

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:

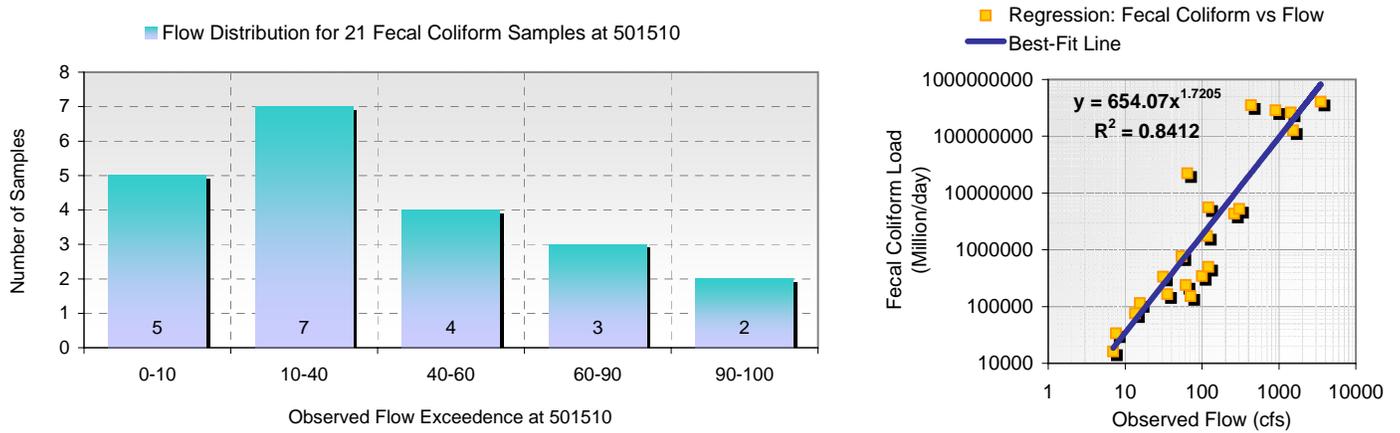
[31: Total Phosphorus at 300040 (mg/L)] -vs- [23: Flow at 300040 (cfs)]

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:

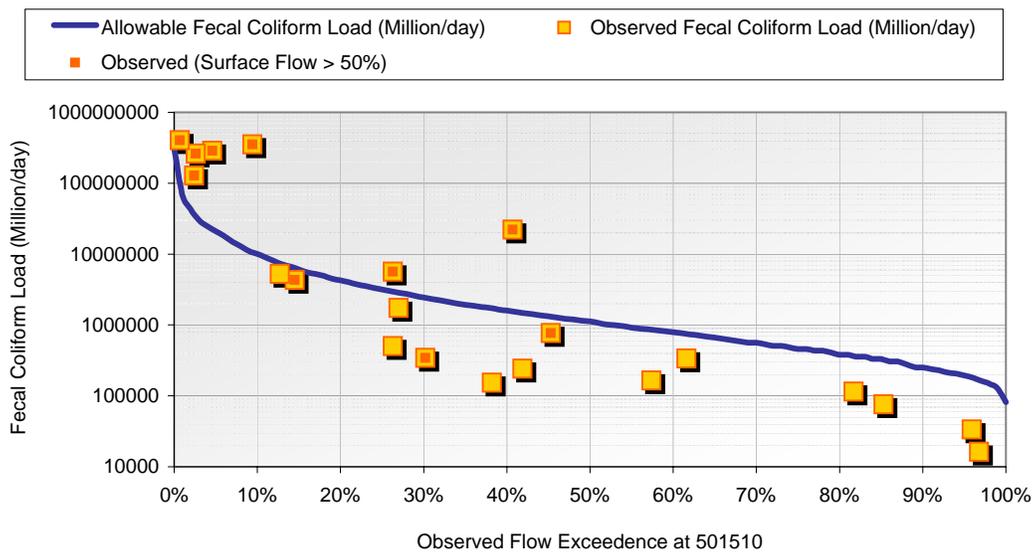
[31: Fecal Coliform at 300040 (MPN/100mL)] -vs- [23: Flow at 300040 (Summer Flows) (cfs)]

[1: Fecal Coliform at 501510 (MPN/100mL)] -vs- [8: Flow at 501510 (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

