

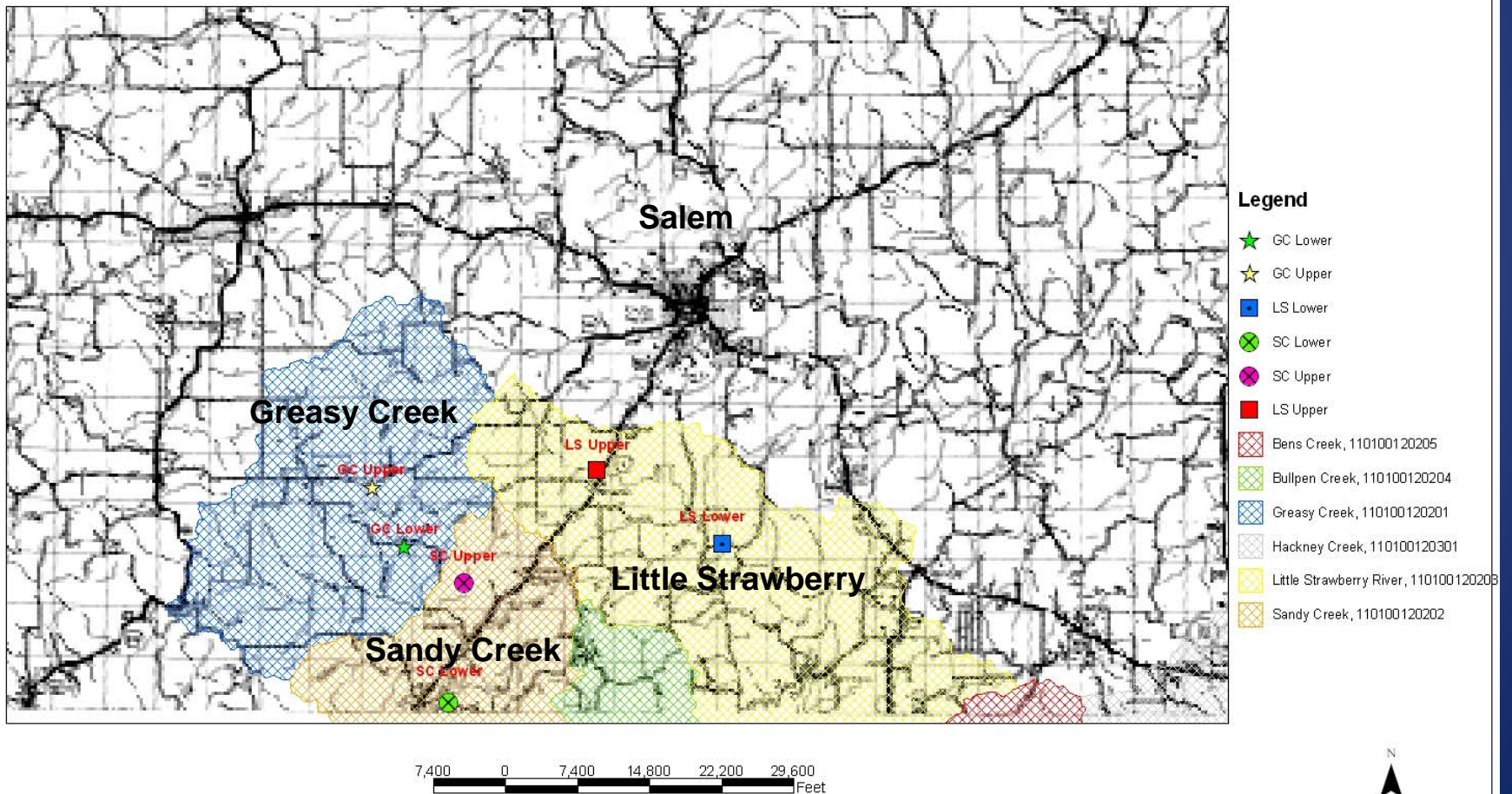
**Water Quality Monitoring on the
Upper Strawberry River
Project 07-1000**

**Dr. Jennifer Bouldin and Teresa Brueggen
Arkansas State University
Ecotoxicology Research Facility
Jonesboro Arkansas**

Sampling sites

Strawberry River Sub Watersheds Monitoring Points

Fulton County



Overview

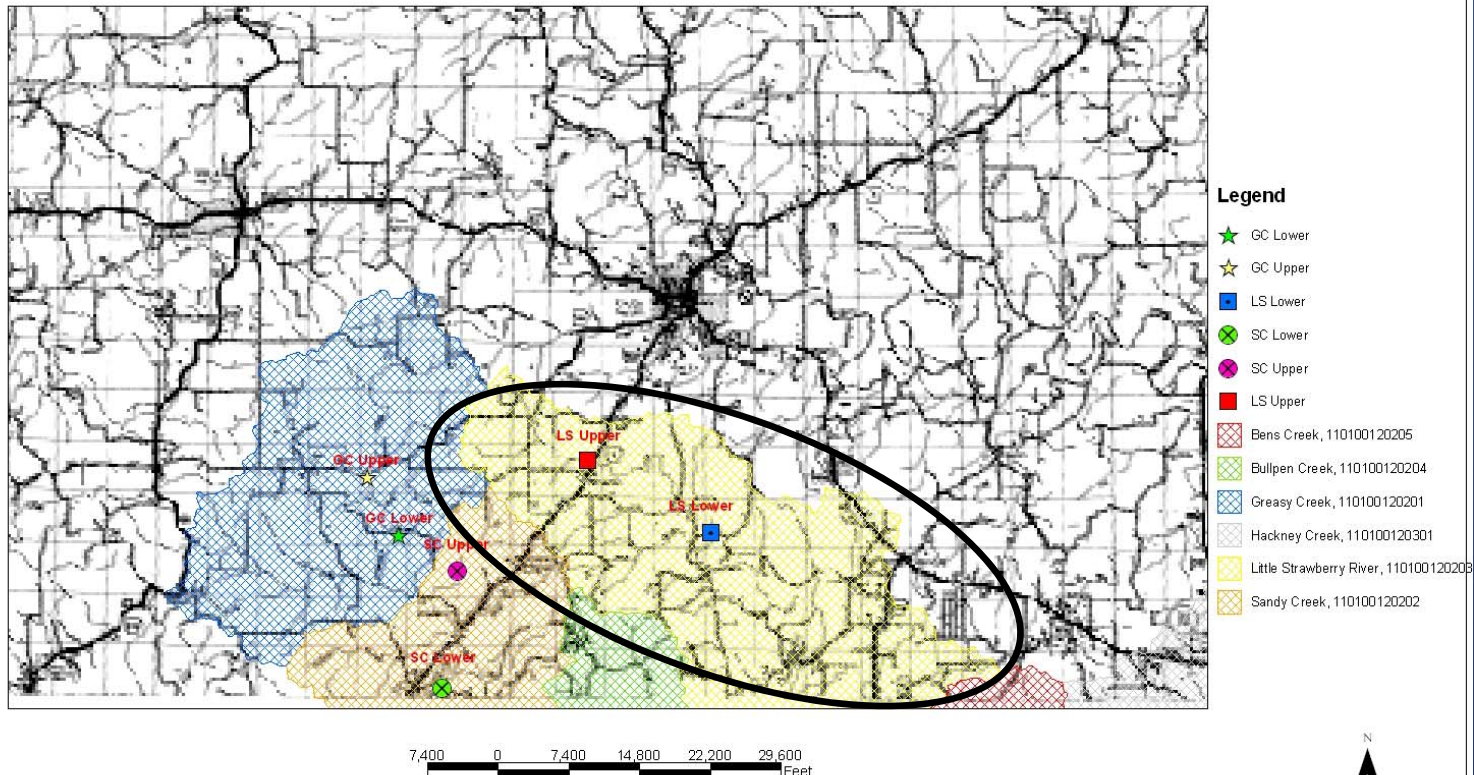
- Major headwater streams in the upper Strawberry River watershed
 - Little Strawberry (LS)
 - Sandy Creek (SC)
 - Greasy Creek (GC)
- Above and below BMP implementation
- Surface Water Quality Tests
 - Nutrients
 - Ortho-Phosphates
 - Nitrites
 - Nitrates
 - Total Suspended Solids



