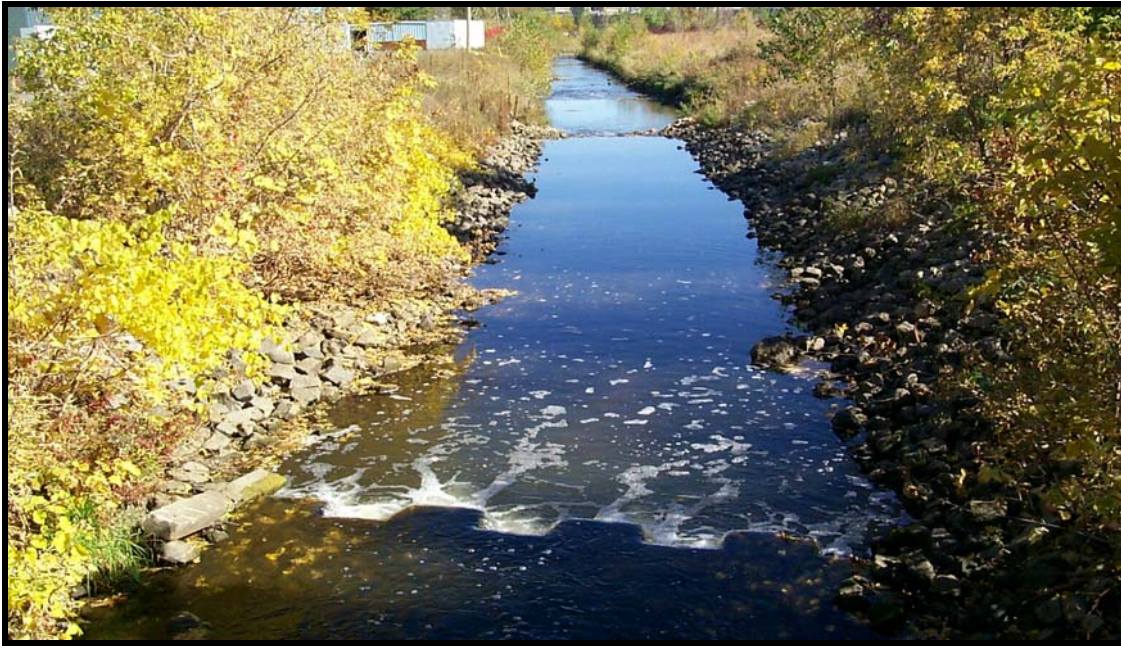


Table 1.BS. Bassett Creek Monitoring Station Information



Station Address: 100 Irving Ave. S., Minneapolis, MN
County: Hennepin
Major Basin: Mississippi River Basin
Watershed: Bassett Creek
Drainage Area: 43 square miles

Station Operator: Minneapolis Park and Recreation Board

Metropolitan Council Environmental Services Contact Information:

Contact Person: Leigh Harrod, P.G.
Address: 2400 Childs Road
St Paul, MN 55106
Phone: 651-602-8085
E-mail: leigh.harrod@metc.state.mn.us

Watershed District or Watershed Management Organization:

Bassett Creek Watershed Management Commission

Station Overview: MCES, with funding provided by the Minnesota Legislature via a grant from the Minnesota Pollution Control Agency (MPCA), has supported water quality monitoring of Bassett Creek since March 2000. The Bassett Creek Watershed is situated entirely within urbanized areas of Hennepin County. The monitoring station is located in Minneapolis, Minnesota, 1.9 miles upstream from the creek confluence with the Mississippi River. In the vicinity of the monitoring station, the creek is quite straight and free of meanders, with rip-rap stabilizing the stream banks and bottom of the channel.

About a quarter mile downstream from the station, Bassett Creek flows into a tunnel beneath the major business sector of downtown Minneapolis before discharging directly into the Mississippi River.

MCES partners with the Minneapolis Park and Recreation Board to operate the station. The Bassett Creek Watershed Management Commission maintains the rating curve at this location. A rain gauge is present at this station for measurement of precipitation.