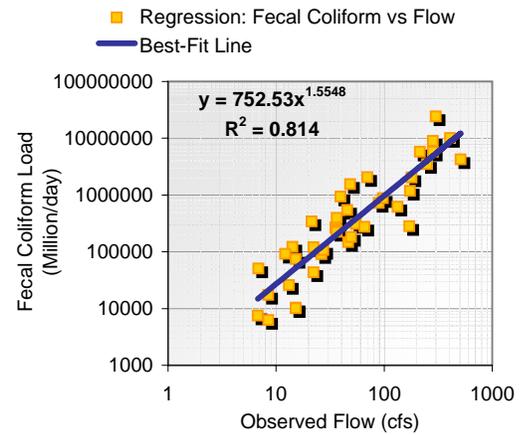
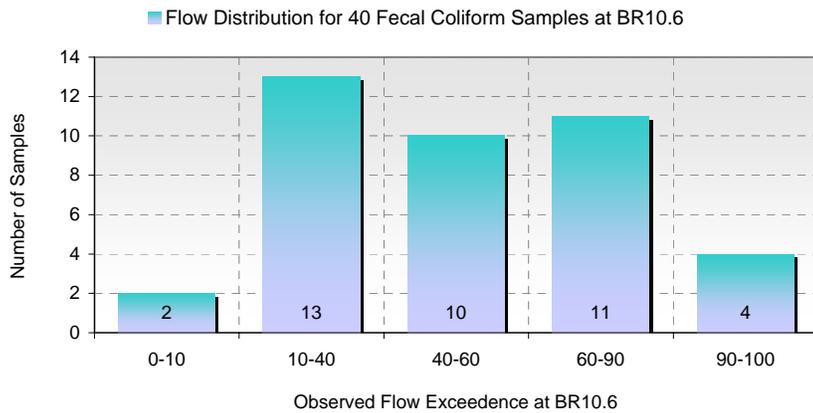


3. Estimated TMDL Loads by Flow Exceedence Range

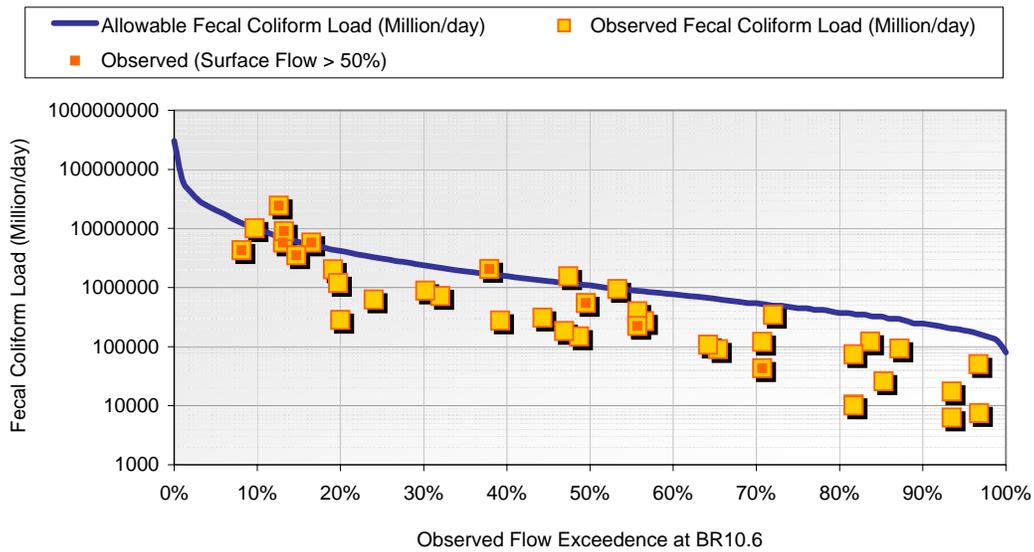
Flow Exceedence Ranges	21-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	5	856.91	20,964,890	286,696,334	92.7%
10-40	7	129.07	3,157,785	1,739,838	0.0%
40-60	4	45.80	1,120,504	504,227	0.0%
60-90	3	18.74	458,388	114,597	0.0%
90-100	2	7.91	193,542	24,836	0.0%

[20: Fecal Coliform at BR10.6 (MPN/100mL)] -vs- [9: Flow at BR10.6 (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