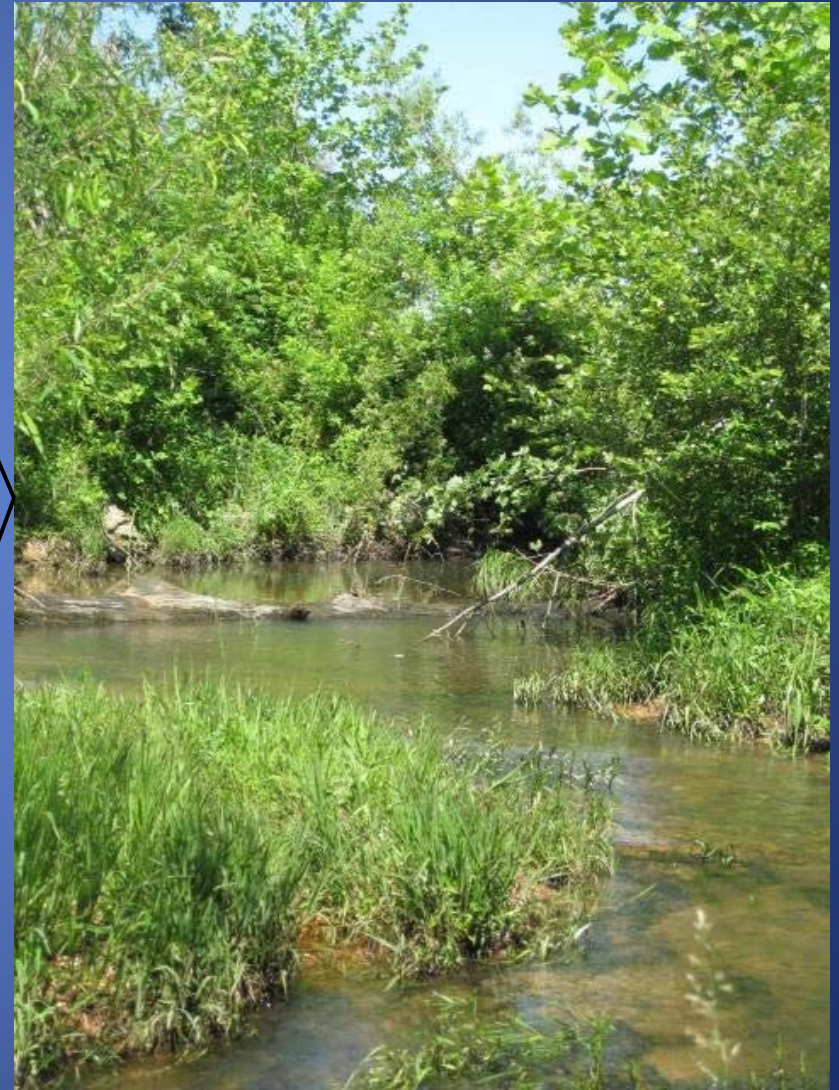
Little Strawberry River Subwatershed

- Largest subwatershed of the Strawberry River

Strawberry River Sub Watersheds Monitoring Points



Little Strawberry Upper

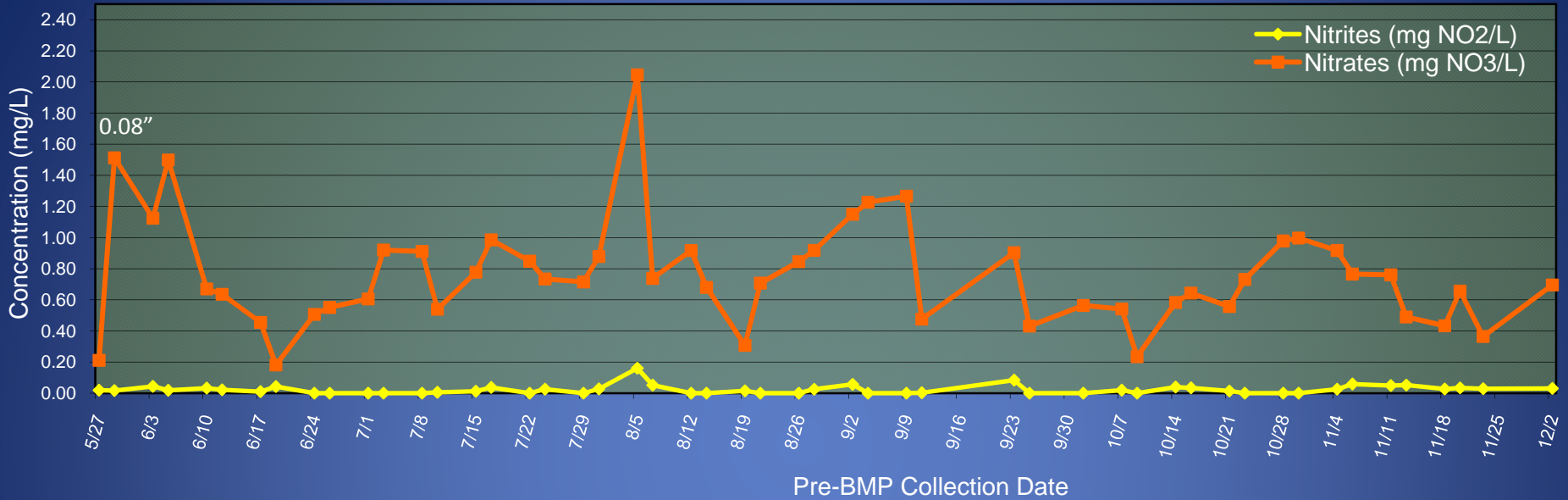


Little Strawberry Lower

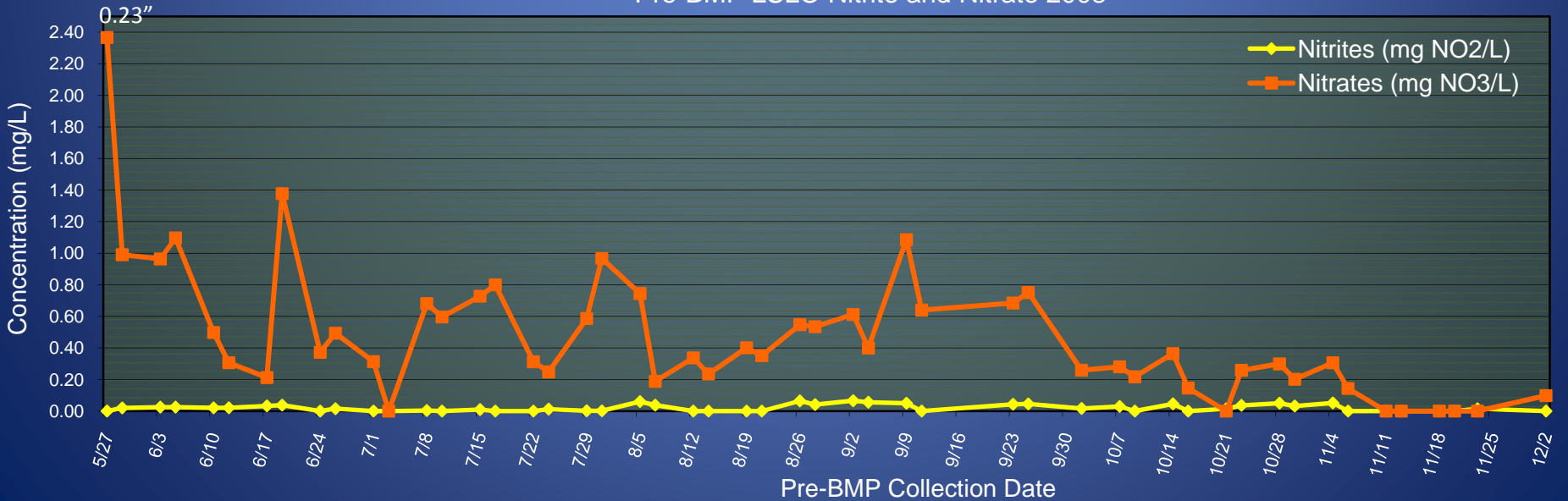


Little Strawberry (LS) NO_x Data

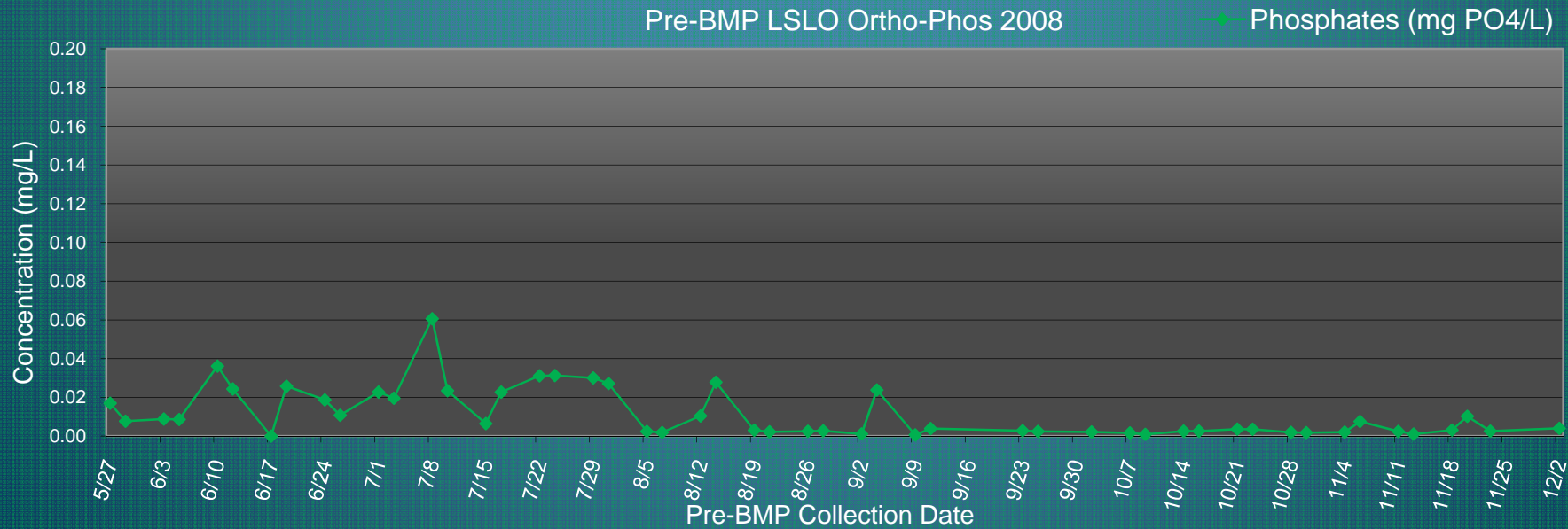
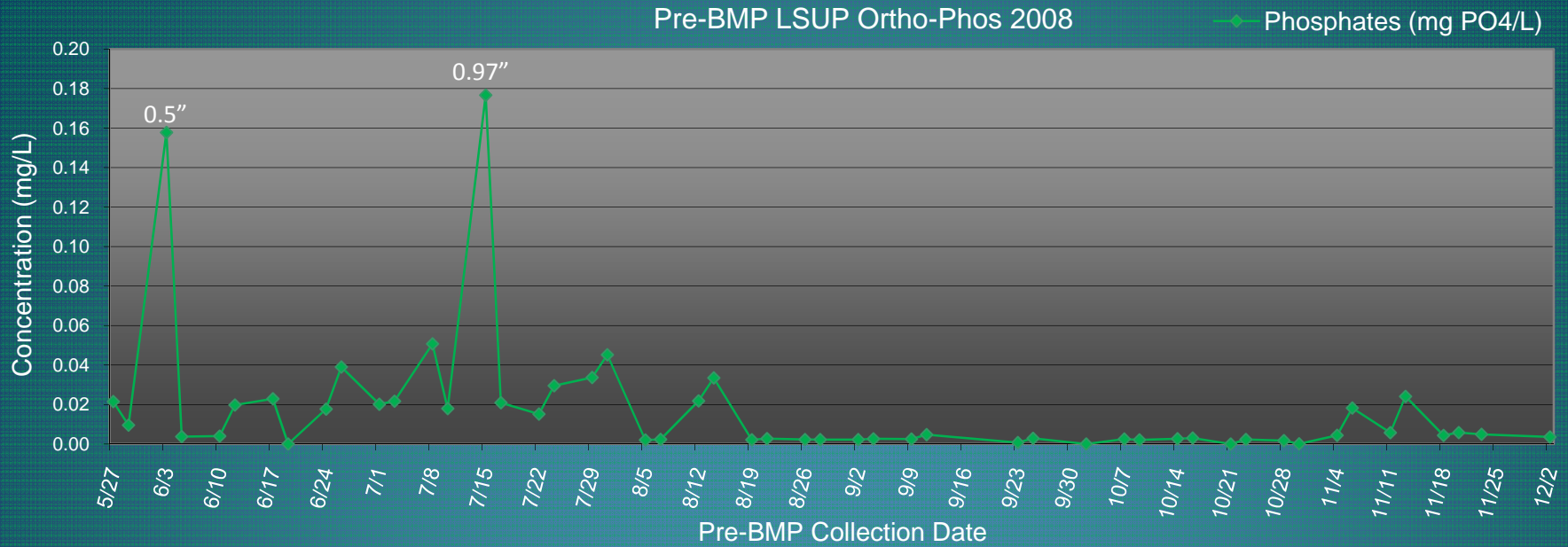
Pre-BMP LSUP Nitrite and Nitrate 2008