2003 Monitoring Year: Prior to the ice-out date of March 12, 2003, daily average flows were estimated, as ice conditions in the stream channel precluded accurate measurement of water stage and flow. The annual spring snowmelt event in mid-March was somewhat subdued, largely due to the lack of significant snow pack accumulation during the winter of 2002-2003.

A peak daily average flow of 287.4 cfs, with a stage of 3.08 feet, occurred on June 25, 2003, in response to 4.03 inches of rain generated by a large thunderstorm. The highest flow attained that same day was 378 cfs, which generated enough energy to dislodge the rip-rap along the stream bank near the station. The ensuing debris caused a shift in the rating curve. Subsequently, the rip-rap was repositioned and the channel debris removed. New rating curve measurements were then obtained to re-establish the stage-discharge relationship.

Rain was recorded on only 79 days at this location in 2003. Total annual rainfall measured at the station in 2003 was 21.09 inches. Of that total, 80% occurred before July 15, 2003. The remainder of the year was largely characterized by drought conditions. Runoff event-based composite sampling began in mid-March 2003 and continued through mid-September.

Nineteen samples were collected for water chemistry analysis during 2003, including 7 composite samples and 12 grab samples. The MCES annual water quality monitoring plan includes 12 monthly baseflow (“non-event”) grab samples and approximately 10 to 15 flow-weighted composite samples collected during all runoff events in the open water season (March-November). The 2003 sampling scheme met the goals of the MCES monitoring work plan; however, a limited number of composite samples were obtained during the last half of 2003 due to drought conditions.

For additional stream monitoring information and monitoring methods regarding this site, see www.metrocouncil.org/environment/RiversLakes.

Figure 1.BS. Bassett Creek Monitoring Station Location and Watershed Characteristics

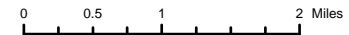
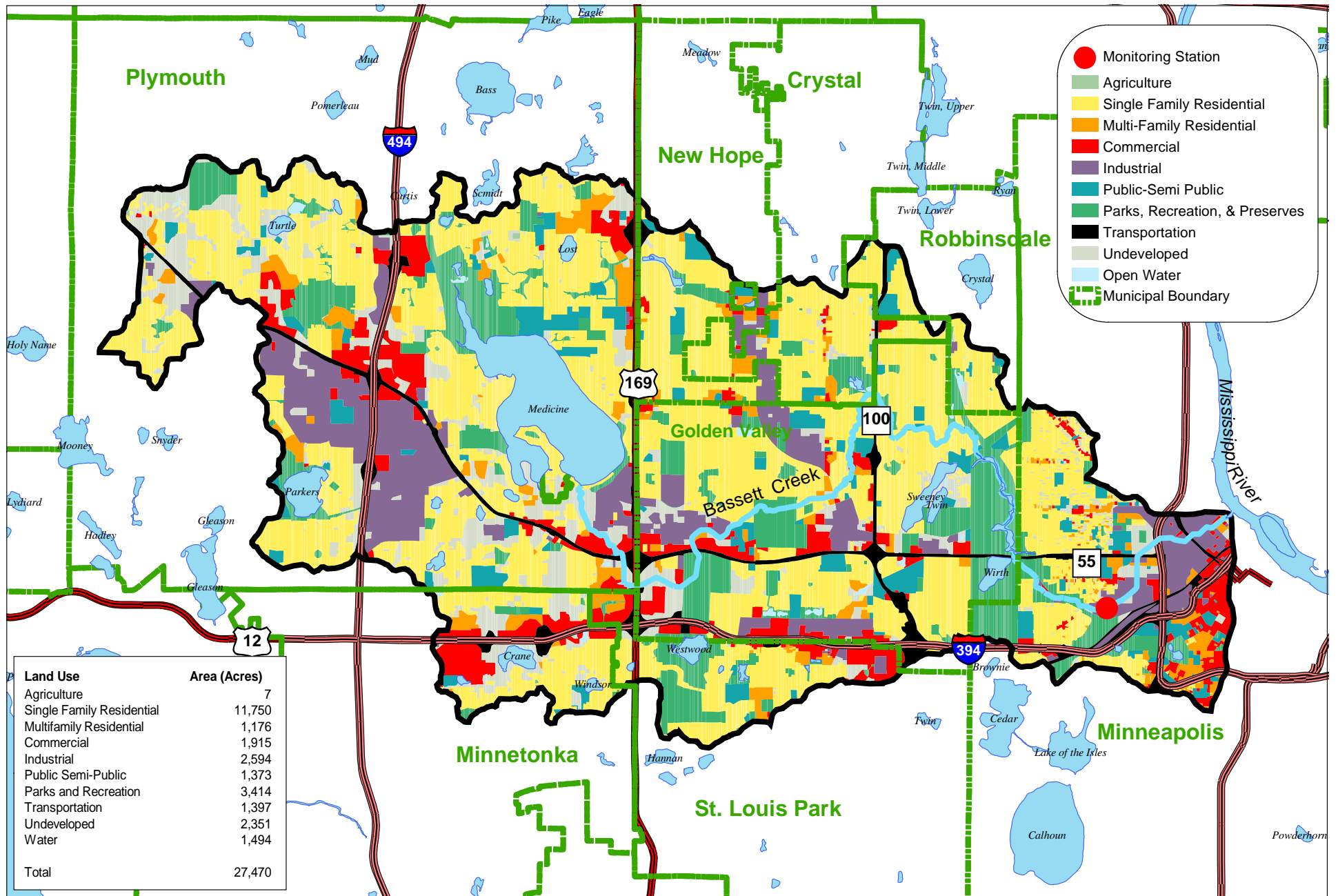