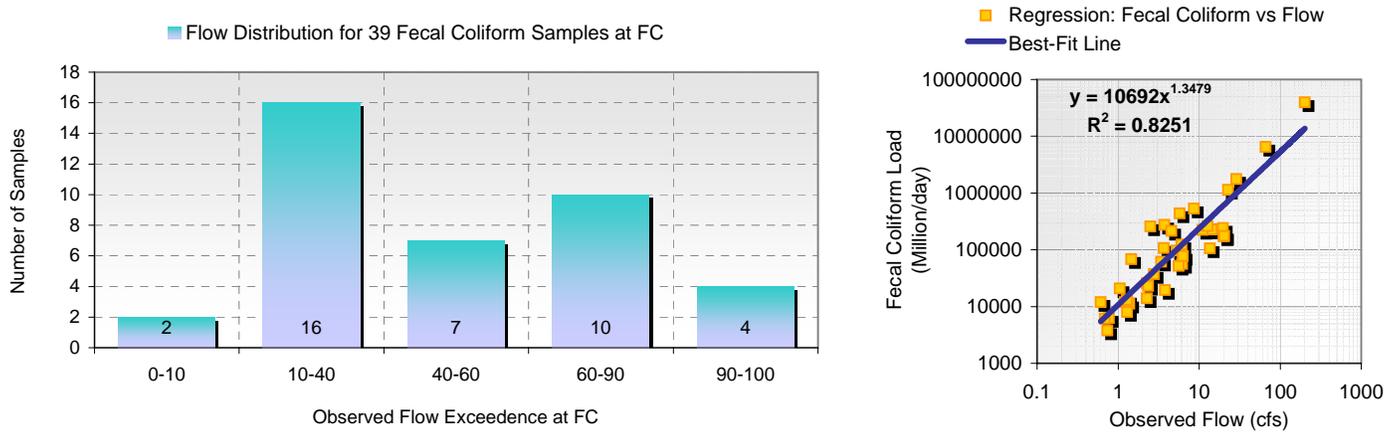


3. Estimated TMDL Loads by Flow Exceedence Range

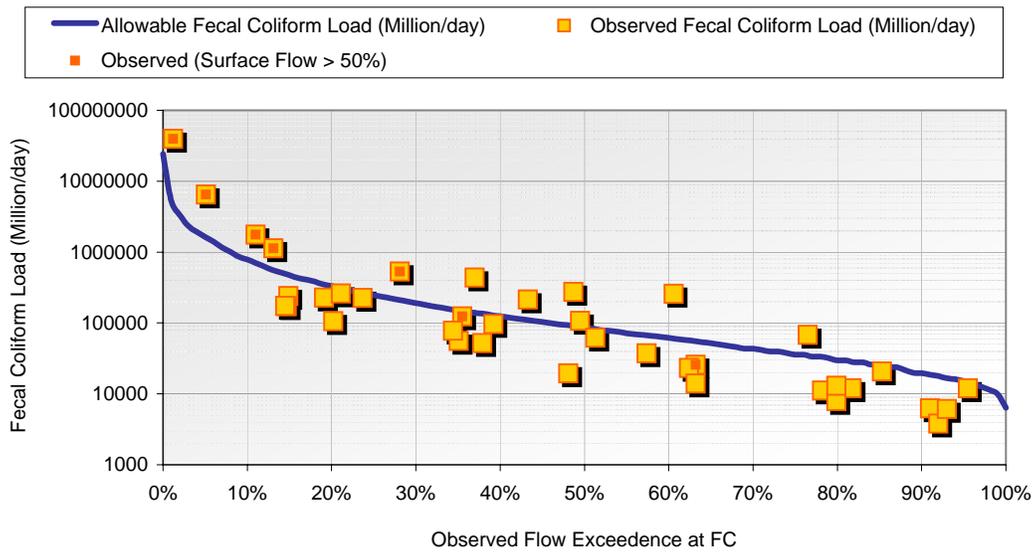
Flow Exceedence Ranges	40-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	833.67	20,396,251	7,127,354	0.0%
10-40	13	125.57	3,072,135	2,017,204	0.0%
40-60	10	44.56	1,090,113	288,260	0.0%
60-90	11	18.23	445,955	90,182	0.0%
90-100	4	7.70	188,292	12,372	0.0%

[21: Fecal Coliform at FC (MPN/100mL)] -vs- [10: Flow at FC (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