Pre-BMP LSLO Nitrite and Nitrate 2008

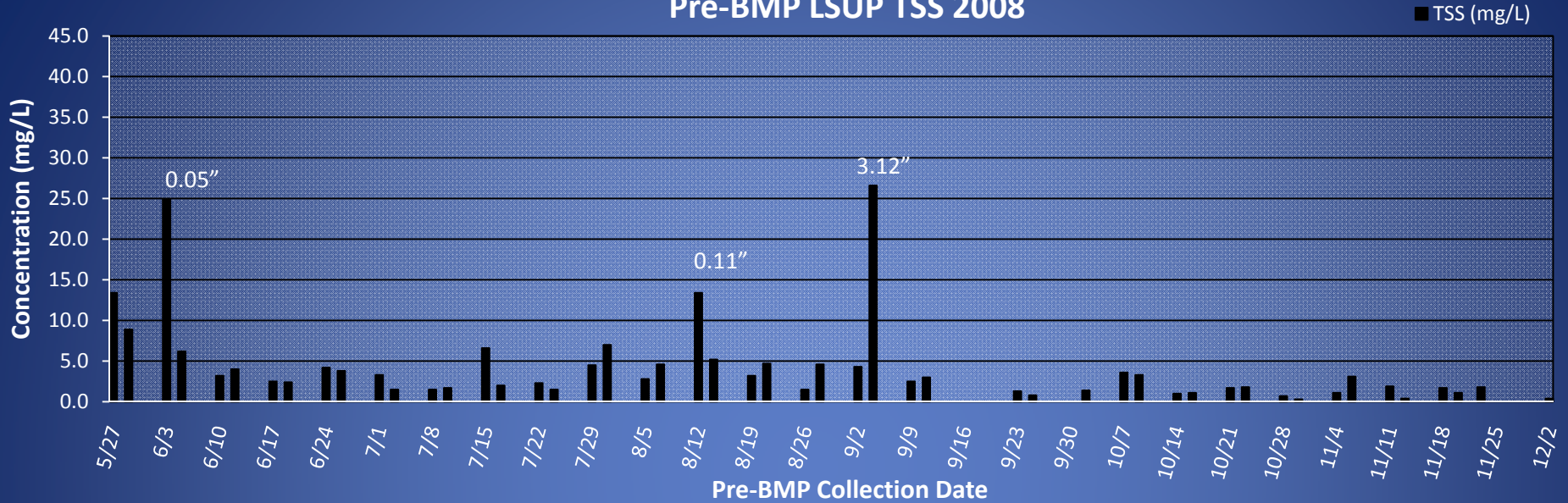


Little Strawberry (LS) Ortho-Phos Data

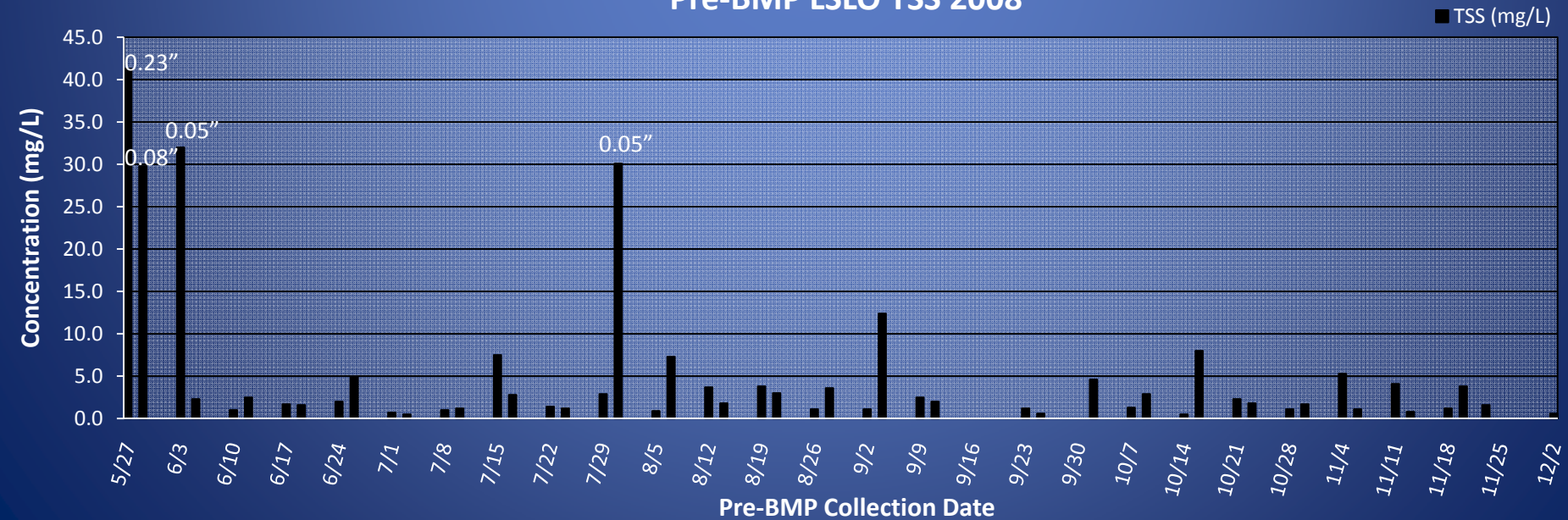


Little Strawberry Total Suspended Solid (TSS) Data

Pre-BMP LSUP TSS 2008

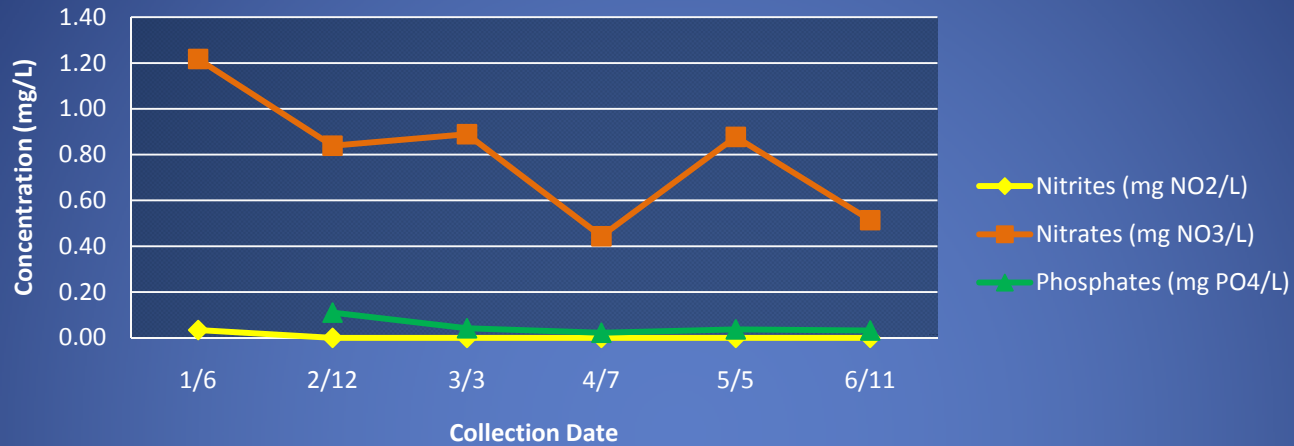


Pre-BMP LSLO TSS 2008

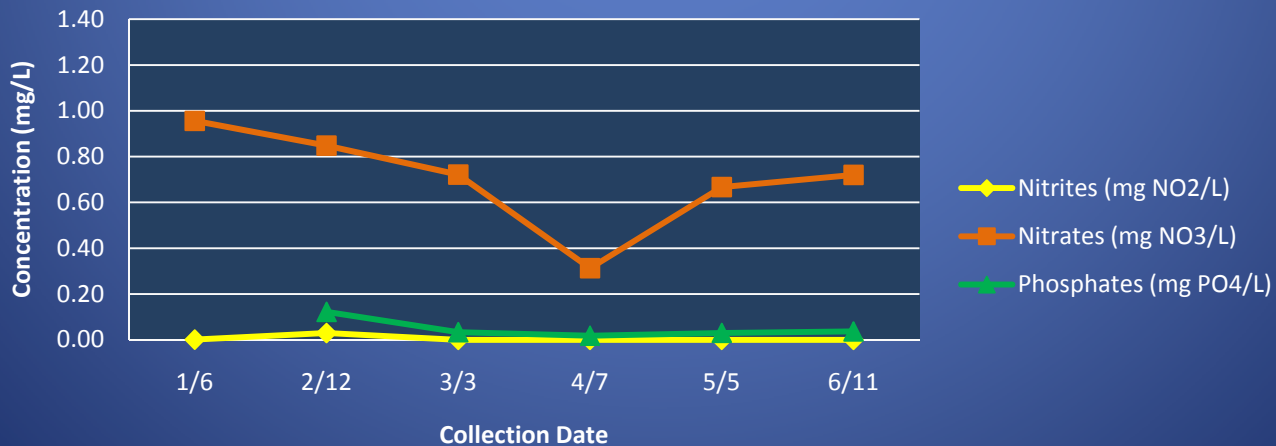


LS 2009 Nutrient Data

LSUP 2009 Nutrient Data

