

## HYDRAULIC INFRASTRUCTURE

SAG S.A. has participated in several studies related to water resources, from initial identification of the study, during design development phase, thru the work supervision and environmental management of the operation phase.





The Company has been involved during the construction and operation of the water resources studies throughout the environmental work supervision of the hydraulic works on industrial, mining and energy sectors.



Environmental work supervision during the construction of small hydroelectric power plants.

## Some of the services that are offered include:

- Environmental work supervision during the construction of hydroelectric power plants in the following infrastructure: diversion dam, water intake structures, sand filters, covering structures, conduction tunnel systems, powerhouse and discharge structures.
- Environmental work supervision during the construction of aqueduct systems.
- Environmental impact study for the construction of the wastewater treatment plant at the Bello municipality.
- Hydrogeological studies.

## SPECIALIZED SERVICES

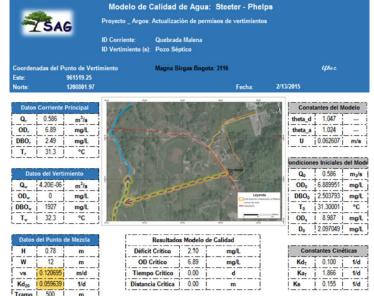
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Water quality model: Streeter - Phelps platform.

- Studies for the design and construction of hydraulic dams.
- Hydrological and hydraulic studies for drainage infrastructure.
- Hydrological modeling of surface water discharge and sediment transport.
- Risk and vulnerability analysis of aquifer systems.
- Risk management plan for discharges.
- Water intake and discharge permits procedures.

The mentioned services have been executed to companies such as ARGOS, EPM, ISAGEN, ISA, HMV Ingenieros, Escuela de Ingeniería de Antioquia.



De acuerdo a los resultados obtenidos, los vertimiento de aguas residuales realizados sobre la comiente principal, No genera efectos adversos sobre la calidad del recurso hidrico, al considerar el nivel minimo de oxigeno 6.89 mg/L alcanzado en el sistema

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Platform on Tablet for characterization and monitoring of wastewater in the field; it allows automating the data processing and calculating the aliquot during composite sampling in real time.

