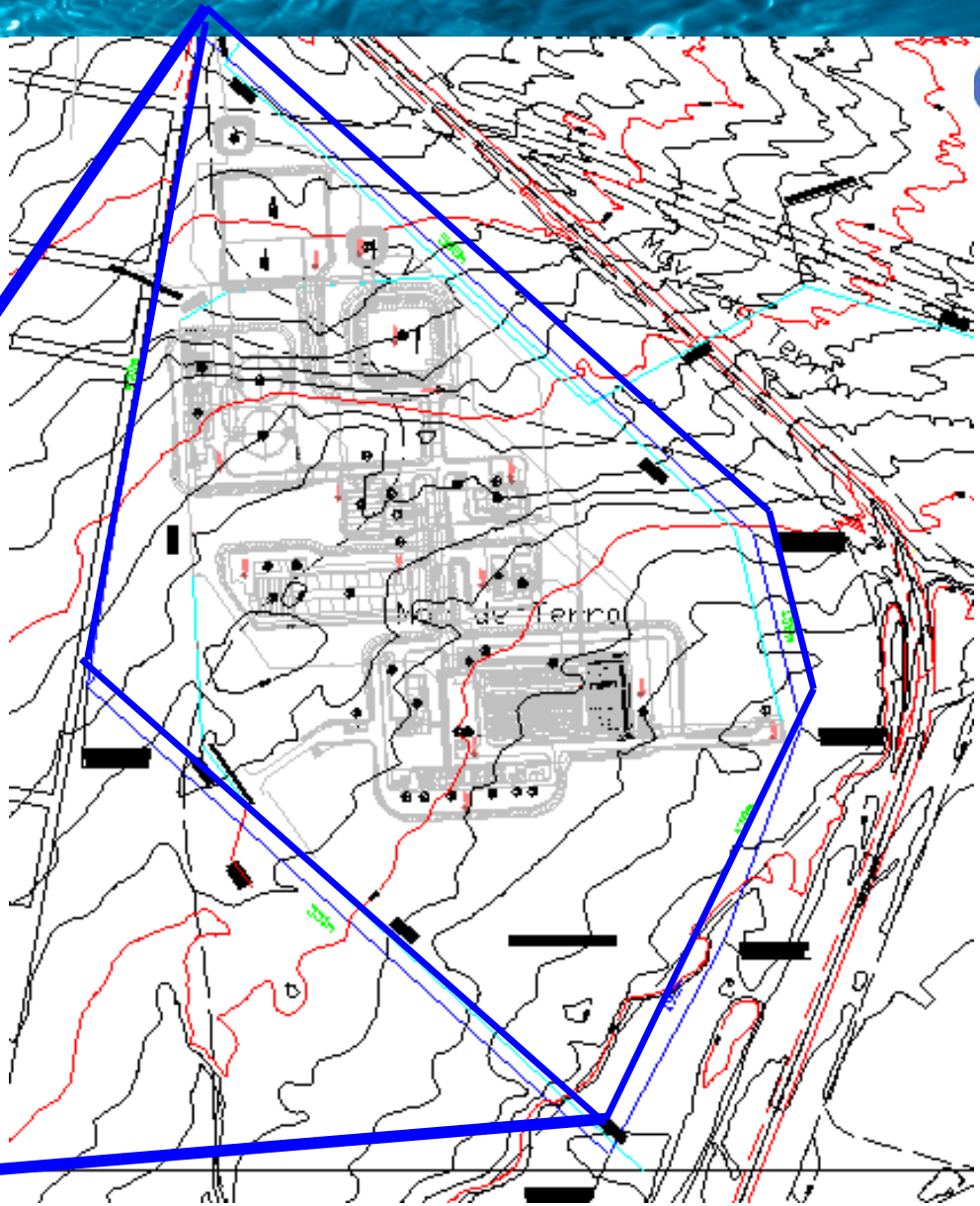
Diameter: 1,3 m.