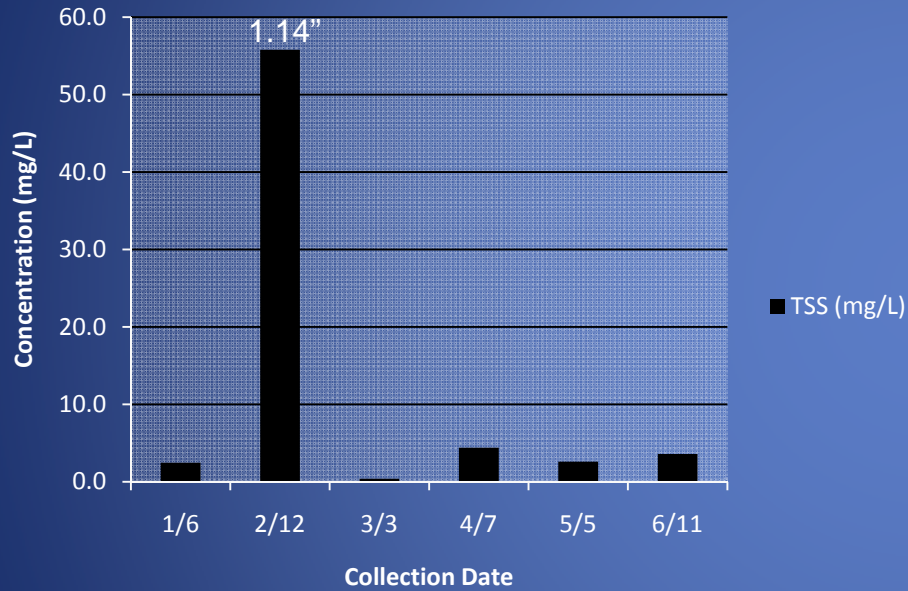


LSLO 2009 Nutrient Data

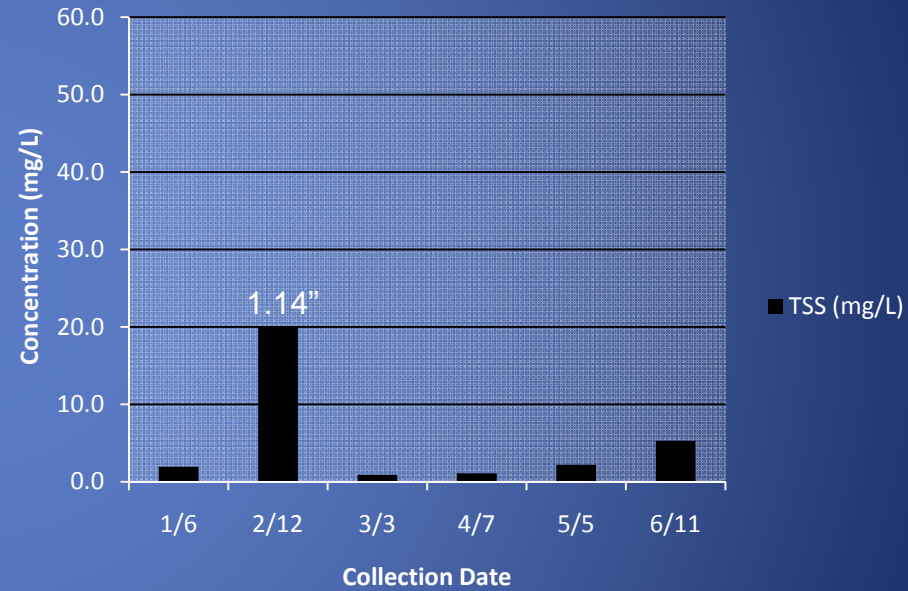


LS 2009 TSS Data

LSUP 2009 TSS Data



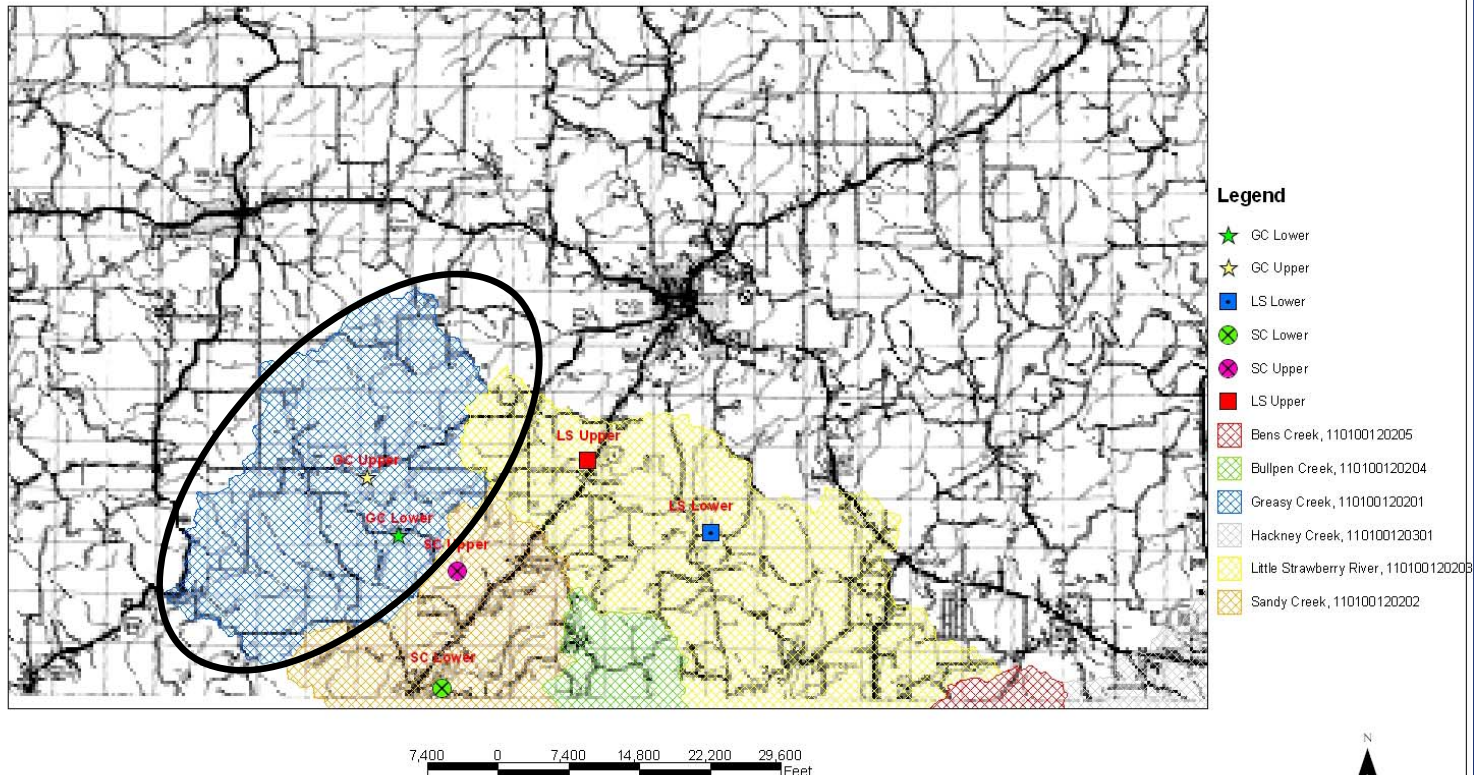
LSLO 2009 TSS Data



Greasy Creek Subwatershed

- 2nd largest subwatershed of the Strawberry River

Strawberry River Sub Watersheds Monitoring Points





Greasy Creek Upper

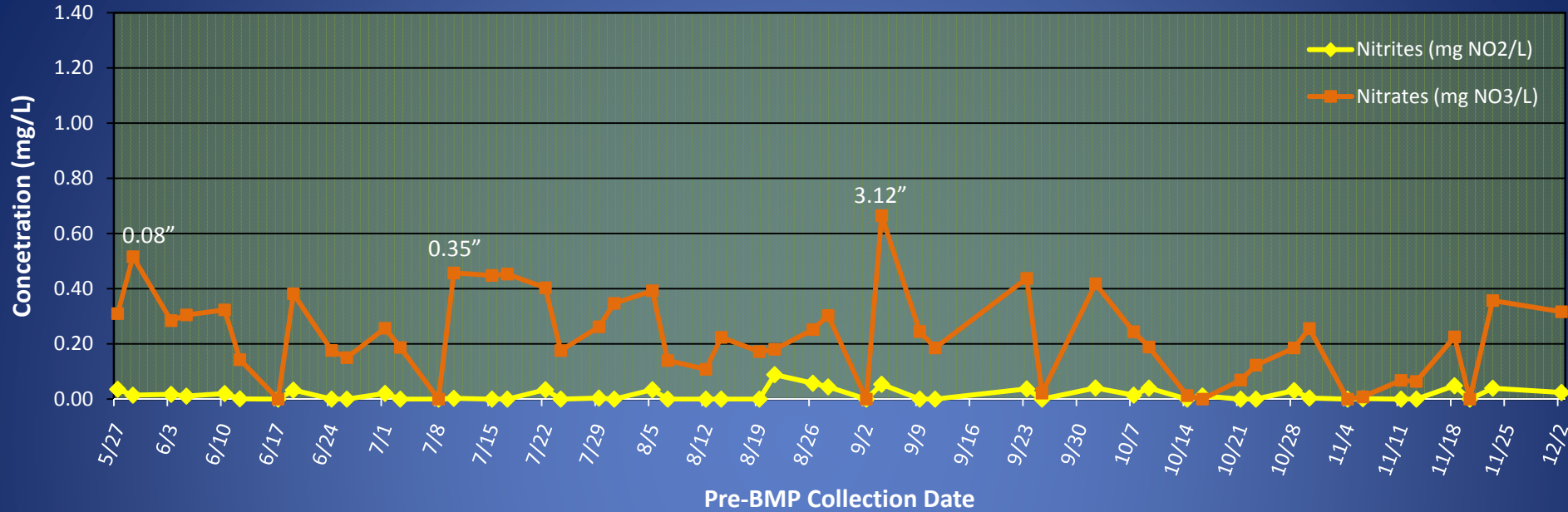


