

**Draft No. 1**

**Table 5-2**

**Comparison of Alternatives to Estimate Net New Recharge from New MS4 Projects**

Criterion	Alternative to Compute Net New Recharge		
	Project-Specific Monitoring, Reporting, and Accounting	Indirect Estimation During the Periodic Redetermination of Safe Yield	Hybrid
Summary of Method	Collect MS4 related documentation from Appropriators annually and use modeling tools to estimate long term average net new recharge.	Use future model calibration efforts to adjust areal recharge estimates (deep infiltration of precipitation and applied water) if necessary to account for new recharge from new MS4 facilities.	Collect MS4 related documentation from Appropriators annually and file for later review. Incorporate constructed MS4 facilities into recharge models and subsequent groundwater model calibration to estimate actual recharge from MS4 facilities. Net new recharge would be estimated by rerunning the calibration without the New MS4 facilities and comparing both simulations.
Timeliness of Information	Long-term average annual net new recharge is computed annually as new facilities come online.	Safe yield is redetermined periodically, say every five to ten years.	Estimates of net new recharge will be computed when Watermaster redetermines safe yield. Safe yield is redetermined periodically, say every five to ten years.
Cost	One time cost to revise recharge models. Annual cost to compile MS4 documentation and estimate net new recharge.	No new cost.	Annual cost to compile MS4 documentation and minor cost to incorporate into the groundwater model recalibration.
Relative Accuracy of Net New Recharge Estimate	Least because there is no way to validate estimates.	Not applicable because the net new recharge would not be estimated and would be incorporated directly into the safe yield.	Greatest because the groundwater level response due to new recharge can be validated by comparing groundwater model projected groundwater levels to measure groundwater levels. Could be years before the groundwater levels respond significantly to recharge from MS4 facilities -- the hybrid approach has the capability of assessing this lag.