

2008 Flow Adjusted Trend Directions and Statistics

NS – Not significant UP – Degrading trend DOWN – Improving trend

BMDL – No trend due to > 20% of the values being Below the Method Detection Limit

SK – Seasonal Kendall

FAC – Flow Adjusted Concentration

Towanda Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	65.8393	0.1324	-	-	-	NS
TN	600	FAC	-0.0250	<0.0001	-42.59	-39.35	-35.93	Down
DN	602	FAC	-0.0214	<0.0001	-38.54	-34.82	-30.87	Down
TON	605	FAC	-0.0302	<0.0001	-51.78	-45.34	-38.03	Down
DON	607	FAC	-0.0208	<0.0001	-42.04	-34.03	-24.92	Down
DNH ₃	608	FAC	-0.0150	0.0004	-37.41	-25.92	-12.32	BMDL
TNH ₃	610	FAC	-0.0247	<0.0001	-48.85	-38.98	-27.21	Down
DKN	623	FAC	-0.0200	<0.0001	-40.64	-32.97	-24.31	Down
TKN	625	FAC	-0.0298	<0.0001	-50.82	-44.90	-38.27	Down
TNO _x	630	FAC	-0.0205	<0.0001	-37.91	-33.63	-29.06	Down
DNO _x	631	FAC	-0.0203	<0.0001	-37.91	-33.37	-28.50	Down
TP	665	FAC	-0.0004	0.9123	-13.85	-0.80	14.24	NS
DP	666	FAC	-0.0021	0.5671	-17.38	-4.11	11.29	NS
DOP	671	FAC	0.1002	<0.0001	486.38	641.87	838.58	Up
TOC	680	FAC	-0.0034	0.0205	-11.91	-6.57	-0.92	Down
SS	80154	FAC	-0.0191	0.0009	-43.95	-30.43	-13.66	Down

Danville Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	104.3158	0.0597	-	-	-	NS
TN	600	FAC	-0.0257	<0.0001	-49.23	-46.03	-42.63	Down
DN	602	FAC	-0.0209	<0.0001	-43.04	-39.44	-35.63	Down
TON	605	FAC	-0.0338	<0.0001	-60.68	-55.57	-49.79	Down
DON	607	FAC	-0.0266	<0.0001	-53.49	-47.19	-40.03	Down
DNH ₃	608	FAC	-0.0243	<0.0001	-53.32	-44.19	-33.27	BMDL
TNH ₃	610	FAC	-0.0297	<0.0001	-58.61	-50.97	-41.93	Down
DKN	623	FAC	-0.0253	<0.0001	-51.79	-45.51	-38.42	Down
TKN	625	FAC	-0.0343	<0.0001	-60.78	-56.10	-50.85	Down
TNO _x	630	FAC	-0.0190	<0.0001	-40.66	-36.62	-32.30	Down
DNO _x	631	FAC	-0.0190	<0.0001	-40.94	-36.62	-31.98	Down
TP	665	FAC	-0.0136	<0.0001	-37.64	-27.85	-16.52	Down
DP	666	FAC	-0.0043	0.1977	-23.14	-9.81	5.84	NS
DOP	671	FAC	0.0866	<0.0001	516.99	699.17	935.14	BMDL
TOC	680	FAC	-0.0088	<0.0001	-23.48	-19.04	-14.34	Down
SS	80154	FAC	-0.0333	<0.0001	-62.57	-55.03	-45.98	Down

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Lewisburg Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	-16.9073	0.6862	-	-	-	NS
TN	600	FAC	-0.0164	<0.0001	-37.13	-32.54	-27.61	Down
DN	602	FAC	-0.0133	<0.0001	-31.96	-27.33	-22.38	Down
TON	605	FAC	-0.0387	<0.0001	-66.65	-60.50	-53.21	Down
DON	607	FAC	-0.0309	<0.0001	-59.02	-52.36	-44.63	Down
DNH ₃	608	FAC	-0.0113	0.0026	-36.23	-23.75	-8.83	BMDL
TNH ₃	610	FAC	-0.0167	<0.0001	-44.25	-33.02	-19.53	Down
DKN	623	FAC	-0.0247	<0.0001	-52.45	-44.72	-35.74	Down
TKN	625	FAC	-0.0323	<0.0001	-60.56	-53.94	-46.20	Down
TNO _x	630	FAC	-0.0055	0.0001	-17.95	-12.37	-6.40	Down
DNO _x	631	FAC	-0.0056	0.0001	-18.15	-12.58	-6.62	Down
TP	665	FAC	-0.0153	0.0001	-42.07	-30.73	-17.18	Down
DP	666	FAC	-0.0258	<0.0001	-55.61	-46.16	-34.71	BMDL
DOP	671	FAC	0.0737	<0.0001	335.99	486.38	688.65	BMDL
TOC	680	FAC	0.0026	0.1135	-1.74	6.44	15.30	NS
SS	80154	FAC	-0.0166	0.0066	-47.18	-32.86	-14.66	Down