Greasy Creek Lower

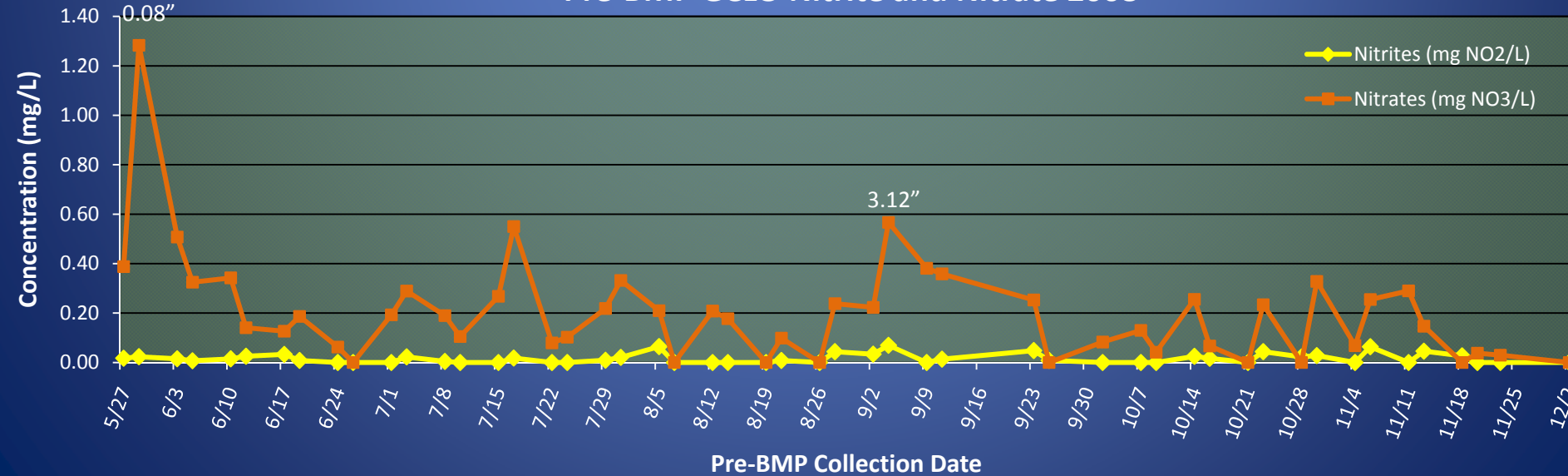


Greasy Creek (GC) NO_x Data

Pre-BMP GCUP Nitrite and Nitrate 2008

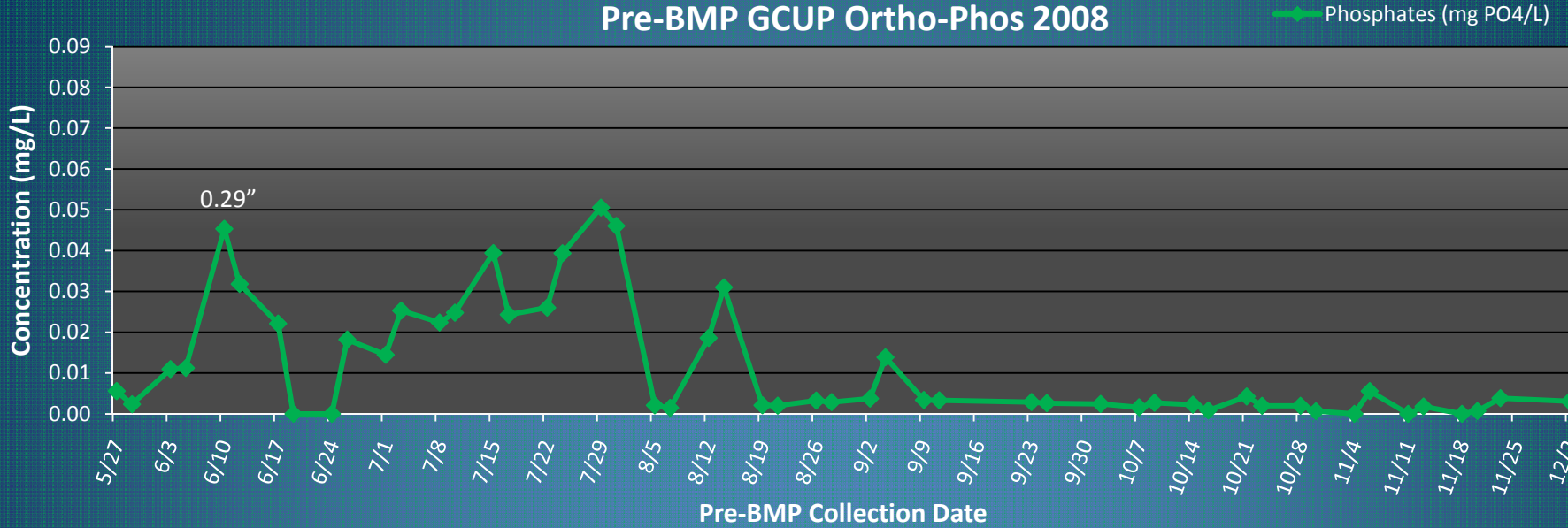


Pre-BMP GCLO Nitrite and Nitrate 2008

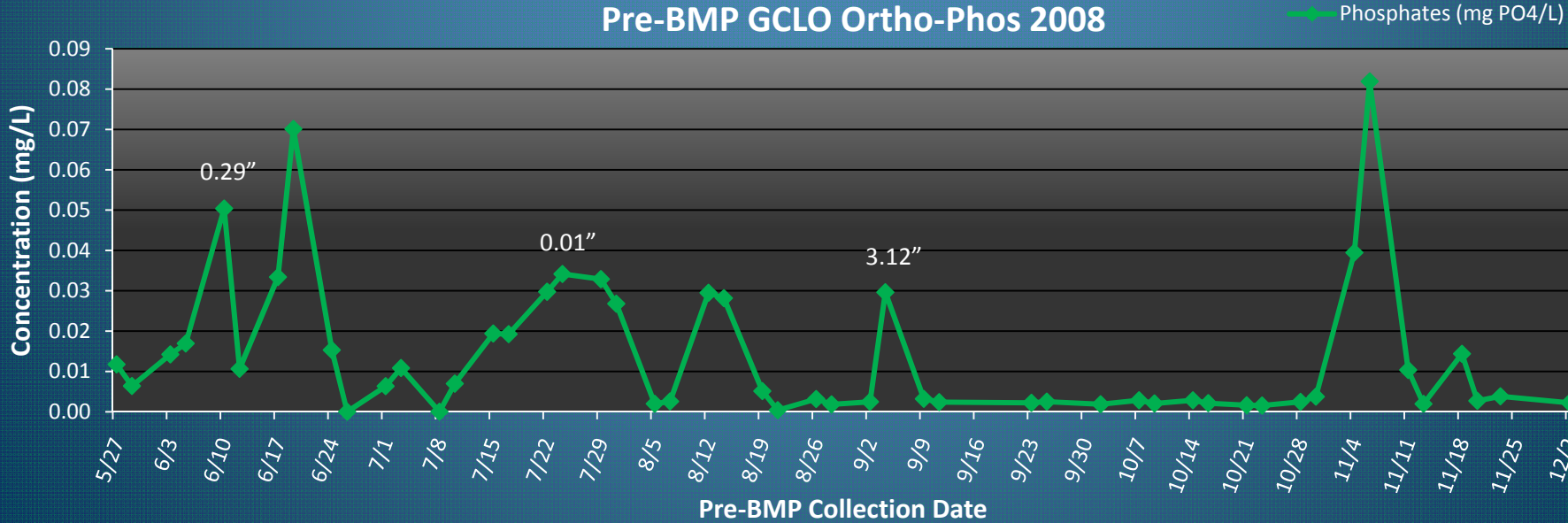


Greasy Creek (GC) Ortho-Phos Data

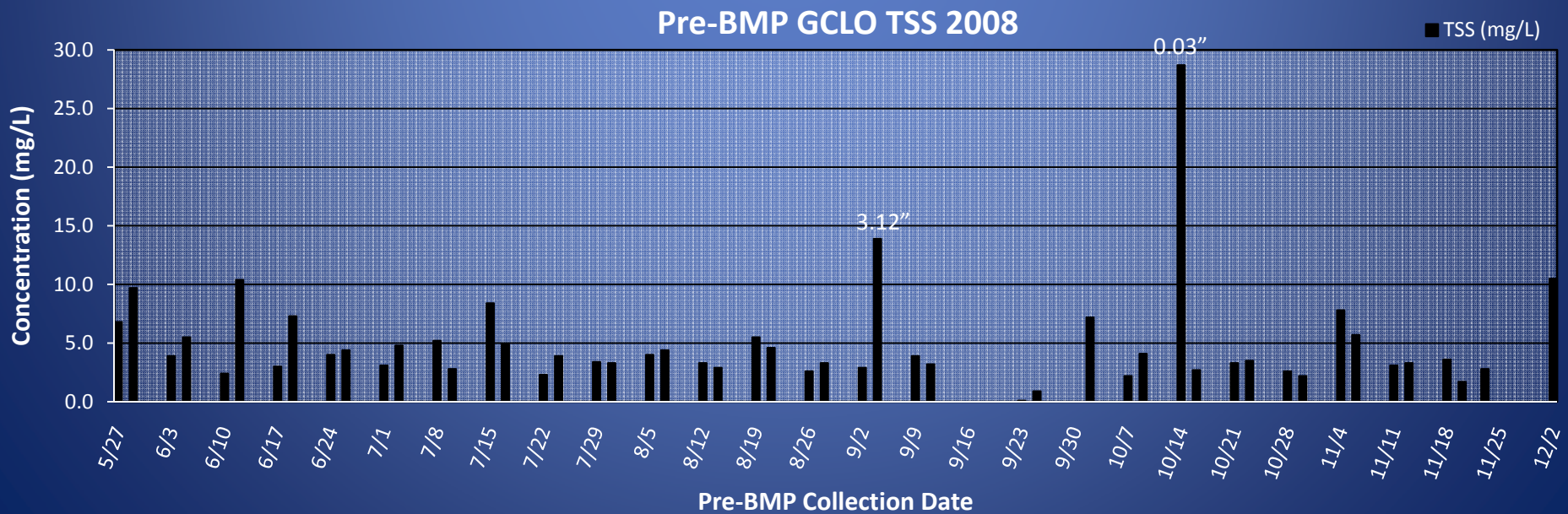
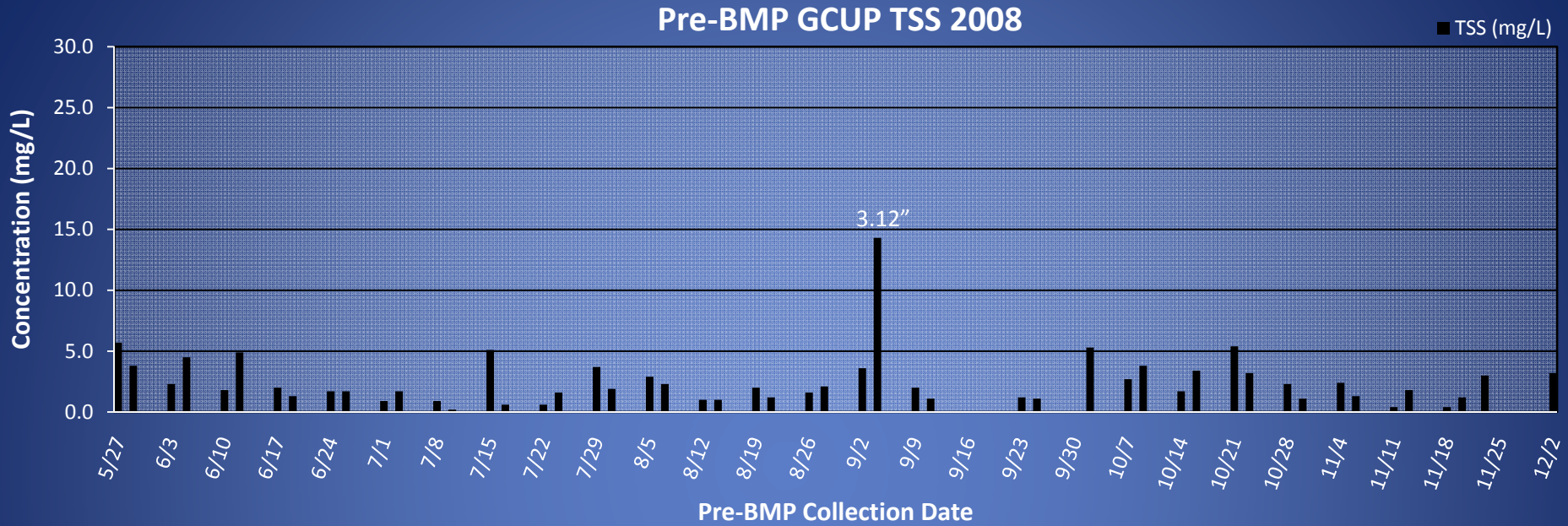
Pre-BMP GCUP Ortho-Phos 2008



