

Overview for 2014

Consent Agreement Item	Actual Value for 2014	Limit
Annual Net Loading (Lbs P)	68.6	175
Max 3 Month Loading (Lbs P)	45.8 (March)	55
Hatchery Flow (mgd)	6.0	20
Adult Coho Passed (Individuals)	9,757	20,000
Adult Chinook Passed (Individuals)	175	1,000
Lake Median TP (mg/m ³)	7.18	8.0
% Compliance with 8 mg/m ³	75	95

Figure 1. 2014 Hatchery and watershed compliance data summary.

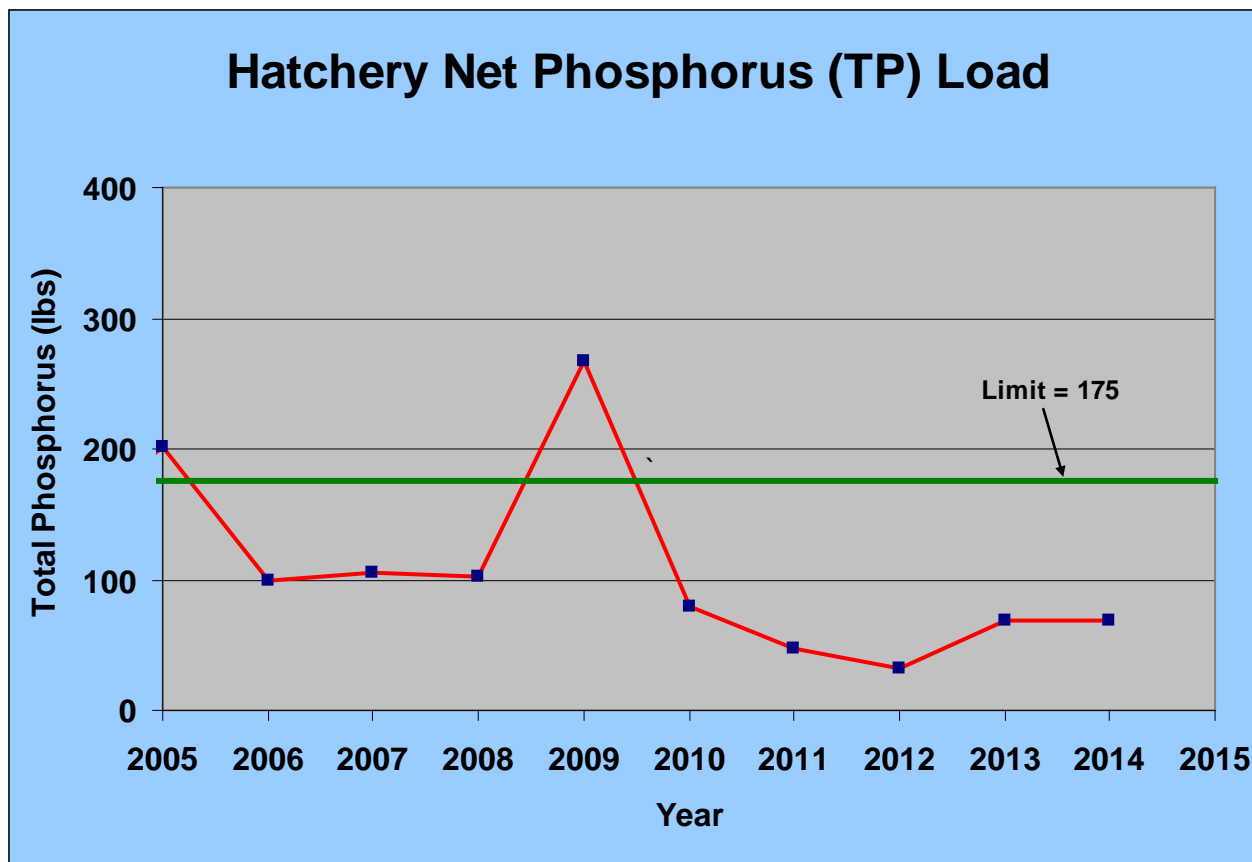


Figure 2. Annual Hatchery phosphorus loadings to the Platte River from 2005 to 2014.

Upper Discharge - Outfall 0002 - Phosphorus for Year 2014

Method: Sigma Automatic 72hr, Average Value: 18.564

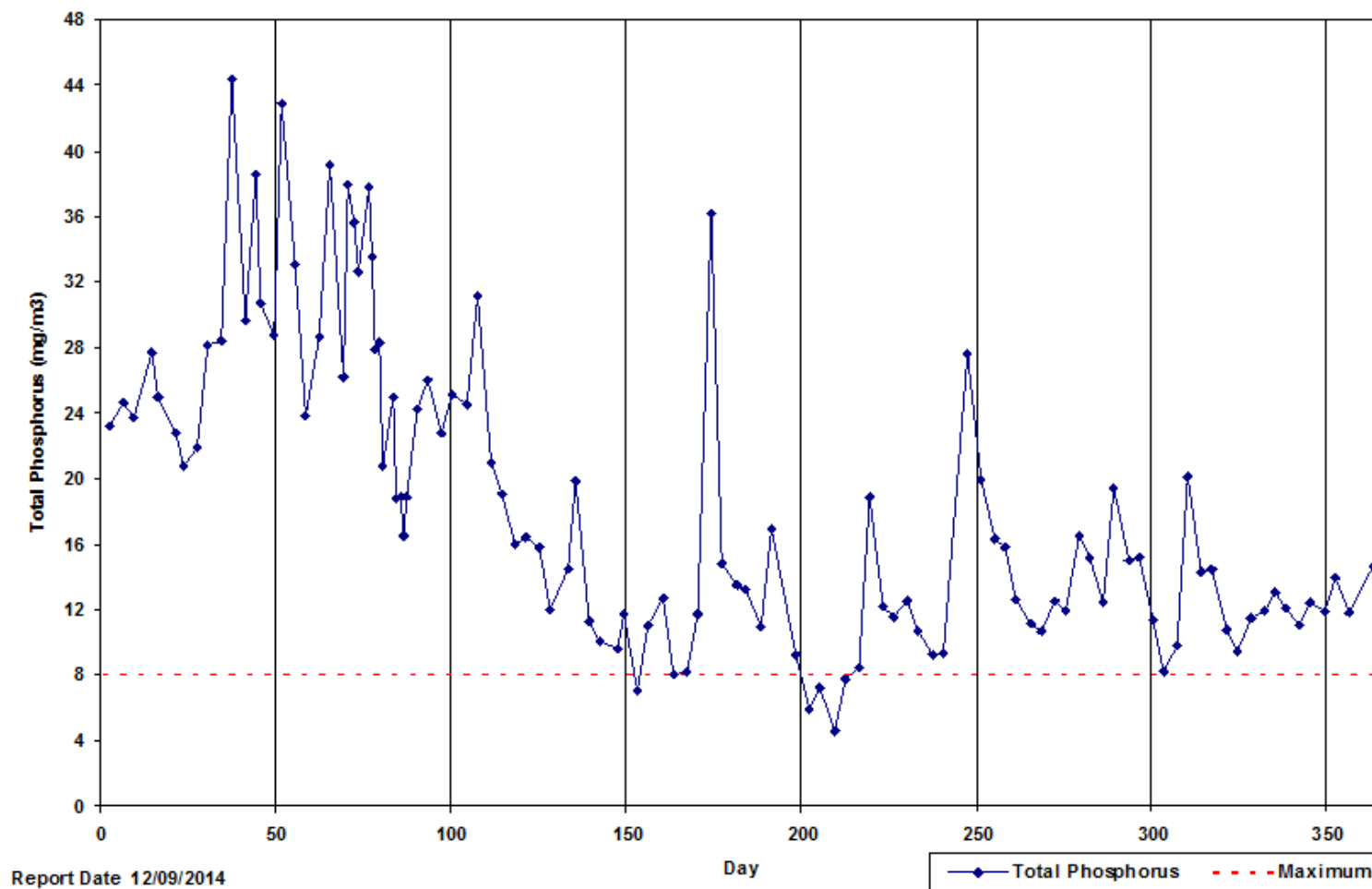
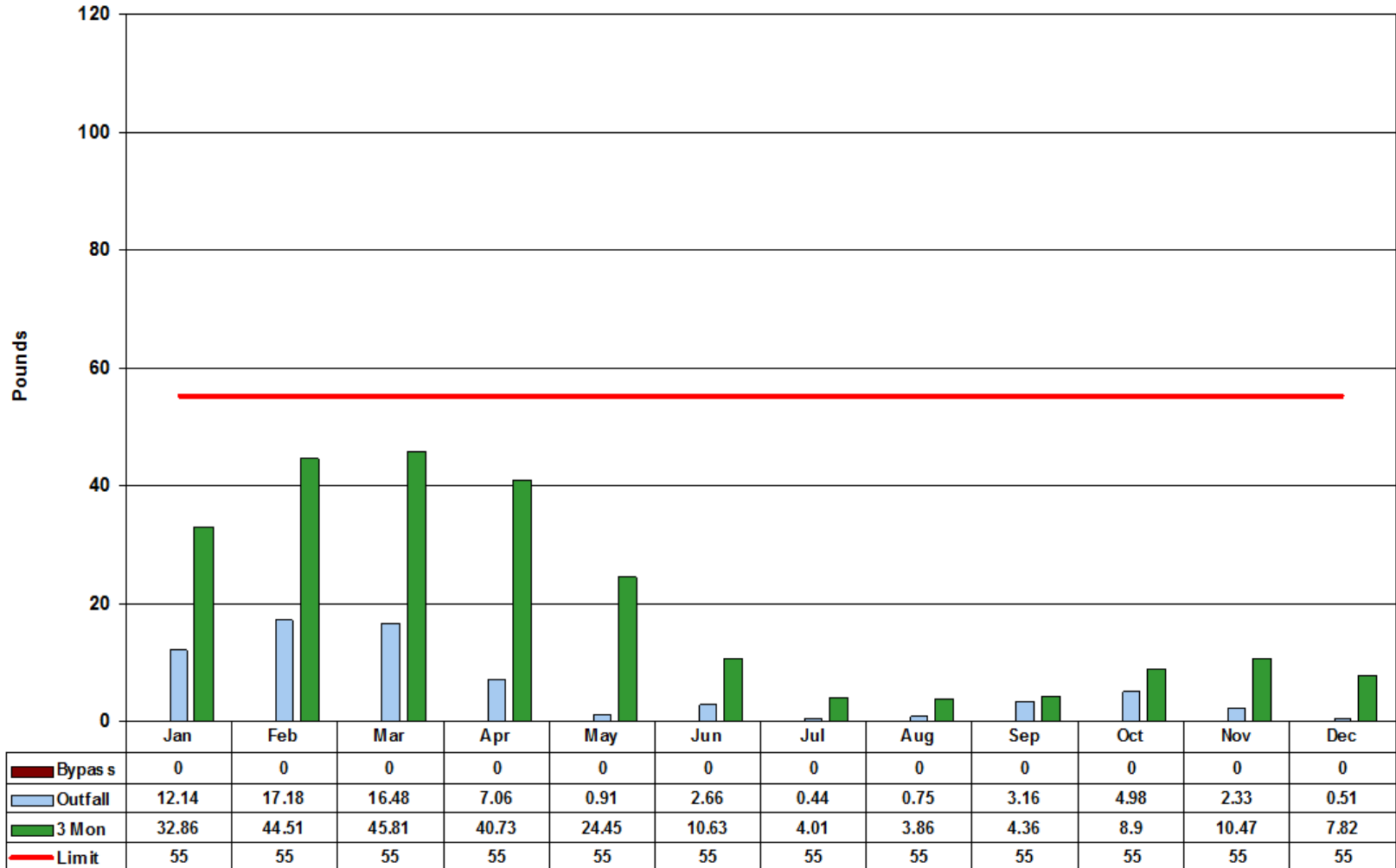