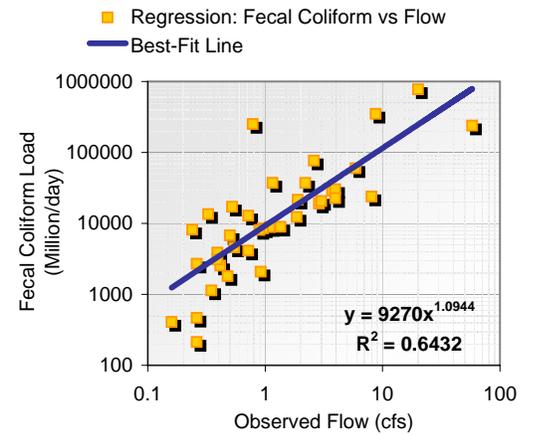
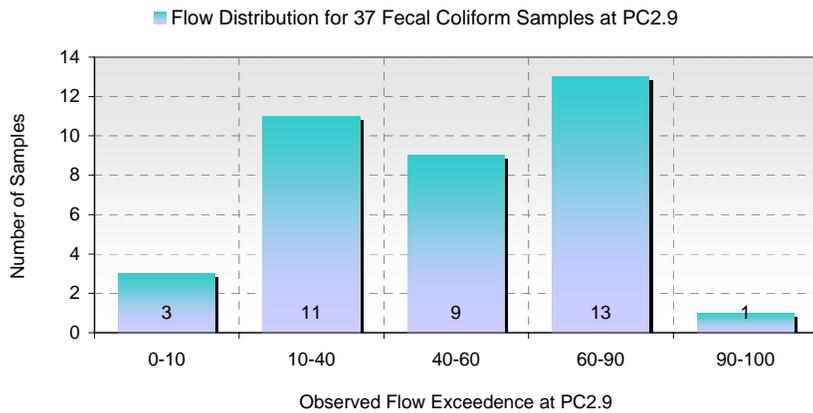


3. Estimated TMDL Loads by Flow Exceedence Range

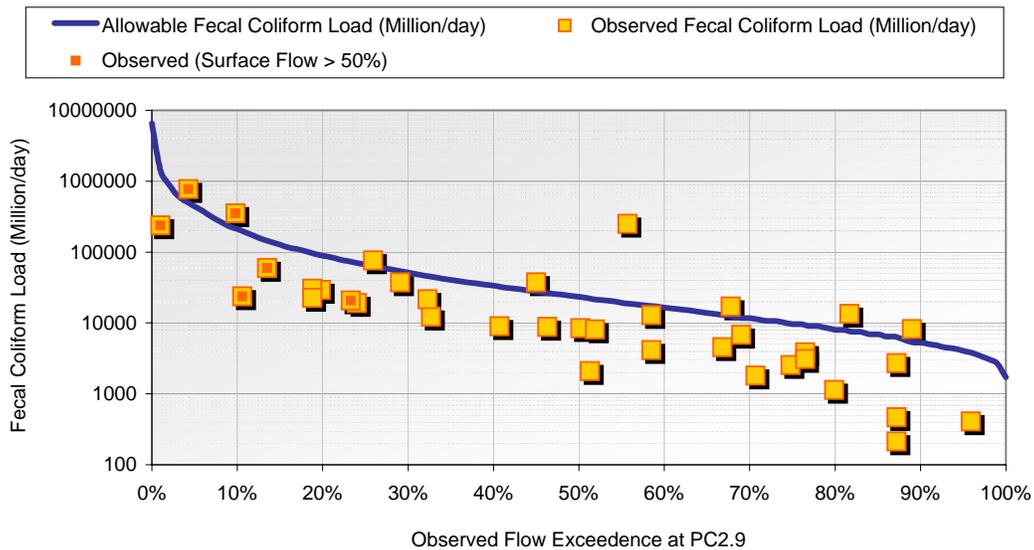
Flow Exceedence Ranges	39-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	2	66.80	1,634,202	22,935,411	92.9%
10-40	16	10.06	246,148	199,231	0.0%
40-60	7	3.57	87,343	107,193	18.5%
60-90	10	1.46	35,731	13,459	0.0%
90-100	4	0.62	15,086	6,149	0.0%

[22: Fecal Coliform at PC2.9 (MPN/100mL)] -vs- [11: Flow at PC2.9 (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

