

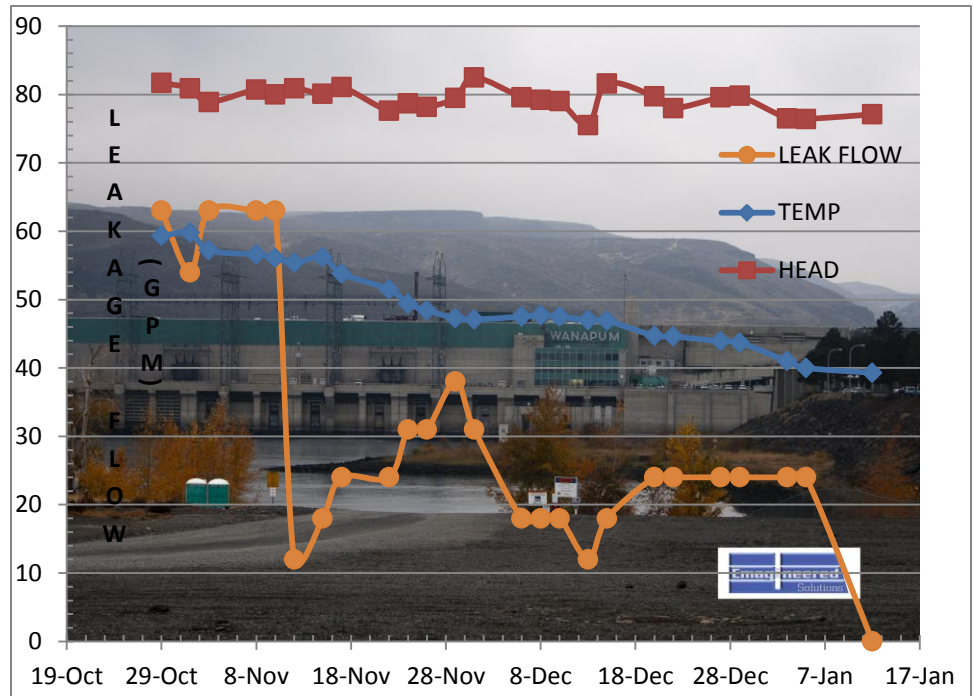
WANAPUM DAM - FIXING MONOLITH JOINT LEAKS

CYLUTIONS™ REMEDIAL WATERSTOP SYSTEM

Public Utility District No. 2 of Grant County, Washington contracted with Emagineered Solutions, Inc. in October, 2010 to install our CYLUTIONS™ Remedial Waterstop System in control joint 1/2 in the powerhouse at Wanapum Dam on the Columbia River. This was done in conjunction with a major modernization of the plant and units.

PUD Engineers had been monitoring the leak in the joint 1/2; the leak continued to worsen in cold water conditions to the point where something needed to be done to regain sump pump safety margins.

After observing a CYLUTIONS™ Remedial Waterstop System installation at a nearby project, the District's engineers determined this procedure to be exactly what they needed for remediation of the leaks in the Wanapum powerhouse.



The chart above documents the leakage flows from this joint before and after installation. The leakage was dry approximately 100 days following installation of the CYLUTIONS™ Remedial Waterstop System. These results were achieved as the temperature dropped during the coldest days of winter. Emagineered Solutions has returned twice since their first installation to repair four additional joints with similar results.