Figure 3. Measured phosphorus concentrations at the Upper Hatchery Discharge in 2014.

Hatchery Average Monthly Net Load for 2014

Total Net Load is 68.62 Pounds for Method Sigma Automatic 72hr (Sigma72)



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Figure 4. Hatchery monthly (blue bars) and 3-month cumulative (green bars) phosphorus loadings to the Platte River. The 3-month cumulative phosphorus discharge limit is displayed on the red line.

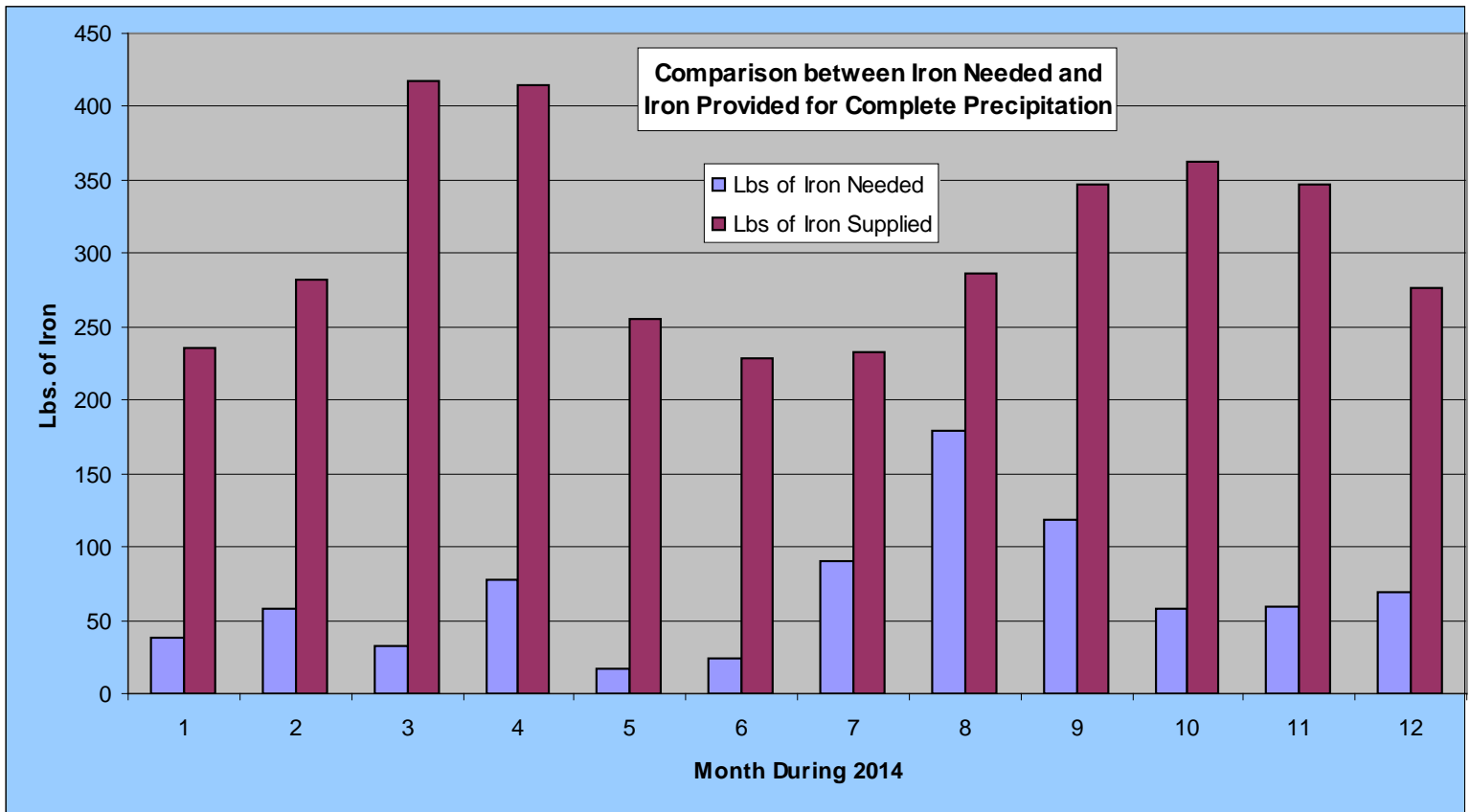
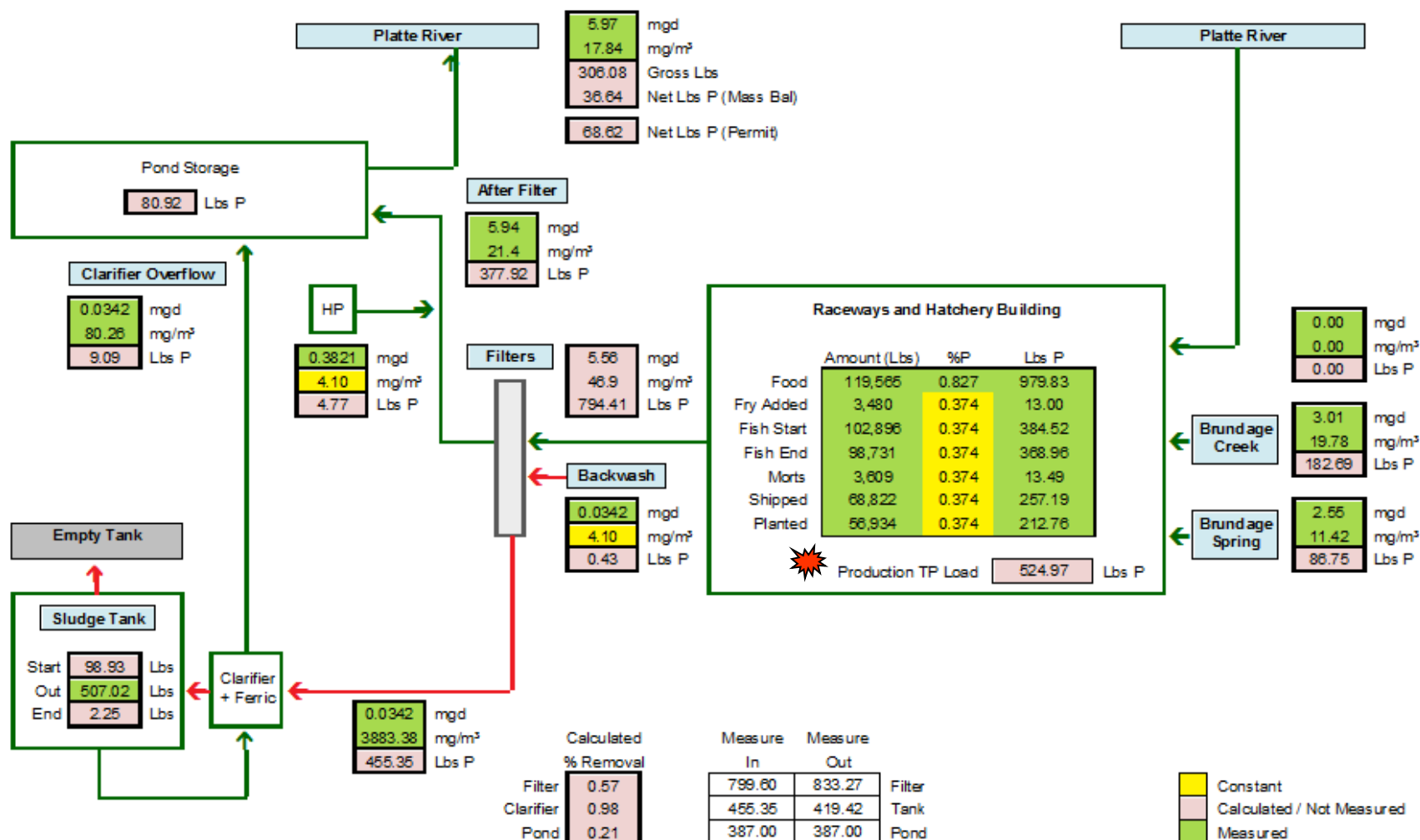