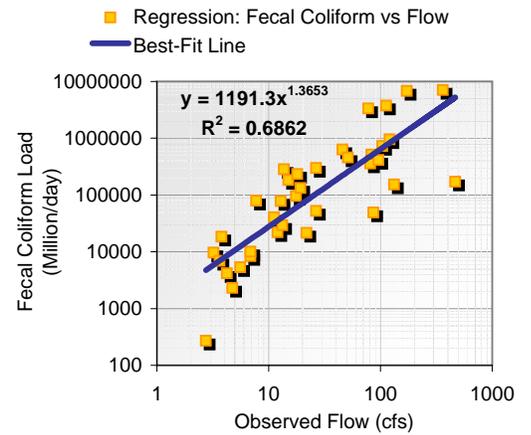
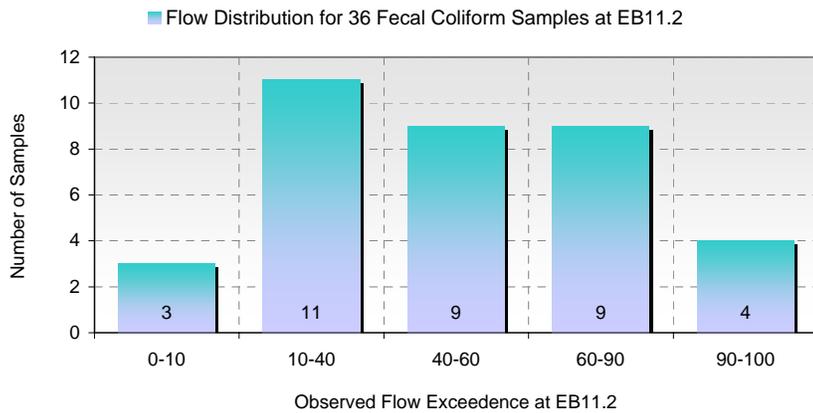


3. Estimated TMDL Loads by Flow Exceedence Range

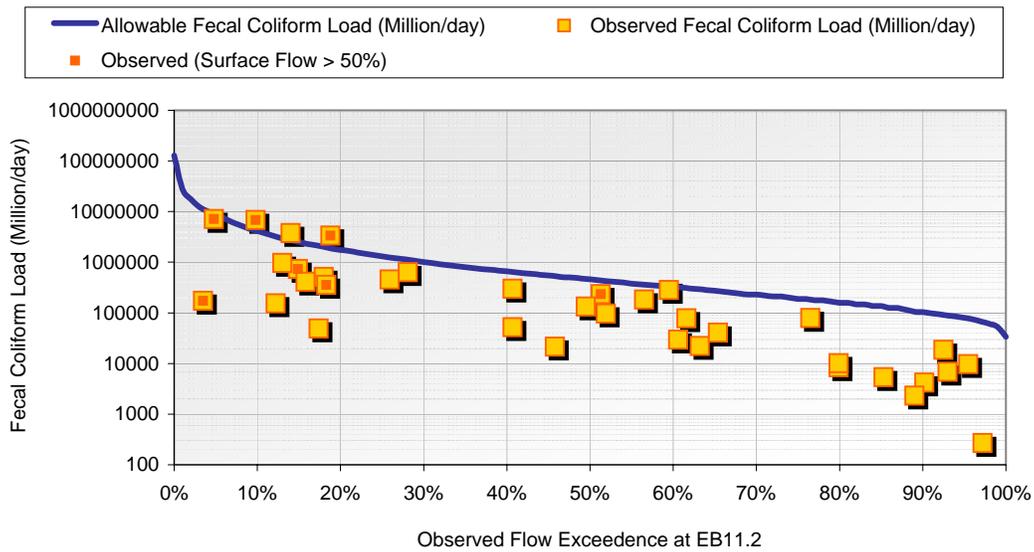
Flow Exceedence Ranges	37-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	3	17.98	439,958	350,577	0.0%
10-40	11	2.71	66,268	23,728	0.0%
40-60	9	0.96	23,514	8,818	0.0%
60-90	13	0.39	9,619	3,078	0.0%
90-100	1	0.17	4,062	406	0.0%

[23: Fecal Coliform at EB11.2 (MPN/100mL)] -vs- [12: Flow at EB11.2 (cfs)]

