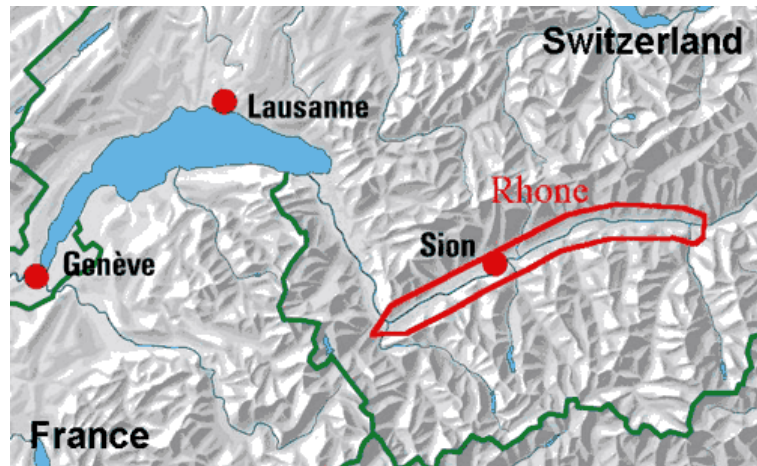


## Project Profile – Levee Performance Monitoring

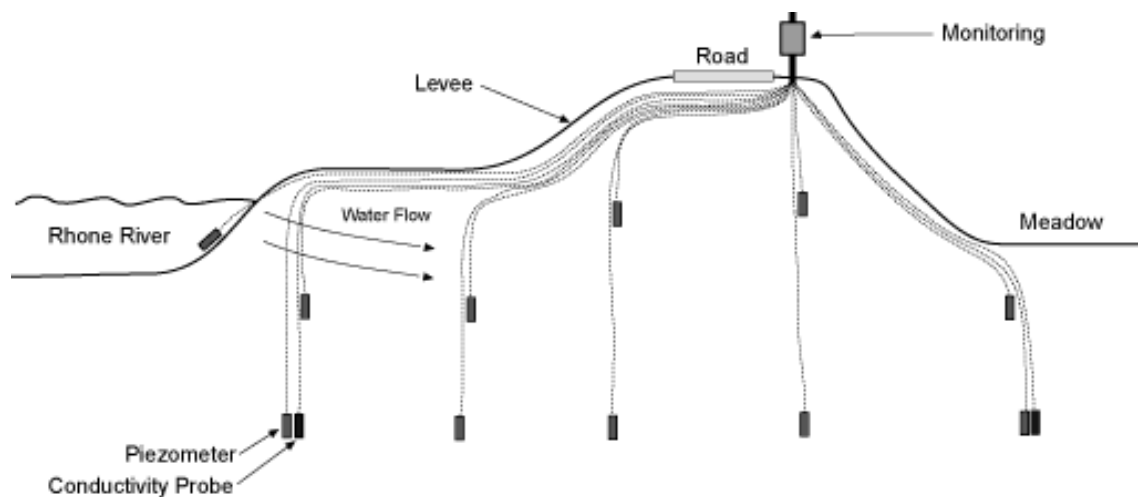
### **Overview**

One of Europe's most picturesque and significant streams, the Rhone River flows from the Swiss Alps westward and southward to the Mediterranean Sea, draining the eastern quarter of France.

Due to its huge and oftentimes unruly nature, a series of levees have been constructed along much of its length to prevent damage to low-lying areas near the river in the event of a flood.



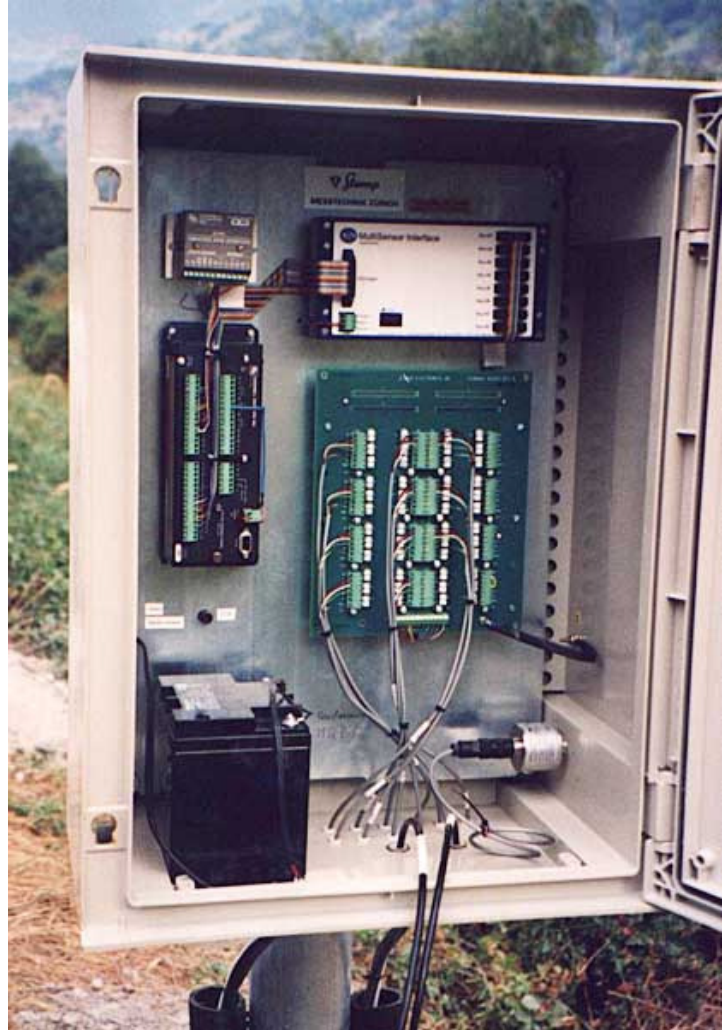
An ambitious instrumentation and monitoring program was initiated for a 70km stretch of the river (shown above in red) in Switzerland to monitor the performance of the levees particularly as they are affected by high water levels. This performance information will be used to provide direction regarding future reinforcement and/or replacement of the levees.



### ***What We Did***

To monitor levee performance a number of site variables had to be monitored. These included the river water level, pore pressures and water conductivity at various depths in and around the levee to detect water flow through the levee, barometric pressure, and air and soil humidity.

Stump Bohr AG, of Zurich Switzerland, received the contract to design and install the monitoring systems, a total of 9 monitoring stations spread out over the 70km stretch of river. Canary Systems supplied all the hardware and software for the monitoring stations, in addition to the conductivity probes. The hardware included the MultiMux for connecting the various types of instruments, the MultiSensor Interface, CR10X Control Module and AWW1 Vibrating Wire Interface. The MultiSensor Interface made it possible to connect all the disparate sensors types, including vibrating wire, 4-20mA, conductivity and thermistors, to the same multiplexers. This simplified the system installation and hardware requirements.



### ***Who to Contact***

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