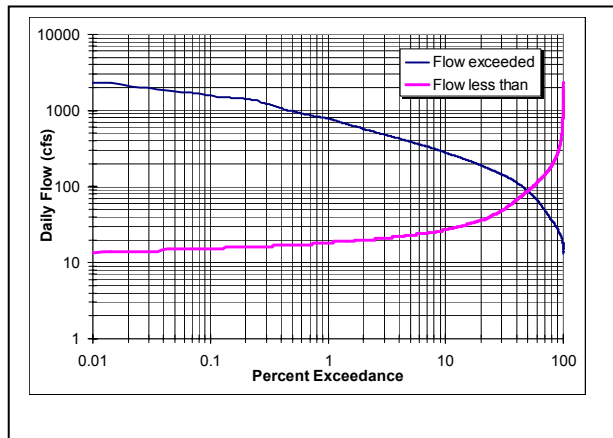




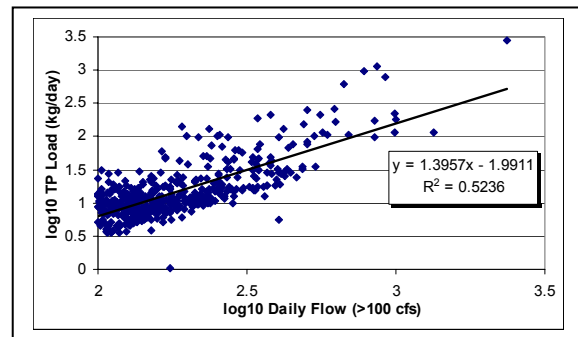
Regional Stormwater Treatment Facility in Lake Sammamish Basin

The King County (Washington) Department of Natural Resources (DNR) wanted to treat the flow in Issaquah Creek to reduce the phosphorus load to Lake Sammamish. Various alternatives were considered, including a regional treatment facility, sources controls, and wetlands treatment.



We worked with the flow, suspended sediment concentration, and phosphorus data to develop relationships between them. The goal of the evaluation was to see if a wetland system could be constructed to remove sufficient phosphorus that the remaining load to Lake Sammamish does not cause severe algal blooms. To develop hydrologic statistics and to examine potential changes in streamflow patterns, the hydrologic analysis program, IHA, was applied to the USGS data from Issaquah Creek. The study concluded that wetland treatment would probably be insufficient to reduce the phosphorus loads in Issaquah Creek without additional “conventional” treatment.

WEST Consultants worked with Gray and Osborne, Inc., and Smayda and Associates, to analyze flows in Issaquah Creek and its tributaries, and evaluated the possibility of using and modifying the downstream wetlands to increase sediment removal, and thus reduce phosphorus loads to the lake.



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