1. Data Assessment and Trend Confirmation



2. Load Exceedence Analysis

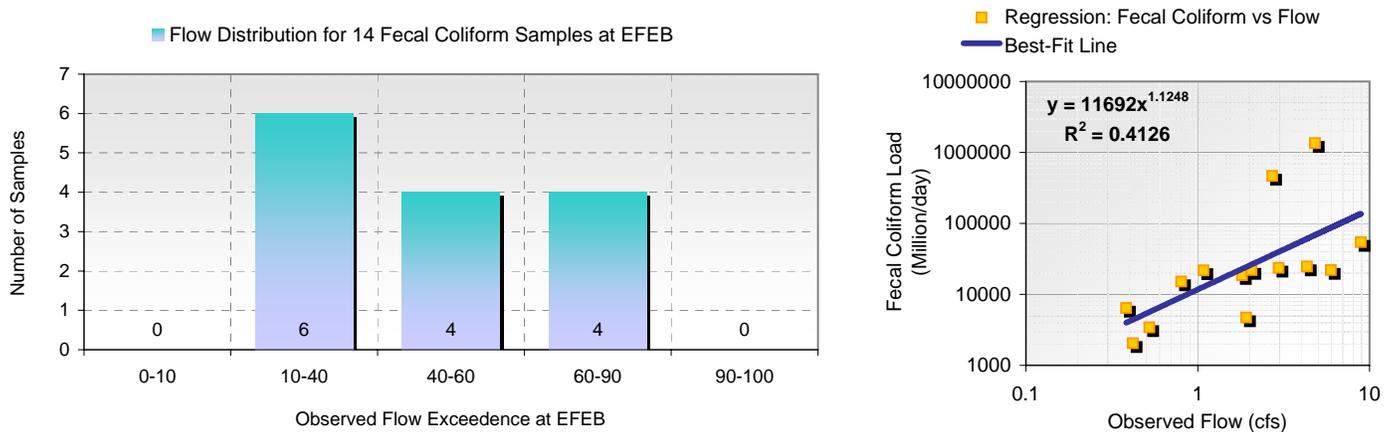


3. Estimated TMDL Loads by Flow Exceedence Range

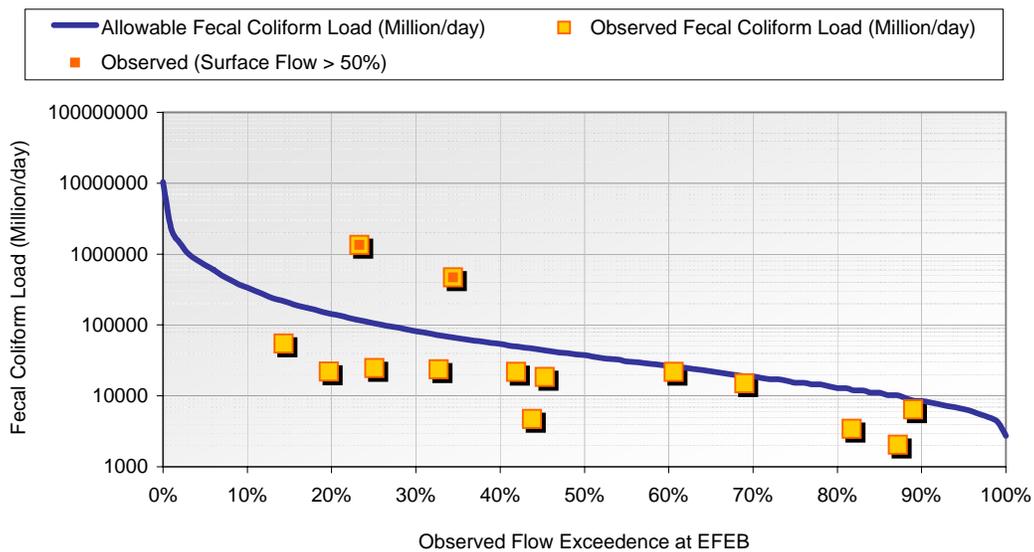
Flow Exceedence Ranges	36-Sample Distribution	Median Observed Flow (cfs)	Allowable Load (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	3	353.17	8,640,471	6,767,538	0.0%
10-40	11	53.19	1,301,450	513,107	0.0%
40-60	9	18.88	461,805	132,244	0.0%
60-90	9	7.72	188,920	10,076	0.0%
90-100	4	3.26	79,766	8,276	0.0%

[24: Fecal Coliform at EFEB (MPN/100mL)] -vs- [13: Flow at EFEB (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 (Million/day)	Observed Load (Million/day)	Estimated Reduction (%)
0-10	0	28.73	702,916	No Data	No Data
10-40	6	4.33	105,875	39,550	0.0%
40-60	4	1.54	37,569	20,109	0.0%
60-90	4	0.63	15,369	4,911	0.0%
90-100	0	0.27	6,489	No Data	No Data