Raw Water Pipeline

Water Treatment Plant

$Q = 2{,}1\ m^3/s$ (1st stage)

$Q = 2{,}8\ m^3/s$ (2nd stage)



Water Treatment Plant

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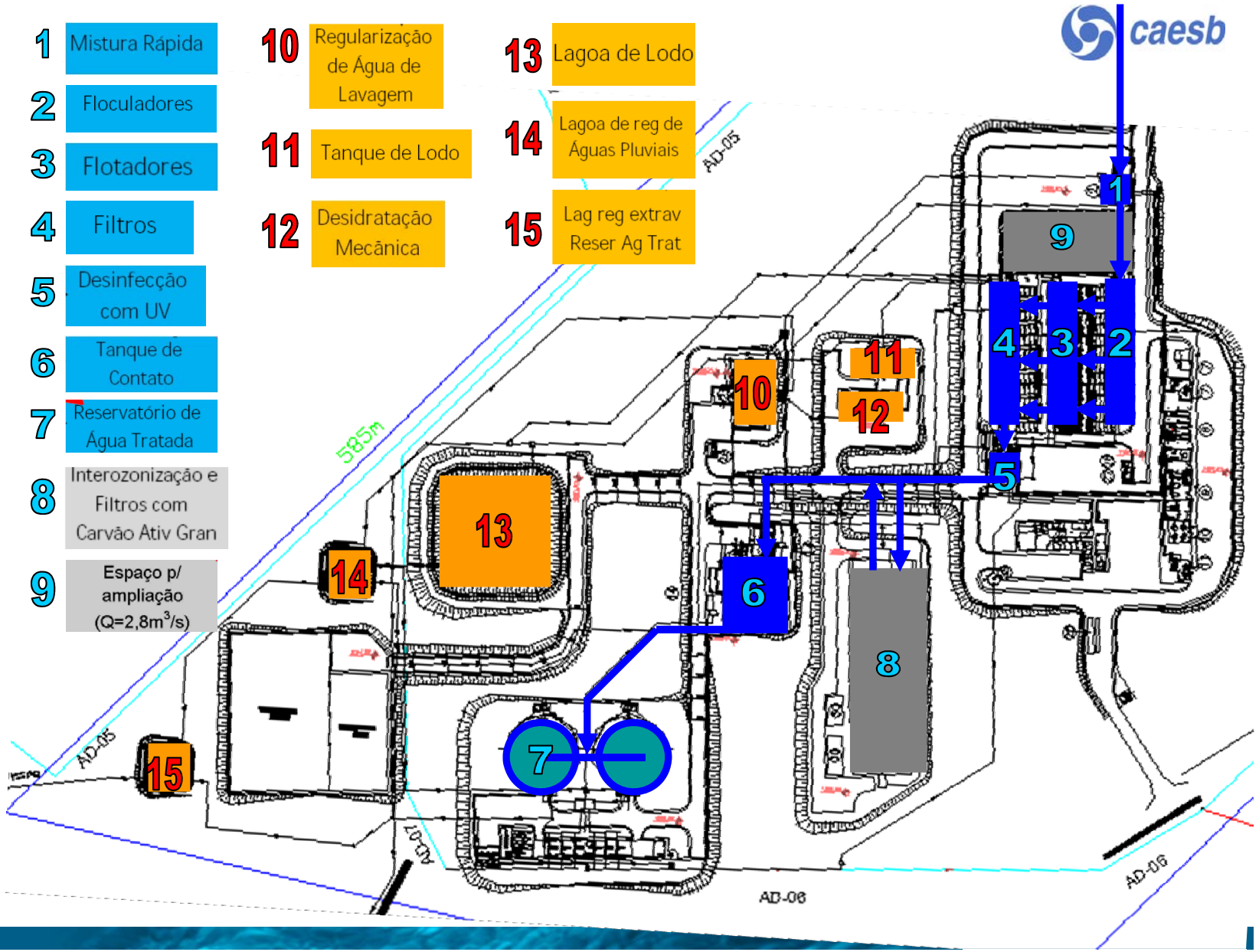
1 Mistura Rápida
2 Floculadores
3 Flotadores
4 Filtros
5 Desinfecção com UV
6 Tanque de Contato
7 Reservatório de Água Tratada
8 Interozonização e Filtros com Carvão Ativ Gran
9 Espaço p/ ampliação (Q=2,8m³/s)
10 Regularização de Água de Lavagem
11 Tanque de Lodo
12 Desidratação Mecânica
13 Lagoa de Lodo
14 Lagoa de reg de Águas Pluviais
15 Lag reg extrav Reser Ag Trat