Figure 5 . Comparison between iron needed and provided in 2014 for complete phosphorus precipitation in the Hatchery treatment system.

Hatchery Phosphorus Mass Balance Diagram for 2014

Total Sources: 1750.93 lbs, Total Losses: 1748.67 lbs



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Figure 6. Annual summary of the 2014 Hatchery phosphorus mass balance model.

Big Platte Lake - Median Phosphorus for Year 2014

Average Median Phosphorus for Year is 7.18 (Above Limit 90 of 365 Days, 25%)

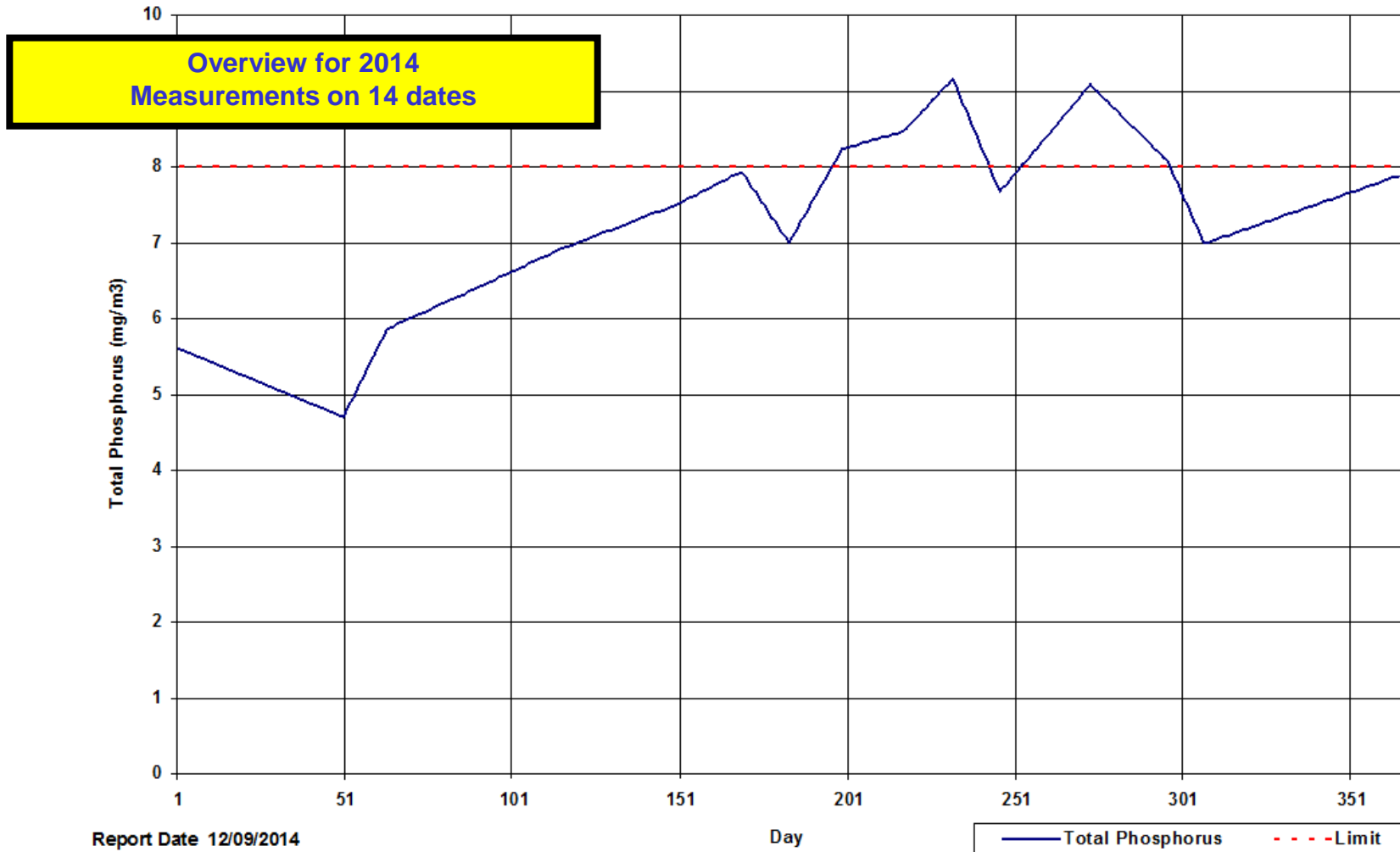


Figure 7. Volume-weighted total phosphorus concentrations in Big Platte Lake during 2014.

Big Platte Lake Secchi Depth for 2014

Average Secchi Value: 15.554 (Minimum: 9, Maximum: 23, Hatchery Avg: 13.643, PLIA Avg: 16.844)