Figure 2.BS. Bassett Creek 2003 Hydrograph, Precipitation and Sampling Information

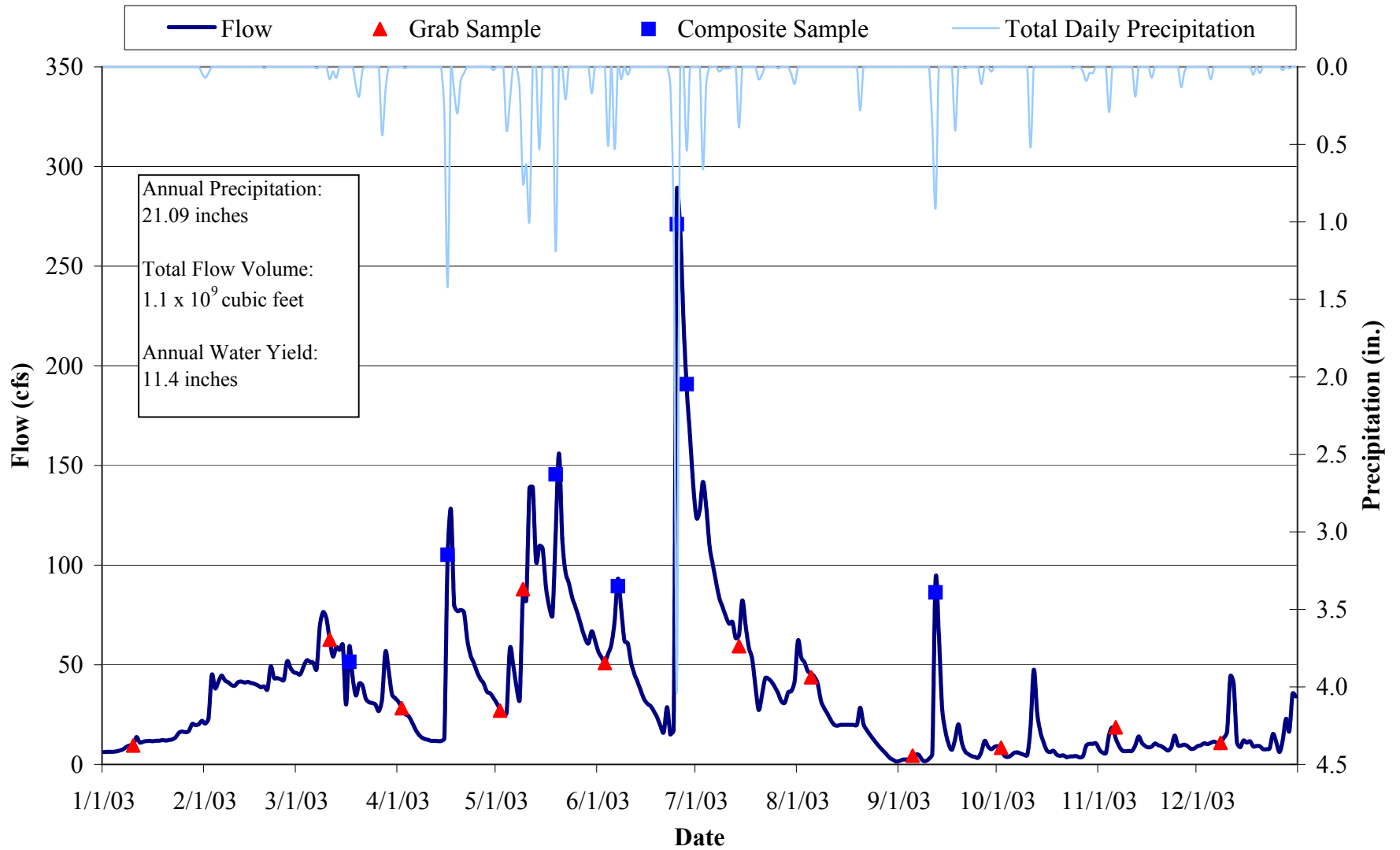


Table 2.BS. Bassett Creek 2003 Water Chemistry Information

Variable	N	Mean	Median	Minimum	Maximum	25%	75%	STD
Chloride, mg/L	19	119	103	30	265	84	139	60
Hardness, mg/L	19	237	206	72	454	174	319	101
Cadmium, ug/L	12	0.2	0.1	<0.1	0.7	<0.1	0.2	0.2
Chromium, ug/L	12	1.2	0.8	0.3	3.0	0.6	1.5	1.0
Copper, ug/L	12	5.2	3.9	2.7	9.7	3.5	7.1	2.4
Lead, ug/L	12	4.1	2.3	0.2	12.8	1.1	4.2	4.7
Nickel, ug/L	12	3.1	3.1	1.7	4.5	2.7	3.7	0.8
Zinc, ug/L	12	12.4	7.1	4.1	33.0	5.8	15.6	10.8
Total Kjeldahl Nitrogen, mg/L	19	1.23	1.10	0.58	3.20	1.05	1.20	0.55
Total Nitrate Nitrogen, mg/L	19	0.31	0.23	0.05	0.80	0.18	0.41	0.21
Total Phosphorus, mg/L	19	0.14	0.11	0.04	0.33	0.09	0.18	0.09
Total Dissolved Phosphorus, mg/L	19	0.04	0.03	0.01	0.24	0.02	0.04	0.05
Total Suspended Solids, mg/L	19	29	16	3	117	11	30	33
Volatile Suspended Solids, mg/L	19	8	5	2	20	4	10	5
Turbidity, NTU	19	9	7	3	33	5	9	8

N: Sample Count

25%, 75%: 25th and 75th Percentiles

STD: Standard Deviation

Table 3.BS. Bassett Creek 2003 Annual Loading Information* for Suspended Solids and Nutrients

Variable	Annual Load (tons)	Annual Yield (lbs/acre)	Annual Normalized Yield (lbs/acre/in of water)	Flow Weighted Mean Concentration (mg/L)
Total Suspended Solids	1,070	78	7	30
Total Phosphorus	4.65	0.34	0.03	0.13
Total Dissolved Phosphorus	1.69	0.12	0.01	0.05
Total Nitrate Nitrogen	14.9	1.08	0.09	0.42

* 2003 Annual Loading Information is provisional and may be subject to minor revisions.

Figure 3.BS. Bassett Creek 2003 Hydrograph with Total Suspended Solids and Nitrate Nitrogen Concentrations