Pre-BMP GCLO Ortho-Phos 2008

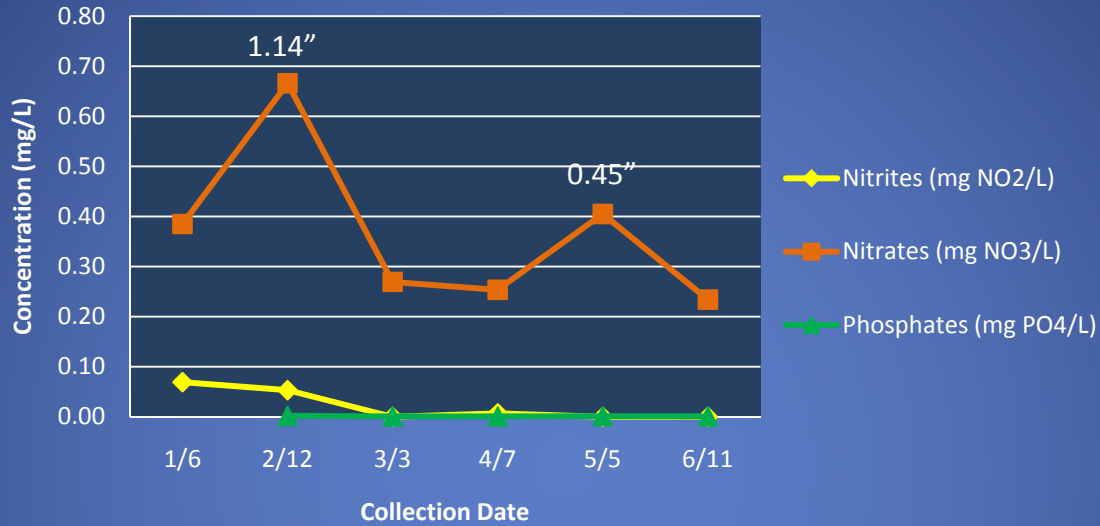


Greasy Creek (GC) Total Suspended Solid (TSS) Data

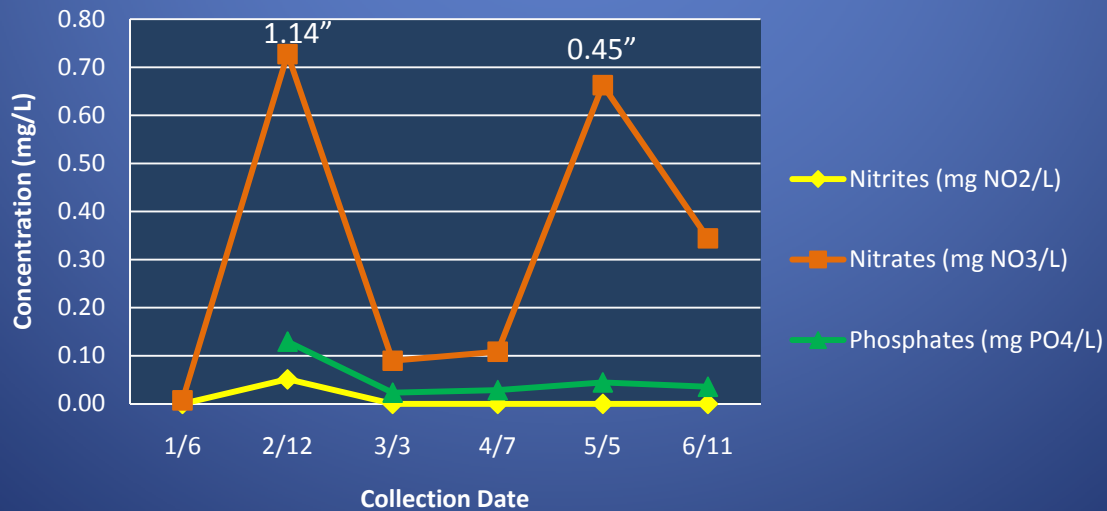


GC 2009 Nutrient Data

GCUP Nutrient Data 2009

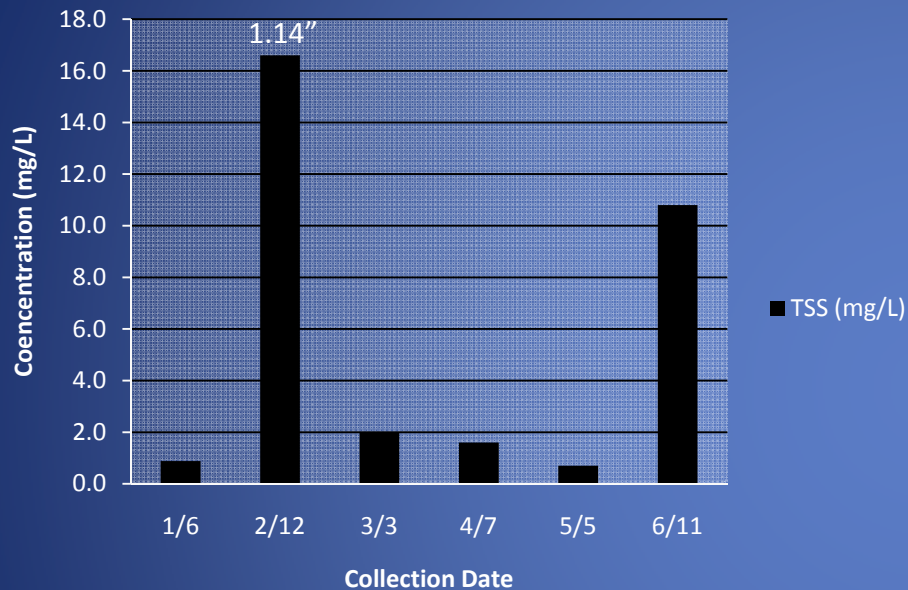


GCLO Nutrient Data 2009

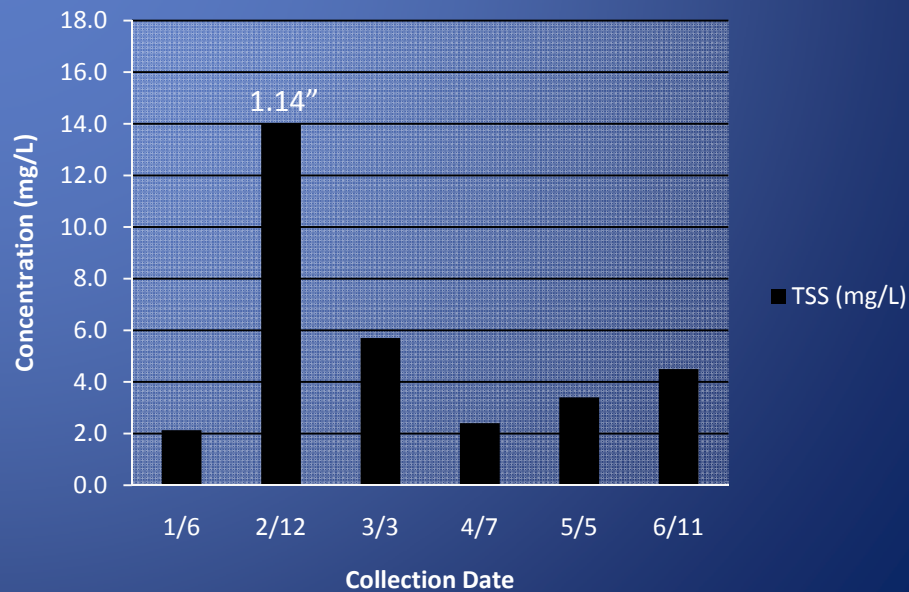


GC 2009 TSS Data

GCUP TSS Data 2009



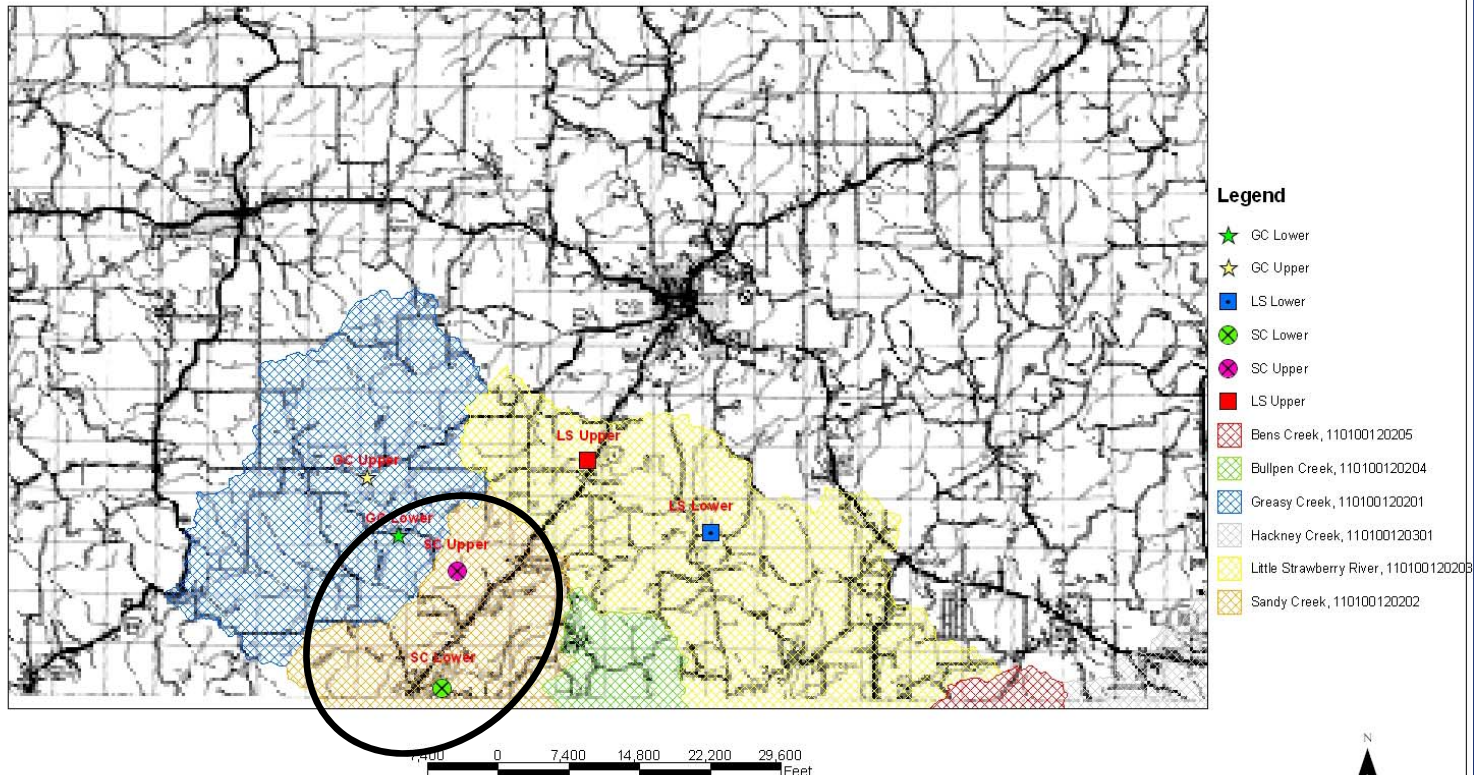
