

## **Appendix A: Load Duration Curves**

Load Duration Curve Reports: Title Format

The load duration curves have been generated using an Excel program developed by Tetra Tech, Inc. Each page in Appendix A represents a load duration curve report that is generated from the program after all data are entered and analyzed. They are organized by station and are in the same order as the Table 4-1 and Table 4-11 in the report. For each station, there are 3 reports (one page for each report), each page representing one of the following parameters: total phosphorus, nitrate, and fecal coliform. No fecal coliform data were collected for stations COC1 and COC2, so there are only 2 reports for each of these stations.

The title at the top of each report will have the following format:

**[#: Parameter analyzed at Station ID (concentration)] -vs- [#: Flow at Station ID (flow units)]**

The numbers at the beginning of each set of brackets are simply from data entry and indicate what column that set of data came from in the worksheet. They are for QA/QC purposes and are not important to understanding the reports.

Each title will differ based on the station and parameter being analyzed. For example, the first report in the appendix appears as follows indicating that the report is an analysis of total phosphorus at station 300040:

**[31: Total Phosphorus at 300040 (mg/L)] -vs- [23: Flow at 300040 (cfs)]**

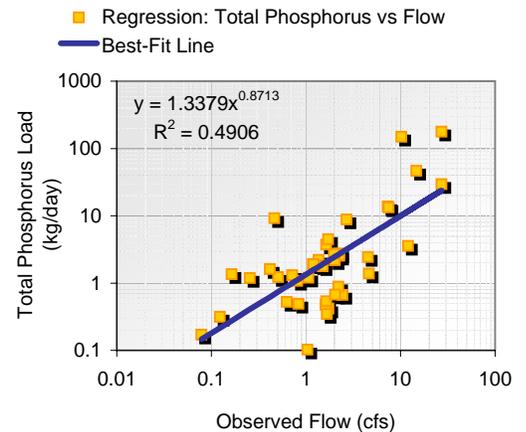
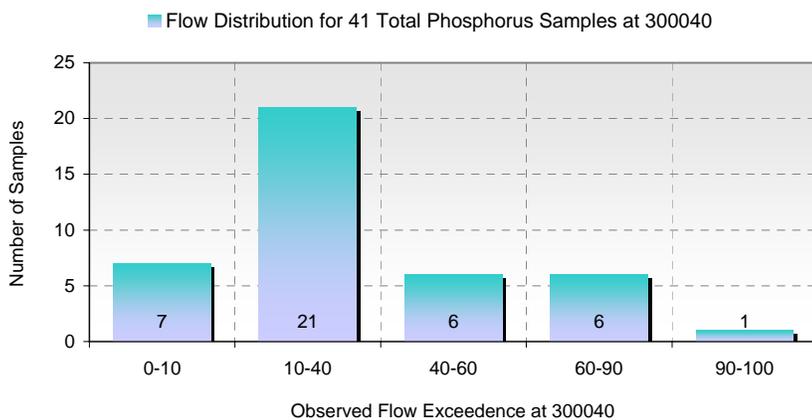
Fecal coliform reports will have additional information in the title noting that only summer flows (May 1 to October 15) were used for analysis because the standard only applies during the recreation season. All fecal coliform reports will be similar to the following example from station 300040:

**[31: Fecal Coliform at 300040 (MPN/100mL)] -vs- [23: Flow at 300040 (Summer Flows) (cfs)]**

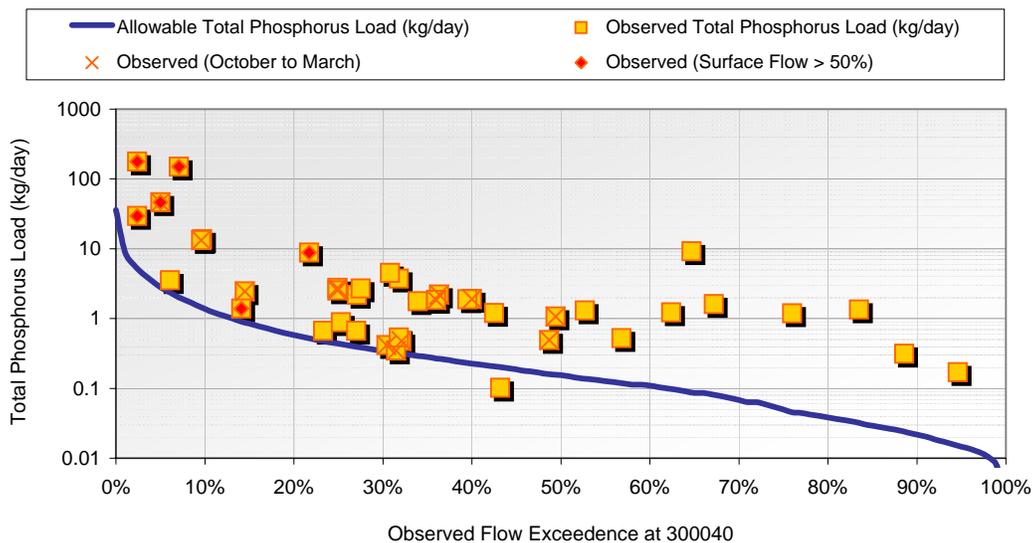
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**[33: Total Phosphorus at 300040 (mg/L)] -vs- [10: Flow at 300040 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

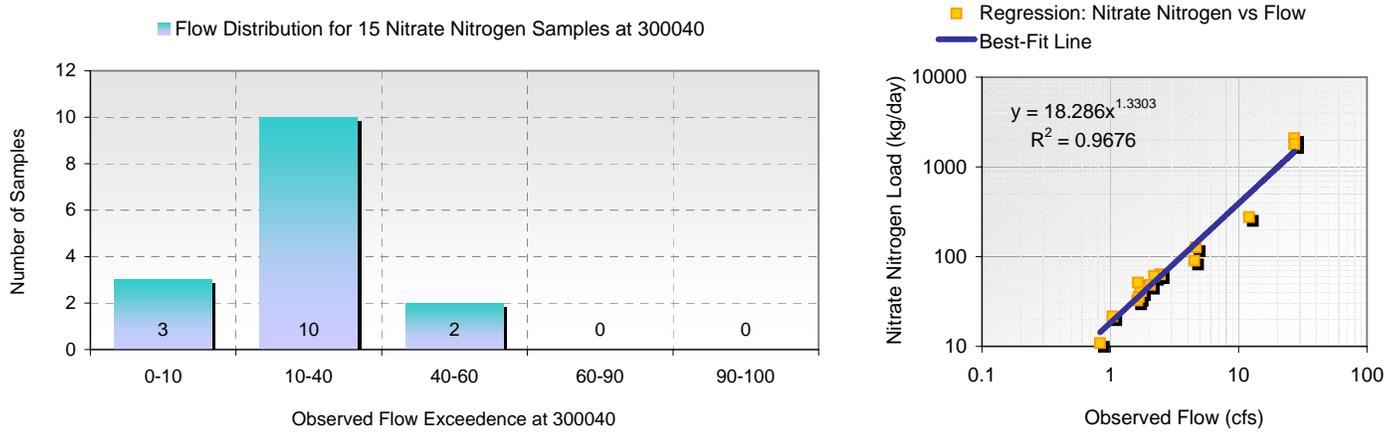


**3. Estimated TMDL Loads by Flow Exceedence Range**

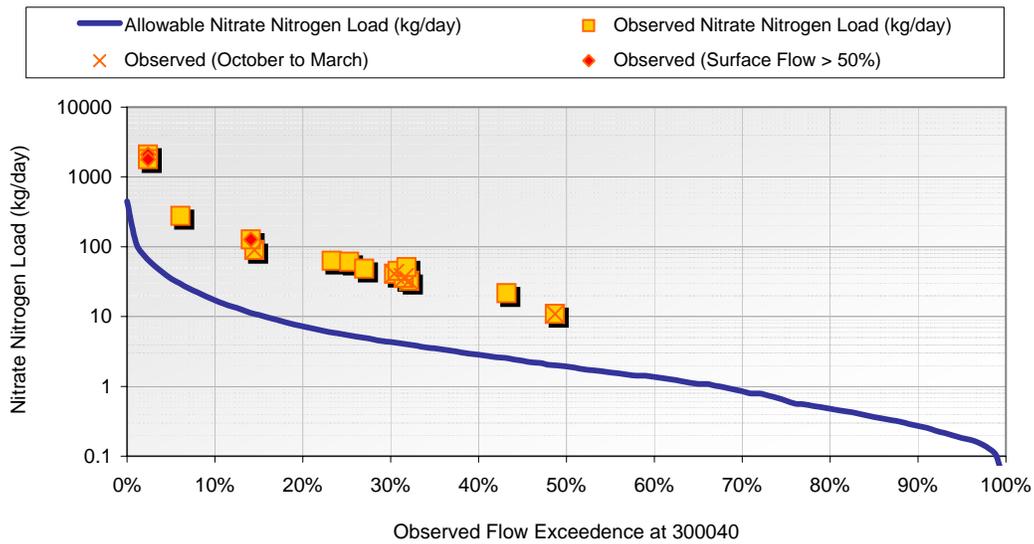
Flow Exceedence Ranges	41-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	7	14.31	3	29	90.5%
10-40	21	2.23	0	2	76.9%
40-60	6	0.79	0	1	80.6%
60-90	6	0.26	0	1	96.1%
90-100	1	0.07	0	0	91.4%

**[32: Nitrate Nitrogen at 300040 (mg/L)] -vs- [10: Flow at 300040 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

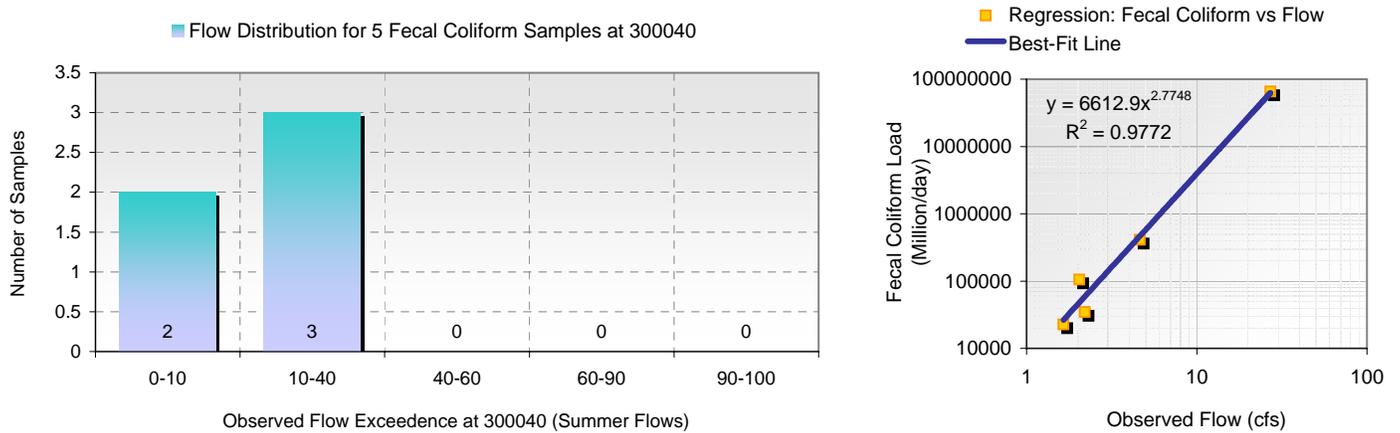


**3. Estimated TMDL Loads by Flow Exceedence Range**

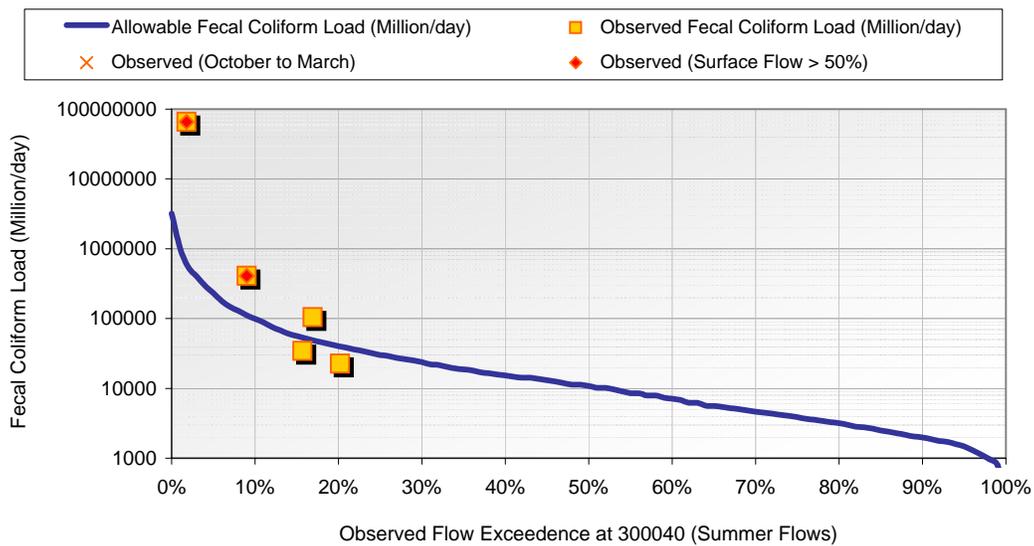
Flow Exceedence Ranges	15-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	3	14.31	35	1,780	98.0%
10-40	10	2.23	5	50	89.0%
40-60	2	0.79	2	16	88.1%
60-90	0	0.26	1	No Data	No Data
90-100	0	0.07	0	No Data	No Data

**[31: Fecal Coliform at 300040 (MPN/100mL)] -vs- [23: Flow at 300040 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

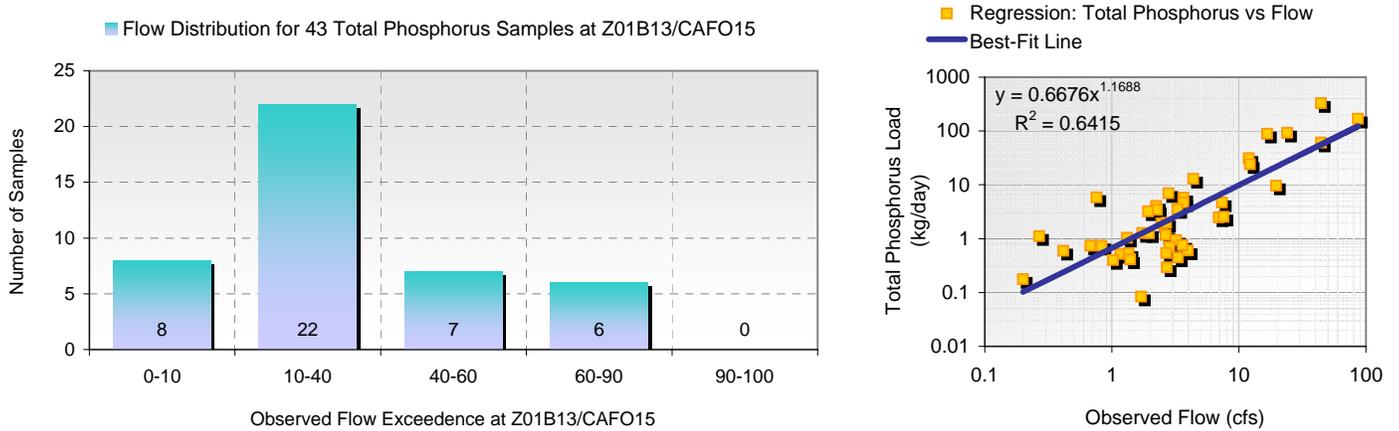


**3. Estimated TMDL Loads by Flow Exceedence Range**

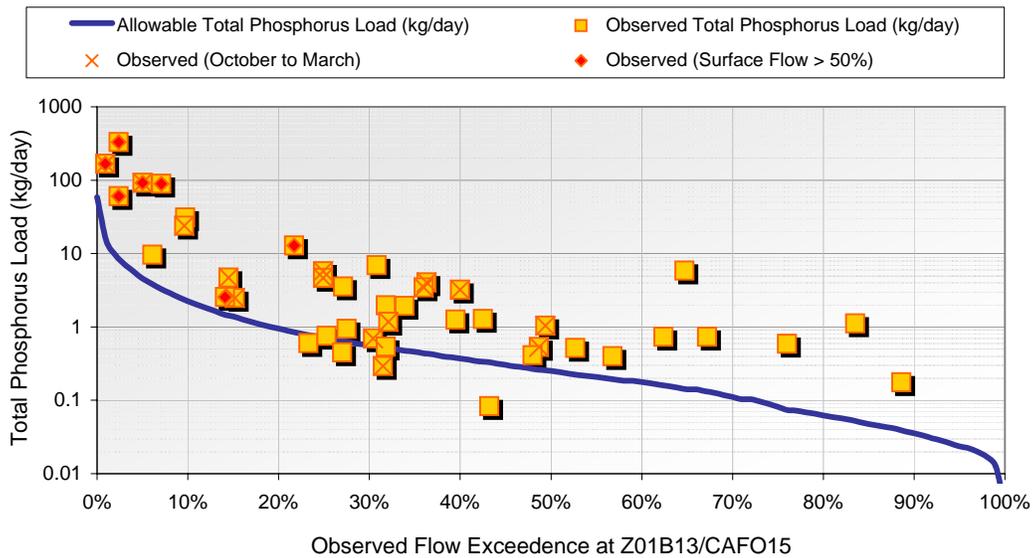
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	9.49	232,144	33,060,103	99.3%
10-40	3	1.23	30,068	34,493	12.8%
40-60	0	0.44	10,779	No Data	No Data
60-90	0	0.16	3,858	No Data	No Data
90-100	0	0.06	1,475	No Data	No Data

**[19: Total Phosphorus at Z01B13/CAFO15 (mg/L)] -vs- [1: Flow at Z01B13/CAFO15 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

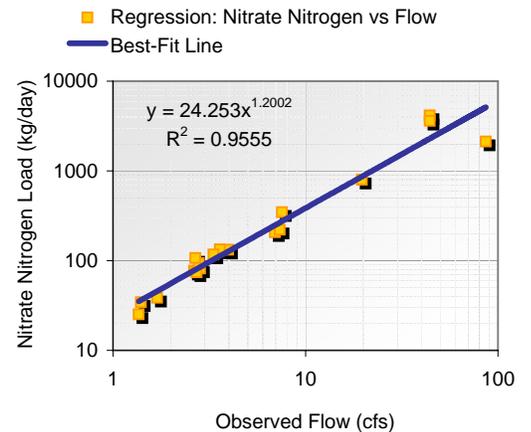
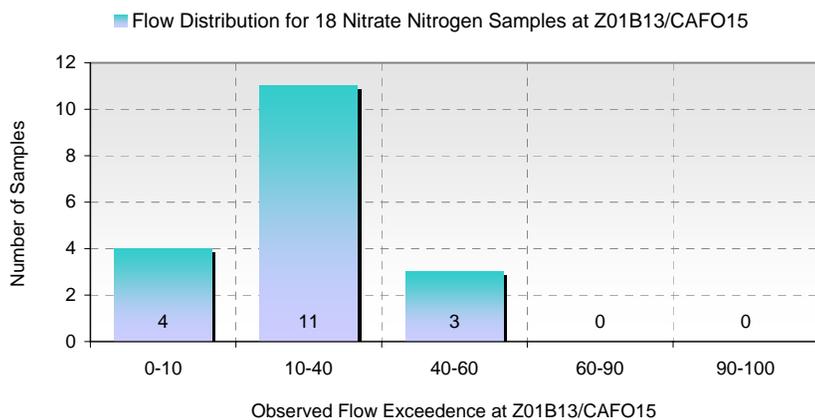


**3. Estimated TMDL Loads by Flow Exceedence Range**

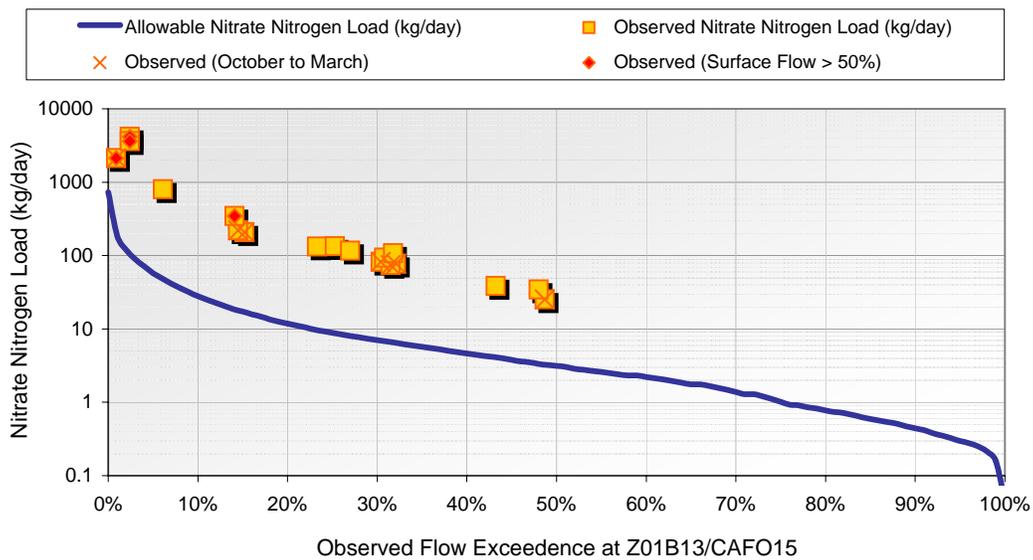
Flow Exceedence Ranges	43-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	8	23.32	5	75	93.9%
10-40	22	3.63	1	2	68.0%
40-60	7	1.29	0	1	51.3%
60-90	6	0.42	0	1	88.9%
90-100	0	0.12	0	No Data	No Data

**[10: Nitrate Nitrogen at Z01B13/CAFO15 (mg/L)] -vs- [1: Flow at Z01B13/CAFO15 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