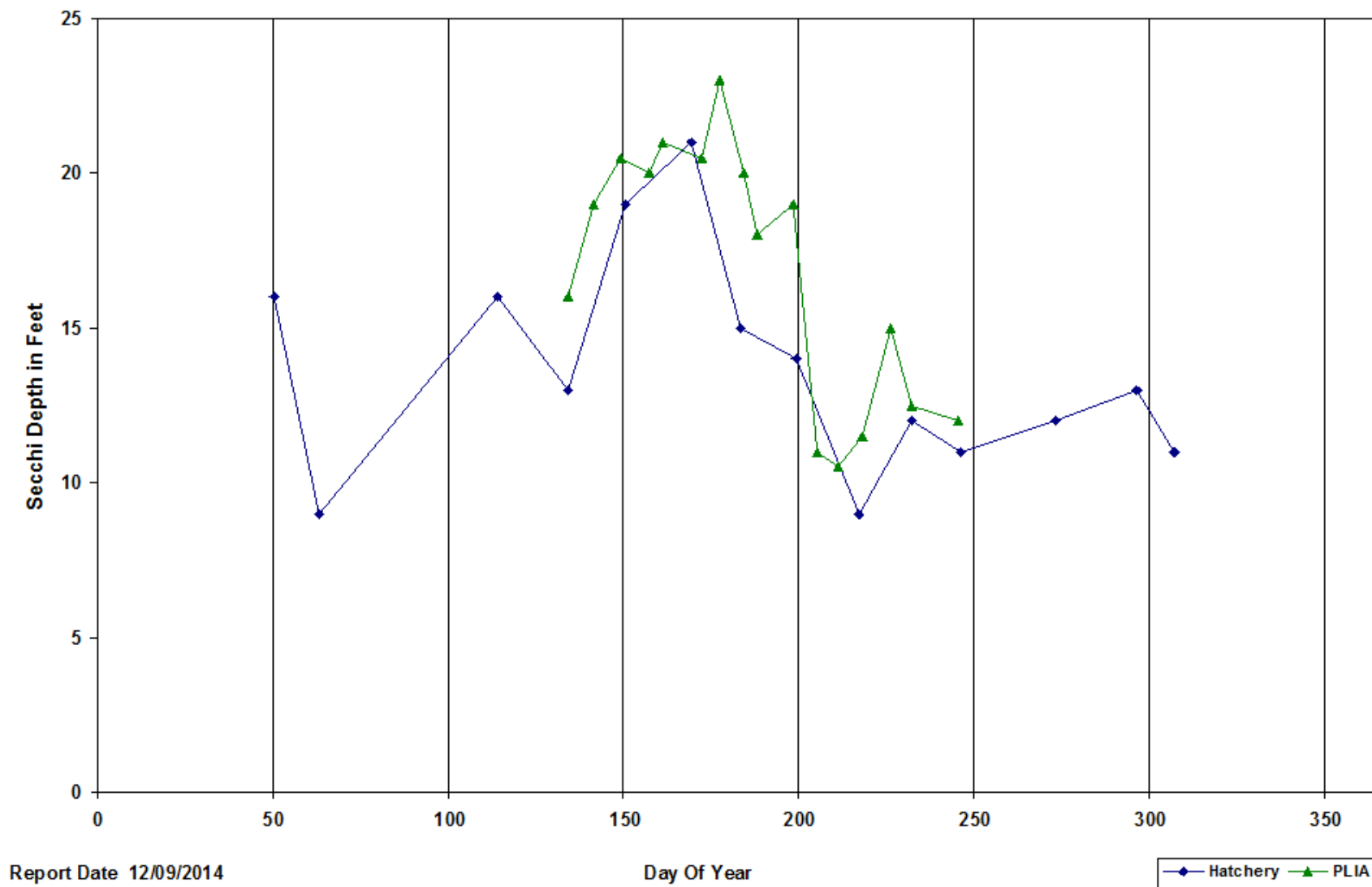


Figure 8. 2014 Big Platte Lake Secchi depth measurements.

Big Platte Lake Temperature (2014 at All Depths)

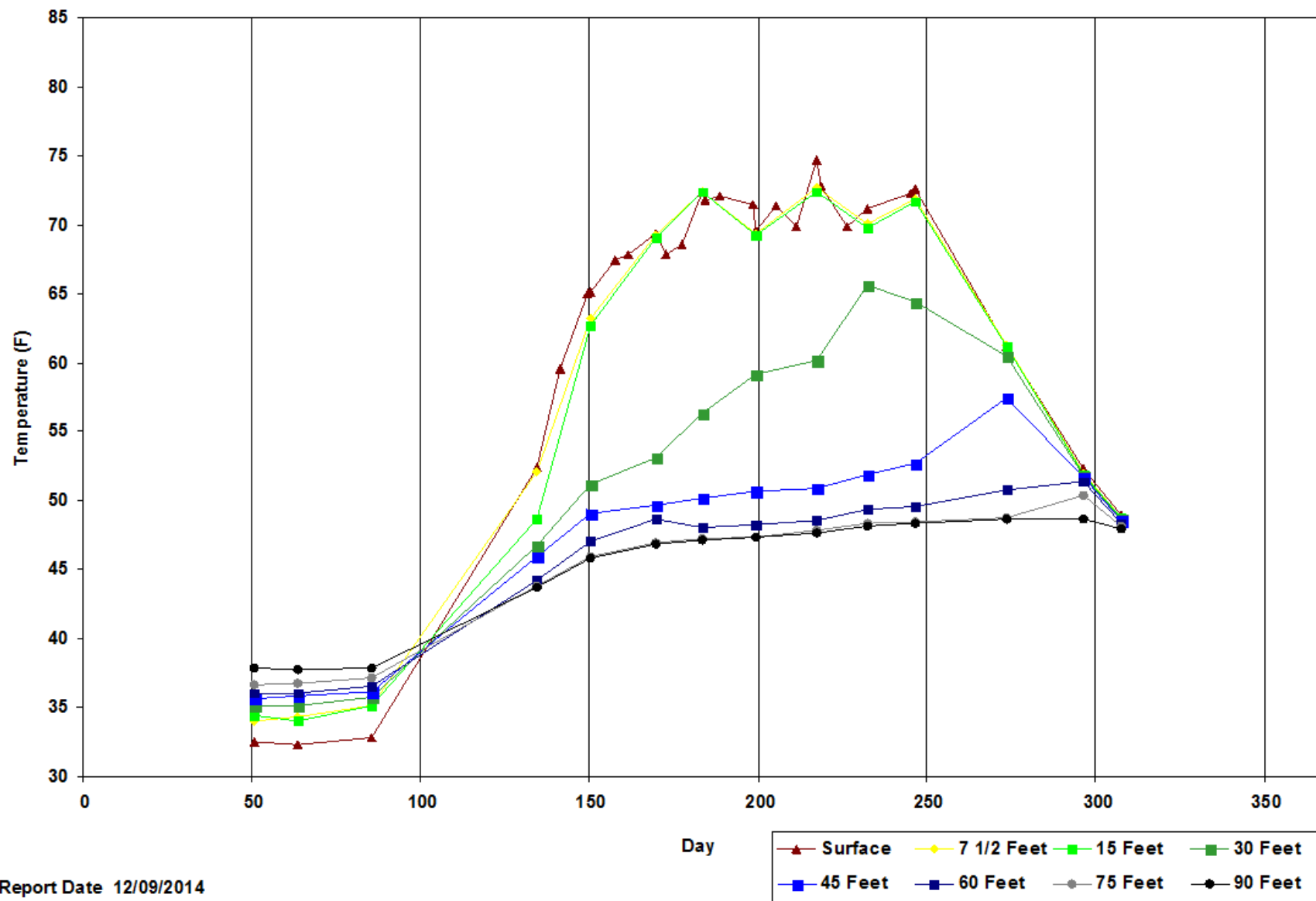
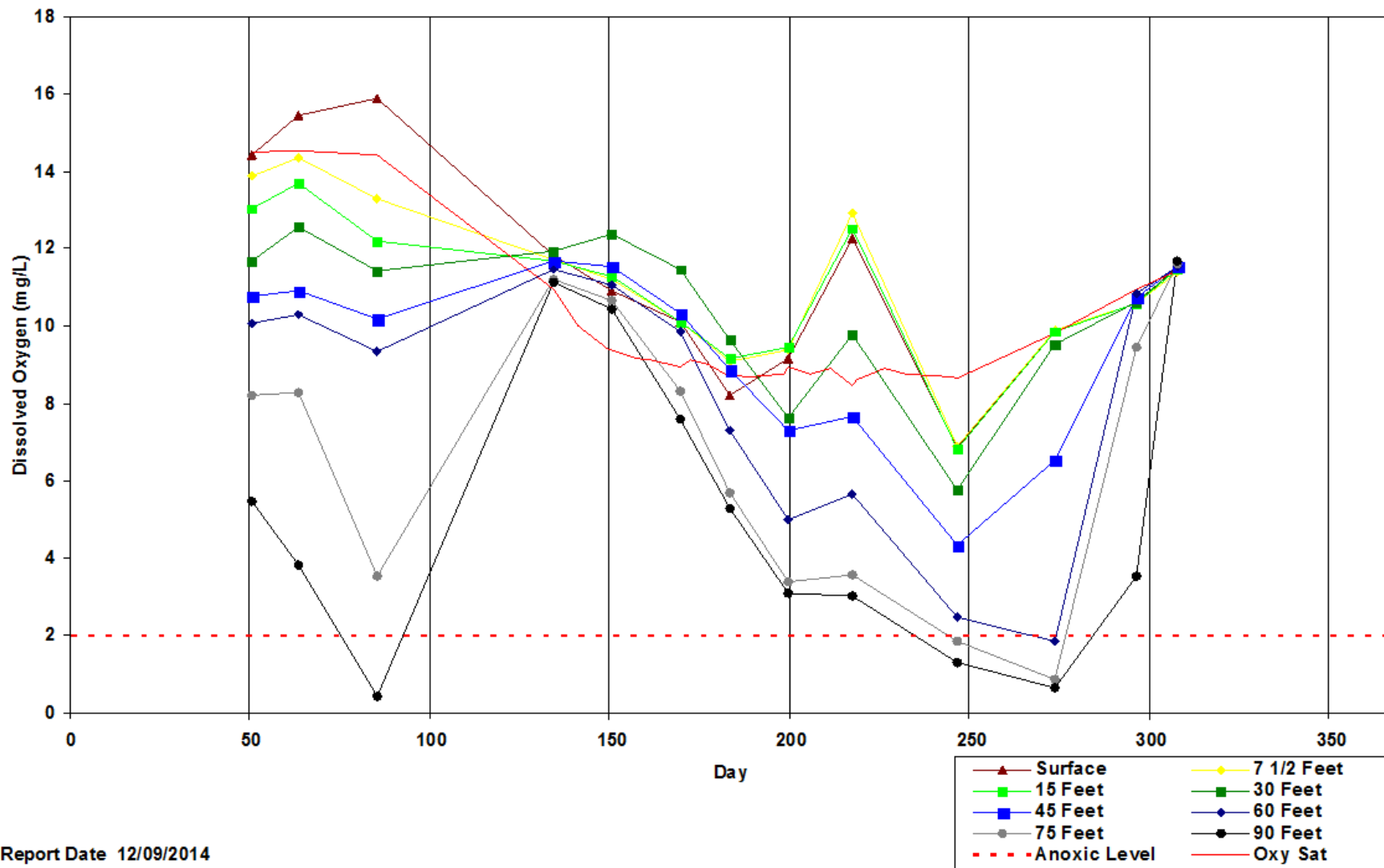


Figure 9. Temperature measurements by depth in Big Platte Lake during 2014.