GCLO TSS Data 2009



Sandy Creek Subwatershed

- Smallest subwatershed of the Strawberry River

Strawberry River Sub Watersheds Monitoring Points



Sandy Creek Upper

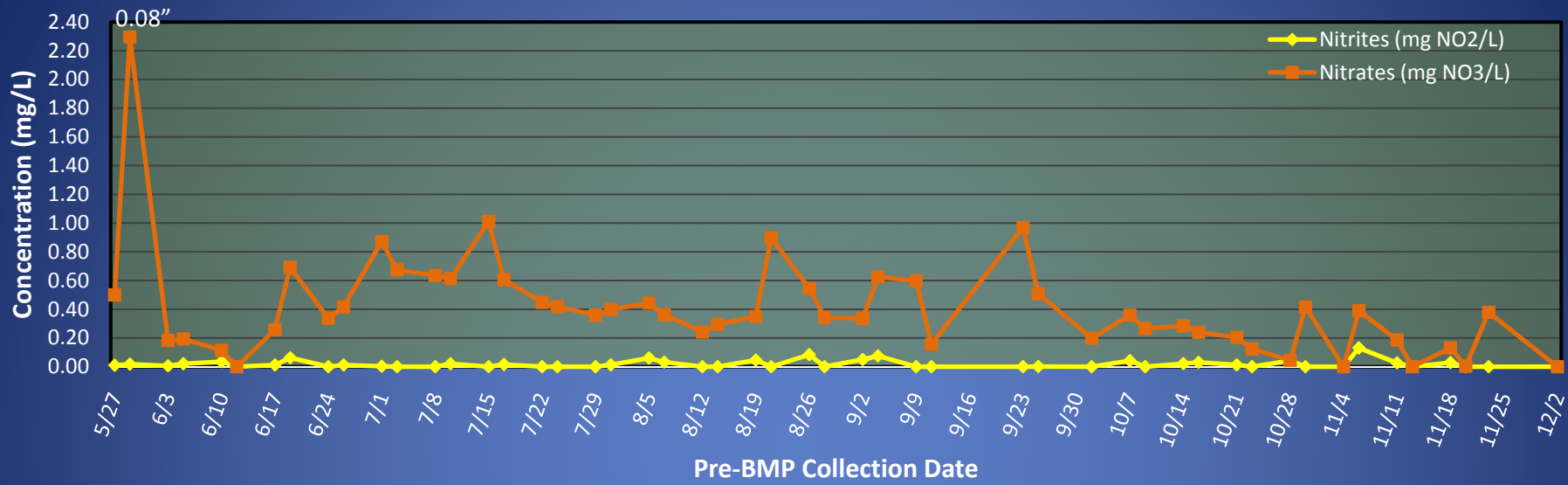




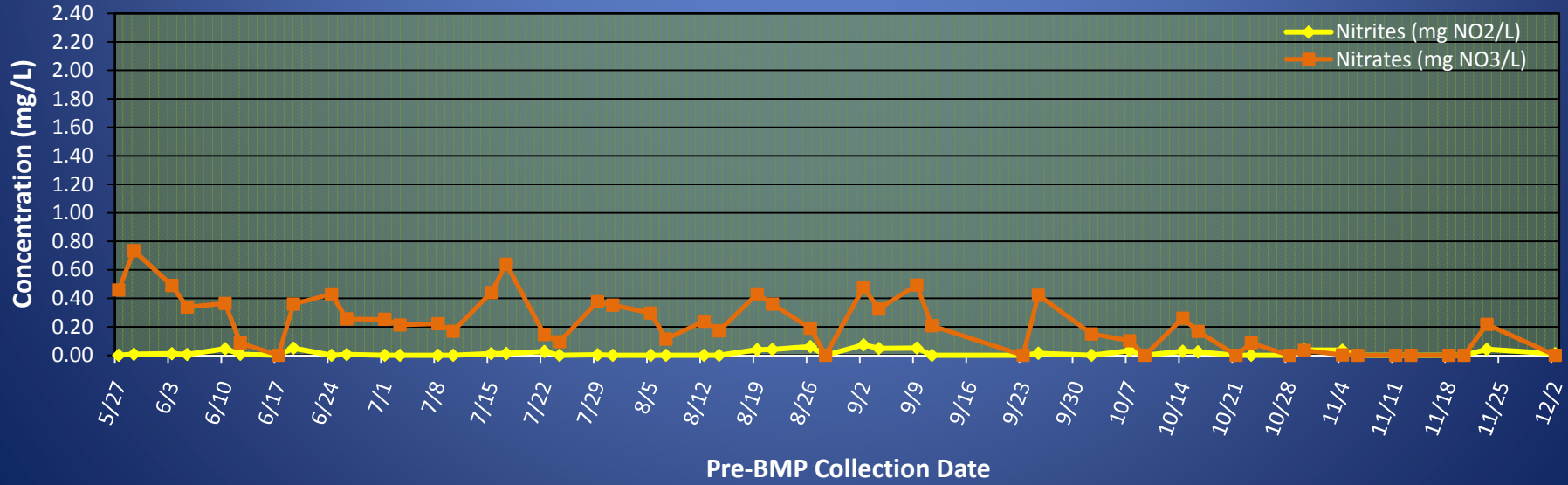
Sandy Creek Lower

Sandy Creek (SC) NO_x Data

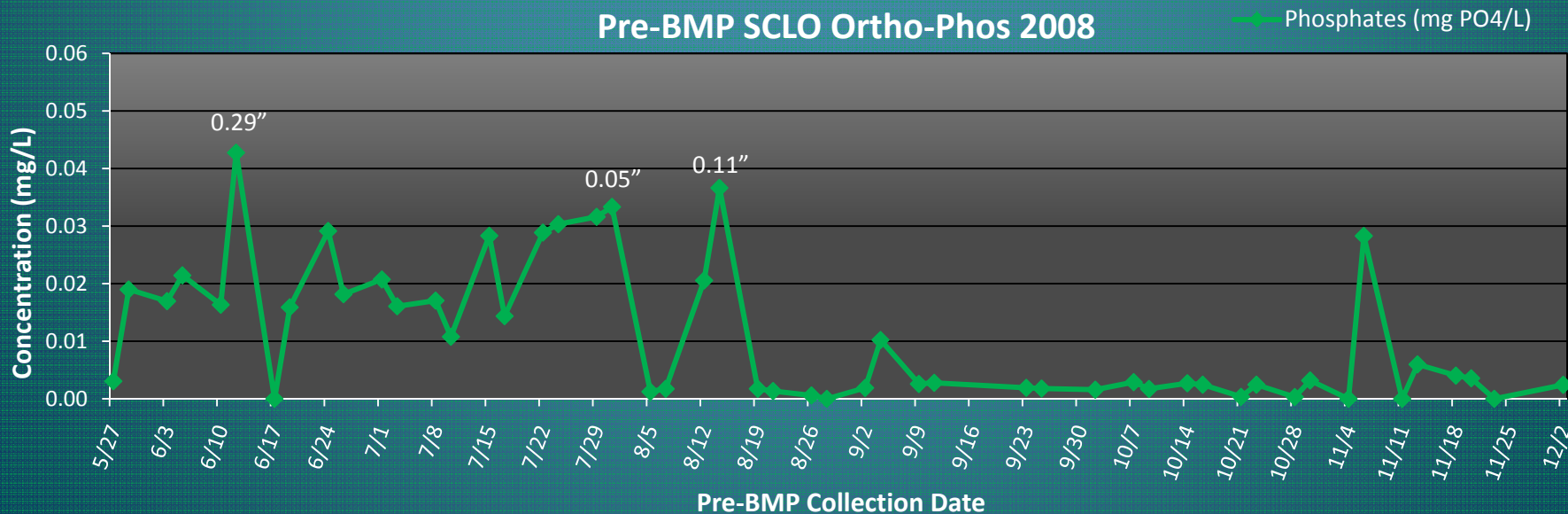
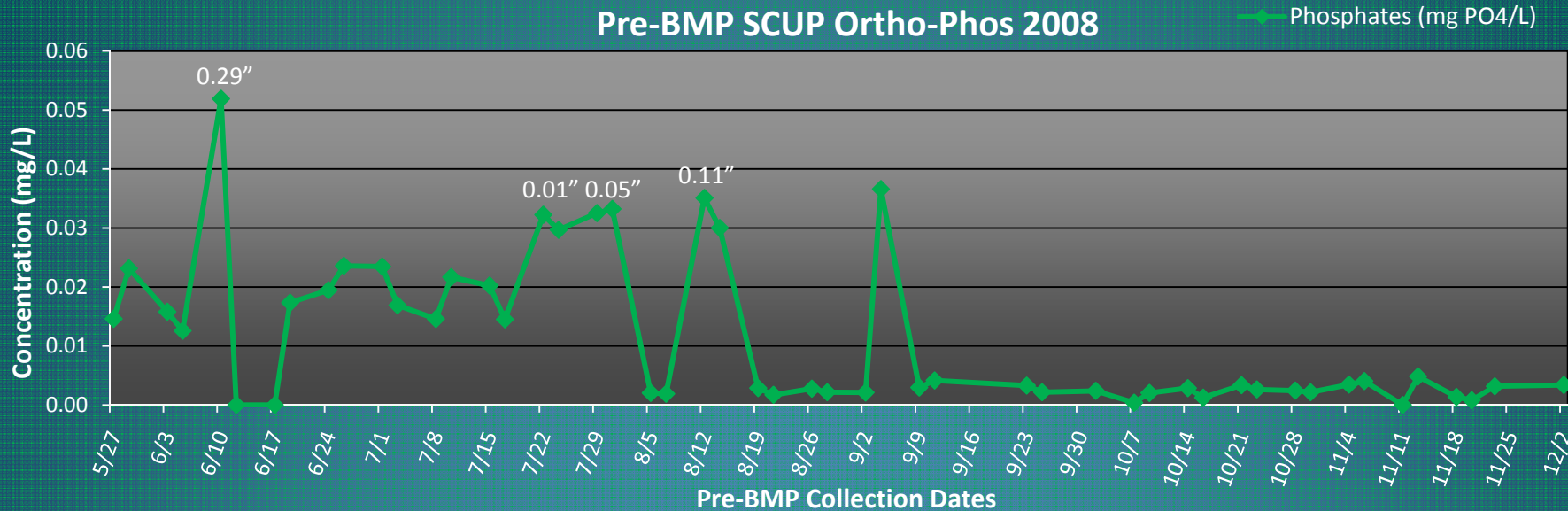
Pre-BMP SCUP Nitrite and Nitrate 2008