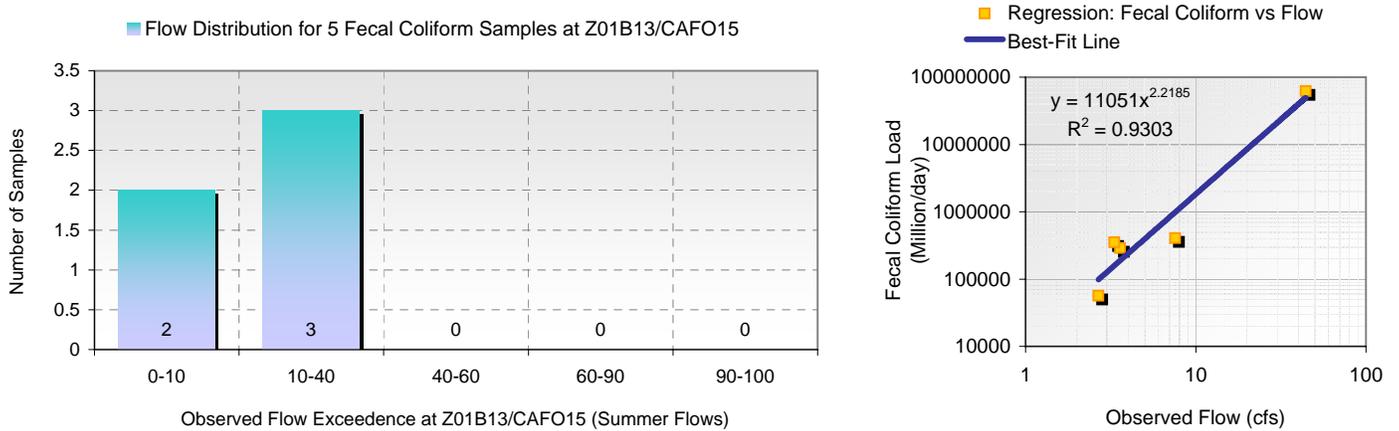


**3. Estimated TMDL Loads by Flow Exceedence Range**

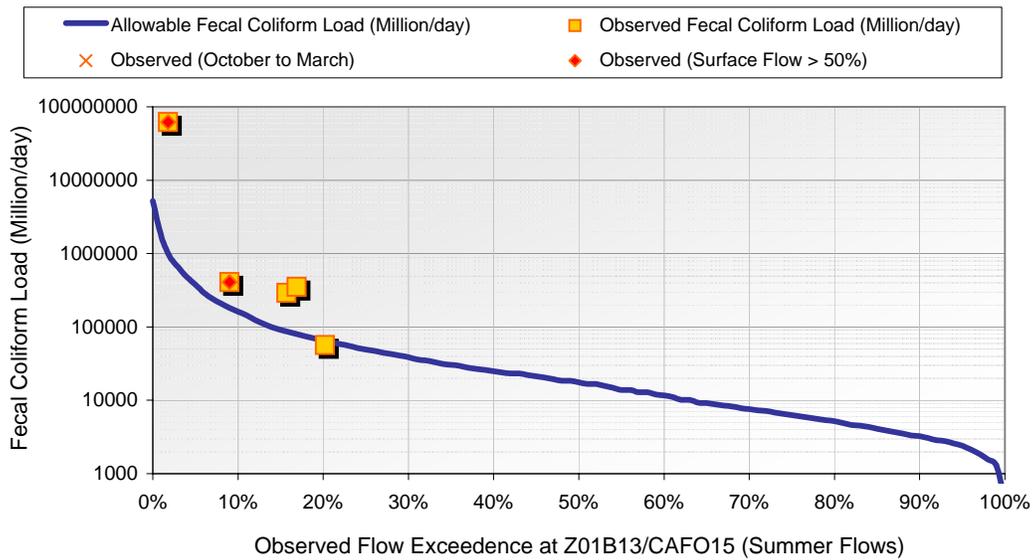
Flow Exceedence Ranges	18-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	4	23.32	57	2,857	98.0%
10-40	11	3.63	9	116	92.4%
40-60	3	1.29	3	34	90.9%
60-90	0	0.42	1	No Data	No Data
90-100	0	0.12	0	No Data	No Data

**[1: Fecal Coliform at Z01B13/CAFO15 (MPN/100mL)] -vs- [14: Flow at Z01B13/CAFO15 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

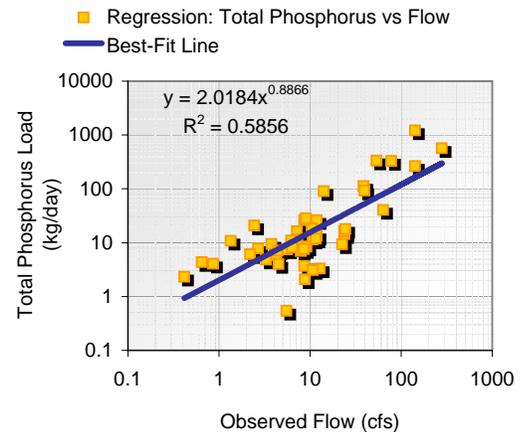
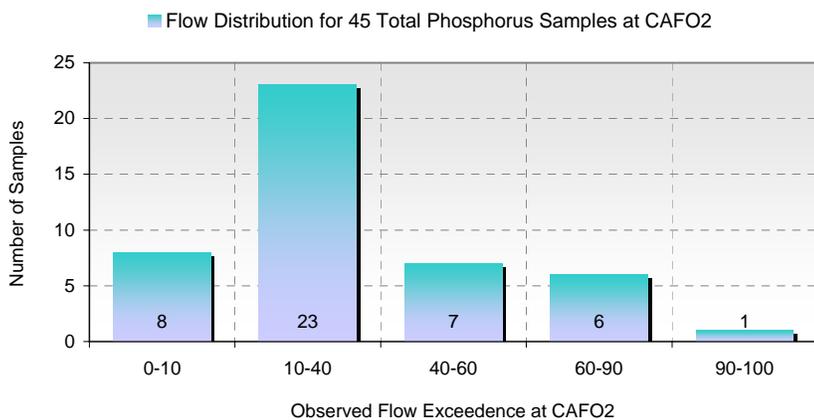


**3. Estimated TMDL Loads by Flow Exceedence Range**

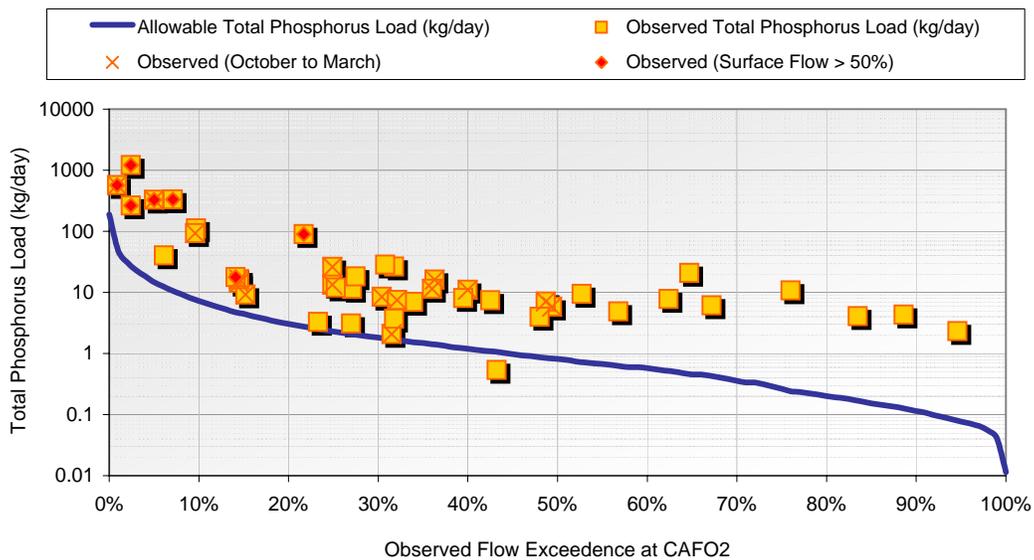
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	15.47	378,400	31,038,635	98.8%
10-40	3	2.00	49,011	289,904	83.1%
40-60	0	0.72	17,570	No Data	No Data
60-90	0	0.26	6,288	No Data	No Data
90-100	0	0.10	2,404	No Data	No Data

**[20: Total Phosphorus at CAFO2 (mg/L)] -vs- [2: Flow at CAFO2 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

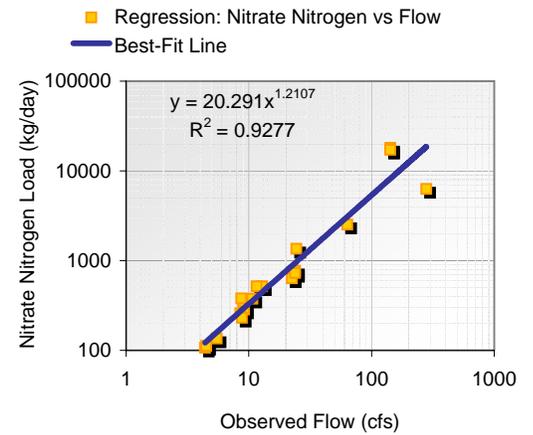
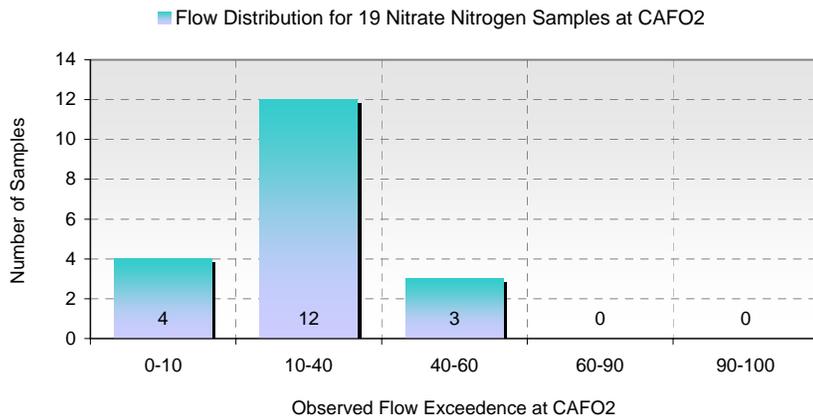


**3. Estimated TMDL Loads by Flow Exceedence Range**

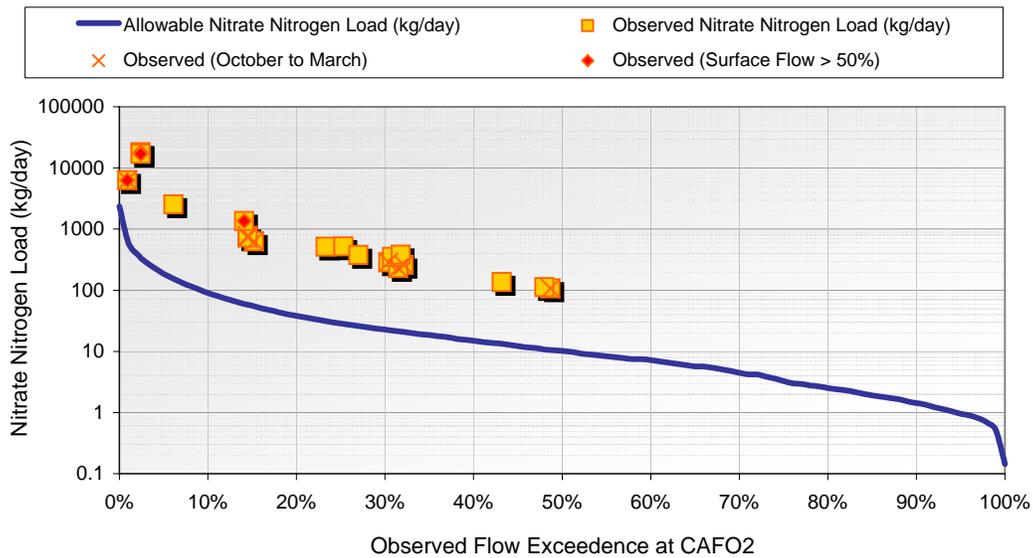
Flow Exceedence Ranges	45-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	8	75.38	15	296	95.0%
10-40	23	11.73	2	11	80.0%
40-60	7	4.15	1	6	86.1%
60-90	6	1.34	0	7	96.2%
90-100	1	0.39	0	2	96.7%

**[11: Nitrate Nitrogen at CAFO2 (mg/L)] -vs- [2: Flow at CAFO2 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

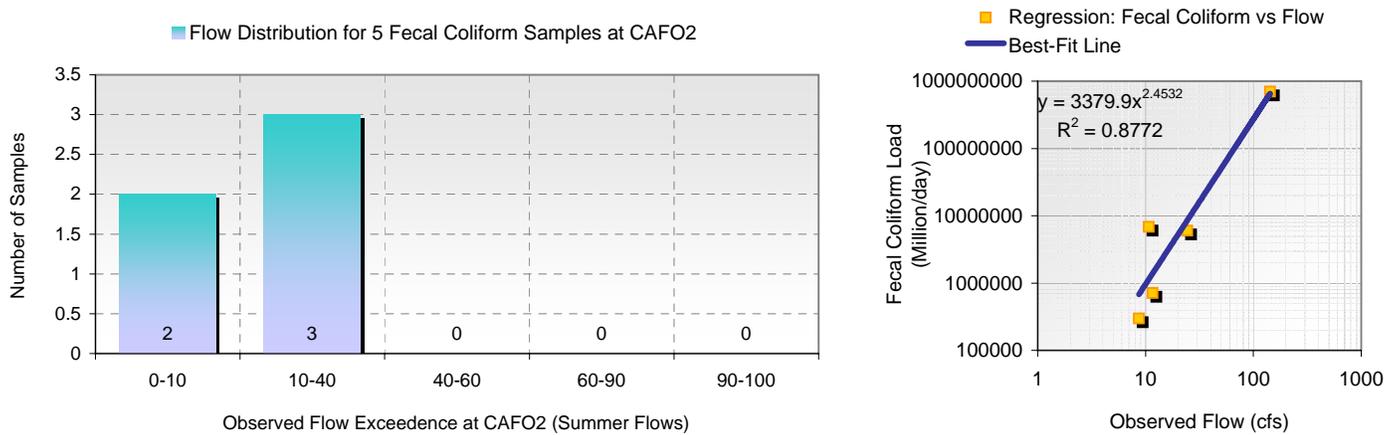


**3. Estimated TMDL Loads by Flow Exceedence Range**

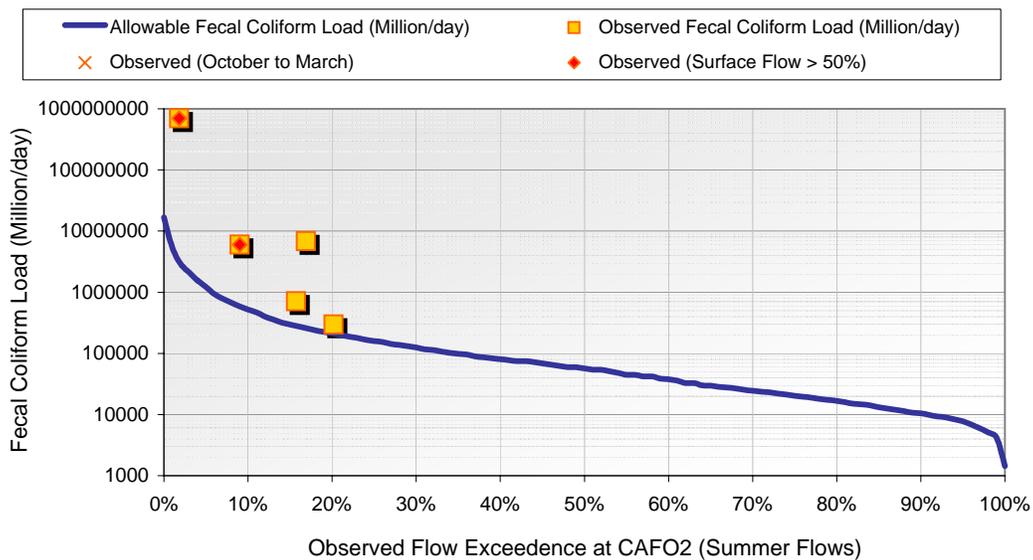
Flow Exceedence Ranges	19-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	4	75.38	184	11,679	98.4%
10-40	12	11.73	29	447	93.6%
40-60	3	4.15	10	112	90.9%
60-90	0	1.34	3	No Data	No Data
90-100	0	0.39	1	No Data	No Data

**[2: Fecal Coliform at CAFO2 (MPN/100mL)] -vs- [15: Flow at CAFO2 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

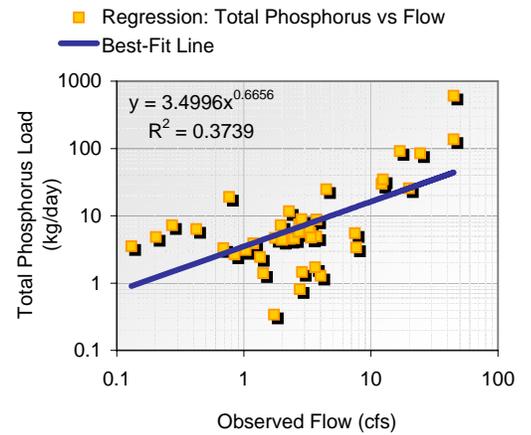
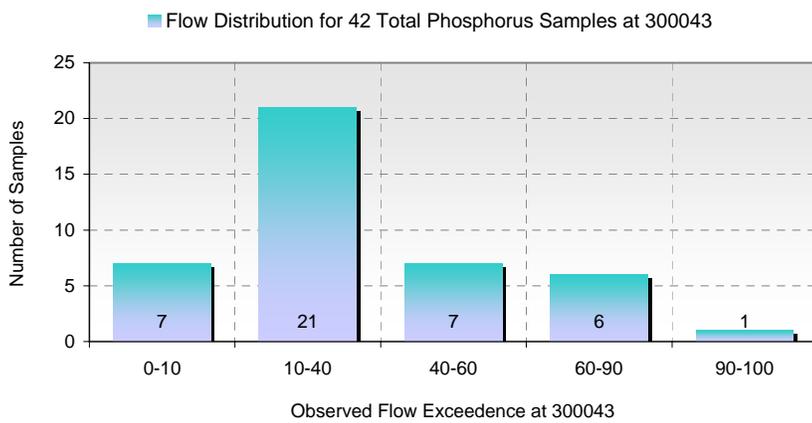


**3. Estimated TMDL Loads by Flow Exceedence Range**

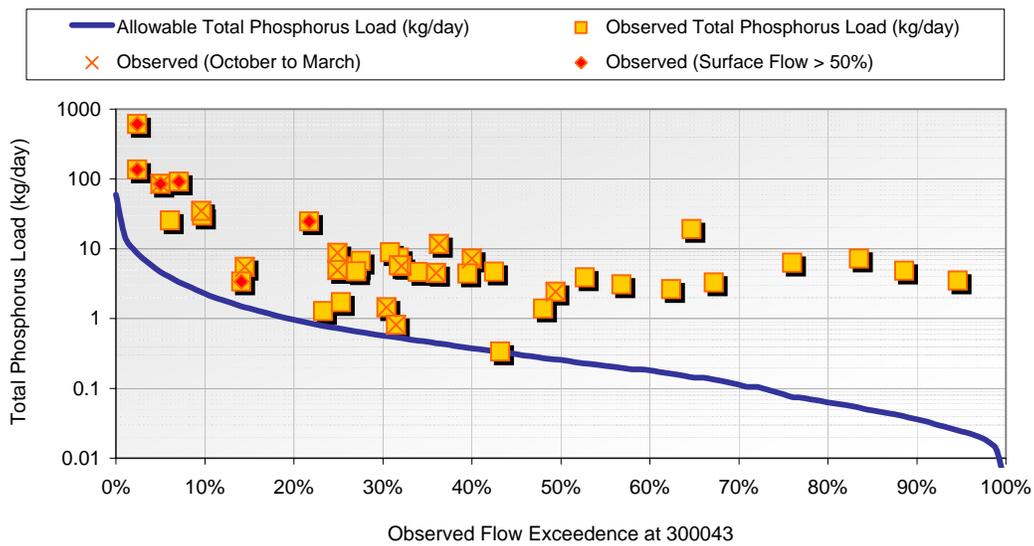
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	49.99	1,223,040	352,685,364	99.7%
10-40	3	6.47	158,410	709,854	77.7%
40-60	0	2.32	56,788	No Data	No Data
60-90	0	0.83	20,324	No Data	No Data
90-100	0	0.32	7,771	No Data	No Data

**[30: Total Phosphorus at 300043 (mg/L)] -vs- [9: Flow at 300043 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

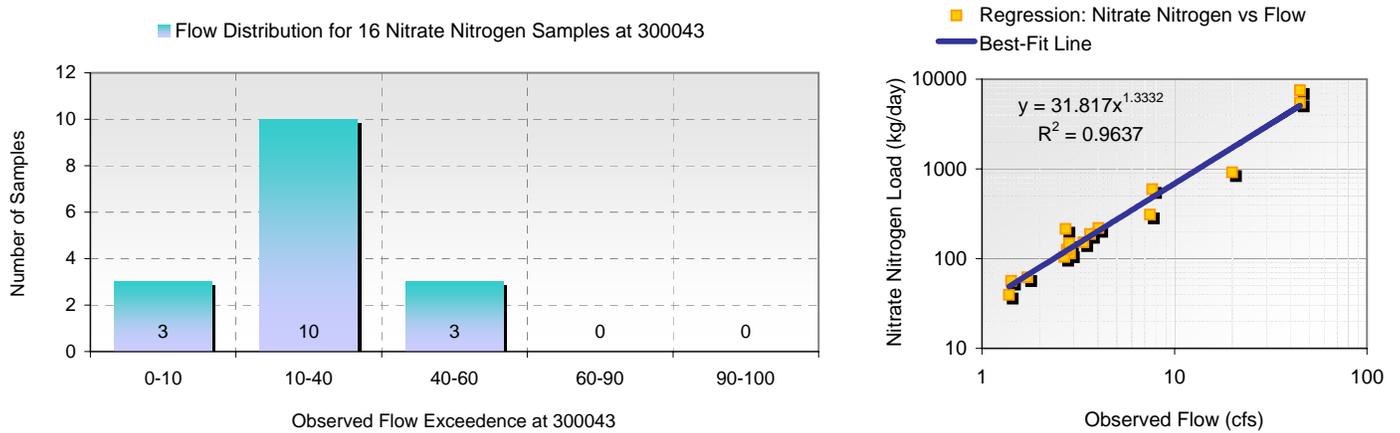


**3. Estimated TMDL Loads by Flow Exceedence Range**

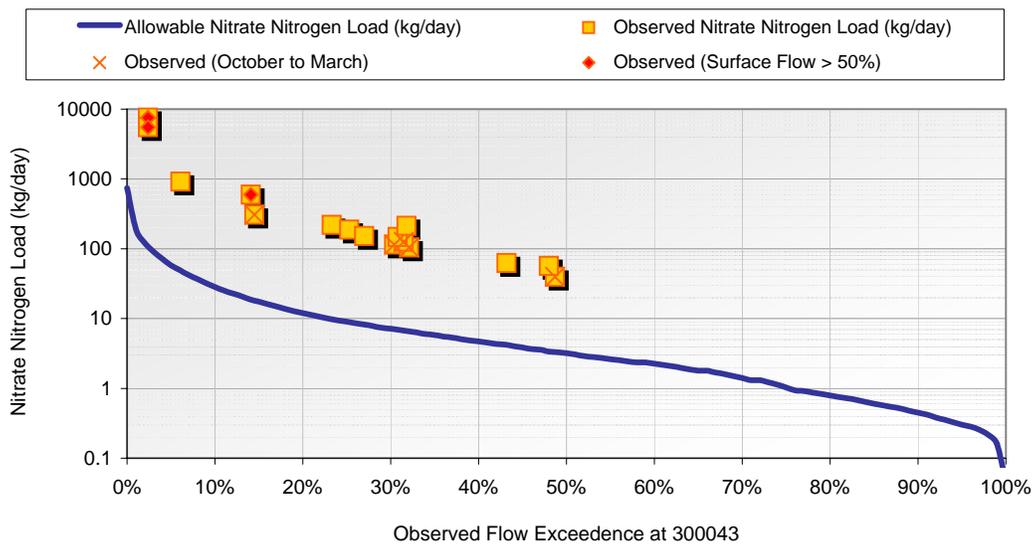
Flow Exceedence Ranges	42-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	7	23.67	5	85	94.5%
10-40	21	3.68	1	5	86.9%
40-60	7	1.30	0	3	90.8%
60-90	6	0.42	0	6	98.5%
90-100	1	0.12	0	4	99.3%