Flowchart WTP

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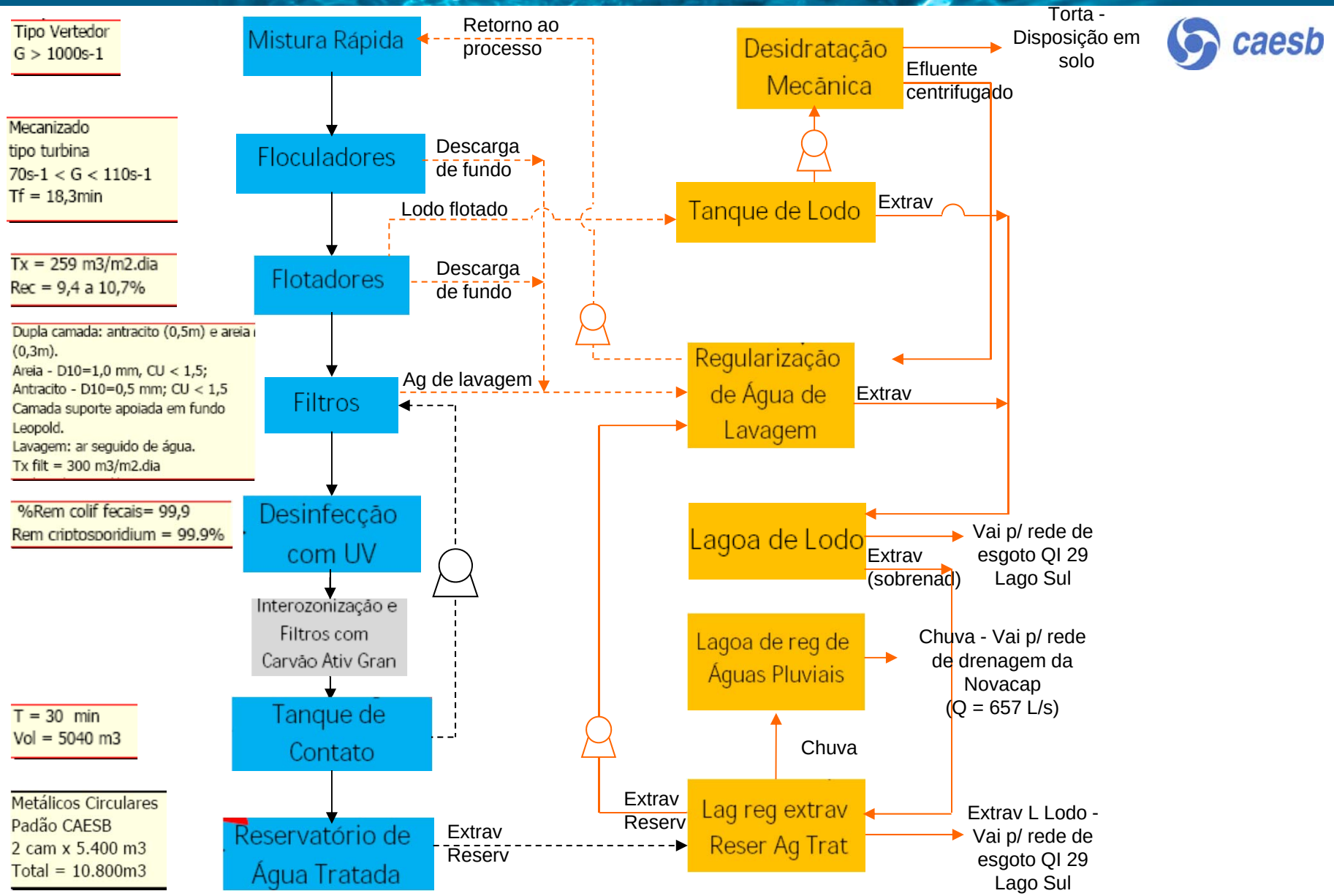
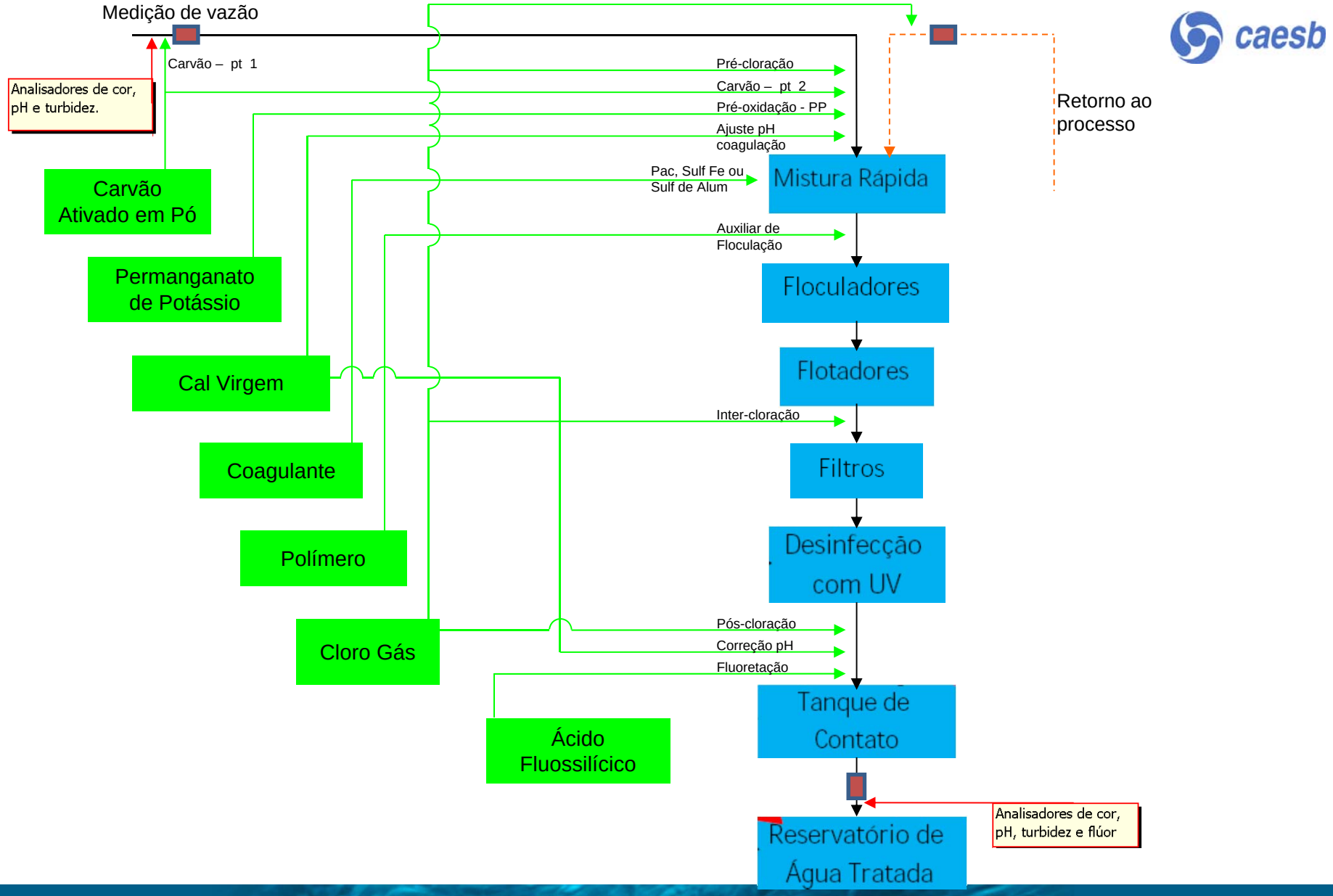