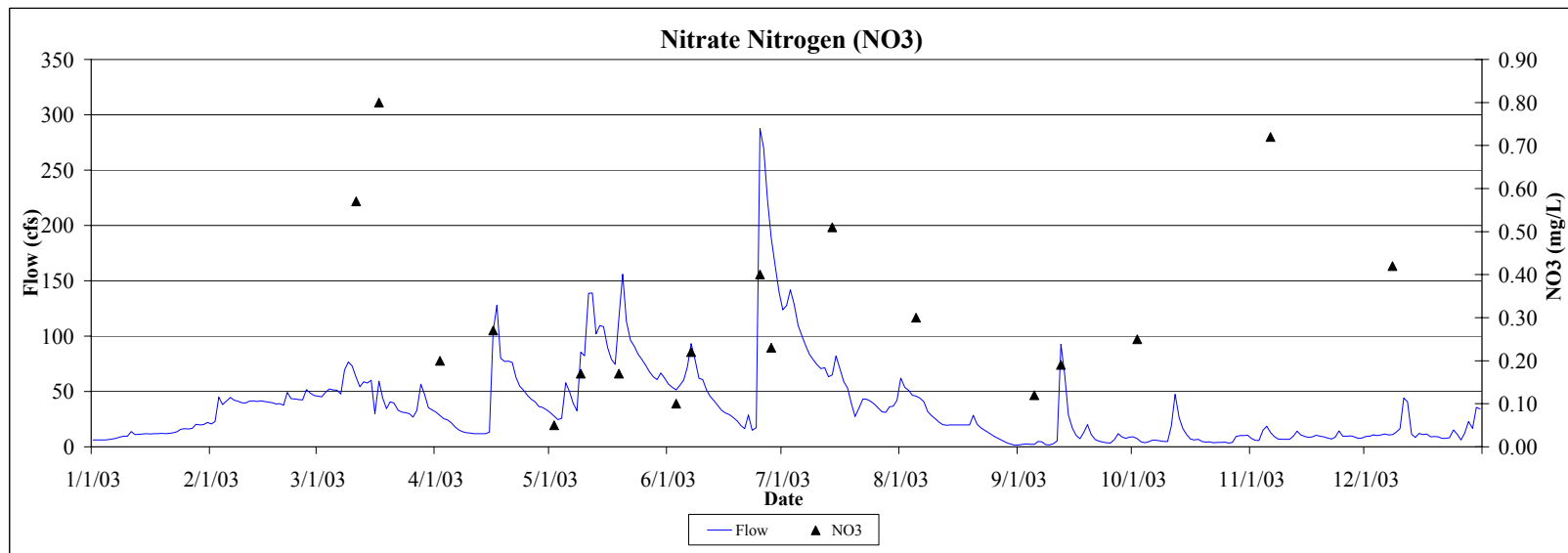
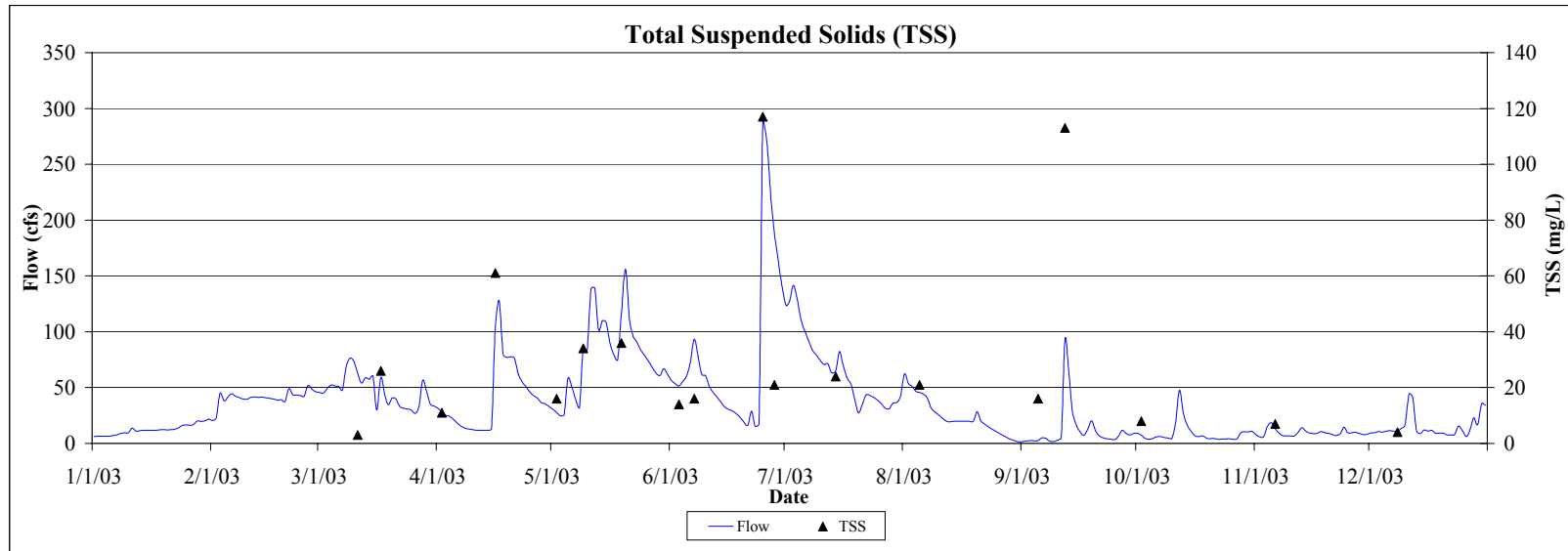