**[29: Nitrate Nitrogen at 300043 (mg/L)] -vs- [9: Flow at 300043 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

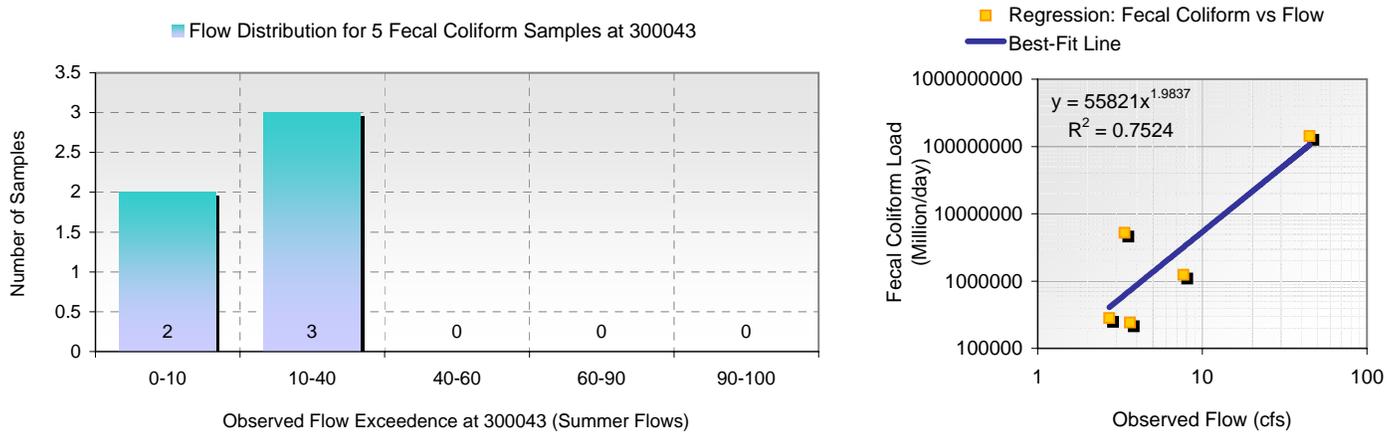


**3. Estimated TMDL Loads by Flow Exceedence Range**

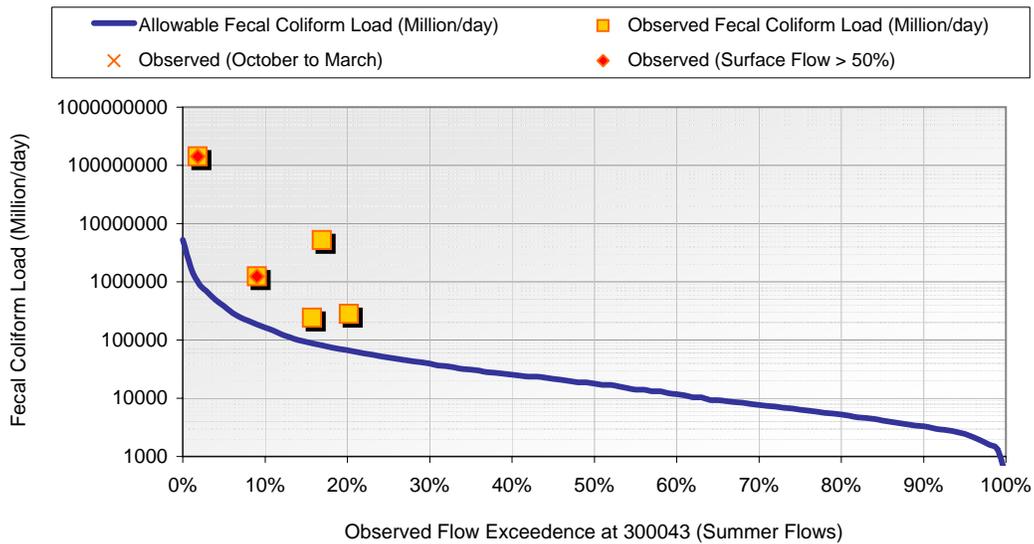
Flow Exceedence Ranges	16-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	3	23.67	58	5,484	98.9%
10-40	10	3.68	9	170	94.7%
40-60	3	1.30	3	57	94.4%
60-90	0	0.42	1	No Data	No Data
90-100	0	0.12	0	No Data	No Data

**[28: Fecal Coliform at 300043 (MPN/100mL)] -vs- [22: Flow at 300043 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

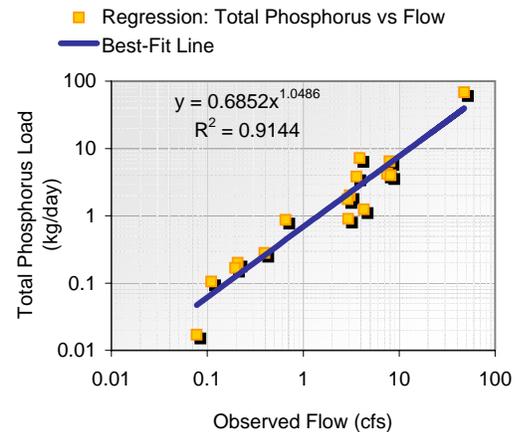
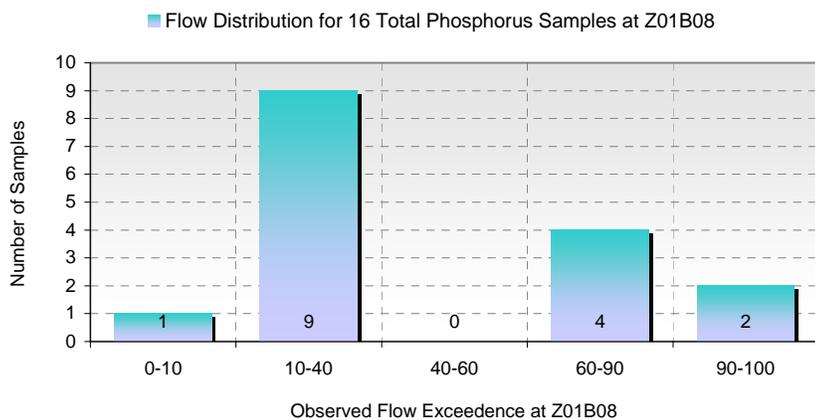


**3. Estimated TMDL Loads by Flow Exceedence Range**

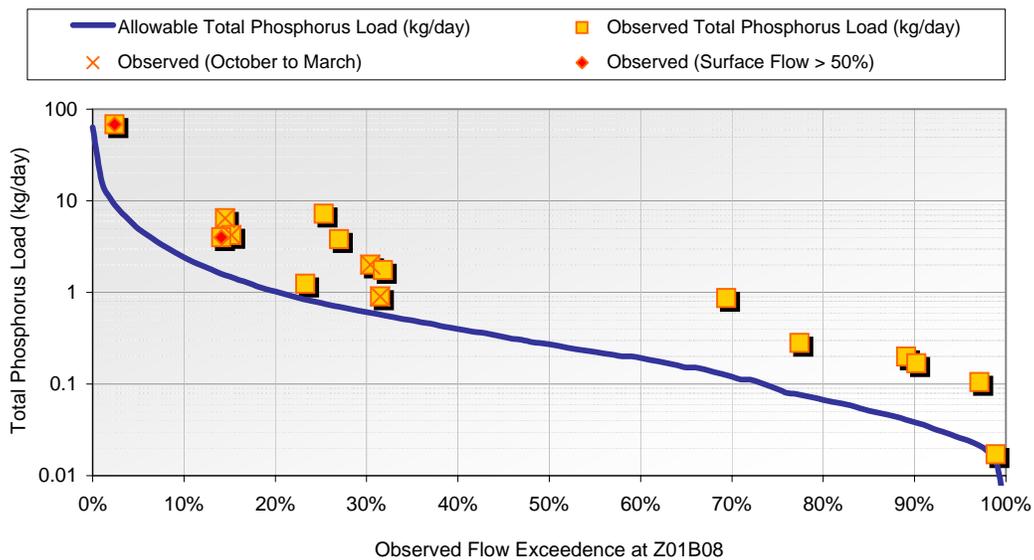
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	15.70	384,117	72,007,838	99.5%
10-40	3	2.03	49,751	279,921	82.2%
40-60	0	0.73	17,835	No Data	No Data
60-90	0	0.26	6,383	No Data	No Data
90-100	0	0.10	2,441	No Data	No Data

**[23: Total Phosphorus at Z01B08 (mg/L)] -vs- [5: Flow at Z01B08 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

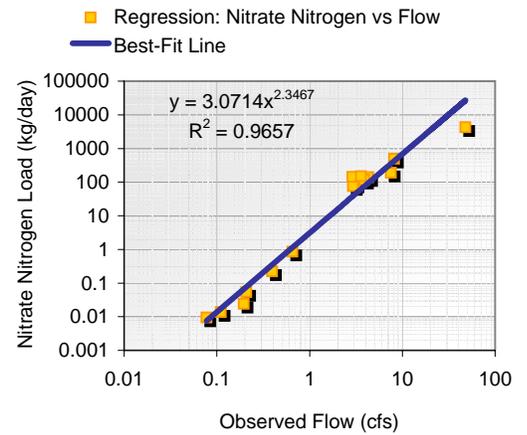
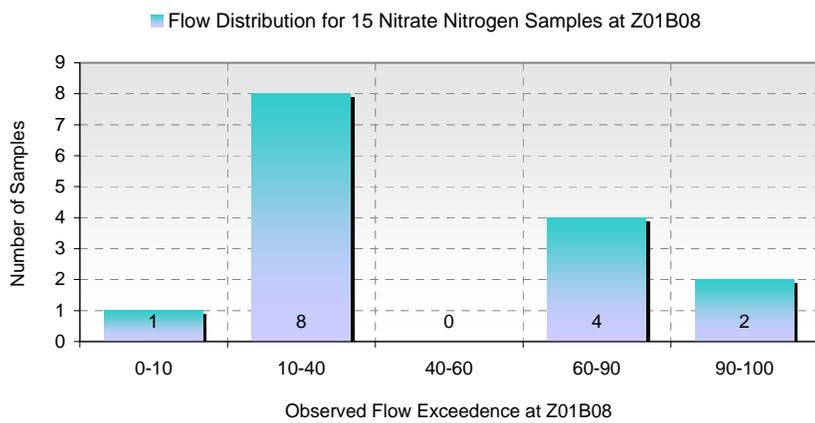


**3. Estimated TMDL Loads by Flow Exceedence Range**

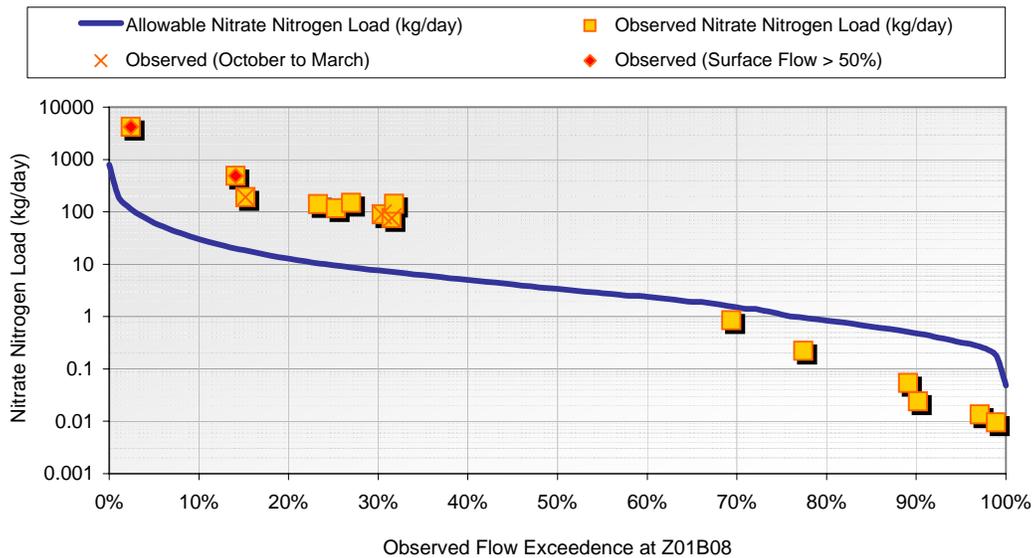
Flow Exceedence Ranges	16-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	25.20	5	68	92.8%
10-40	9	3.92	1	4	79.8%
40-60	0	1.39	0	No Data	No Data
60-90	4	0.45	0	0	63.3%
90-100	2	0.13	0	0	58.2%

**[14: Nitrate Nitrogen at Z01B08 (mg/L)] -vs- [5: Flow at Z01B08 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

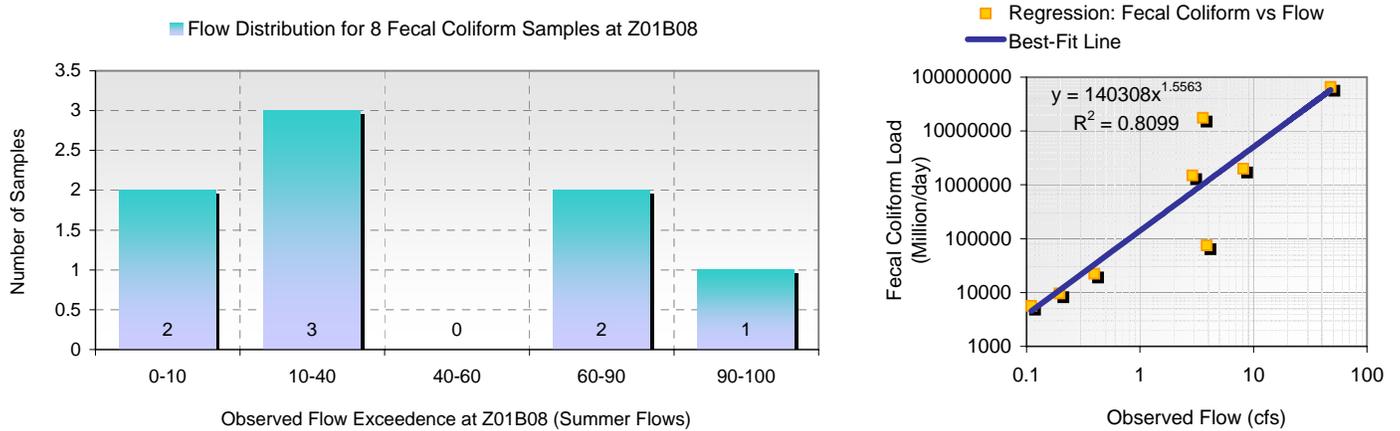


**3. Estimated TMDL Loads by Flow Exceedence Range**

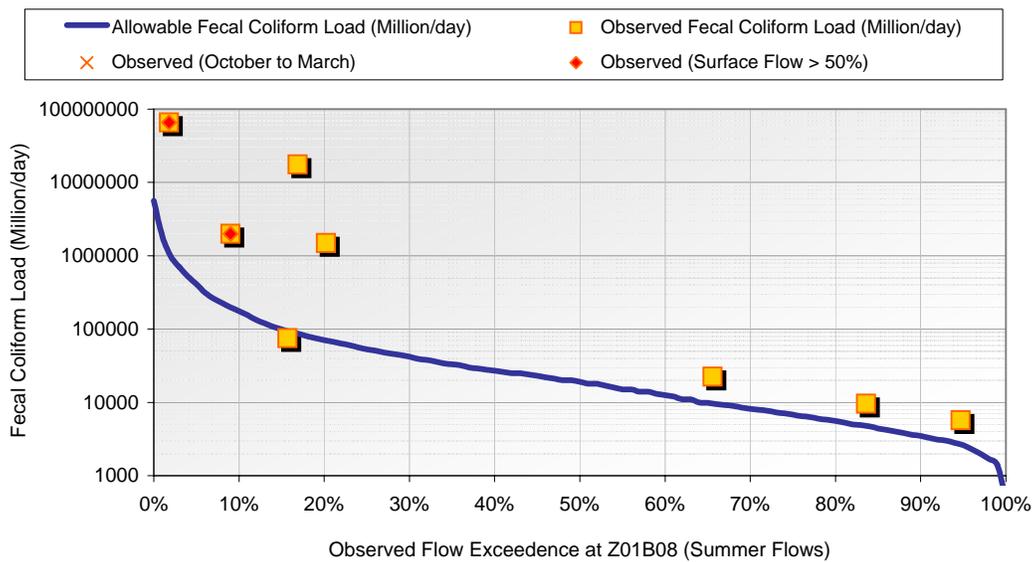
Flow Exceedence Ranges	15-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	25.20	62	4,210	98.5%
10-40	8	3.92	10	141	93.2%
40-60	0	1.39	3	No Data	No Data
60-90	4	0.45	1	0	0.0%
90-100	2	0.13	0	0	0.0%

**[5: Fecal Coliform at Z01B08 (MPN/100mL)] -vs- [18: Flow at Z01B08 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

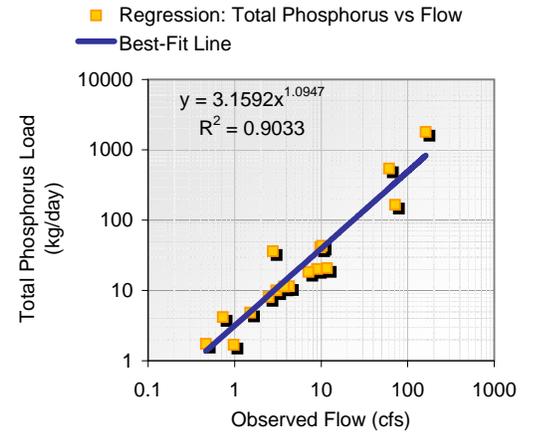
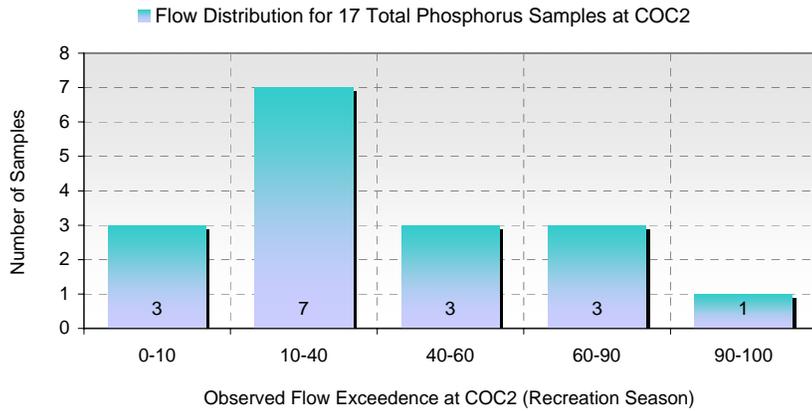


**3. Estimated TMDL Loads by Flow Exceedence Range**

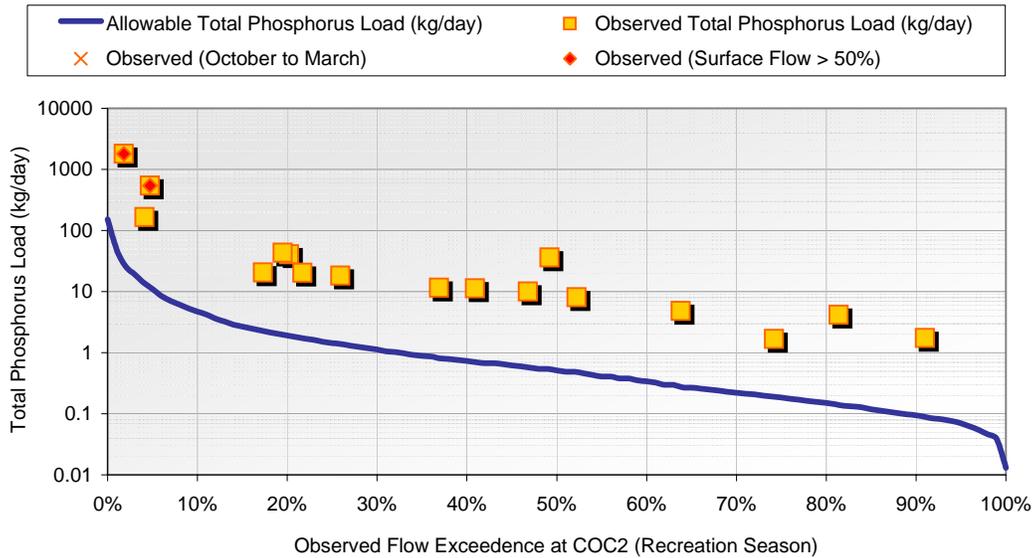
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	16.72	408,965	33,740,625	98.8%
10-40	3	2.17	52,970	1,490,144	96.4%
40-60	0	0.78	18,989	No Data	No Data
60-90	2	0.28	6,796	15,946	57.4%
90-100	1	0.11	2,599	5,667	54.1%

**[40: Total Phosphorus at COC2 (mg/L)] -vs- [40: Flow at COC2 (Recreation Season) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

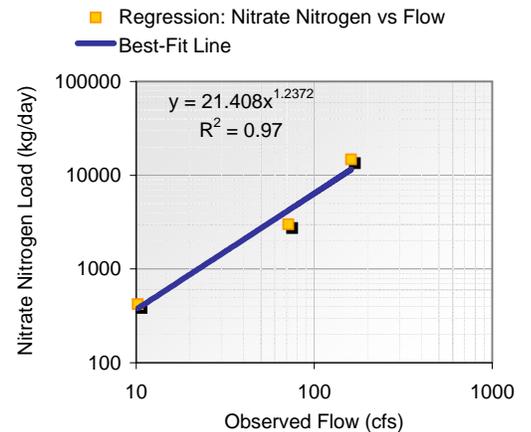
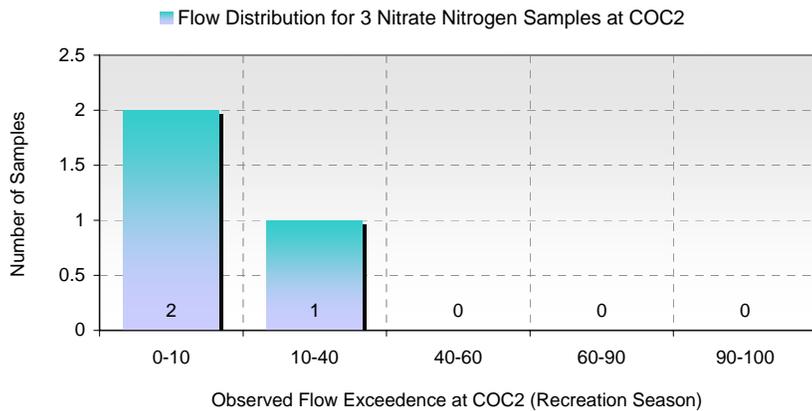


**3. Estimated TMDL Loads by Flow Exceedence Range**

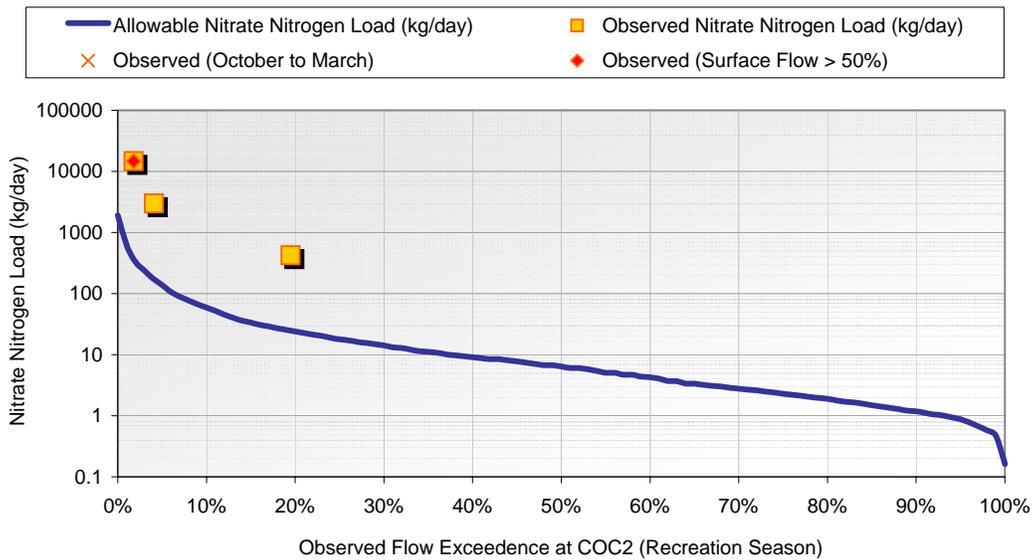
Flow Exceedence Ranges	17-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	3	56.45	11	542	98.0%
10-40	7	7.31	1	20	92.9%
40-60	3	2.62	0.51	10	94.8%
60-90	3	0.94	0.18	4	95.6%
90-100	1	0.36	0.07	2	96.0%