Pre-BMP SCLO Nitrite and Nitrate 2008

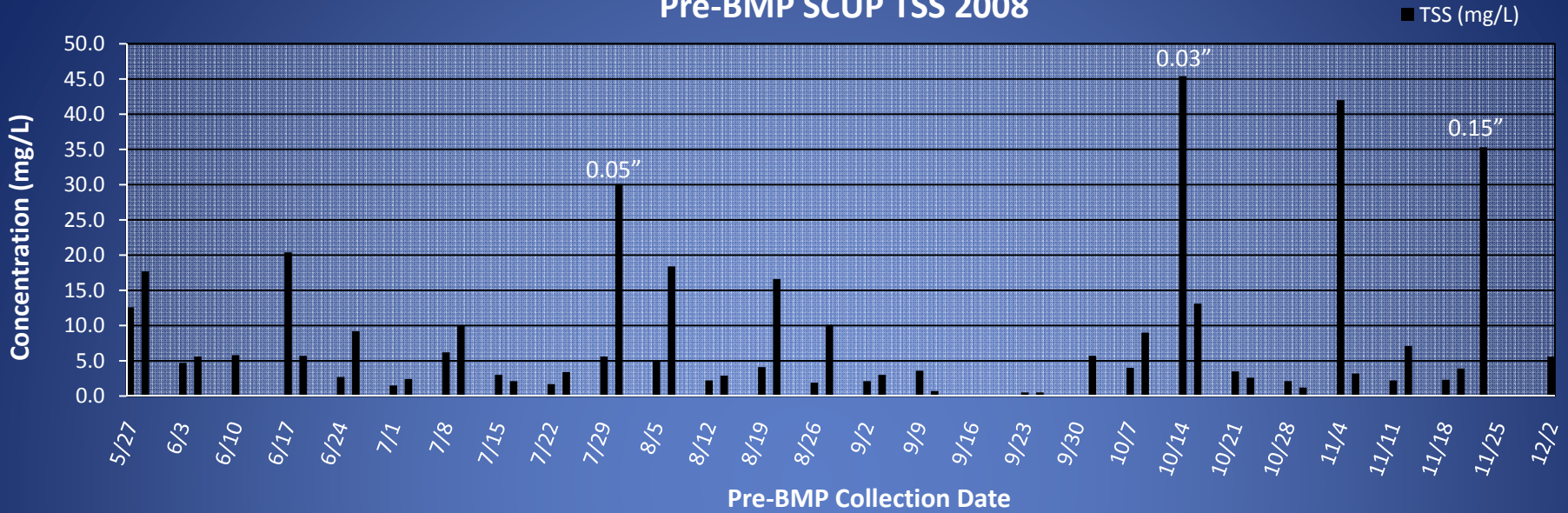


Sandy Creek (SC) Ortho-Phos Data

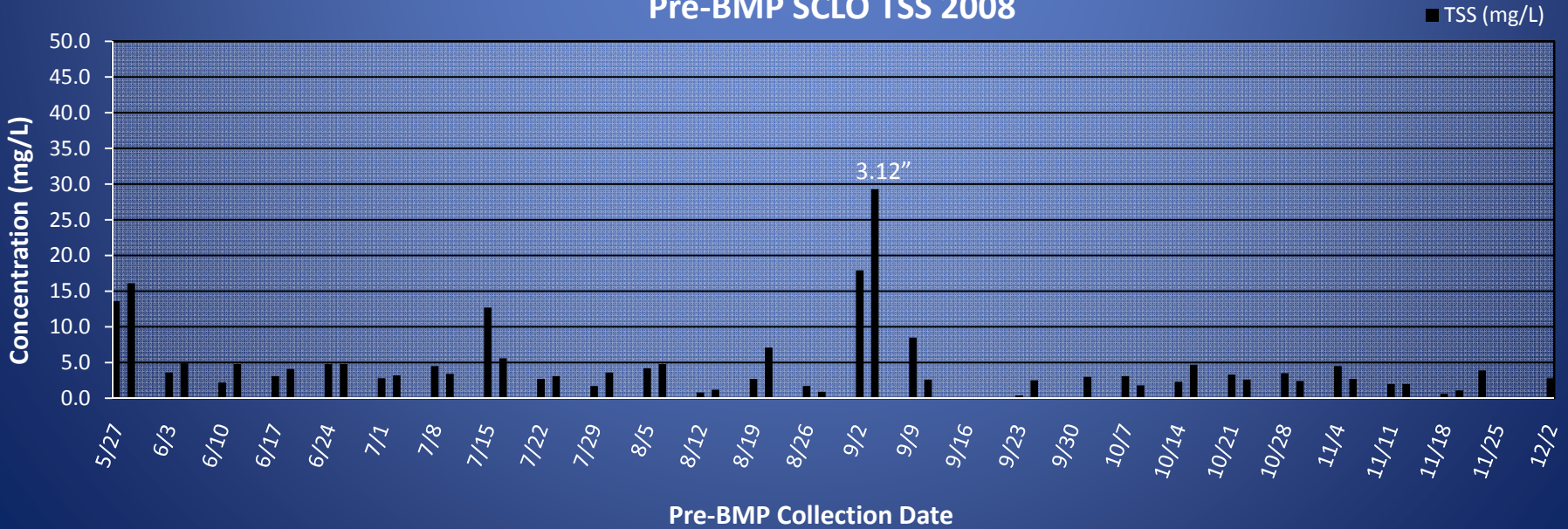


Sandy Creek (SC) Total Suspended Solid (TSS) Data

Pre-BMP SCUP TSS 2008

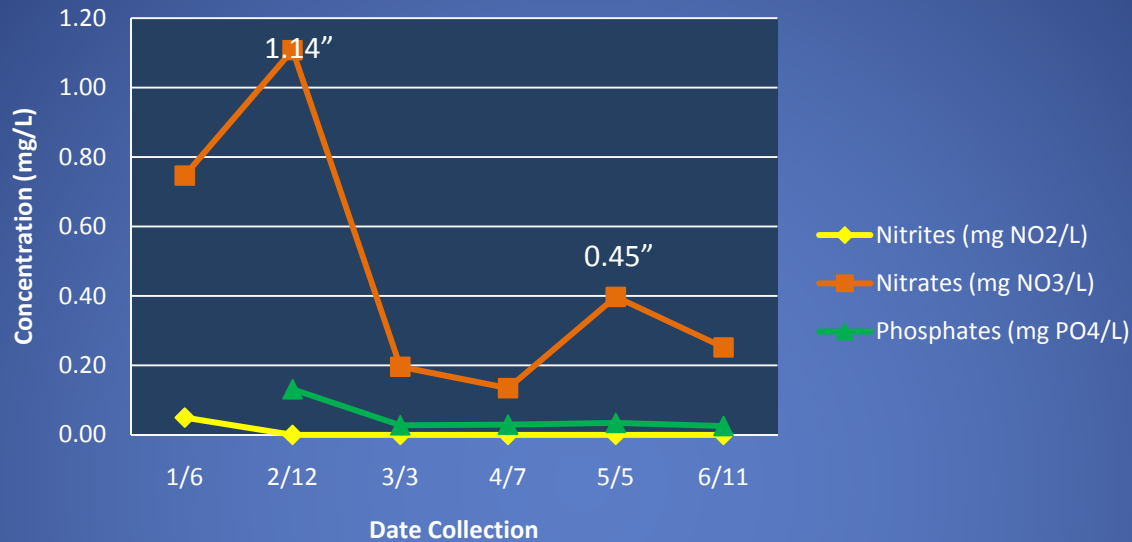


Pre-BMP SCLO TSS 2008

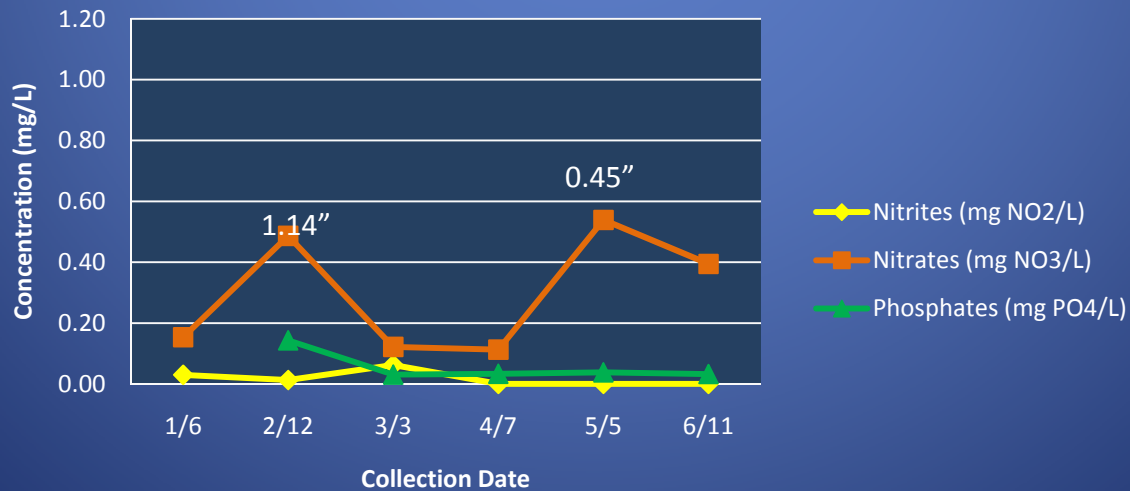


SC 2009 Nutrient Data

SCUP 2009 Nutrient Data

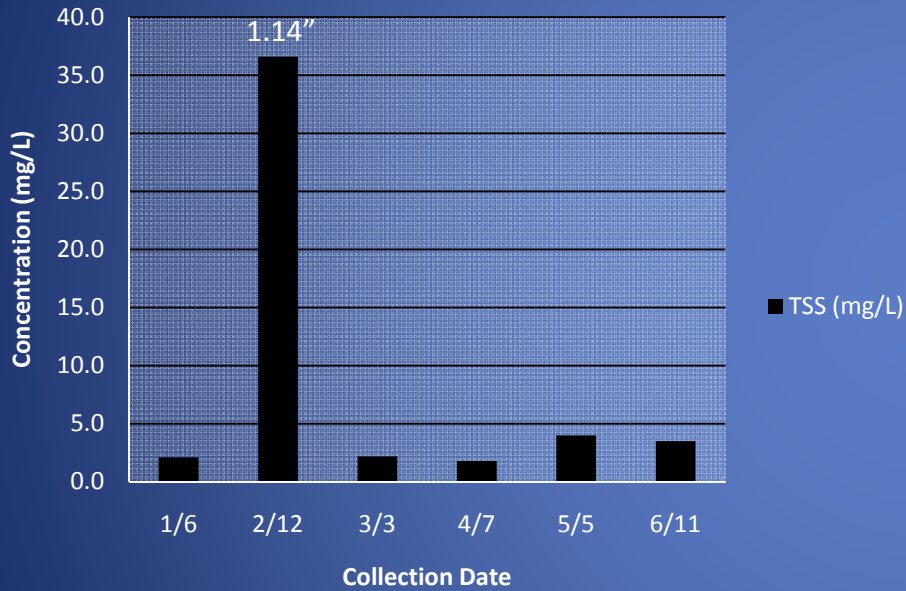


SCLO 2009 Nutrient Data

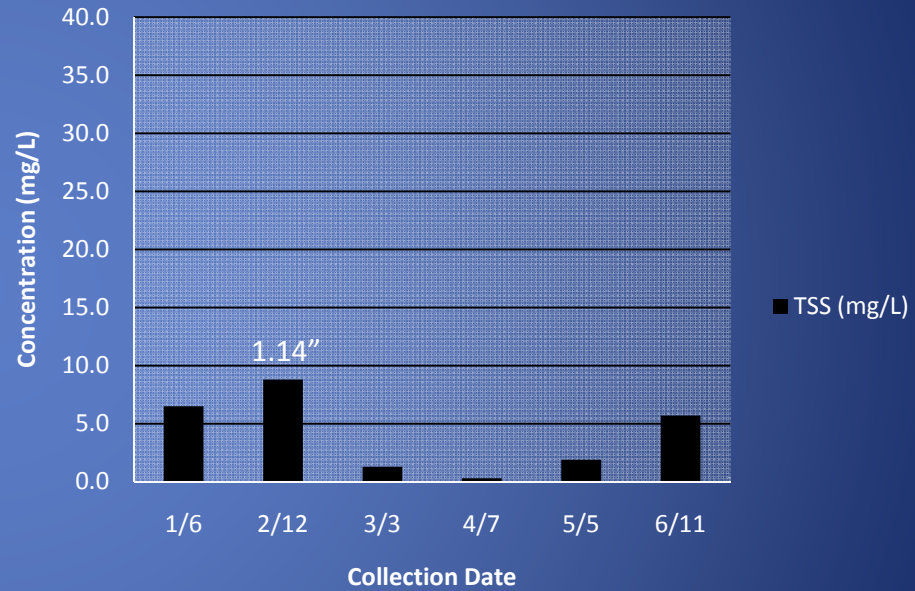


SC 2009 TSS Data

SCUP 2009 TSS Data



SCLO 2009 TSS Data



High and Mean Values: Pre-BMP 2008 and 2009

	Nitrate (mg/L)				Nitrite (mg/L)			
	Pre-BMP		2009		Pre-BMP		2009	
	Hi	Mean	Hi	Mean	Hi	Mean	Hi	Mean
LSUP	2.046	0.761	1.218	0.797	0.160	0.023	0.034	0.006
LSLO	2.366	0.480	0.956	0.704	0.066	0.020	0.030	0.005
GCUP	0.665	0.229	1.108	0.472	0.089	0.015	0.050	0.008
GCLO	1.283	0.203	0.727	0.323	0.070	0.015	0.051	0.009
SCUP	2.295	0.418	1.108	0.472	0.131	0.019	0.050	0.008
SCLO	0.735	0.223	0.539	0.301	0.061	0.015	0.062	0.017

High and Mean Values: Pre-BMP 2008 and 2009

	Ortho-phos (mg/L)				TSS (mg/L)			
	Pre-BMP		2009		Pre-BMP		2009	
	Hi	Mean	Hi	Mean	Hi	Mean	Hi	Mean
LSUP	0.177	0.018	0.110	0.049	26.6	4.124	55.8	11.54
LSLO	0.061	0.012	0.037	0.048	41.3	5.021	20.0	5.240
GCUP	0.051	0.012	0.131	0.050	14.3	2.488	16.6	8.368
GCLO	0.819	0.014	0.129	0.052	28.7	4.902	14.0	5.355
SCUP	0.052	0.012	0.131	0.050	45.4	8.204	36.6	8.368
SCLO	0.043	0.011	0.143	0.055	29.3	4.631	8.80	4.085