Big Platte Lake Dissolved Oxygen (2014 at All Depths)

Anoxic at 60 Feet: 6.4 Days, 75 Feet: 32.3 Days, 90 Feet: 66.6 Days



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Figure 10. Dissolved oxygen measurements by depth in Big Platte Lake during 2014.

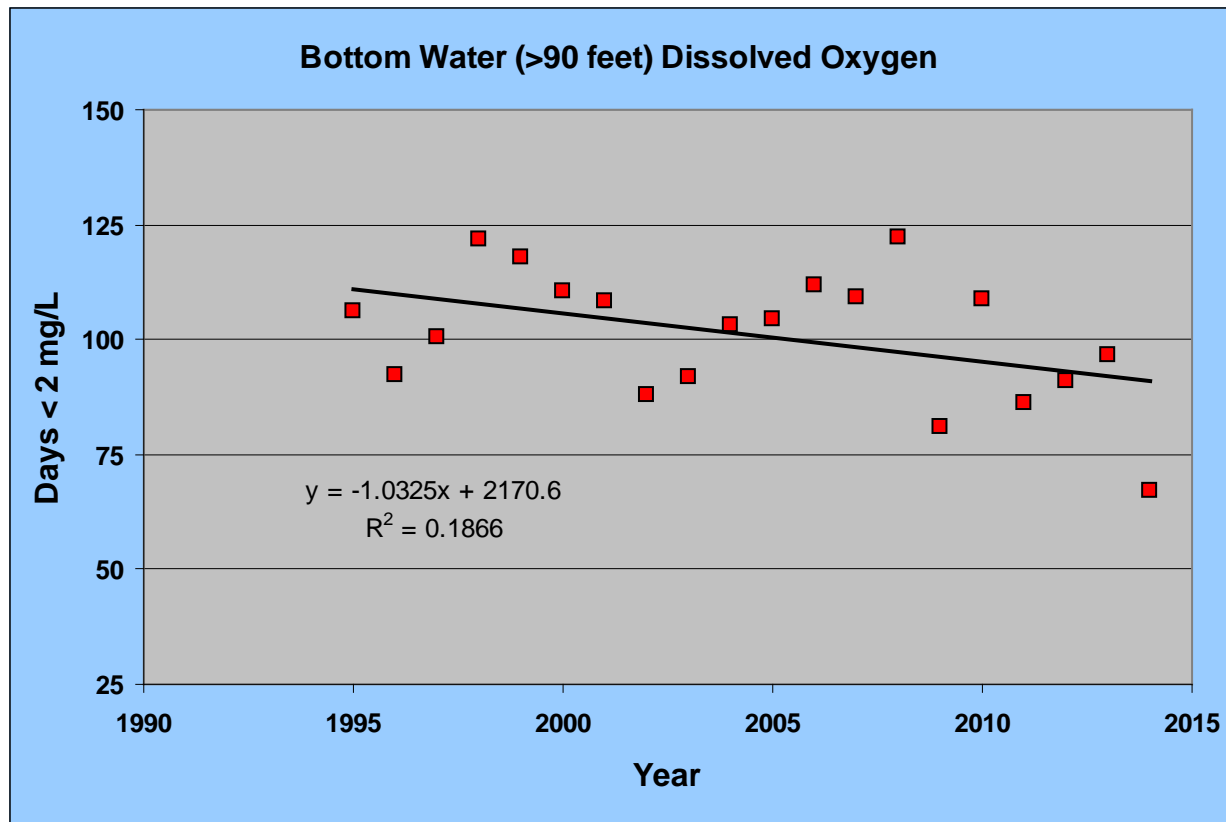


Figure 11. Number of days where dissolved oxygen concentrations were less than 2 mg/L in the bottom waters of Big Platte Lake.

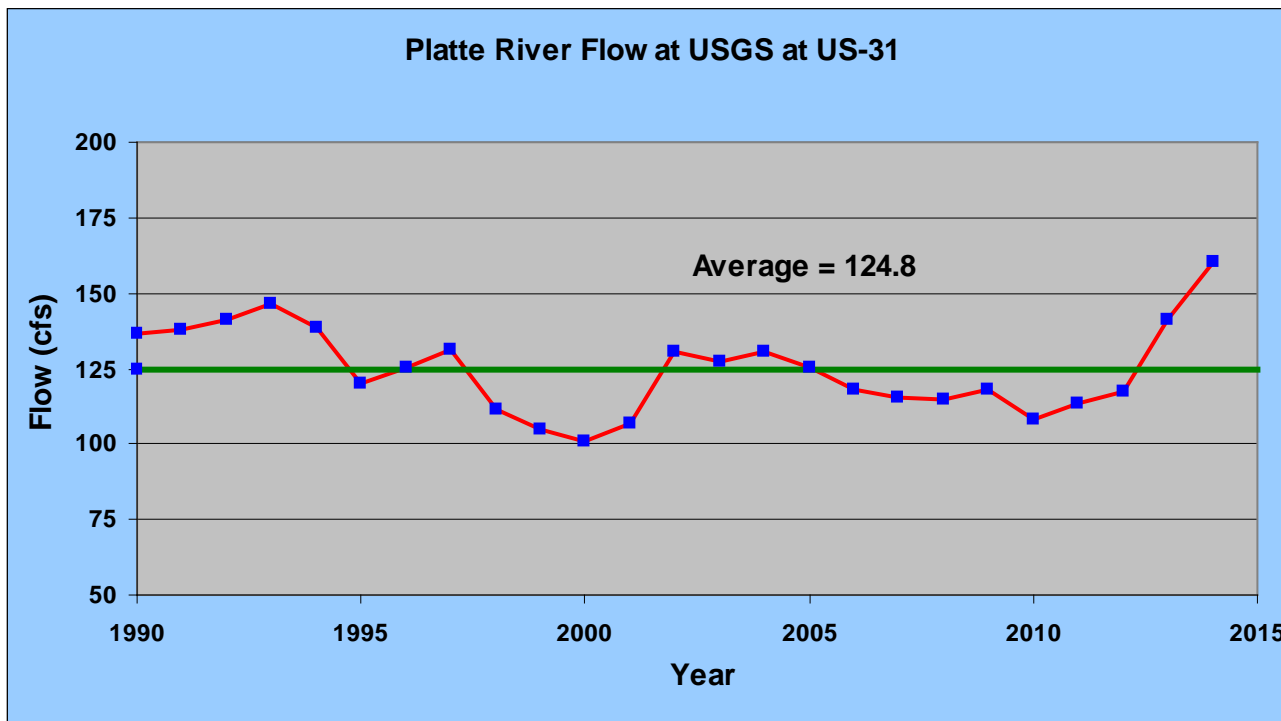


Figure 12. Average annual discharge of the Platte River at the USGS Gaging Station 04126740 at Honor, MI.