**[39: Nitrate Nitrogen at COC2 (mg/L)] -vs- [40: Flow at COC2 (Recreation Season) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

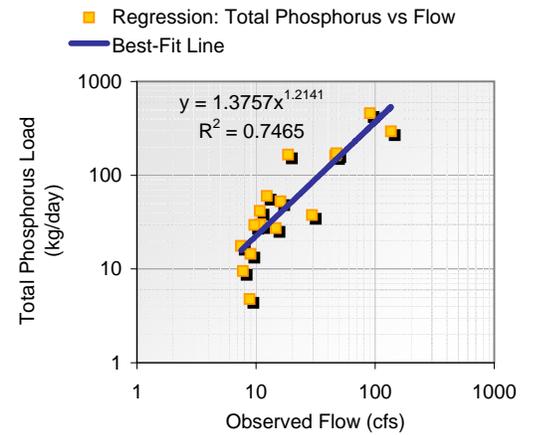
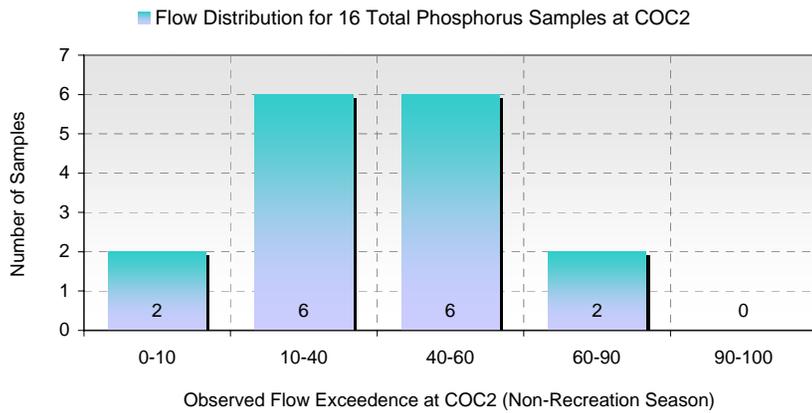


**3. Estimated TMDL Loads by Flow Exceedence Range**

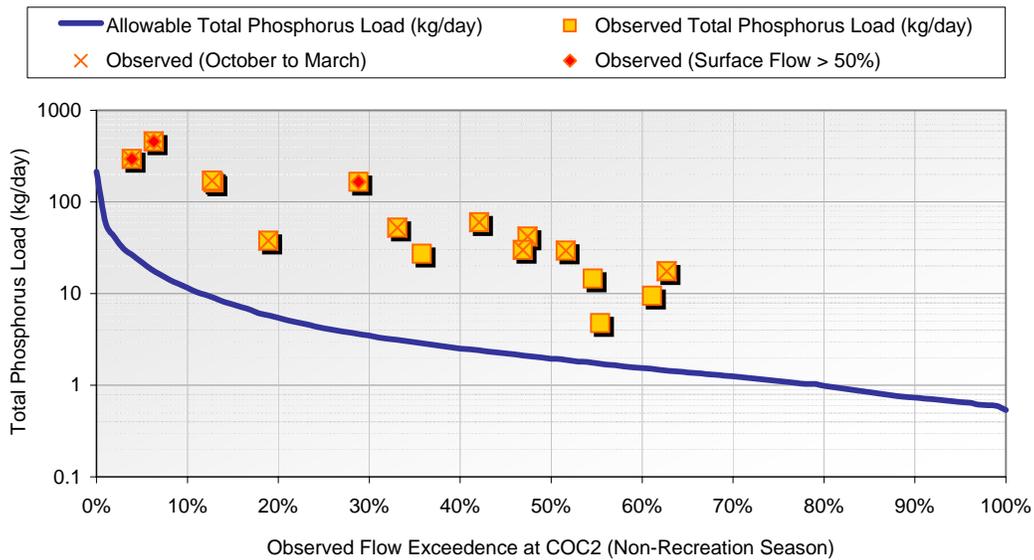
Flow Exceedence Ranges	3-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	56.45	138	8,867	98.4%
10-40	1	7.31	18	420	95.7%
40-60	0	2.62	6	No Data	No Data
60-90	0	0.94	2	No Data	No Data
90-100	0	0.36	1	No Data	No Data

**[40: Total Phosphorus at COC2 (mg/L)] -vs- [41: Flow at COC2 (Non-Recreation Season) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

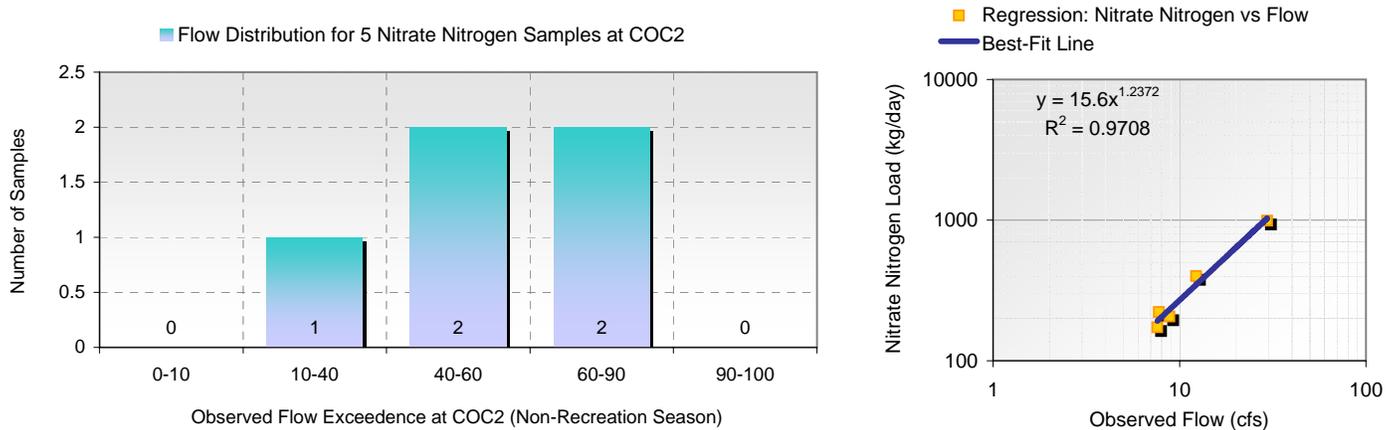


**3. Estimated TMDL Loads by Flow Exceedence Range**

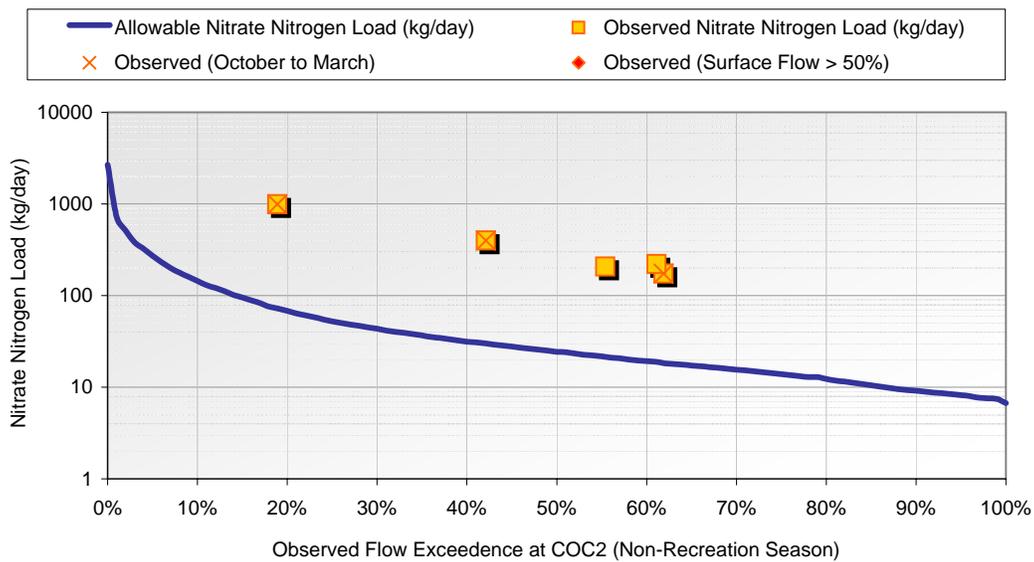
Flow Exceedence Ranges	16-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	111.41	22	375	94.2%
10-40	6	21.41	4	108	96.1%
40-60	6	9.96	2	30	93.4%
60-90	2	5.68	1	14	91.8%
90-100	0	3.35	0.66	No Data	No Data

**[39: Nitrate Nitrogen at COC2 (mg/L)] -vs- [41: Flow at COC2 (Non-Recreation Season) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

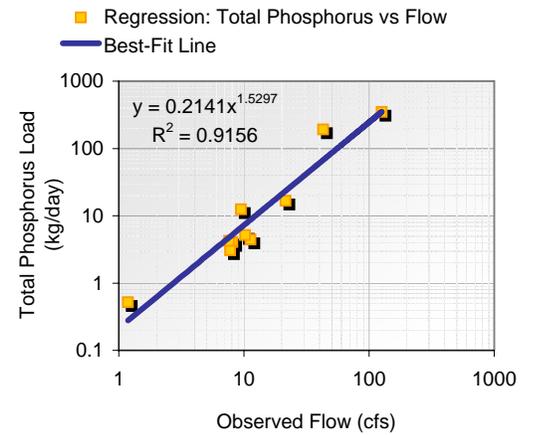
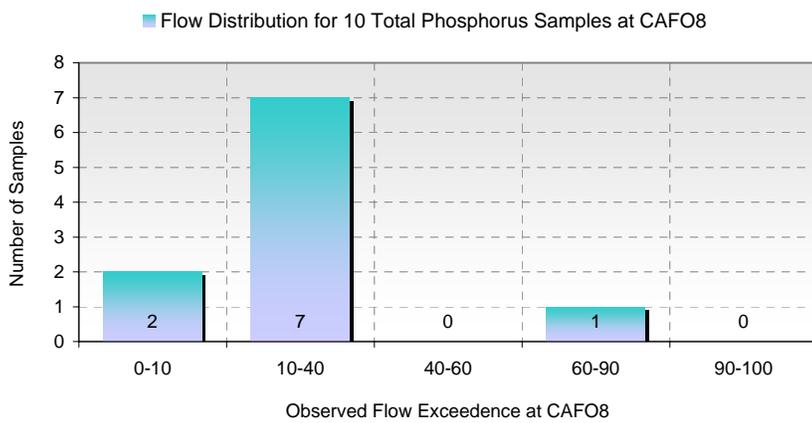


**3. Estimated TMDL Loads by Flow Exceedence Range**

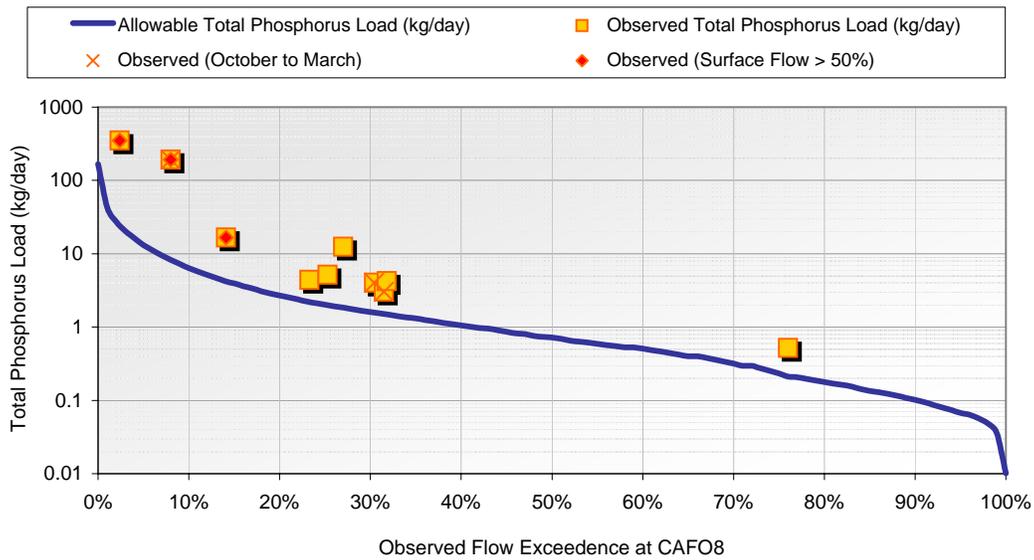
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	0	111.41	273	No Data	No Data
10-40	1	21.41	52	991	94.7%
40-60	2	9.96	24	303	92.0%
60-90	2	5.68	14	197	93.0%
90-100	0	3.35	8	No Data	No Data

**[21: Total Phosphorus at CAFO8 (mg/L)] -vs- [3: Flow at CAFO8 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

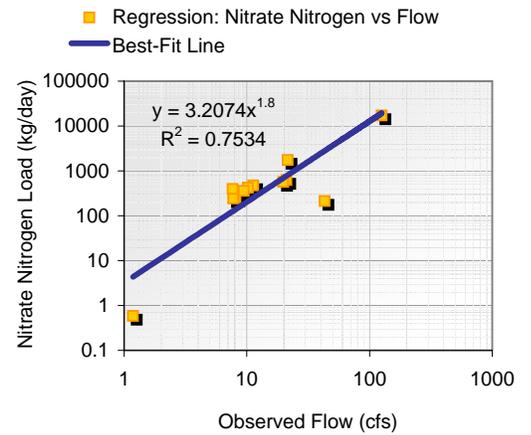
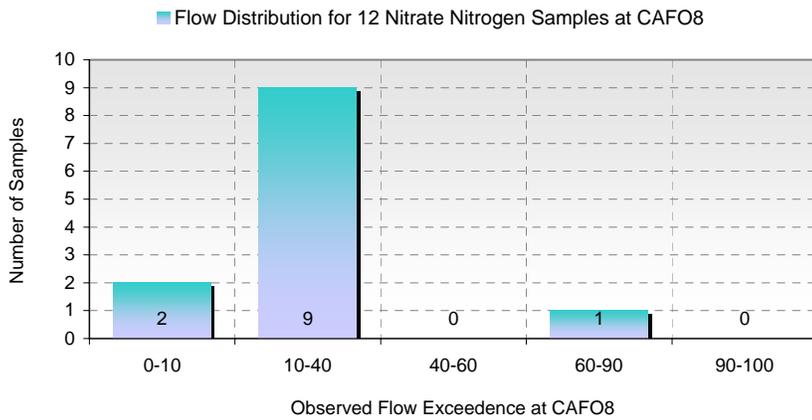


**3. Estimated TMDL Loads by Flow Exceedence Range**

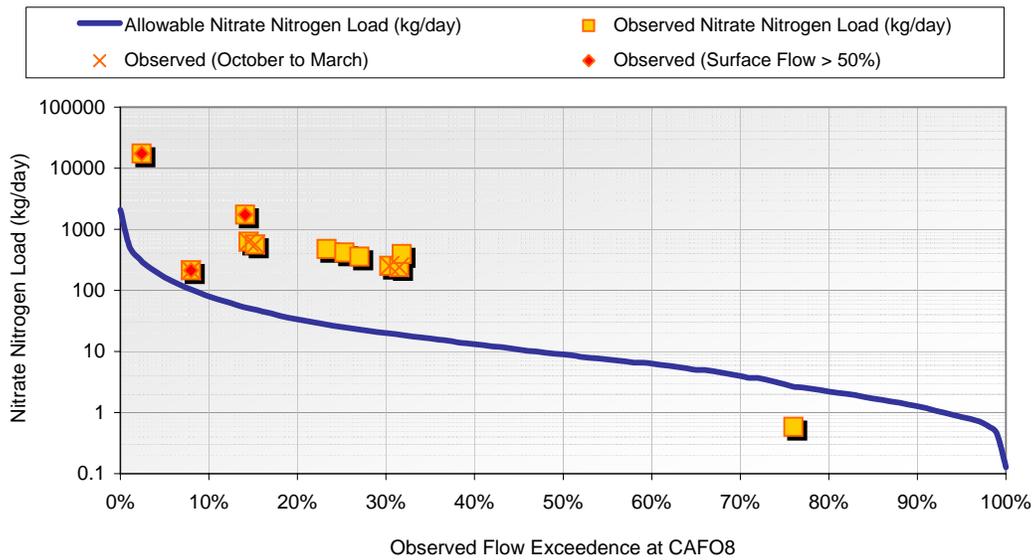
Flow Exceedence Ranges	10-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	66.49	13	270	95.2%
10-40	7	10.35	2	4	54.0%
40-60	0	3.66	1	No Data	No Data
60-90	1	1.19	0	1	55.3%
90-100	0	0.34	0	No Data	No Data

**[12: Nitrate Nitrogen at CAFO8 (mg/L)] -vs- [3: Flow at CAFO8 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

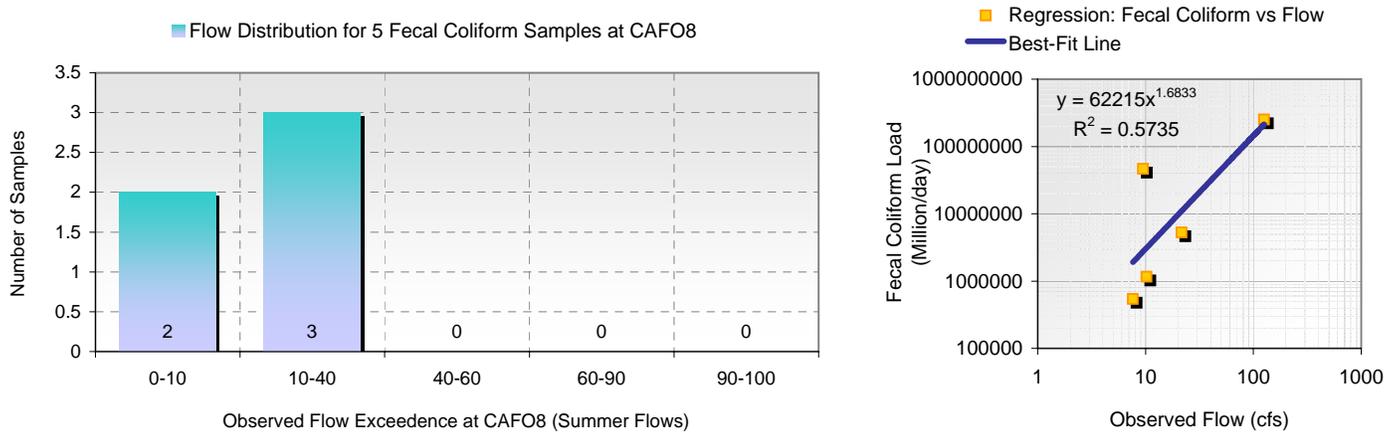


**3. Estimated TMDL Loads by Flow Exceedence Range**

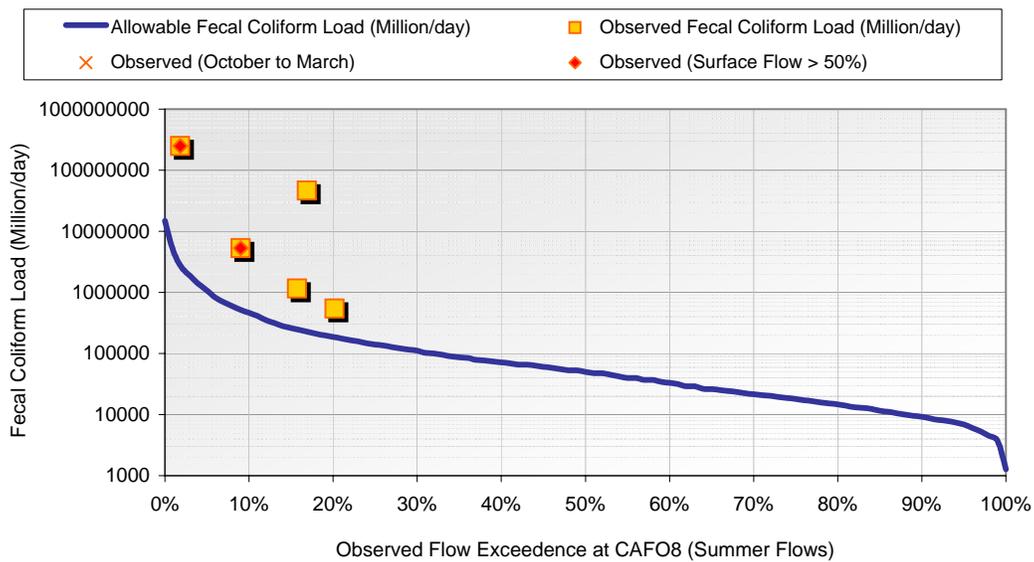
Flow Exceedence Ranges	12-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	66.49	163	8,744	98.1%
10-40	9	10.35	25	418	93.9%
40-60	0	3.66	9	No Data	No Data
60-90	1	1.19	3	1	0.0%
90-100	0	0.34	1	No Data	No Data