Figure 4.BS. Bassett Creek 2003 Hydrograph with Total and Dissolved Phosphorus Concentrations

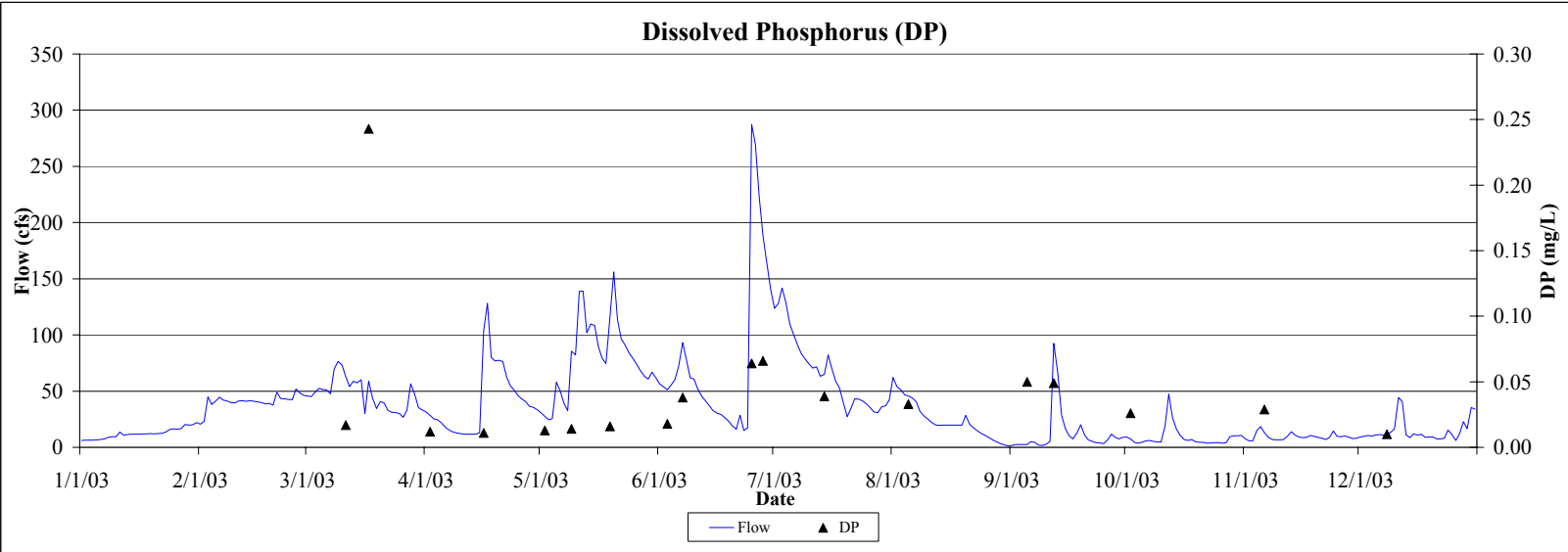
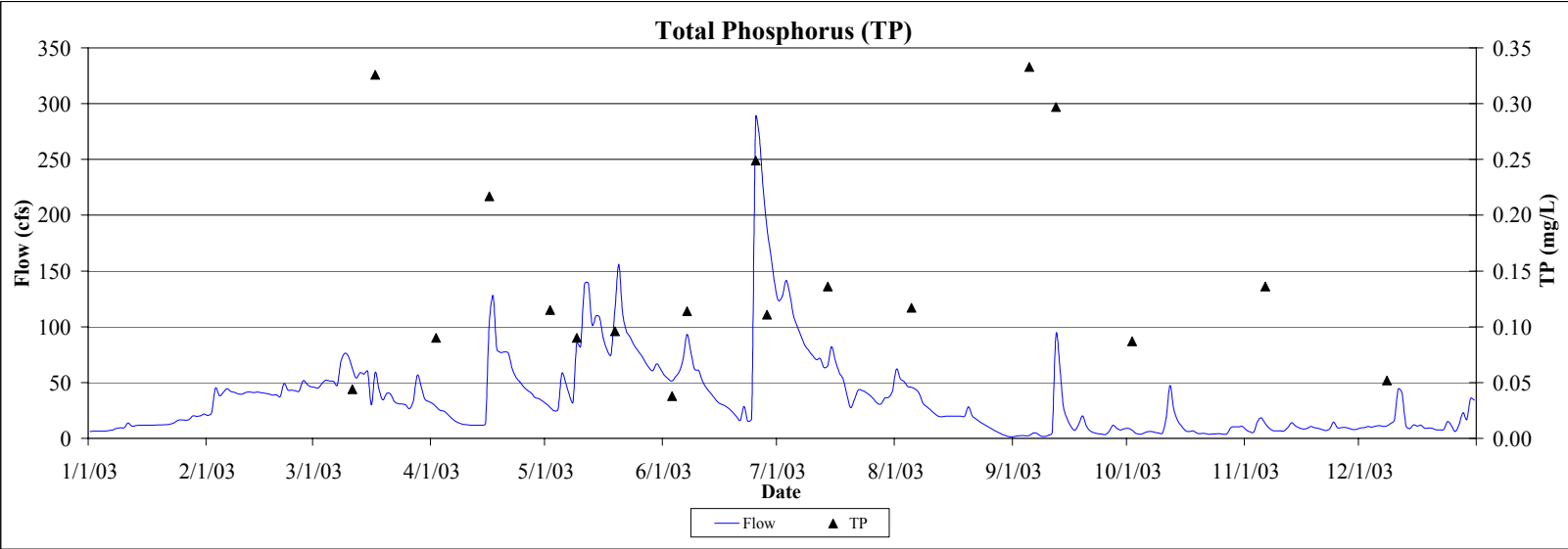