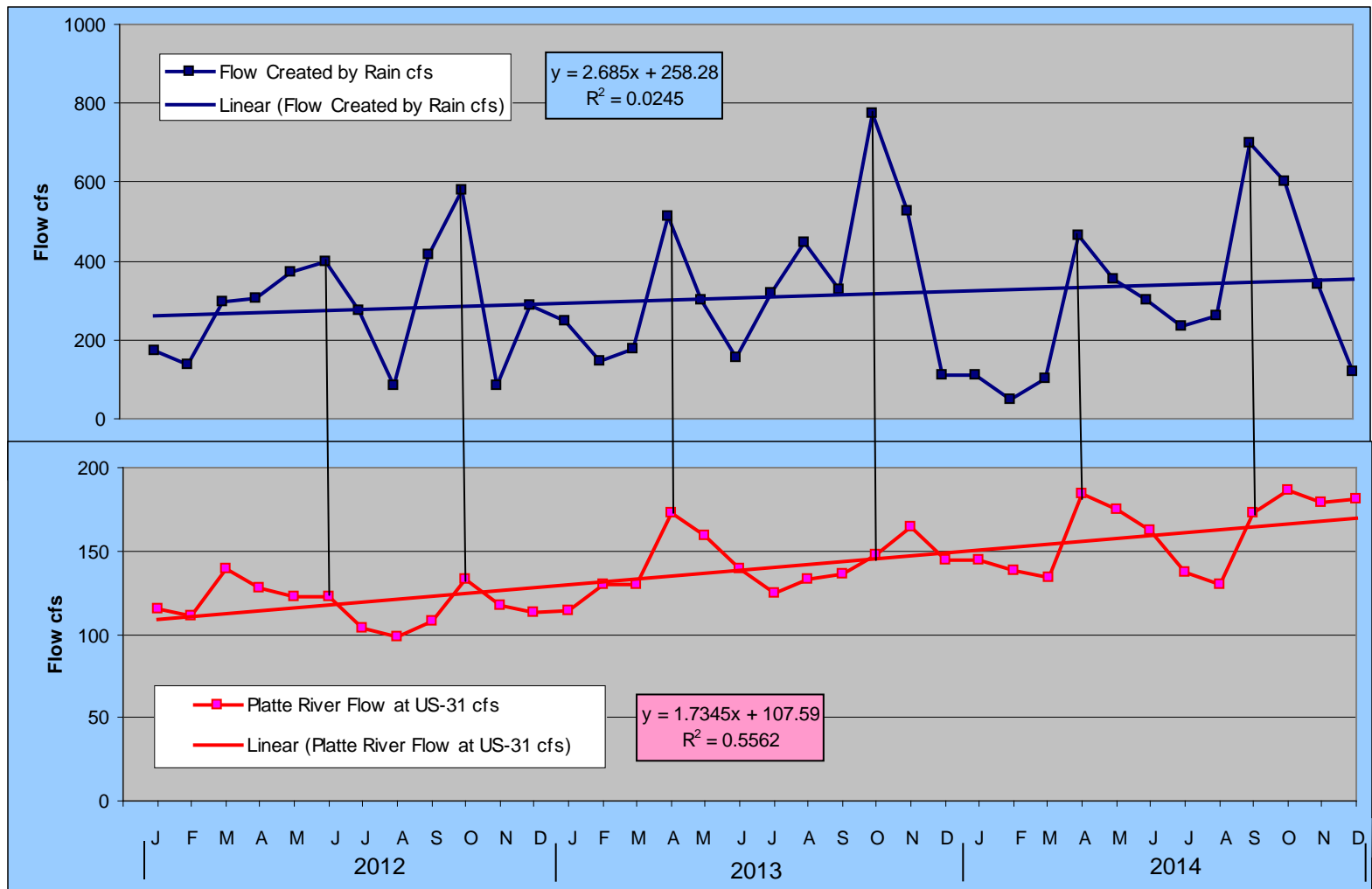


Figure 13. Comparison of potential flow created by watershed rainfall and measured flow at USGS site for 2012, 2013, and 2014.

2014 Flow of Platte River at US - 31 (cfs)

Method: 24 hour average, US31 Average: 160.3, Sampled Average: 148.4

Storm Event Factor 0.1 Generated 27 Storm Events

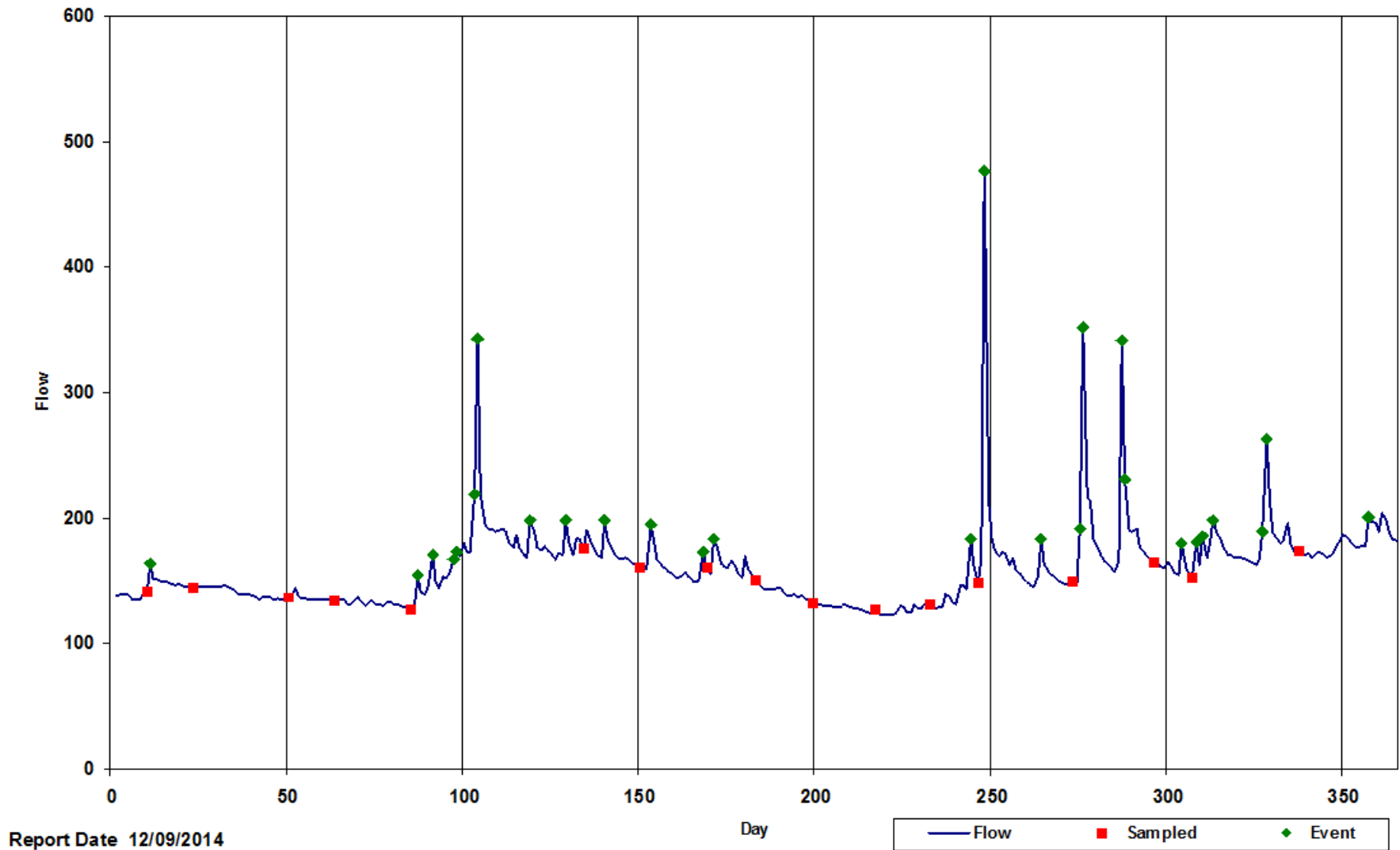


Figure 14. Daily average flows of Platte River in 2014 at the USGS Gaging Station 04126740 at Honor, MI and on dates when water quality sampling occurred at that site.