**[3: Fecal Coliform at CAFO8 (MPN/100mL)] -vs- [16: Flow at CAFO8 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

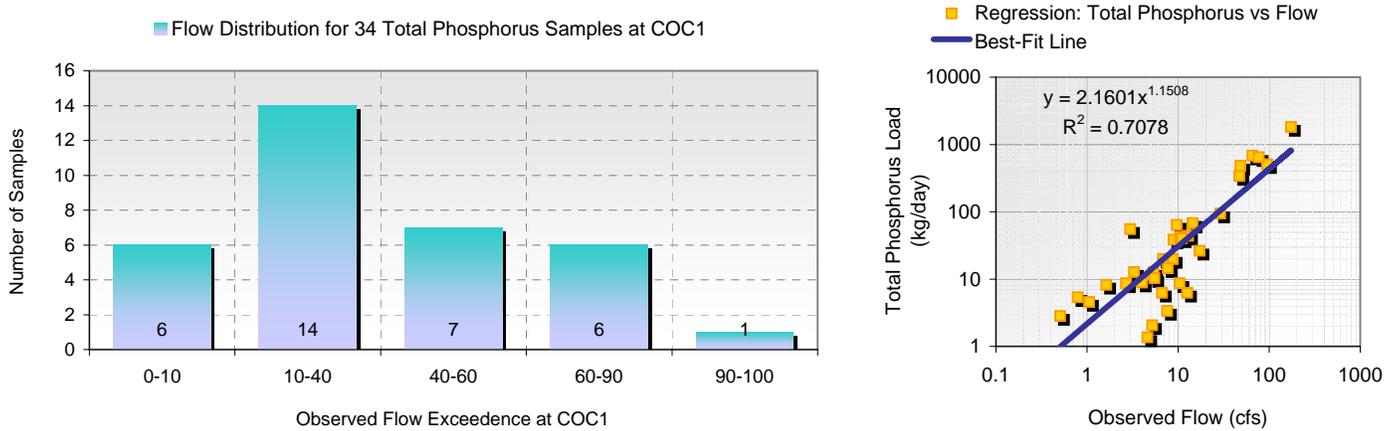


**3. Estimated TMDL Loads by Flow Exceedence Range**

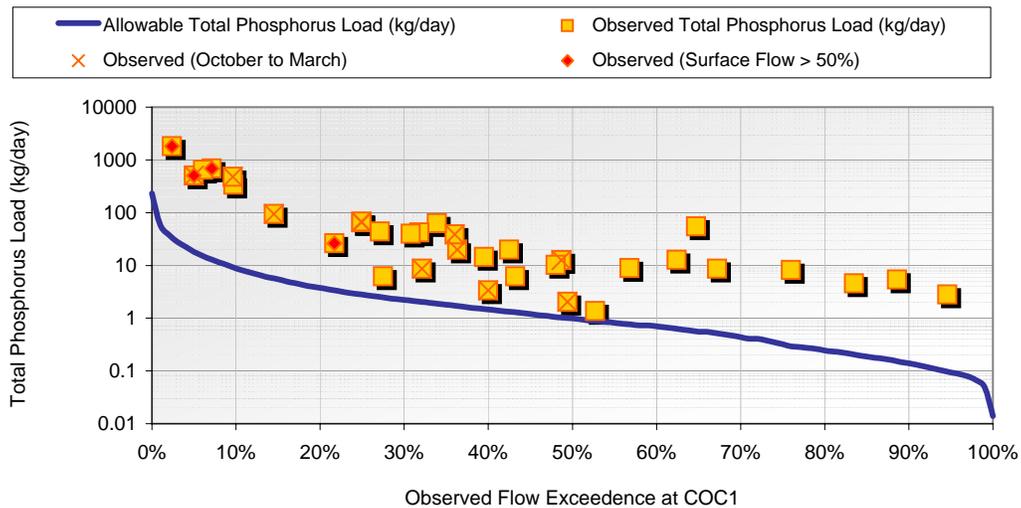
Flow Exceedence Ranges	5-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	44.10	1,078,896	127,571,943	99.2%
10-40	3	5.71	139,740	1,152,195	87.9%
40-60	0	2.05	50,095	No Data	No Data
60-90	0	0.73	17,929	No Data	No Data
90-100	0	0.28	6,855	No Data	No Data

**[38: Total Phosphorus at COC1 (mg/L)] -vs- [12: Flow at COC1 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

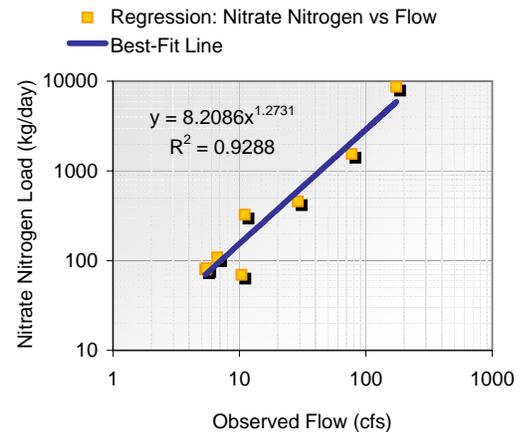
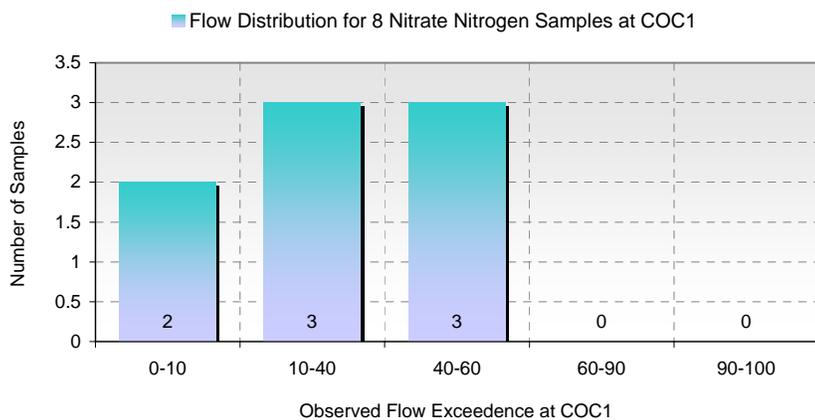


**3. Estimated TMDL Loads by Flow Exceedence Range**

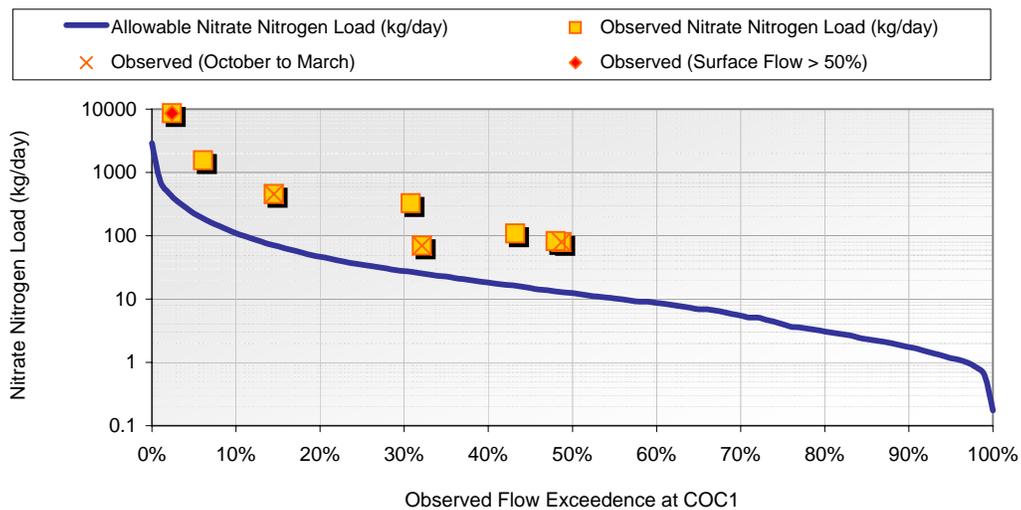
Flow Exceedence Ranges	34-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	6	91.97	18	576	96.9%
10-40	14	14.31	3	39	92.9%
40-60	7	5.07	1	9	88.8%
60-90	6	1.64	0	8	96.2%
90-100	1	0.48	0	3	96.7%

**[37: Nitrate Nitrogen at COC1 (mg/L)] -vs- [12: Flow at COC1 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

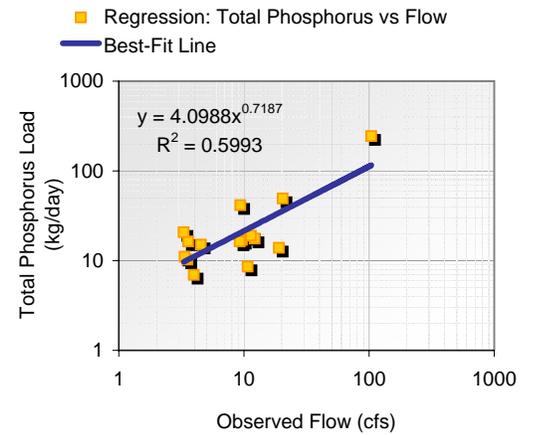
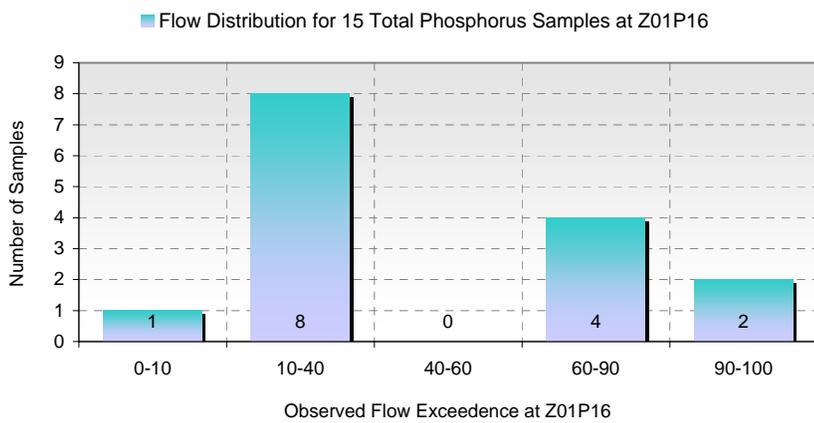


**3. Estimated TMDL Loads by Flow Exceedence Range**

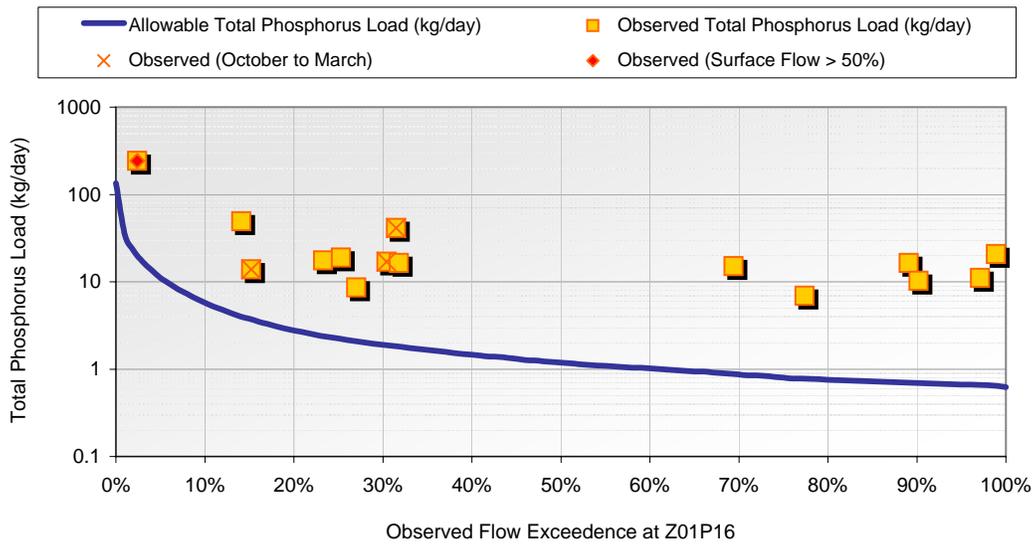
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	91.97	225	5,081	95.6%
10-40	3	14.31	35	324	89.2%
40-60	3	5.07	12	82	84.9%
60-90	0	1.64	4	No Data	No Data
90-100	0	0.48	1	No Data	No Data

**[22: Total Phosphorus at Z01P16 (mg/L)] -vs- [4: Flow at Z01P16 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

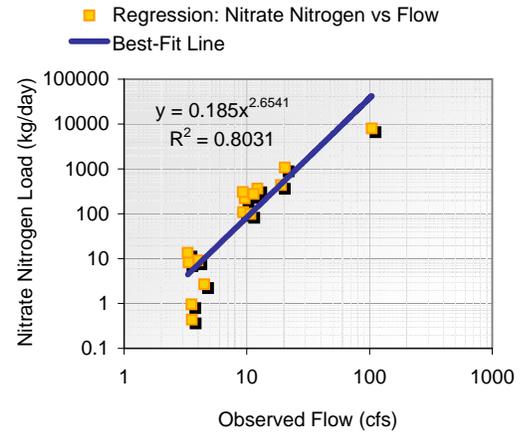
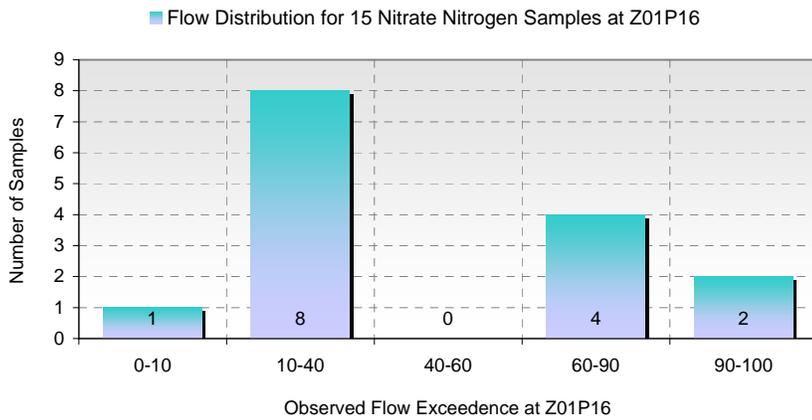


**3. Estimated TMDL Loads by Flow Exceedence Range**

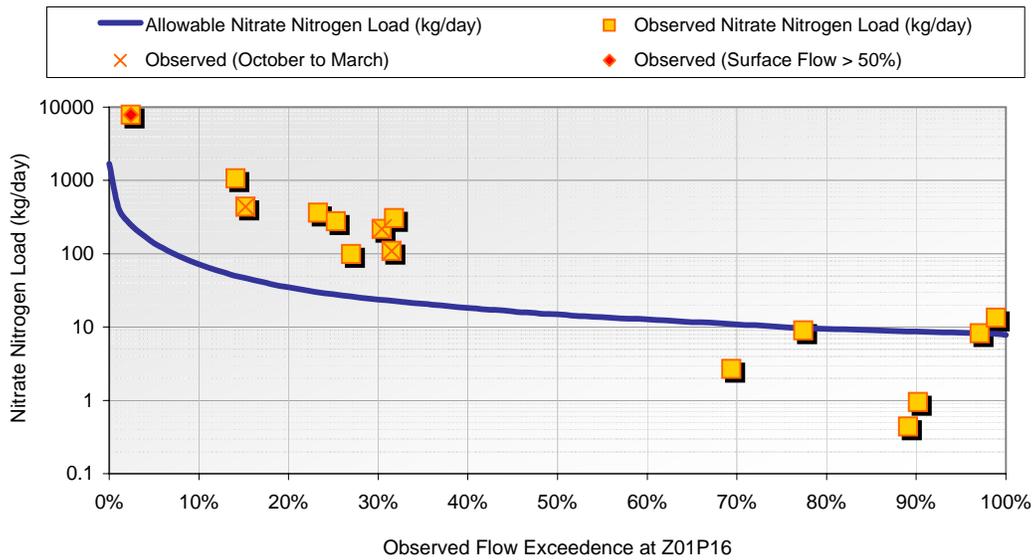
Flow Exceedence Ranges	15-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	56.53	11	243	95.4%
10-40	8	11.44	2	17	87.0%
40-60	0	6.08	1	No Data	No Data
60-90	4	4.09	1	13	93.7%
90-100	2	3.41	1	16	95.8%

**[13: Nitrate Nitrogen at Z01P16 (mg/L)] -vs- [4: Flow at Z01P16 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

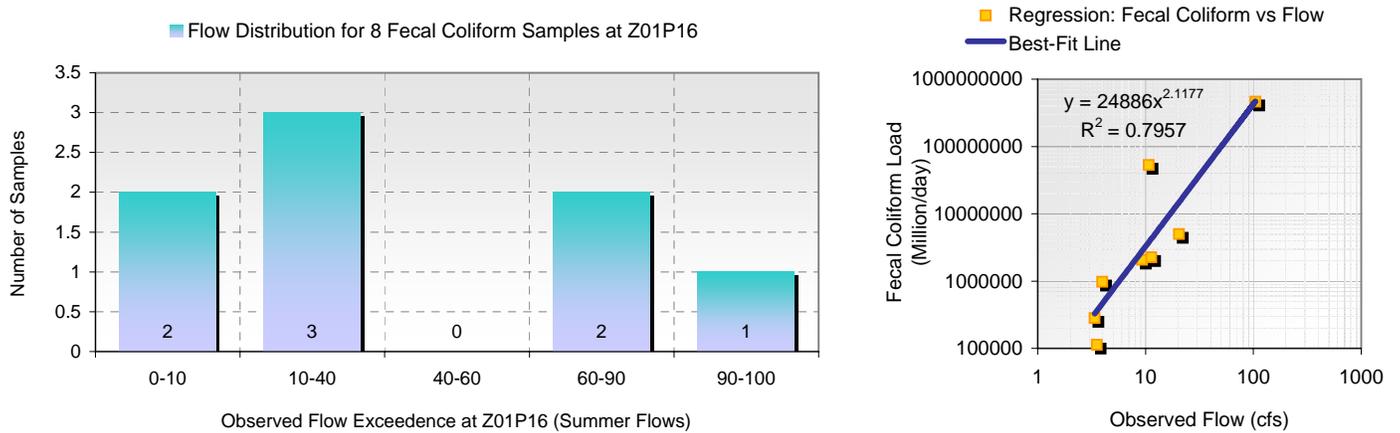


**3. Estimated TMDL Loads by Flow Exceedence Range**

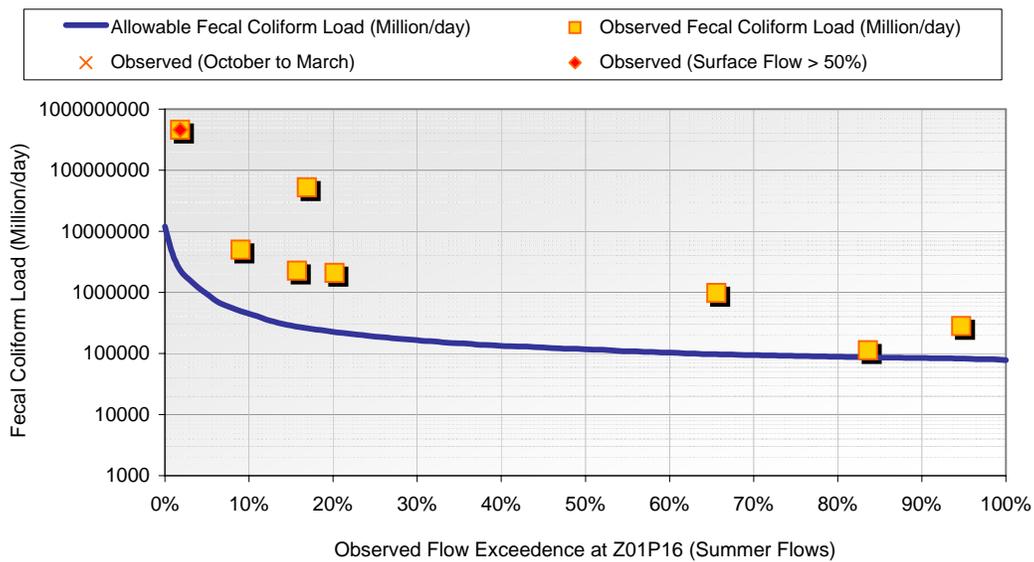
Flow Exceedence Ranges	15-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	56.53	138	7,892	98.2%
10-40	8	11.44	28	290	90.4%
40-60	0	6.08	15	No Data	No Data
60-90	4	4.09	10	2	0.0%
90-100	2	3.41	8	11	22.7%

**[4: Fecal Coliform at Z01P16 (MPN/100mL)] -vs- [17: Flow at Z01P16 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

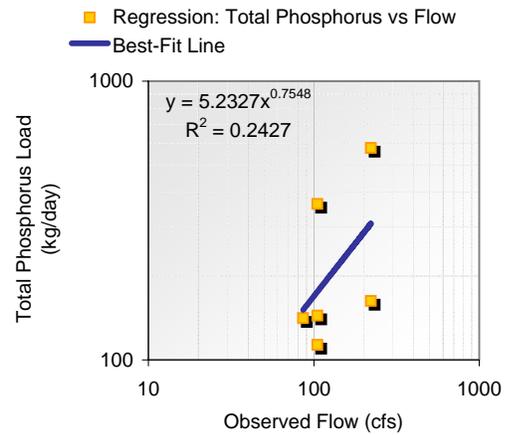
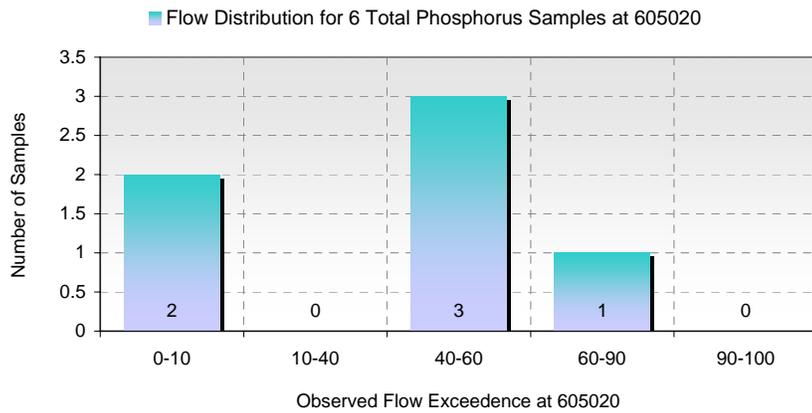


**3. Estimated TMDL Loads by Flow Exceedence Range**

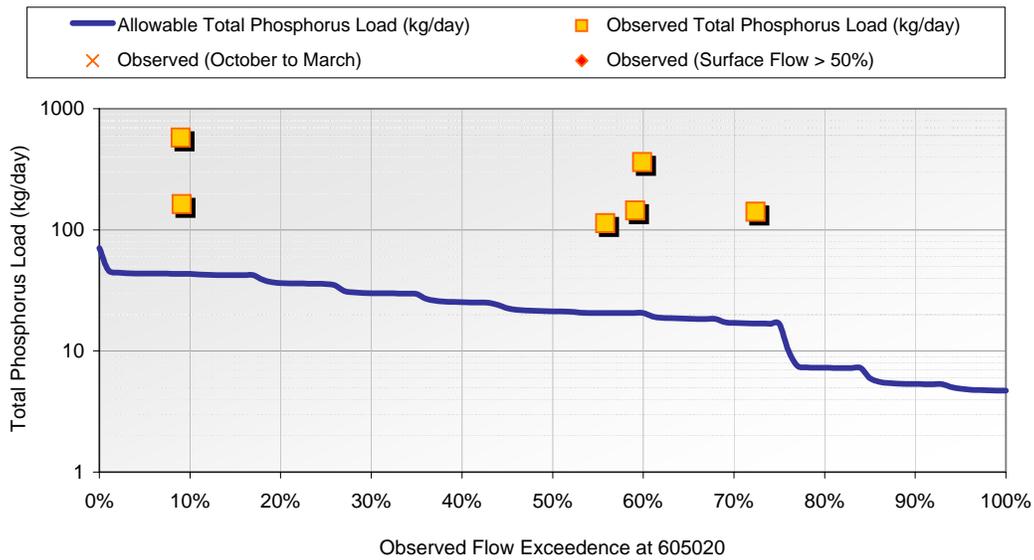
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	38.55	943,154	232,363,419	99.6%
10-40	3	7.72	188,958	2,250,878	91.6%
40-60	0	4.78	116,968	No Data	No Data
60-90	2	3.73	91,137	542,872	83.2%
90-100	1	3.36	82,244	280,349	70.7%