Table 4.BS. Bassett Creek: Comparison of 2001-2003 Hydrology and Water Chemistry

	2001*	2002*	2003
Hydrology			
Total Precipitation (inches)	29.89	33.93	21.09
Water Yield (inches)	18.4	18.3	11.4
Total Volume (cubic feet)	1.8 x 10 ⁹	1.8 x 10 ⁹	1.1 x 10 ⁹
Annual Load (tons)			
Total Suspended Solids	1,790	1,780	1,070
Total Phosphorus	7.51	7.47	4.65
Total Dissolved Phosphorus	2.73	2.71	1.69
Total Nitrate Nitrogen	23.7	24.1	14.9
Annual Yield (lbs/acre)			
Total Suspended Solids	130	130	78
Total Phosphorus	0.55	0.54	0.34
Total Dissolved Phosphorus	0.20	0.20	0.12
Total Nitrate Nitrogen	1.72	1.75	1.08
Annual Normalized Yield (lbs/acre/inch of water)			
Total Suspended Solids	7	7	7
Total Phosphorus	0.03	0.03	0.03
Total Dissolved Phosphorus	0.01	0.01	0.01
Total Nitrate Nitrogen	0.09	0.10	0.09
Flow-Weighted Mean Concentration (mg/L)			
Total Suspended Solids	34	33	30
Total Phosphorus	0.13	0.13	0.13
Total Dissolved Phosphorus	0.05	0.05	0.05
Total Nitrate Nitrogen	0.41	0.42	0.42

* Note: Annual loads, yields, normalized yields, and flow-weighted mean concentrations have been revised.