Platte River at US 31 - USGS - Phosphorus & Turbidity ALL Methods for Year 2014

Average Phos: 17.565, Average Turb: 3.722

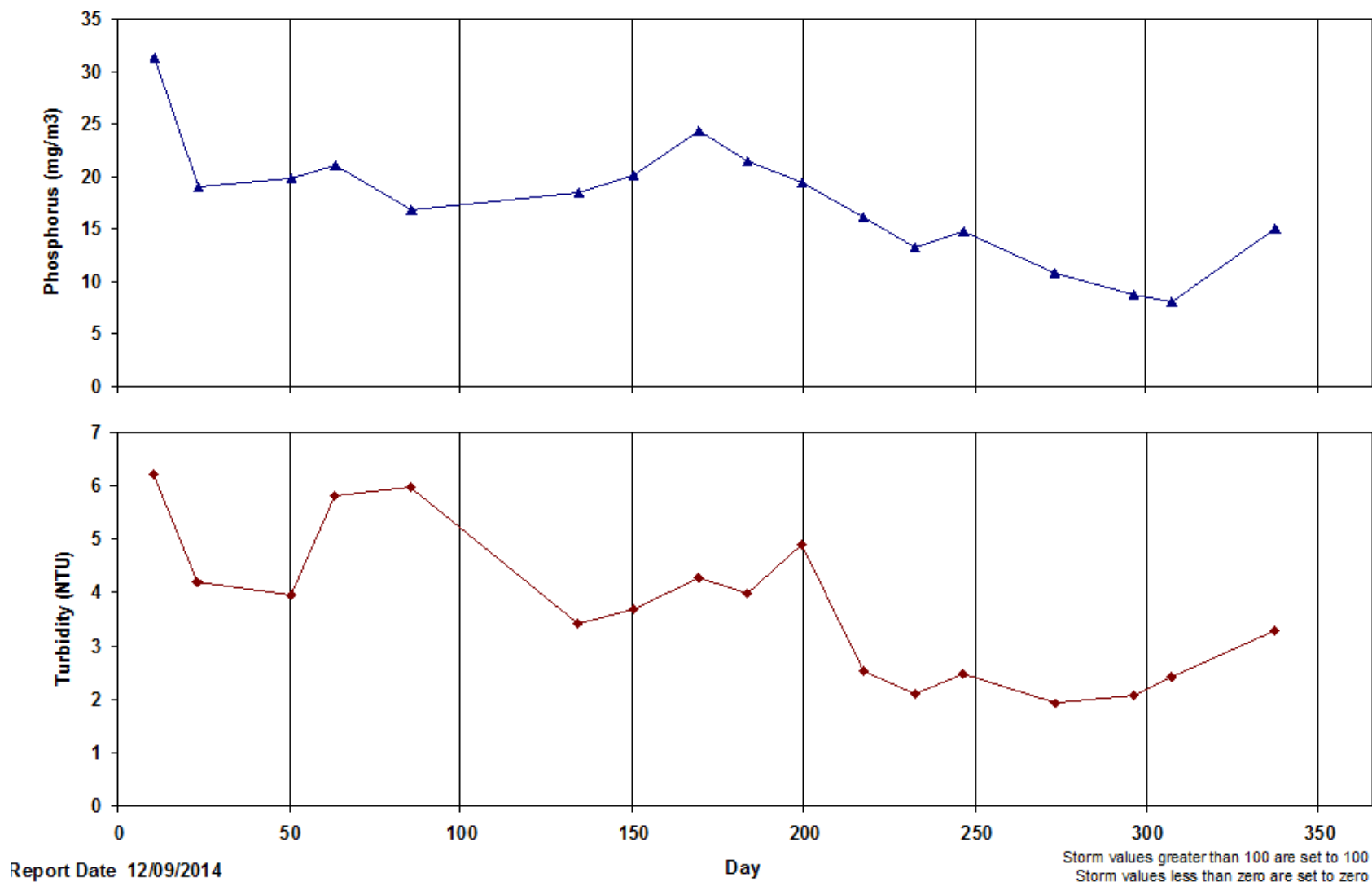


Figure 15. Total Phosphorus and Turbidity of Platte River at the USGS Gaging Station 04126740 during 2014.

North Branch Deadsteam Dr. - Phosphorus & Turbidity ALL Methods for Year 2014

Average Phos: 14.424, Average Turb: 2.793

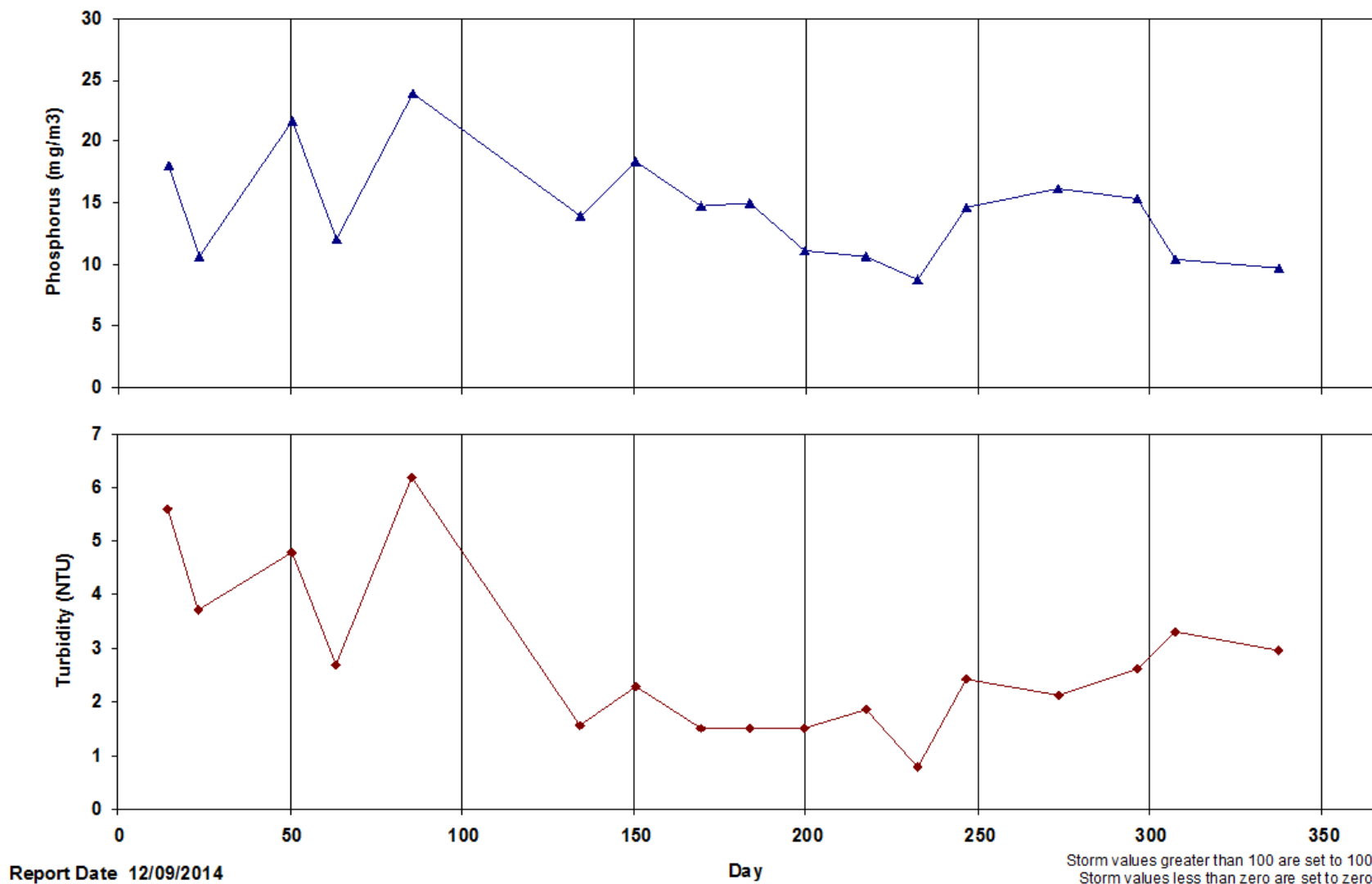
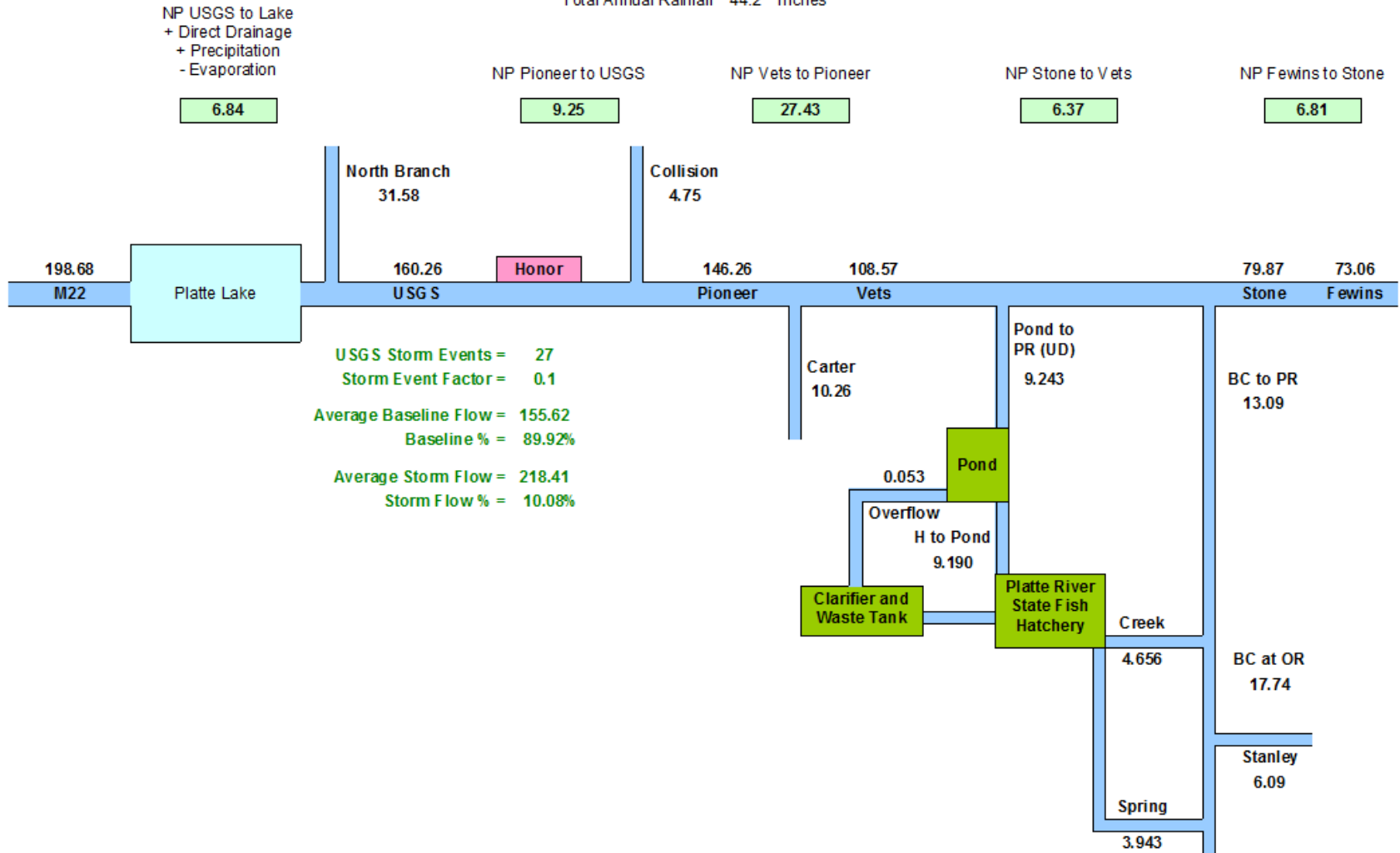


Figure 16. Total Phosphorus and Turbidity of the North Branch of the Platte River at Deadstream Road during 2014.