**[43: Total Phosphorus at 605020 (mg/L)] -vs- [27: Flow at 605020 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

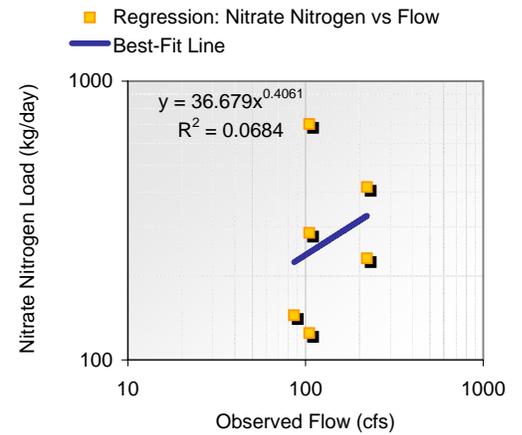
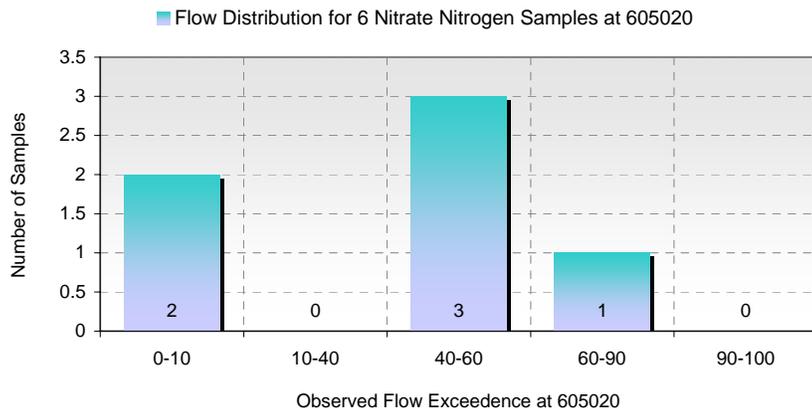


**3. Estimated TMDL Loads by Flow Exceedence Range**

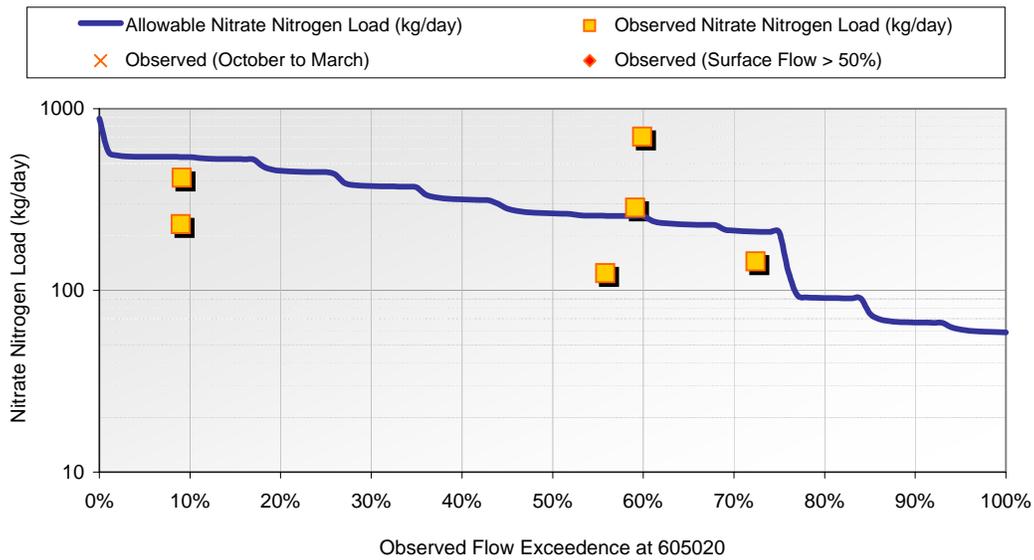
Flow Exceedence Ranges	6-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	222.25	43.50	369	88.2%
10-40	0	182.85	36	No Data	No Data
40-60	3	108.43	21	144	85.3%
60-90	1	85.51	17	141	88.1%
90-100	0	24.92	4.88	No Data	No Data

**[42: Nitrate Nitrogen at 605020 (mg/L)] -vs- [27: Flow at 605020 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

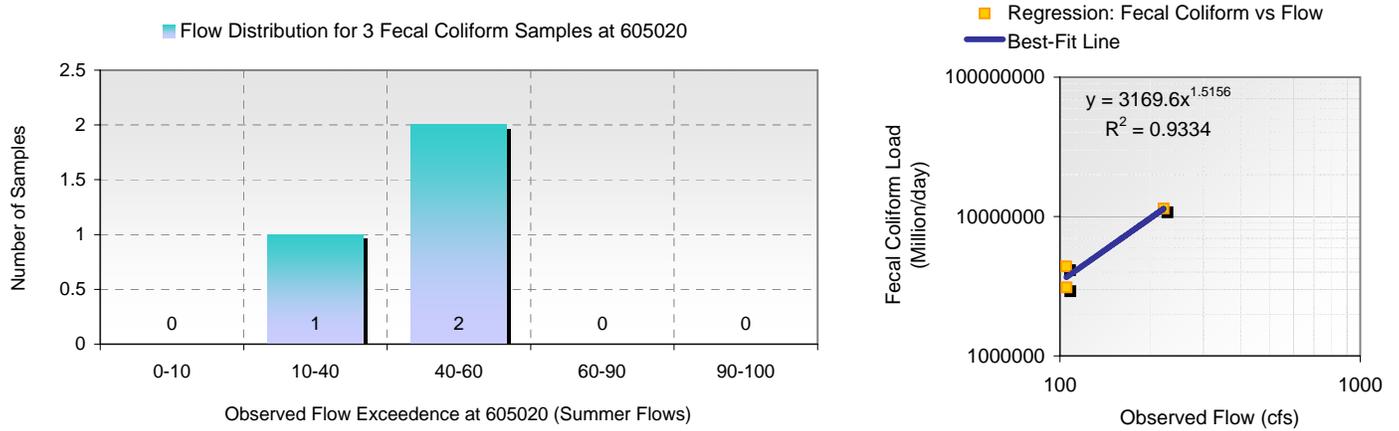


**3. Estimated TMDL Loads by Flow Exceedence Range**

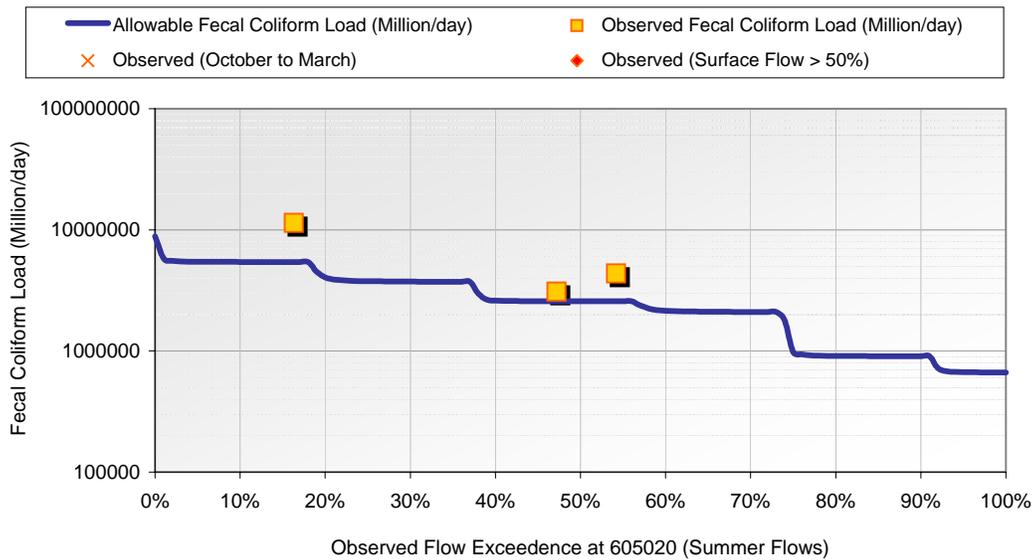
Flow Exceedence Ranges	6-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	2	222.25	543.76	324	0.0%
10-40	0	182.85	447	No Data	No Data
40-60	3	108.43	265	285	7.0%
60-90	1	85.51	209	144	0.0%
90-100	0	24.92	60.96	No Data	No Data

**[41: Fecal Coliform at 605020 (MPN/100mL)] -vs- [29: Flow at 605020 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

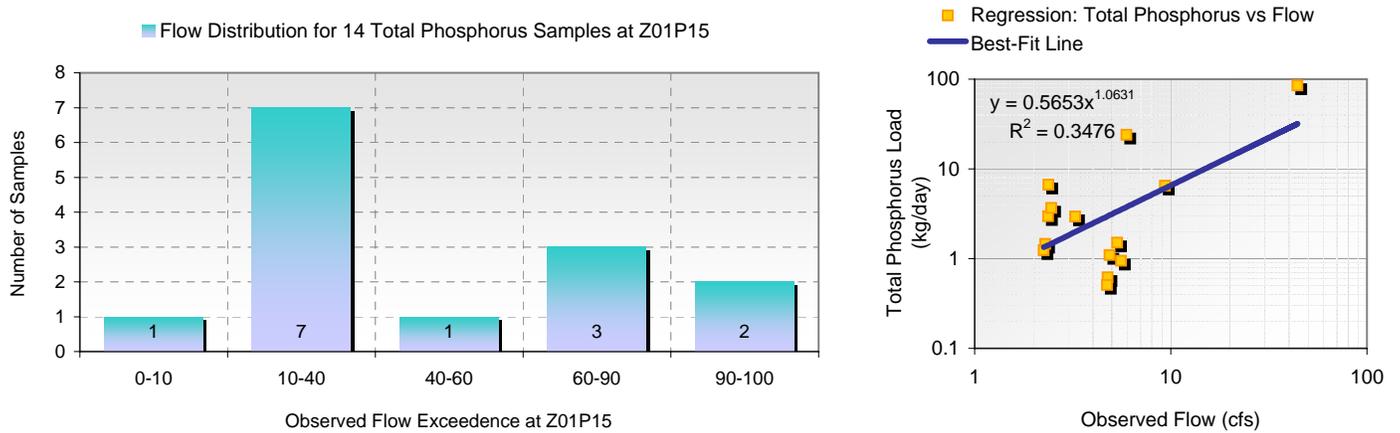


**3. Estimated TMDL Loads by Flow Exceedence Range**

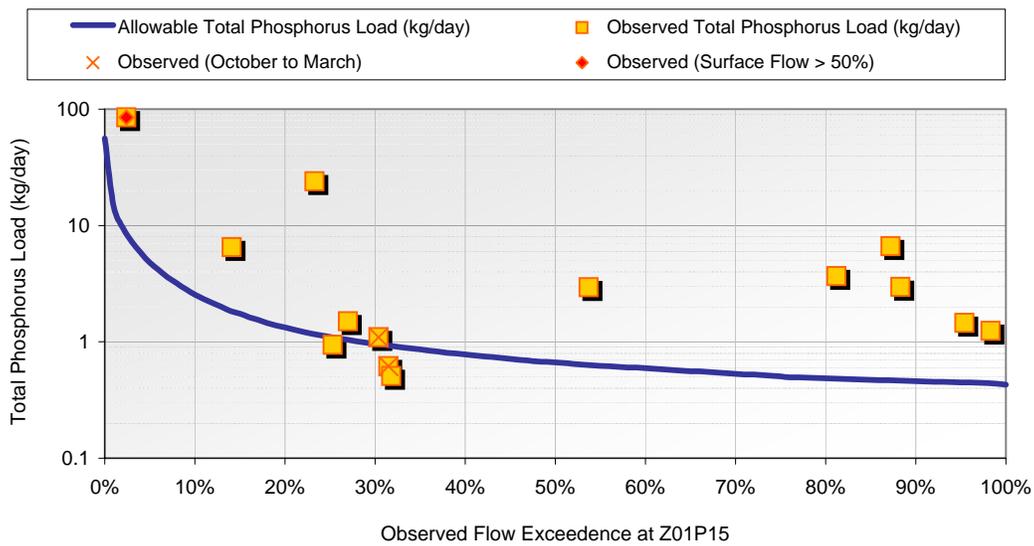
Flow Exceedence Ranges	3-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	0	222.90	5,453,366.06	No Data	No Data
10-40	1	153.95	3,766,601	11,397,233	67.0%
40-60	2	105.13	2,572,081	3,729,111	31.0%
60-90	0	40.03	979,400	No Data	No Data
90-100	0	27.29	667,676.69	No Data	No Data

**[24: Total Phosphorus at Z01P15 (mg/L)] -vs- [6: Flow at Z01P15 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

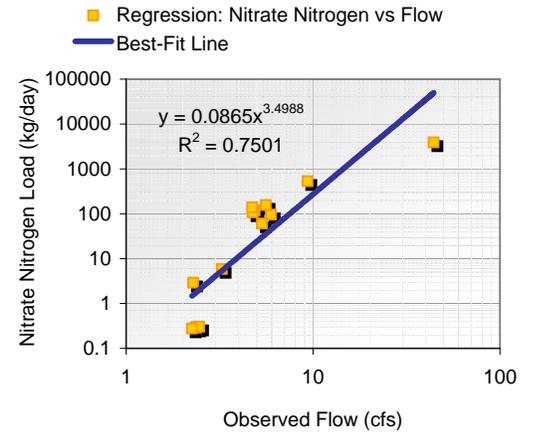
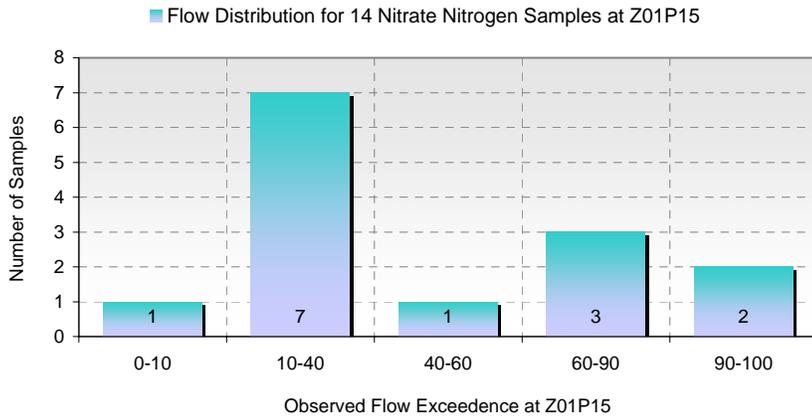


**3. Estimated TMDL Loads by Flow Exceedence Range**

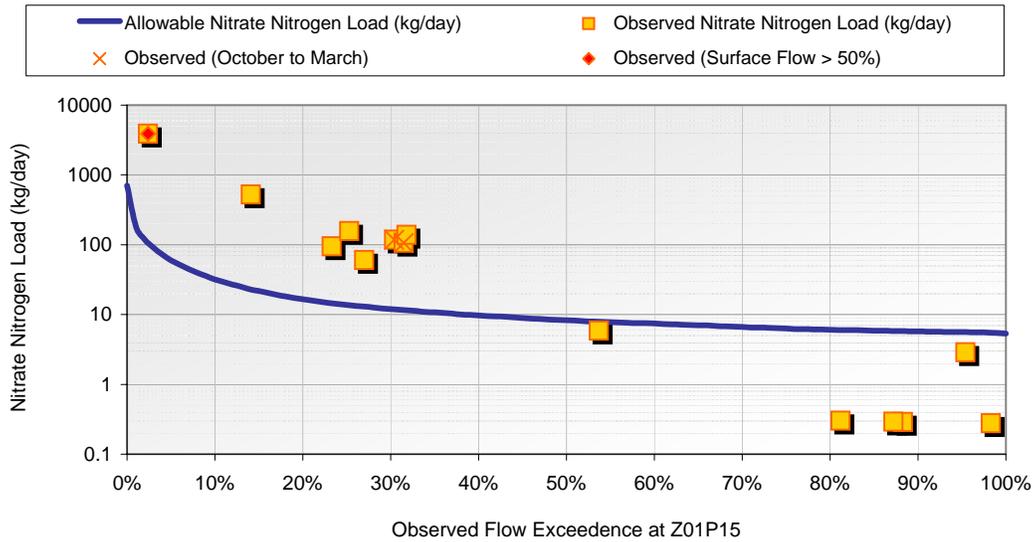
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	24.36	5	85	94.4%
10-40	7	5.63	1	1	0.0%
40-60	1	3.40	1	3	77.4%
60-90	3	2.57	1	4	86.3%
90-100	2	2.29	0	1	66.8%

**[15: Nitrate Nitrogen at Z01P15 (mg/L)] -vs- [6: Flow at Z01P15 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

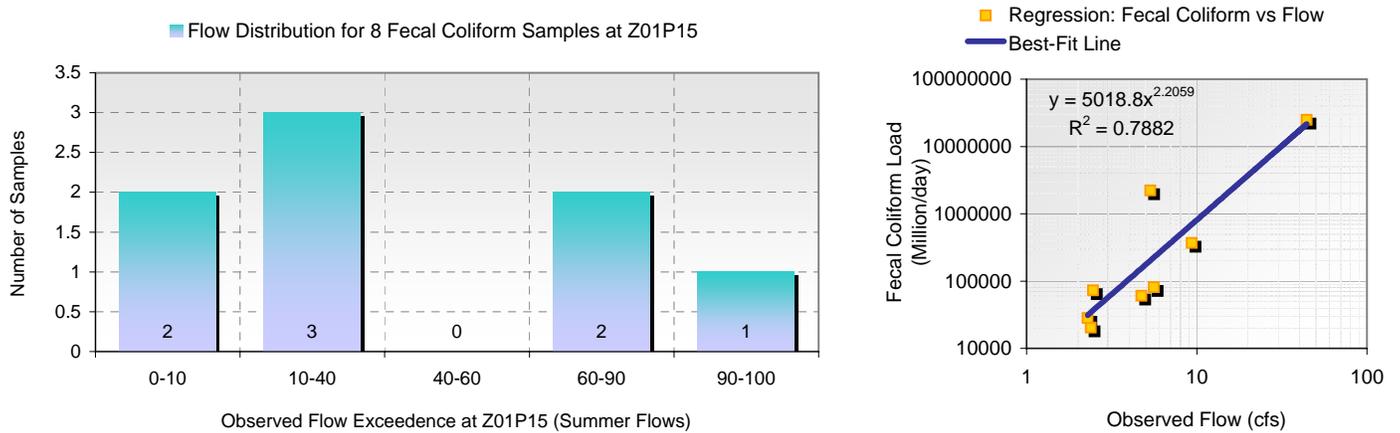


**3. Estimated TMDL Loads by Flow Exceedence Range**

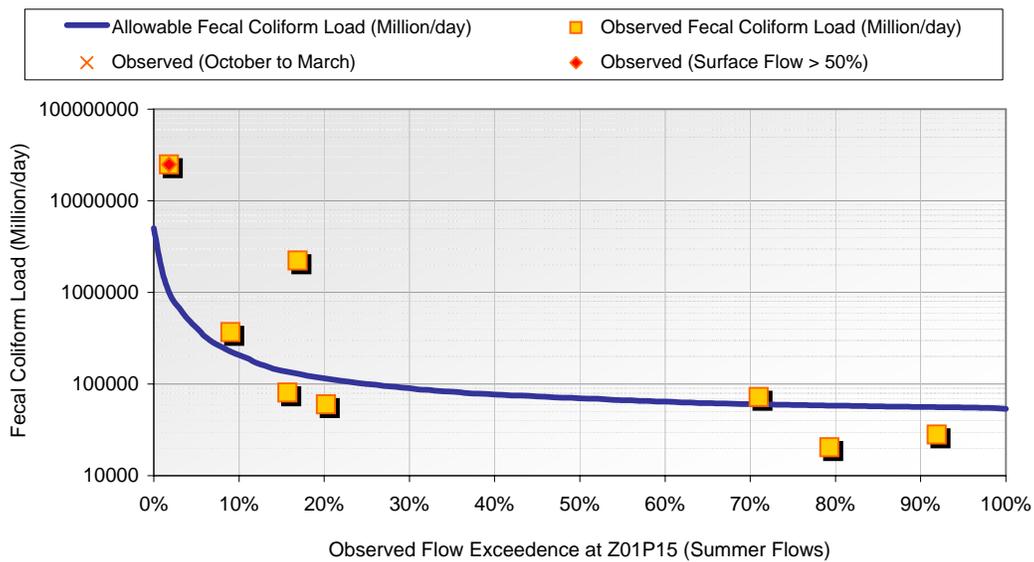
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	24.36	60	3,897	98.5%
10-40	7	5.63	14	118	88.3%
40-60	1	3.40	8	6	0.0%
60-90	3	2.57	6	0	0.0%
90-100	2	2.29	6	2	0.0%

**[6: Fecal Coliform at Z01P15 (MPN/100mL)] -vs- [19: Flow at Z01P15 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

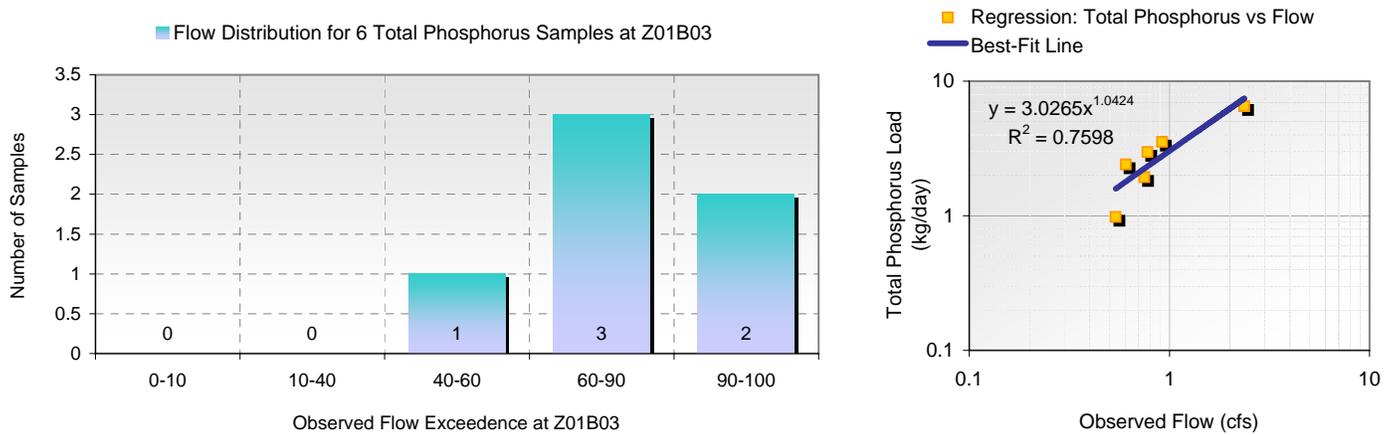


**3. Estimated TMDL Loads by Flow Exceedence Range**

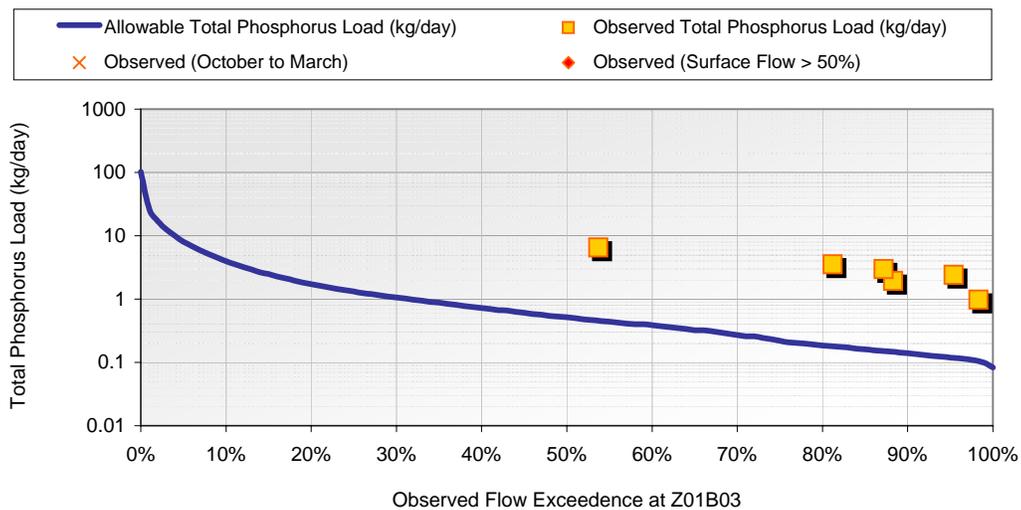
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	16.89	413,219	12,633,225	96.7%
10-40	3	4.08	99,821	80,697	0.0%
40-60	0	2.86	69,907	No Data	No Data
60-90	2	2.42	59,173	46,339	0.0%
90-100	1	2.27	55,478	28,003	0.0%

