

Figure 4. Concentration & flow relationships in the South Branch Raritan River Watershed

Constituent	South Branch Raritan River				Spruce Run	Mulhockaway Creek	Neshanic River
	Middle Valley	High Bridge	Stanton	Three Bridges	Glen Gardner	Van Syckle	Reaville
Alkalinity	↓	↓	↓	↓	↓	↓	↓
Ammonia	NSR	↓	NSR	NSR	NSR	NSR	NSR
Un-ionized Ammonia	NSR	↓	↓	↓	↓	↓	↓
Total Organic Nitrogen	NSR	NSR	↑	NSR	NSR	NSR	NSR
Nitrate + Nitrite	↓	↓	NSR	↓	NSR	NSR	↑
Total Phosphorus	NSR	NSR	NSR	NSR	NSR	NSR	↑
BOD	NSR	NSR	NSR	NSR	NSR	NSR	NSR
DO	NSR	NSR	NSR	NSR	↑	↑	↑
TOC	↑	NSR	NSR	NSR	NSR	↑	NSR
TDS	↓	↓	↓	↓	↓	↓	↓
Chloride	NSR	NSR	↑	NSR	NSR	↑	NSR
Sodium	NSR	NSR	↑	NSR	NSR	↑	NSR
Sulfate	NSR	NSR	↓	↓	↓	↓	↓
Hardness	↓	↓	↓	↓	↓	↓	↓
pH	↓	↓	↓	NSR	↓	↓	↓
Fecal Coliform	NSR	NSR	NSR	NSR	NSR	NSR	NSR
TSS	↑	NSR	↑	↑	NSR	NSR	↑
Temperature	NSR	↓	NSR	NSR	↓	↓	↓

Up arrows = concentration increases with increasing flow; Down arrows = concentration decreases with increasing flow.

↑, ↓ = Regression slope with a value < 1 (slight relationship); ↑, ↓ = Regression slope with a value ≥ 1 & ≤ 5 (relationship);

▲, ▼ = Regression slope with a value > 5 (strong relationship); NSR= No significant relationship

Figure 5. Concentration & flow relationships in the North Branch Raritan River Watershed

Constituent	North Branch Raritan River		Lamington River		Rockaway Creek
	Chester	Burnt Mills	Pottersville	Burnt Mills	Whitehouse
Alkalinity	↓	↓	↓	↓	↓
Ammonia	NSR	NSR	NSR	NSR	NSR
Un-ionized Ammonia	NSR	NSR	NSR	↓	↓
Total Organic Nitrogen	NSR	NSR	NSR	NSR	NSR
Nitrate + Nitrite	↓	NSR	NSR	NSR	NSR
Total Phosphorus	NSR	NSR	↓	NSR	NSR
BOD	NSR	NSR	NSR	NSR	NSR
DO	↑	↑	↑	NSR	↑
TOC	NSR	NSR	NSR	NSR	NSR
TDS	↓	↓	↓	↓	↓
Chloride	NSR	NSR	NSR	NSR	NSR
Sodium	NSR	NSR	NSR	NSR	NSR
Sulfate	↓	↓	↓	↓	↓
Hardness	↓	↓	↓	↓	↓
pH	↓	↓	↓	↓	↓
Fecal Coliform	NSR	NSR	NSR	NSR	↓
TSS	NSR	↑	NSR	NSR	↑
Temperature	↓	↓	↓	↓	↓

Up arrows = concentration increases with increasing flow; Down arrows = concentration decreases with increasing flow.

↑, ↓ = Regression slope with a value < 1 (slight relationship); ↑, ↓ = Regression slope with a value ≥ 1 & ≤ 5 (relationship);

▲, ▼ = Regression slope with a value > 5 (strong relationship); NSR = No significant relationship

Figure 13. Concentration & flow relationships in the Lower Raritan WMA

Constituent	Main Stem Raritan River		Matchaponix Brook	Manalapan Brook
	Manville	Bound Brook	Spotswood	Manalapan
Alkalinity	↓	↓	↓	↓
Ammonia	NSR	NSR	NSR	NSR
Un-ionized Ammonia	↓	↓	⬇	↓
Total Organic Nitrogen	NSR	↑	↑	NSR
Nitrate + Nitrite	↑	↓	↓	NSR
Total Phosphorus	↓	↓	NSR	NSR
BOD	NSR	NSR	NSR	NSR
DO	↑	NSR	NSR	NSR
TOC	NSR	↑	NSR	NSR
TDS	↓	↓	↓	↓
Chloride	NSR	↓	↓	↓
Sodium	NSR	↓	↓	NSR
Sulfate	↓	↓	↓	NSR
Hardness	↓	↓	↓	↓
PH	↓	NSR	↓	↓
Fecal Coliform	NSR	NSR	NSR	NSR
TSS	↑	↑	↑	↑
Temperature	↓	NSR	NSR	NSR

Up arrows = concentration increases with increasing flow; Down arrows = concentration decreases with increasing flow.

↑, ↓ = Regression slope with a value < 1 (slight relationship); ⬆, ⬇ = Regression slope with a value ≥ 1 & ≤ 5 (relationship);
 ▲, ▼ = Regression slope with a value > 5 (strong relationship); NSR= No significant relationship

Figure 17. Concentration & flow relationships in the Millstone WMA

Constituent	Millstone River			Stony Brook	Beden Brook
	Manalapan	Grovers Mill	Blackwells Mills	Princeton	Rocky Hill
Alkalinity	↓	↓	↓	↓	↓
Ammonia	↑	NSR	NSR	NSR	↓
Un-ionized Ammonia	NSR	NSR	↓	NSR	NSR
Total Organic Nitrogen	↑	NSR	NSR	↑	↓
Nitrate + Nitrite	NSR	↓	↓	NSR	↓
Total Phosphorus	↑	NSR	↓	↑	↓
BOD	NSR	NSR	NSR	↑	NSR
DO	NSR	↑	↑	↑	↑
TOC	NSR	NSR	NSR	↑	NSR
TDS	NSR	↓	↓	↓	↓
Chloride	NSR	NSR	NSR	↓	↑
Sodium	NSR	↓	NSR	↓	↓
Sulfate	↑	↓	↓	↓	↓
Hardness	↓	↓	↓	↓	↓
pH	↓	↓	NSR	↓	NSR
Fecal Coliform	NSR	NSR	NSR	NSR	↓
TSS	↑	NSR	↑	↑	NSR
Temperature	NSR	↓	↓	↓	↓

Up arrows = concentration increases with increasing flow; Down arrows = concentration decreases with increasing flow.

↑, ↓ = Regression slope with a value < 1 (slight relationship); ↑, ↓ = Regression slope with a value ≥ 1 & ≤ 5 (relationship);
 ▲, ▼ = Regression slope with a value > 5 (strong relationship); NSR= No significant relationship