Newport Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	5.4509	0.6639	-	-	-	NS
TN	600	FAC	-0.0055	<0.0001	-16.79	-12.37	-7.71	Down
DN	602	FAC	-0.0029	0.0048	-11.01	-6.72	-2.23	Down
TON	605	FAC	-0.0307	<0.0001	-59.40	-52.14	-43.57	Down
DON	607	FAC	-0.0248	<0.0001	-51.89	-44.85	-36.79	Down
DNH ₃	608	FAC	-0.0162	<0.0001	-43.57	-32.21	-18.56	BMDL
TNH ₃	610	FAC	-0.0173	<0.0001	-44.79	-33.98	-21.06	BMDL
DKN	623	FAC	-0.0248	<0.0001	-52.56	-44.85	-35.90	Down
TKN	625	FAC	-0.0270	<0.0001	-55.00	-47.69	-39.19	Down
TNO _x	630	FAC	0.0012	0.2752	-2.27	2.92	8.39	NS
DNO _x	631	FAC	0.0024	0.0346	0.12	5.93	12.08	NS
TP	665	FAC	-0.0189	<0.0001	-45.60	-36.47	-25.80	Down
DP	666	FAC	-0.0170	<0.0001	-42.79	-33.50	-22.70	Down
DOP	671	FAC	0.0498	<0.0001	152.71	230.42	332.03	Up
TOC	680	FAC	-0.0077	<0.0001	-23.62	-16.87	-9.53	Down
SS	80154	FAC	-0.0206	0.0001	-52.02	-39.01	-22.47	Down

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Marietta Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	6.8896	0.9513	-	-	-	NS
TN	600	FAC	-0.0148	<0.0001	-32.02	-27.79	-23.30	Down
DN	602	FAC	-0.0214	<0.0001	-41.46	-37.55	-33.38	Down
TON	605	FAC	-0.0306	<0.0001	-55.95	-48.99	-40.94	Down
DON	607	FAC	-0.0244	<0.0001	-49.73	-41.54	-32.01	Down
DNH ₃	608	FAC	-0.0111	0.0040	-33.79	-21.67	-7.32	Down
TNH ₃	610	FAC	-0.0140	0.0003	-37.88	-26.51	-13.05	Down
DKN	623	FAC	-0.0228	<0.0001	-47.70	-39.44	-29.88	Down
TKN	625	FAC	-0.0286	<0.0001	-53.17	-46.70	-39.34	Down
TNO _x	630	FAC	-0.0064	0.0001	-18.92	-13.13	-6.93	Down
DNO _x	631	FAC	-0.0064	0.0001	-18.92	-13.13	-6.93	Down
TP	665	FAC	-0.0123	0.0001	-33.25	-23.71	-12.80	Down
DP	666	FAC	-0.0158	<0.0001	-38.73	-29.36	-18.56	Down
DOP	671	FAC	0.0999	<0.0001	598.24	800.52	1061.40	BMDL
TOC	680	FAC	-0.0070	<0.0001	-19.64	-14.27	-8.54	Down
SS	80154	FAC	-0.0239	<0.0001	-51.74	-40.89	-27.61	Down

Conestoga Parameter	Storet Code	Time Series	Slope	P-Value	Slope Magnitude (%)			Trend Direction
					Minimum	Trend	Maximum	
FLOW	60	SK	2.7941	0.2756	-	-	-	NS
TN	600	FAC	-0.0093	<0.0001	-23.68	-20.00	-16.15	Down
DN	602	FAC	-0.0010	0.3378	-6.86	-2.37	2.33	NS
TON	605	FAC	-0.0306	<0.0001	-58.14	-52.02	-45.01	Down
DON	607	FAC	-0.0014	0.5903	-14.84	-3.30	9.79	NS
DNH ₃	608	FAC	-0.0597	<0.0001	-79.76	-76.14	-71.87	Down
TNH ₃	610	FAC	-0.0614	<0.0001	-80.57	-77.09	-72.99	Down
DKN	623	FAC	-0.0128	<0.0001	-34.61	-26.45	-17.27	Down
TKN	625	FAC	-0.0359	<0.0001	-62.62	-57.75	-52.26	Down
TNO _x	630	FAC	0.0005	0.6824	-4.80	1.21	7.59	NS
DNO _x	631	FAC	0.0011	0.3969	-3.42	2.68	9.15	NS
TP	665	FAC	-0.0299	<0.0001	-57.23	-51.21	-44.34	Down
DP	666	FAC	-0.0246	<0.0001	-49.33	-44.59	-39.41	Down
DOP	671	FAC	-0.0096	0.0013	-31.03	-20.58	-8.54	Down
TOC	680	FAC	-0.0269	<0.0001	-51.82	-47.57	-42.93	Down
SS	80154	FAC	-0.0514	<0.0001	-76.43	-70.88	-64.01	Down