**[36: Total Phosphorus at Z01B03 (mg/L)] -vs- [11: Flow at Z01B03 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

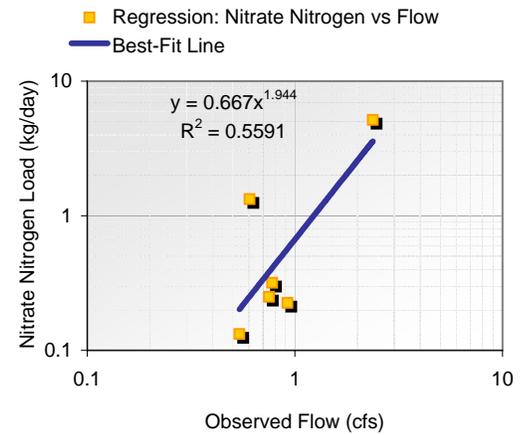
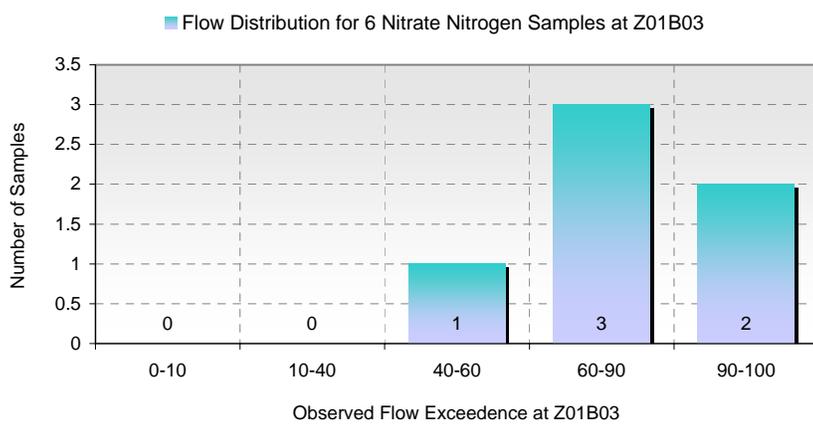


**3. Estimated TMDL Loads by Flow Exceedence Range**

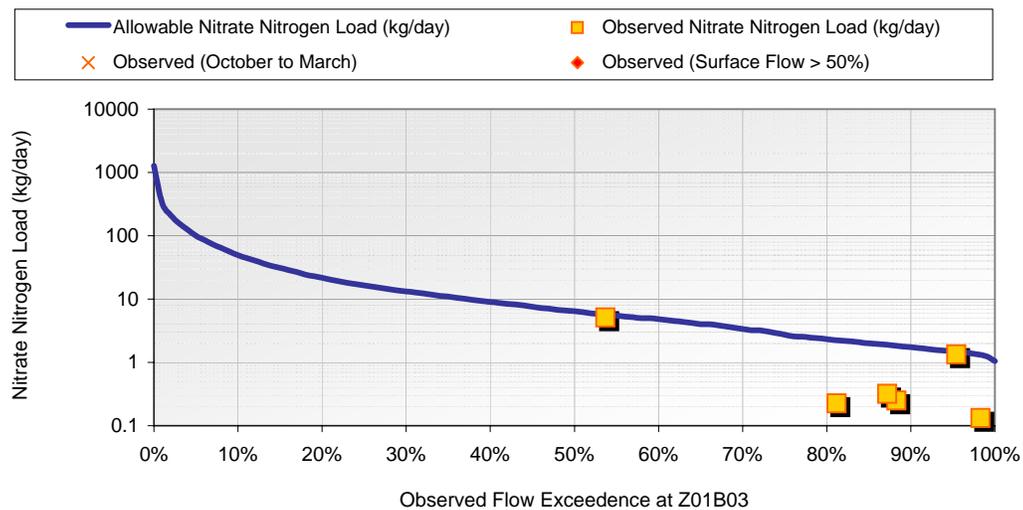
Flow Exceedence Ranges	6-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	0	41.04	8	No Data	No Data
10-40	0	6.72	1	No Data	No Data
40-60	1	2.63	1	6	92.1%
60-90	3	1.12	0	3	92.6%
90-100	2	0.61	0	2	93.0%

**[35: Nitrate Nitrogen at Z01B03 (mg/L)] -vs- [11: Flow at Z01B03 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

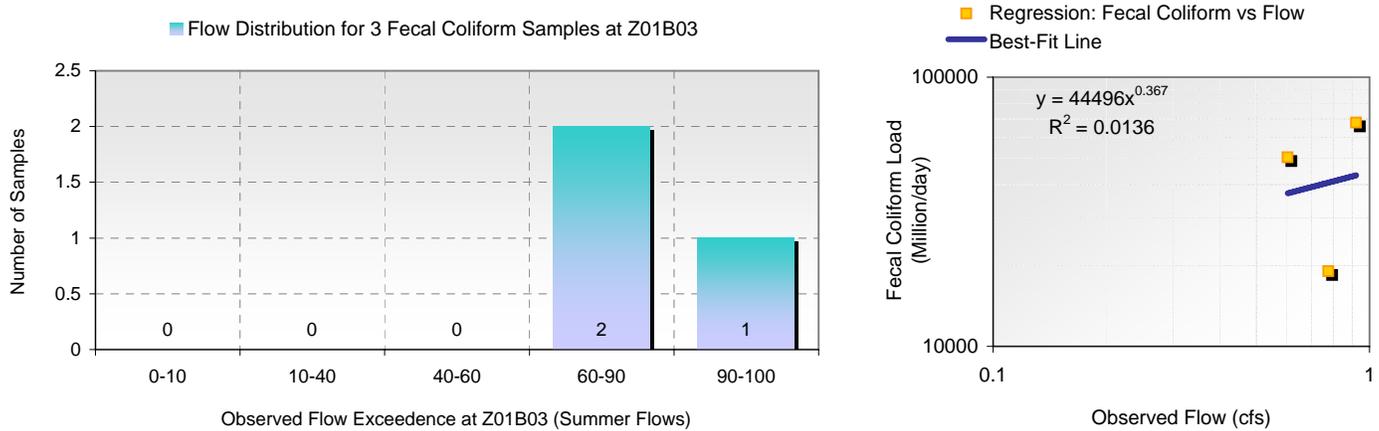


**3. Estimated TMDL Loads by Flow Exceedence Range**

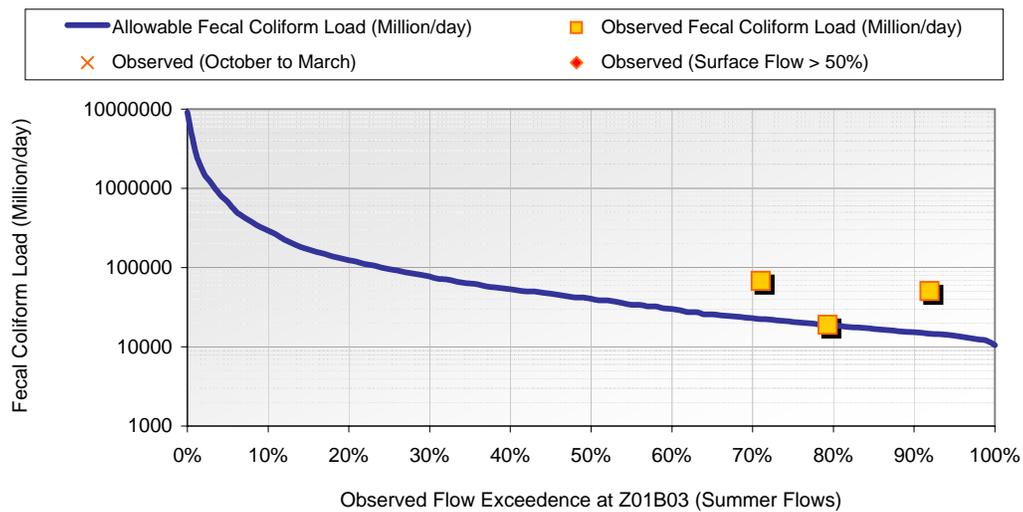
Flow Exceedence Ranges	6-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	0	41.04	100	No Data	No Data
10-40	0	6.72	16	No Data	No Data
40-60	1	2.63	6	5	0.0%
60-90	3	1.12	3	0	0.0%
90-100	2	0.61	1	1	0.0%

**[34: Fecal Coliform at Z01B03 (MPN/100mL)] -vs- [24: Flow at Z01B03 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

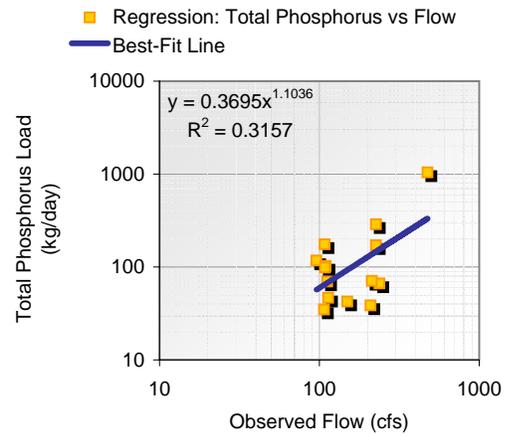
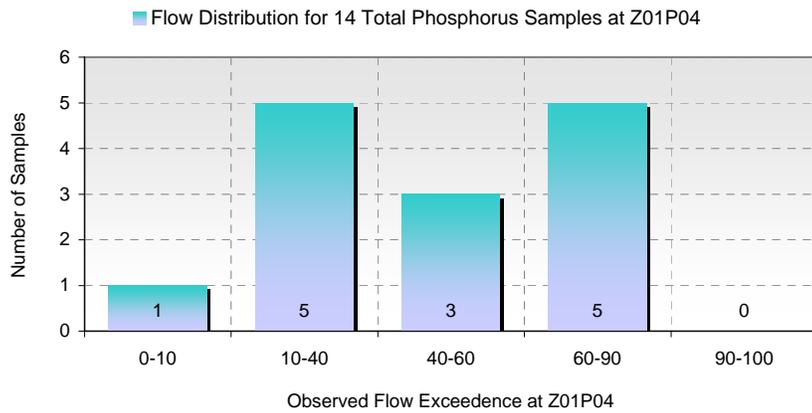


**3. Estimated TMDL Loads by Flow Exceedence Range**

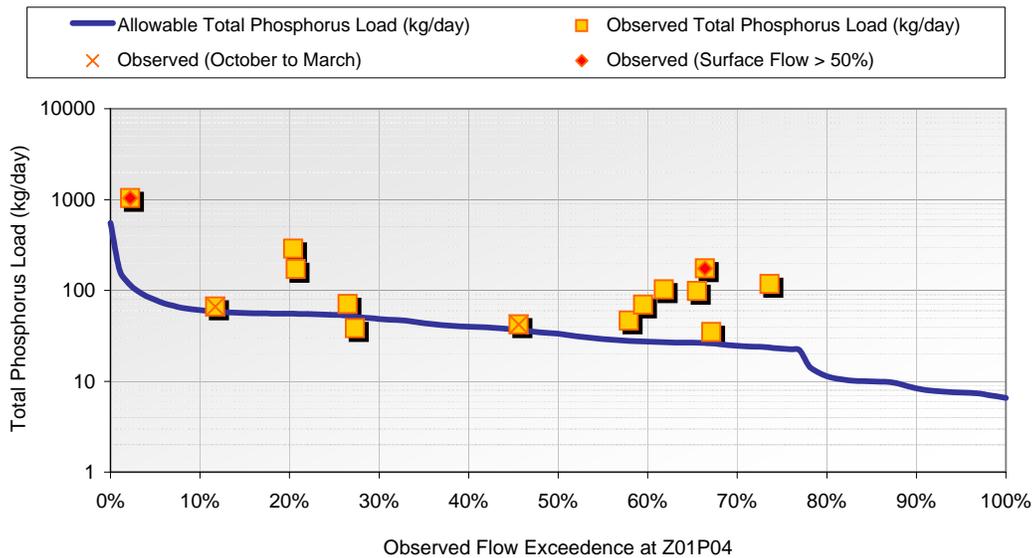
Flow Exceedence Ranges	3-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	0	27.35	669,167	No Data	No Data
10-40	0	3.89	95,087	No Data	No Data
40-60	0	1.65	40,290	No Data	No Data
60-90	2	0.84	20,627	43,349	52.4%
90-100	1	0.57	13,858	50,405	72.5%

**[26: Total Phosphorus at Z01P04 (mg/L)] -vs- [28: Flow at Z01P04 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

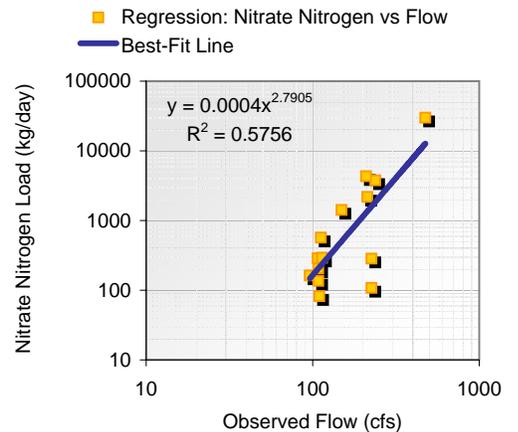
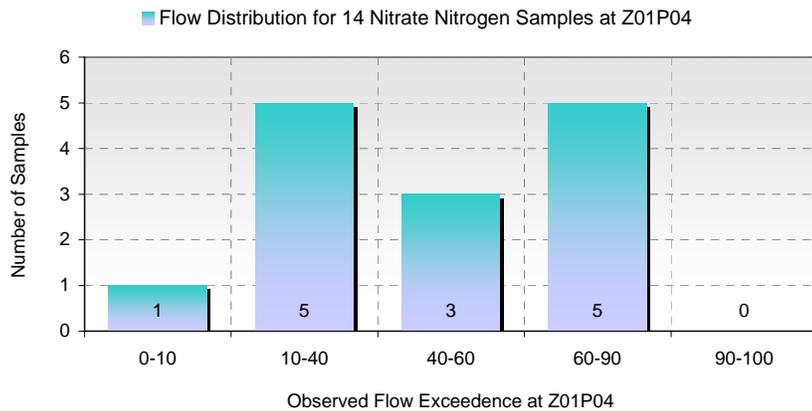


**3. Estimated TMDL Loads by Flow Exceedence Range**

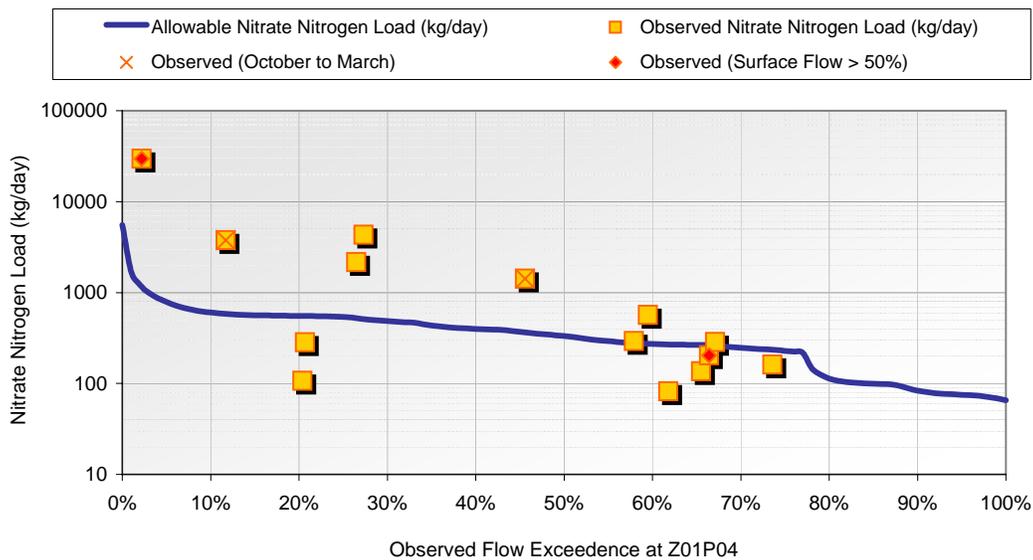
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	321.02	78.54	1,038	92.4%
10-40	5	219.83	54	71	23.7%
40-60	3	136.46	33	46	28.0%
60-90	5	93.29	23	102	77.6%
90-100	0	30.66	7.50	No Data	No Data

[17: Nitrate Nitrogen at Z01P04 (mg/L)] -vs- [28: Flow at Z01P04 (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

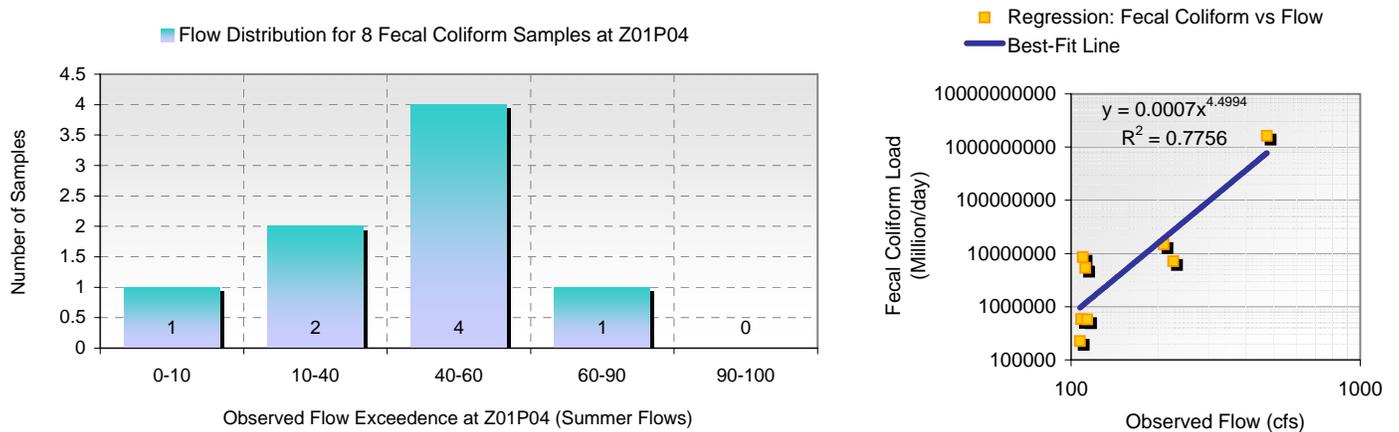


3. Estimated TMDL Loads by Flow Exceedence Range

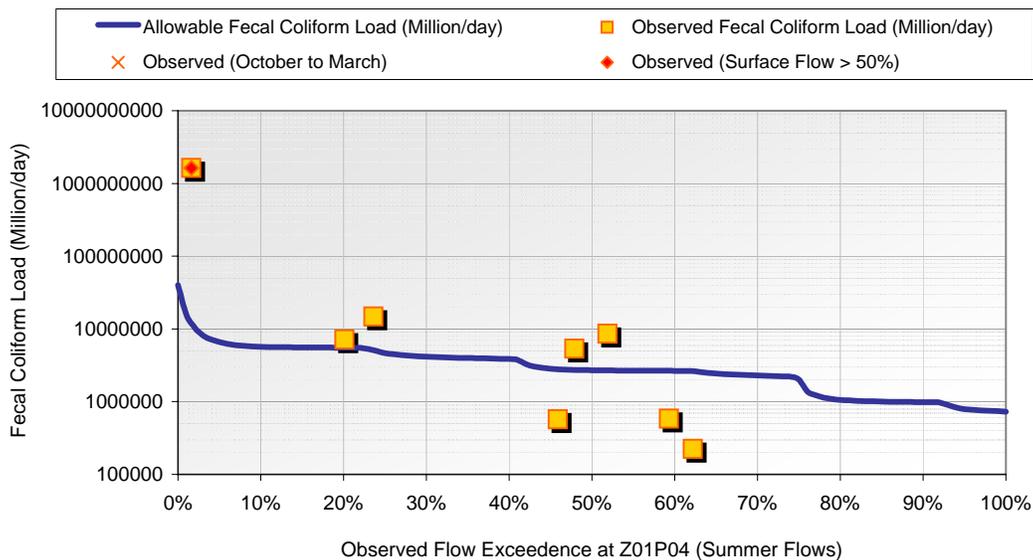
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	321.02	785.40	29,721	97.4%
10-40	5	219.83	538	2,167	75.2%
40-60	3	136.46	334	567	41.1%
60-90	5	93.29	228	161	0.0%
90-100	0	30.66	75.01	No Data	No Data

**[8: Fecal Coliform at Z01P04 (MPN/100mL)] -vs- [30: Flow at Z01P04 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

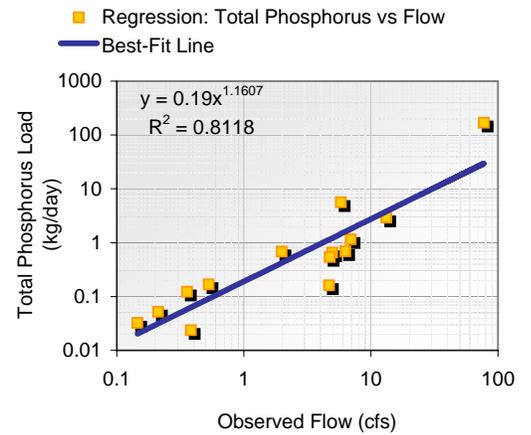
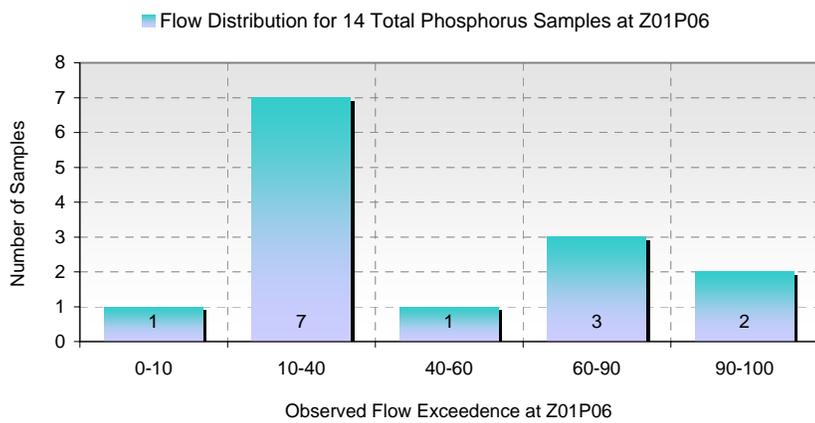


