

Comparison Matrix of Source Sector and Habitat Workgroup BMP verification Protocols

	Agriculture	Forestry	Urban stormwater	Wastewater	Wetlands	Streams
Protocol version	Version 3.5 (12/3/2012)	11/27/2012	USWG Final Review Draft, 11/11/2012	12/3/2012	11/30/2012	11/30/2012
Annual	√ Annual BMPs listed in Protocol Concept version 3.5; Management BMPs- Plans; Management BMPs-Practices	√ expanded tree cover; urban riparian forest buffers; ag forest buffers and ag tree planting; forest harvesting	√ operational BMPs (ESC, IDDE, UNM, street sweeping)	√ on-site treatment systems pumpouts	N/A	N/A
Structural	√ AWMS; barnyard runoff control; biofilters; loafing lot management, etc. See protocol	√	√ Traditional BMPs (e.g., wet ponds, dry ED ponds, bioswales, etc.); Runoff Reduction (e.g., ESD and LID under new performance standards); and Restoration BMPs (retrofits, stream restoration, etc.)	√ WWTPs; CSOs; on- site systems	√	√
Regulated source	√ CAFOs	(TBD)	√ MS4 communities; semi-regulated BMPs installed under state construction general permit	√ WWTPs; CSOs; on- site systems (in some states)	X	X
Non-regulated source	√ voluntary, NGO- and private-funded BMPs	√ private forest lands	√ Voluntary BMPs not triggered by MS4 permit or regulation	√ on-site systems (in some states)	√	√
Presence of a verification mechanism	√ state and federal cost share contracts	(TBD)	√ MS4 permits, construction general permits	√ installation/O&M inspections for septics; monitoring requirements in permits and reporting into DMR for non-sigs; construction and post- construction verification and monitoring for CSOs	√ state and federal cost share contracts in the cases of WRP, CRP, and CREP	X
Reliance on statistical sampling	√	√ sampling is mentioned as an option for all four BMPs	√ one suggested option for semi-regulated BMPs	X	X	X
Reliance on site/field visit	√ (depending on specific conservation practice)	√ suggested as an option, when possible	√ post-construction inspections for all BMPs; periodic (every 3-5 years) maintenance inspections	√	√	√
Frequency of verification (once, annually, once-per-permit cycle, etc.)	√	√ varies by BMP and option	√ at least once every other permit cycle for regulated areas;	√ for septics, recommendations will be made by OWTS expert panel; regular monitoring and inspection requirements for non- sigs and CSOs	√ varies by funding mechanism	X
Verification types (regulatory/insp ector, 3rd party, self-certified or reported, citizen monitoring)	√ (all of the types listed in first column depending on conservation practice)	√ varies; for expanded tree cover, a "trusted urban forestry partner" is suggested	√ regulatory/certified inspector in MS4 areas; various options for semi-regulated and voluntary BMPs	√ inspections by local government agencies or certified service providers	√ (unclear which exact types)	X
Reliance on selection of verification technique appropriate to practice	√	√ Unclear	√ verification schedules/techniques recommended by BMP expert panels	√	X (insufficient documentation to clearly determine)	X
Addresses functional equivalency	X	X	X	X	X	X

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Credit discounting based verification	N/A -- Any procedures that demonstrate 80% or greater confidence level are given full credit	√ For expanded tree cover and urban riparian forest buffers, levels of credit based on likelihood to attain net gain in tree cover and monitoring	√ see option 4 for semi-regulated BMPs	X	X	X
Addresses practice lifespans	√	X	√ prioritize verification inspections for oldest legacy BMPs	(TBD)	X	X
Achieves Principle 1 (Practice Reporting)	√	√	√	√	X	X
Achieves Principle 2 (Scientific Rigor)	√ verification categories' "relative scientific defensibility" is scored high, medium, or low	X	√ generally supported throughout protocol; specific protocols to be based on expert panels	√	X (insufficient documentation to clearly determine)	X (insufficient documentation to clearly determine)
Incorporates Principle 3 (Public Confidence and transparency)	√ verification categories' "relative transparency" is scored high, medium, or low	X	√ generally supported throughout protocol	X	X	X
Incorporates Principle 4 (Adaptive Management)	√	X	√	X	X	X
Achieves Principle 5 (Sector Equity*)	√	√	√	√	X	X

DRAFT; updated December 3rd, 2012

Key:

√ = yes, the protocol discusses this factor (followed by narrative description or summary, if needed)

X = the current version of the protocol does not address this factor

N/A = This factor is not applicable to this sector or habitat

*Intra-sector only; cross-sector equity not evaluated in this matrix