Annual Average Watershed Flow Balance for 2014

all flows cfs

Total Annual Rainfall 44.2 Inches

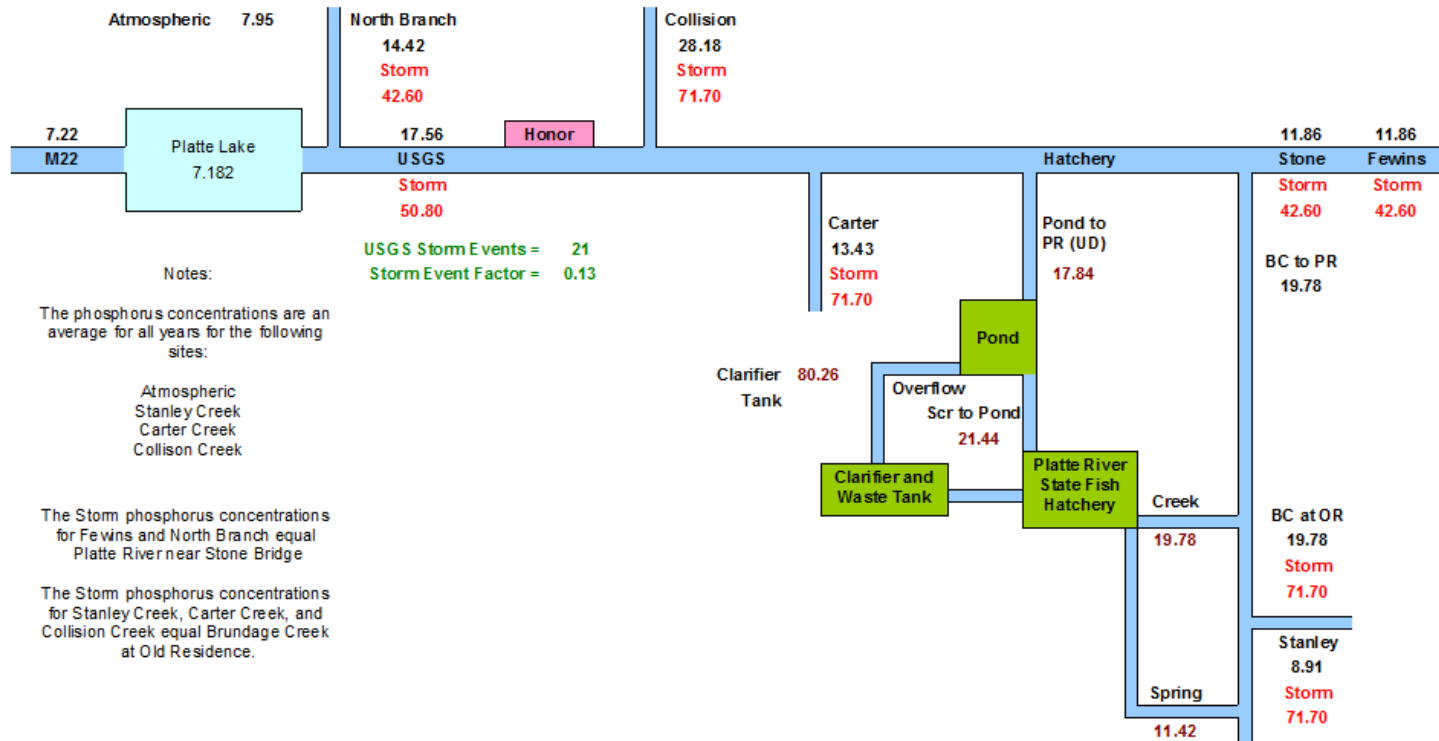


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Platte River Watershed

Figure 17. Watershed flow balance for 2014.

Annual Average Watershed TP Concentrations for 2014



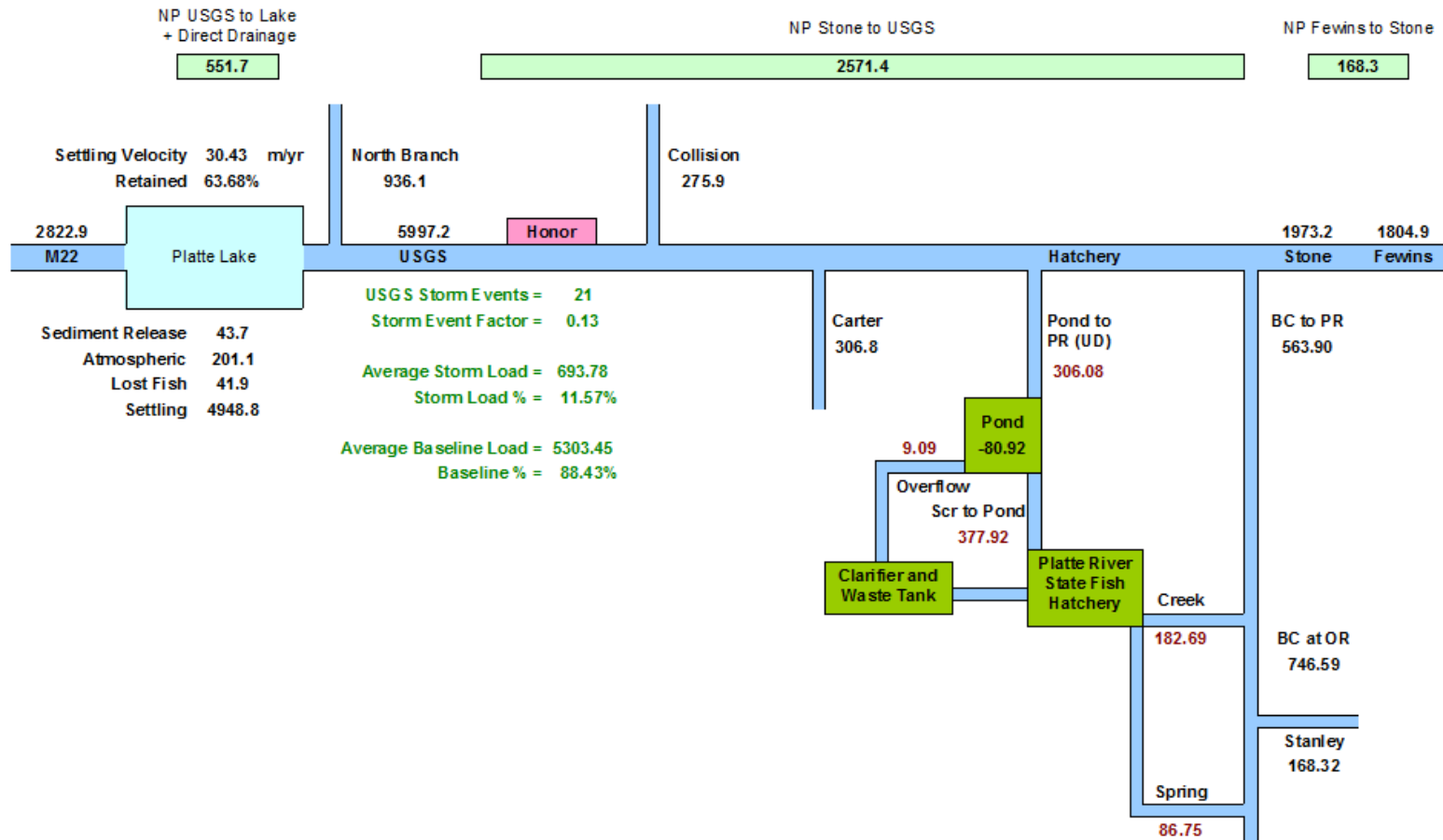
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Platte River Watershed

Figure 18. Average watershed total phosphorus concentrations for 2014.

Annual Average Watershed Load Balance for 2014

all loads annual pounds



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Platte River Watershed

Figure 19. Watershed phosphorus load balance for 2014.