**3. Estimated TMDL Loads by Flow Exceedence Range**

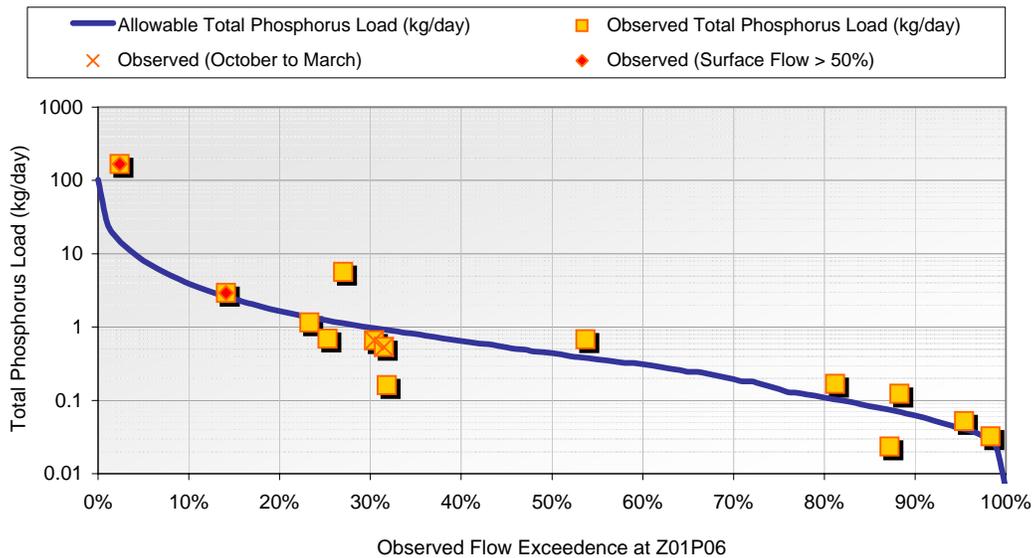
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	1	269.01	6,581,574.70	1,628,556,132	99.6%
10-40	2	190.49	4,660,568	11,012,479	57.7%
40-60	4	110.32	2,698,945	2,962,521	8.9%
60-90	1	82.48	2,018,026	224,434	0.0%
90-100	0	32.08	784,914.64	No Data	No Data

**[27: Total Phosphorus at Z01P06 (mg/L)] -vs- [8: Flow at Z01P06 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

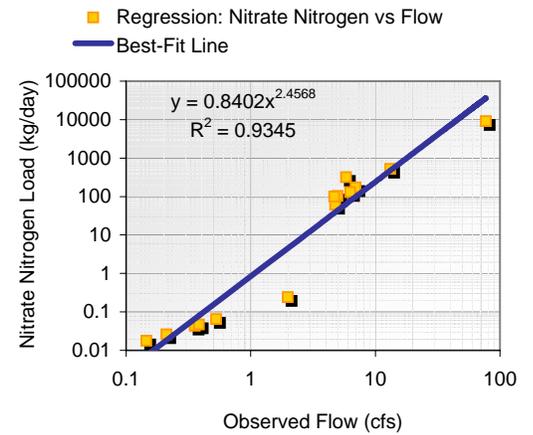
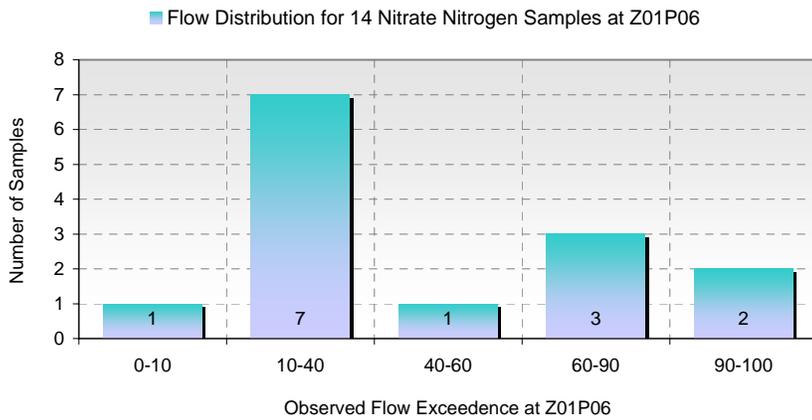


**3. Estimated TMDL Loads by Flow Exceedence Range**

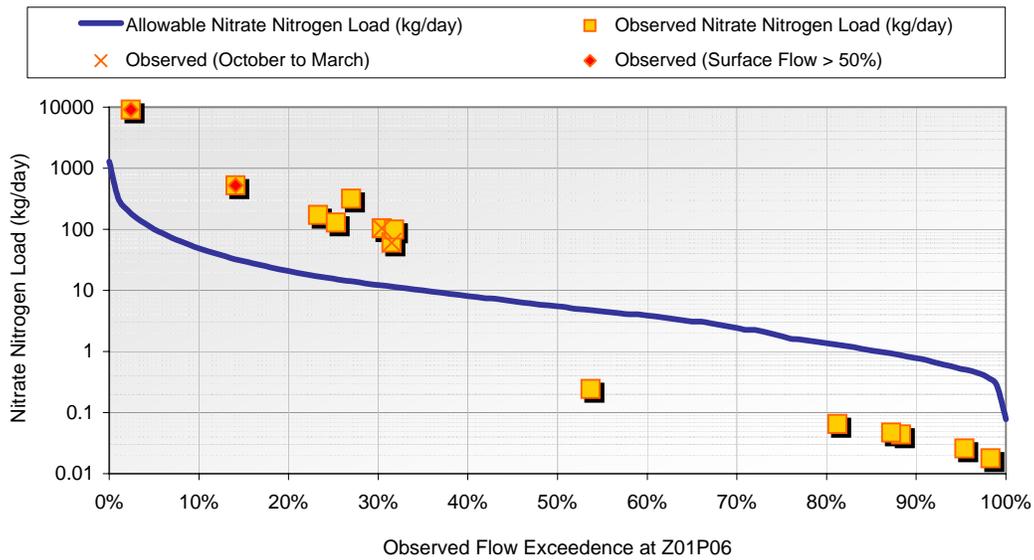
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	40.81	8	167	95.2%
10-40	7	6.35	1	1	0.0%
40-60	1	2.25	0	1	35.2%
60-90	3	0.73	0	0	0.0%
90-100	2	0.21	0	0	1.2%

**[18: Nitrate Nitrogen at Z01P06 (mg/L)] -vs- [8: Flow at Z01P06 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

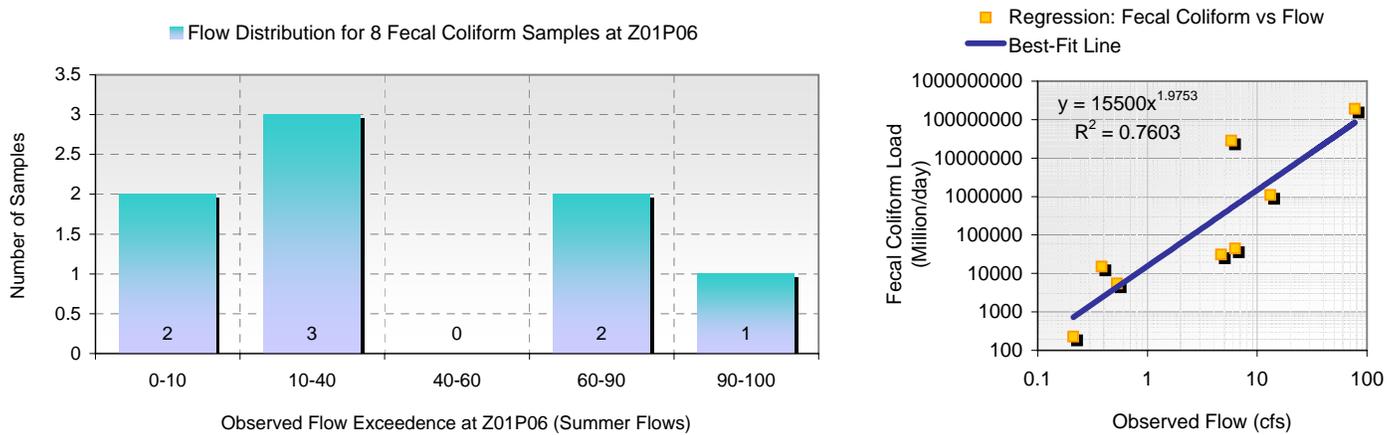


**3. Estimated TMDL Loads by Flow Exceedence Range**

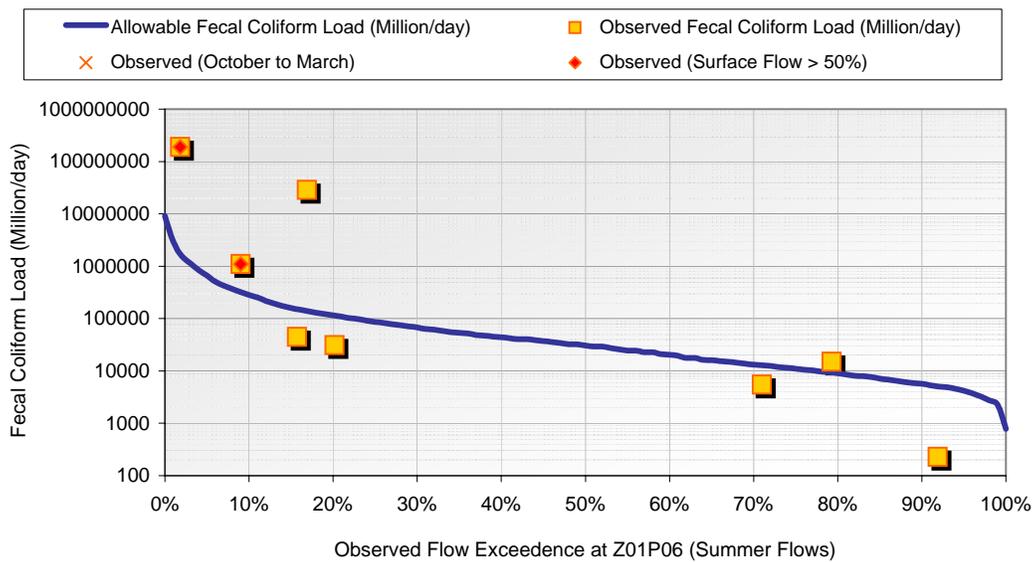
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	40.81	100	9,127	98.9%
10-40	7	6.35	16	129	88.0%
40-60	1	2.25	6	0	0.0%
60-90	3	0.73	2	0	0.0%
90-100	2	0.21	1	0	0.0%

**[9: Fecal Coliform at Z01P06 (MPN/100mL)] -vs- [21: Flow at Z01P06 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

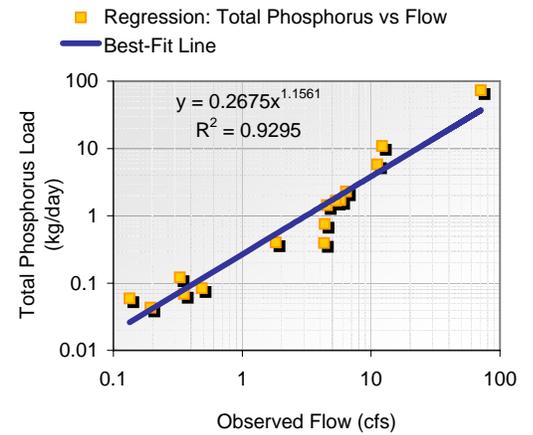
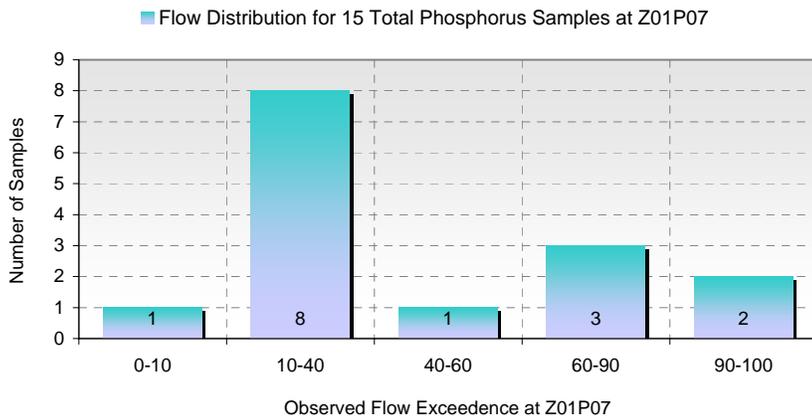


**3. Estimated TMDL Loads by Flow Exceedence Range**

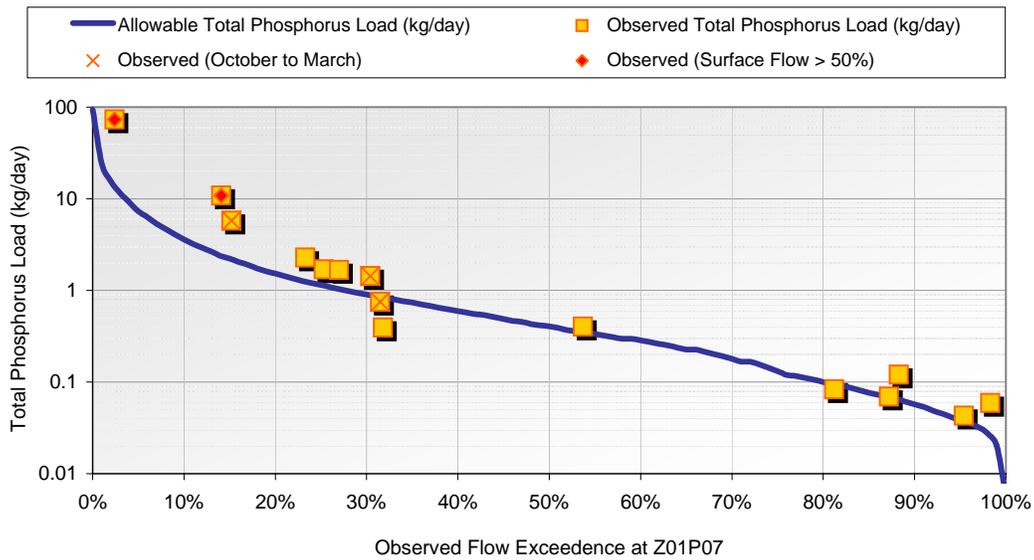
Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	27.07	662,253	95,227,228	99.3%
10-40	3	3.51	85,776	44,587	0.0%
40-60	0	1.26	30,750	No Data	No Data
60-90	2	0.45	11,005	10,228	0.0%
90-100	1	0.17	4,208	228	0.0%

**[25: Total Phosphorus at Z01P07 (mg/L)] -vs- [7: Flow at Z01P07 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

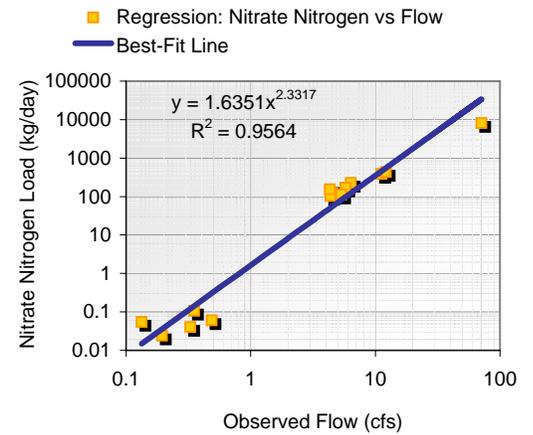
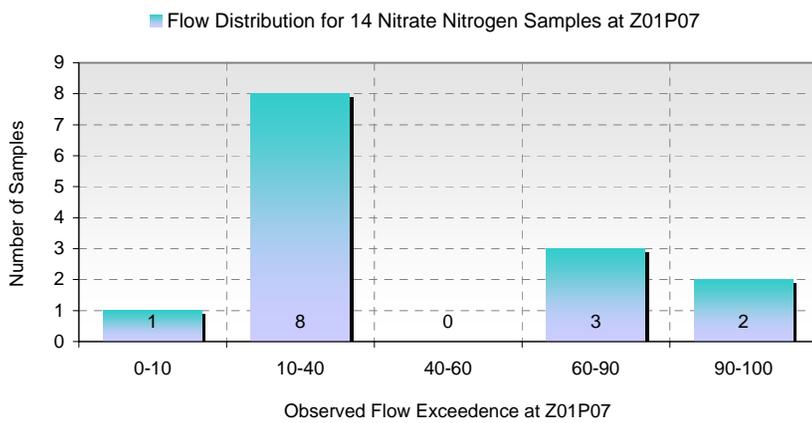


**3. Estimated TMDL Loads by Flow Exceedence Range**

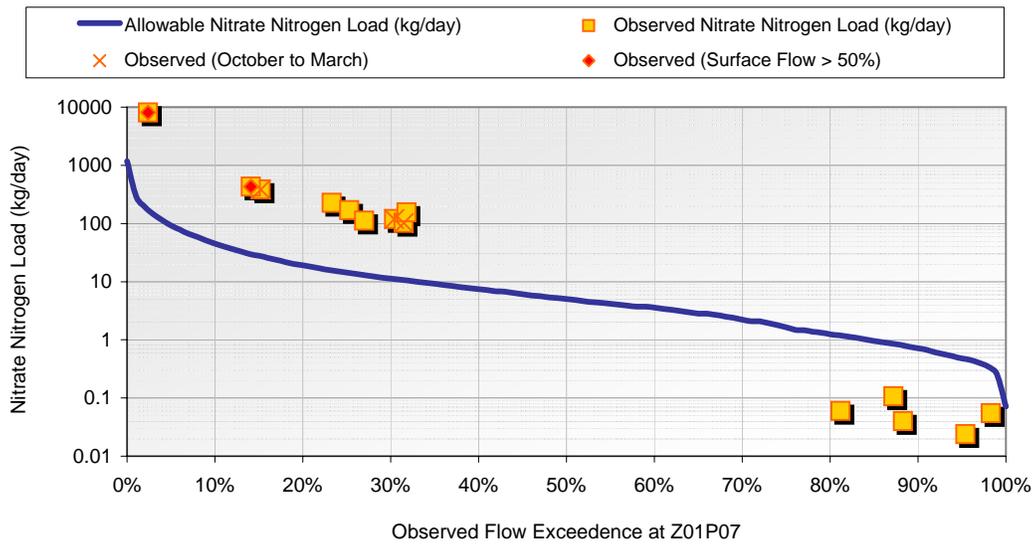
Flow Exceedence Ranges	15-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	37.53	7	73	90.0%
10-40	8	5.84	1	2	32.0%
40-60	1	2.07	0	0	0.0%
60-90	3	0.67	0	0	0.0%
90-100	2	0.19	0	0	25.1%

**[16: Nitrate Nitrogen at Z01P07 (mg/L)] -vs- [7: Flow at Z01P07 (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**

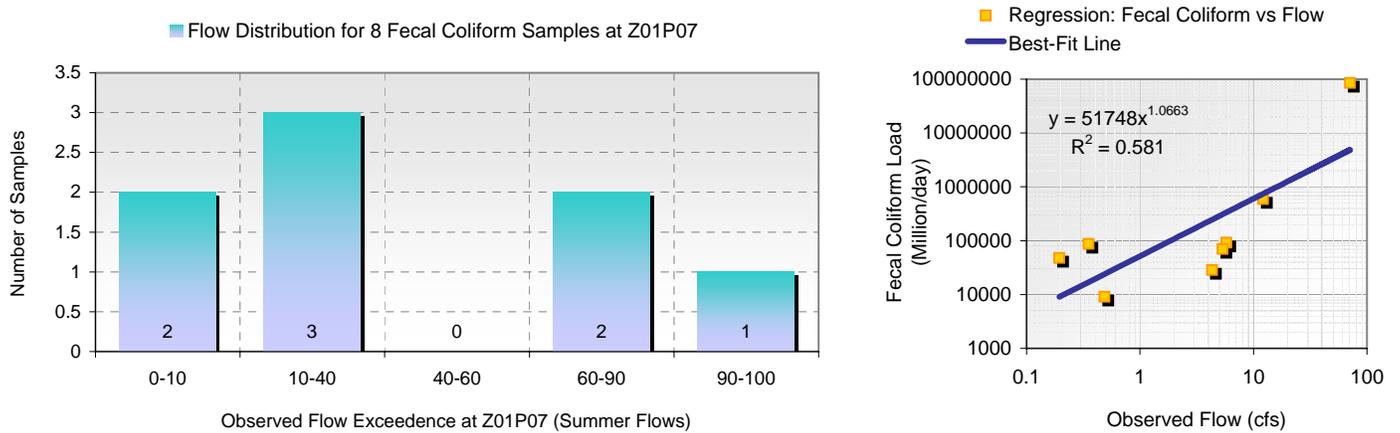


**3. Estimated TMDL Loads by Flow Exceedence Range**

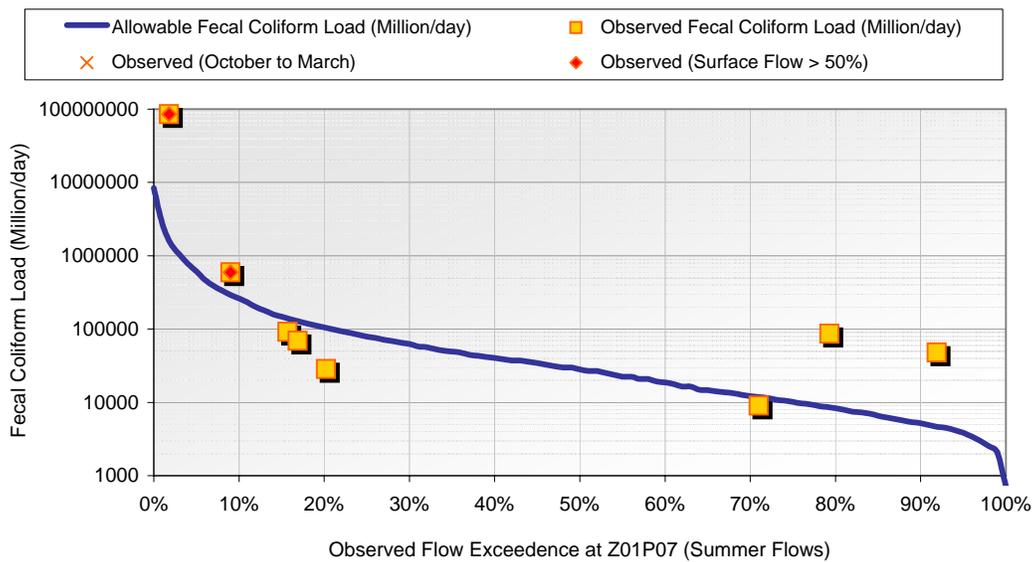
Flow Exceedence Ranges	14-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (kg/day)	Observed Load (kg/day)	Estimated Reduction (%)
0-10	1	37.53	92	8,061	98.9%
10-40	8	5.84	14	161	91.1%
40-60	0	2.07	5	No Data	No Data
60-90	3	0.67	2	0	0.0%
90-100	2	0.19	0	0	0.0%

**[7: Fecal Coliform at Z01P07 (MPN/100mL)] -vs- [20: Flow at Z01P07 (Summer Flows) (cfs)]**

**1. Data Assessment and Trend Confirmation**



**2. Load Exceedence Analysis**



**3. Estimated TMDL Loads by Flow Exceedence Range**

Flow Exceedence Ranges	8-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	24.89	608,892	42,951,329	98.6%
10-40	3	3.22	78,864	69,401	0.0%
40-60	0	1.16	28,272	No Data	No Data
60-90	2	0.41	10,118	47,676	78.8%
90-100	1	0.16	3,869	47,616	91.9%