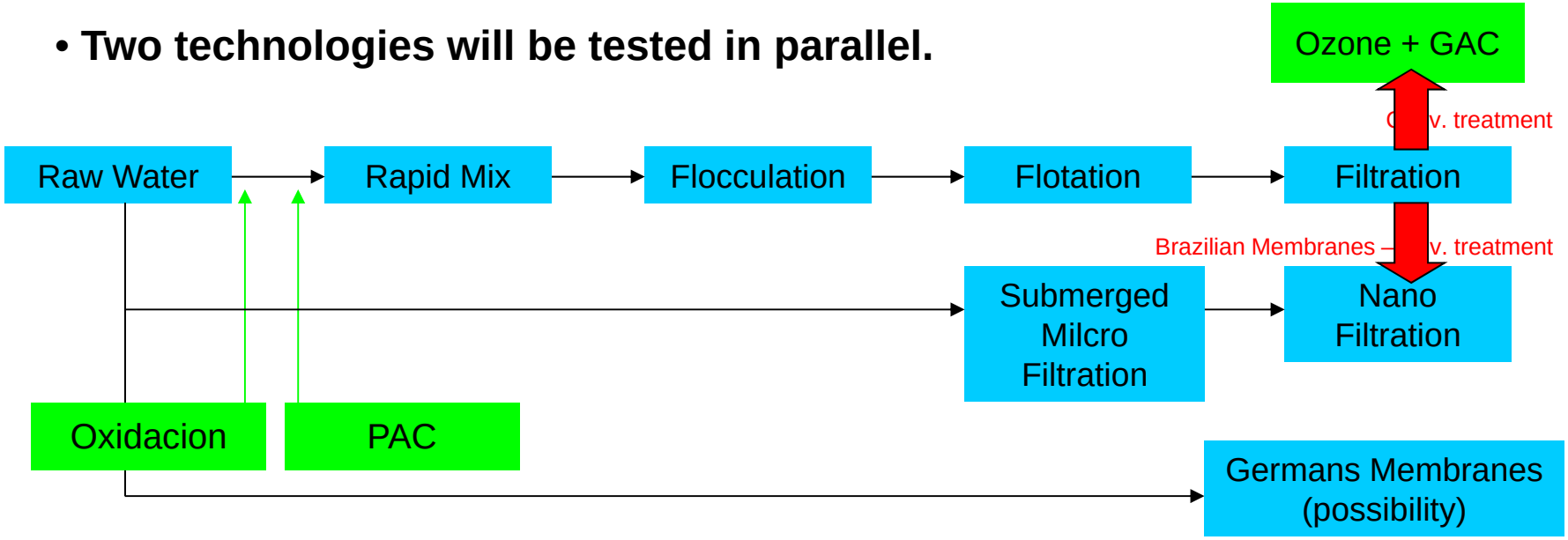
Chemicals WTP



Plans for Pilot Plant

Financial supports provided by Caesb

- **Two technologies will be tested in parallel.**



Experimental Investigation steps:

1 – Operational and design parameters optimization;

2 – Use of chemicals to improve the treatment;

3 – Investigation of conventional and advanced treatment.

Pilot Plant Location