

# The Siphon: Liquid Ingenuity at its Finest



## PROJECT SCOPE

A fish dam in a remote area required a bypass.

## CLIENT

US Forest Service

## INDUSTRY SEGMENT

Municipality

## EQUIPMENT

- HDPE Pipe
- Fittings

## BACKGROUND

The US Forest Service was in the process of building a fish dam in a remote area on the Black River to separate two species of trout. Bypassing the river was necessary to ensure the area was dry enough for construction to proceed. Half of the dam had been constructed the previous year with diversion of the river being managed by six 12-inch diesel pumps provided by another pump company.

Rain for Rent recommended a siphon, which would significantly improve the environmental impact of the project- a big concern for the US Forest Service.

## OUTCOME

After receiving drawings with elevation information, the Rain for Rent Chandler, AZ team designed the system to include two 24-inch, 150-foot long siphons to successfully bypass the necessary 40 cubic feet per second flow rate. A single siphon would have managed the flow, but double siphons with gate valves were even more effective than the diesel pumps at managing the variable flow.

## HIGHLIGHTS

The crew performed superbly under extremely challenging site conditions. Rain for Rent's Branch Manager commented, "Twenty-four inch HDPE and valves are challenging enough in wide open space and they were in the middle of a mountain forest with running water. It takes a lot of practical experience to get a job like this done safely and on time." By using a simple siphon system, the US Forest Service saved on pumping and fueling costs to the remote location while also minimizing the environmental impact of the jobsite.

## CUSTOMER FEEDBACK

Engineers from the US Forest Service were impressed with the simplicity of the system and want to use siphons in the future when the site conditions will allow. They noted that they were able to save money and reduce their environmental impact by going with the siphon solution.



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