Phase 6 Chesapeake Bay Most-Effective State-Basins

Relative effectiveness accounts for the role of geography on nitrogen and phosphorus load changes and, in turn, Bay water quality. Because of various factors such as in-stream transport and nitrogen and phosphorus cycling in the watershed, the influence of a given management practice on water quality varies depending on the location of its implementation within the watershed. For example, the same management practice applied in Williamsport, Pennsylvania, will have less of an effect on Dissolved Oxygen (DO) than one applied in Baltimore, Maryland.

The relative effectiveness of each contributing river basin in the Chesapeake Bay watershed on DO was determined by using the Chesapeake Bay Program partnership's Phase 6 suite of modeling tools. The following tables list the most-effective state-basins from greatest to least effective for both nitrogen and phosphorus.

State-Basin	
Nitrogen	**Phosphorus**
Maryland Susquehanna	Maryland Middle Eastern Shore
Virginia Eastern Shore	Maryland Upper Eastern Shore
Pennsylvania Susquehanna	Maryland Patuxent (Below Fall Line)
Maryland Potomac (Above Fall Line[1])	Maryland Western Shore
Pennsylvania Upper Eastern Shore	Maryland Susquehanna
Pennsylvania Potomac (Above Fall Line)	Pennsylvania Upper Eastern Shore
Delaware Lower Eastern Shore	Delaware Upper Eastern Shore
Maryland Middle Eastern Shore	Maryland Potomac (Below Fall Line)
District of Columbia Potomac (Above Fall Line)	District of Columbia (Below Fall Line)
West Virginia Potomac (Above Fall Line)	Maryland Lower Eastern Shore
District of Columbia Potomac (Below Fall Line)	Delaware Middle Eastern Shore
Maryland Patuxent (Below Fall Line)	Virginia Potomac (Below Fall Line)
Maryland Western Shore	Virginia Eastern Shore
Maryland Lower Eastern Shore	Virginia Potomac (Above Fall Line)
Maryland Upper Eastern Shore	District of Columbia Potomac (Above Fall Line)
Maryland Potomac (Below Fall Line)	Maryland Patuxent (Above Fall Line)
Virginia Rappahannock (Below Fall Line)	Pennsylvania Susquehanna
Delaware Upper Eastern Shore	Maryland Potomac (Above Fall Line)
Delaware Middle Eastern Shore	Virginia Rappahannock (Above Fall Line)
New York Susquehanna	Pennsylvania Potomac (Above Fall Line)
Virginia Potomac (Below Fall Line)	Virginia Rappahannock (Below Fall Line)
Virginia Potomac (Above Fall Line)	Delaware Lower Eastern Shore
Maryland Patuxent (Above Fall Line)	New York Susquehanna
Pennsylvania Western Shore	West Virginia Potomac (Above Fall Line)
Virginia Rappahannock (Above Fall Line)	Pennsylvania Western Shore
Virginia York (Below Fall Line)	Virginia York (Below Fall Line)
Virginia James (Below Fall Line)	Virginia James (Below Fall Line)
Virginia York (Above Fall Line)	Virginia James (Above Fall Line)
Virginia James (Above Fall Line)	West Virginia James (Above Fall Line)
West Virginia James (Above Fall Line)	Virginia York (Above Fall Line)

[1] The fall line is a geologic feature that separates the Coastal Plain regions from the Piedmont regions.