

# PROJECT PROFILE

## EVALUATION OF HYDROELECTRIC PROJECT IN ARGENTINA

The Piedra del Aguila Hydroelectric Project is a 1,400-MW facility located in the south of Argentina, on the Limay River approximately 250 kilometers from Bariloche. The dam is of concrete-gravity construction, and it is 860 meters long, averaging 170 meters in height above its foundation. The power plant is located at the toe of the dam and has four Francis Runner turbines. The project does not include fish passages or other environmental facilities.

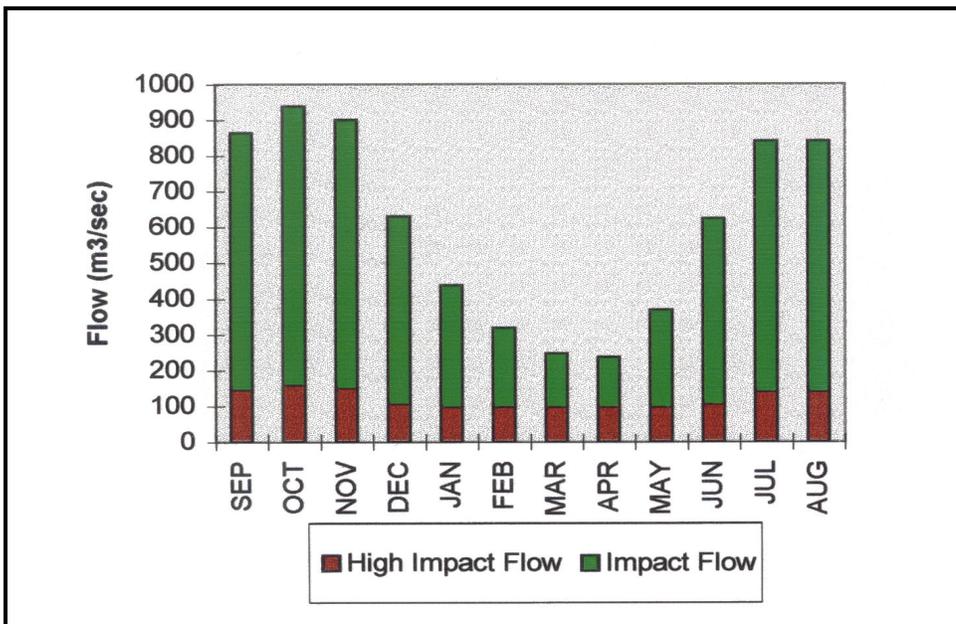
As part of an economic privatization plan, the government of Argentina solicited public bids for studies on several hydroelectric projects including the Piedra del Aguila Project. D'Appolonia was retained by Duke Engineering & Services (DE&S) to perform an environmental evaluation of the facility. The evaluation included:

- Review of existing documentation,
- Survey of federal, state, and local environmental regulations,
- Meetings with regulators,
- Meetings with personnel responsible for environmental issues at the site, and



The Piedra del Aguila Hydroelectric Project including dam, spillway and generating plant.

- An inspection of the facility.
  - Identification/description of environmental issues,
  - Technical recommendations, and
  - Capital and operation and maintenance costs for a 20-year concession period.
- The findings of the environmental evaluation were compiled into a technical report that provided:
- A description of the environmental regulatory setting in Argentina,
  - A list and description of regulatory agencies that have jurisdiction over plant activities,



Projected consequences of low volume discharges on the riverine ecological systems located downstream from the Piedra del Aguila dam.

The potential environmental impacts to downstream agriculture under various assumptions of dam operation were also evaluated.

Since D'Appolonia's initial assessment of environmental impact, we have conducted extensive studies to determine the environmental consequences of various scenarios of dam failure on the downstream affected population. These studies have taken into account the hydraulic characteristics of this and other dams both upstream and downstream. The results were presented as an Emergency Action Plan for the watersheds of both the Limay and Rio Negro River systems.