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Stormwater Management: Traditional BMPs

Best Practices White Paper Summary

Which combinations of retrofit BMPs in a basin are most effective at reducing pollutants to receiving waters?

The literature available was not able to answer this question. Studies have looked at individual retrofit BMPs and showed positive pollutant removal ability, however, no studies looked at which combinations of retrofit BMPs are most effective at reducing pollutants.

To what extent does retrofitting using water quality treatment devices reduce urban stormwater pollution to receiving water bodies?

Limited studies showed significant removals of suspended solids, total metals, and nutrients. Significant reductions in dissolved metals were also observed at higher influent concentrations.

Are existing sizing criteria for vegetative filter strips (based on bioswales) overly conservative?

Current WSDOT sizing criteria uses a series of calculations to determine filter strip width, with a minimum recommended width of 8 feet. Available studies indicate that filter strips should be a minimum of 16.4 feet wide to have good removal of sediment. Existing criteria do not seem overly conservative.

Which combination of length, width, slope, soil types and vegetation types result in the greatest removal of sediment by vegetative filter strips?

The literature available was not able to answer this question. Individual studies have looked at how different design elements affected pollutant removal ability, but no studies looked at which combination resulted in the greatest removal of sediment.

Summary prepared by AWC staff, June 2013