Overview for 2010

Consent Agreement Item	Actual Value for 2010	Limit
Annual Loading (Lbs P)	80.2	175
Max 3 Month Loading (Lbs P)	42.7	55
Hatchery Flow (mgd)	6.88	20
Adult Coho (Individuals)	12,796	20,000
Adult Chinook (Individuals)	179	1,000
Lake Median TP (mg/m^3)	7.98	8.0
% Compliance with 8 mg/m^3	49	95

Figure 1. Data summary for the 2010 Annual Report.

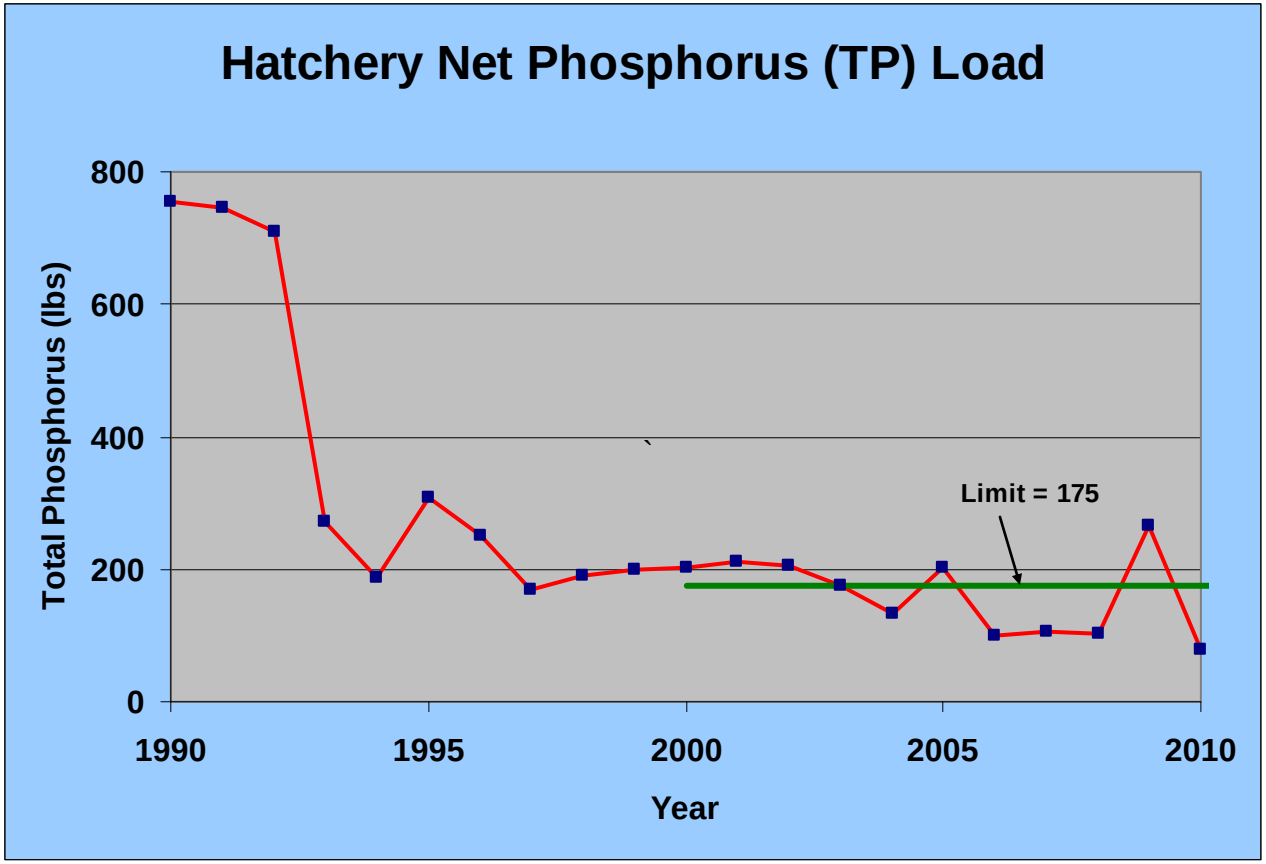


Figure 2. Annual Hatchery phosphorus loadings to the Platte River from 1990 to 2010.

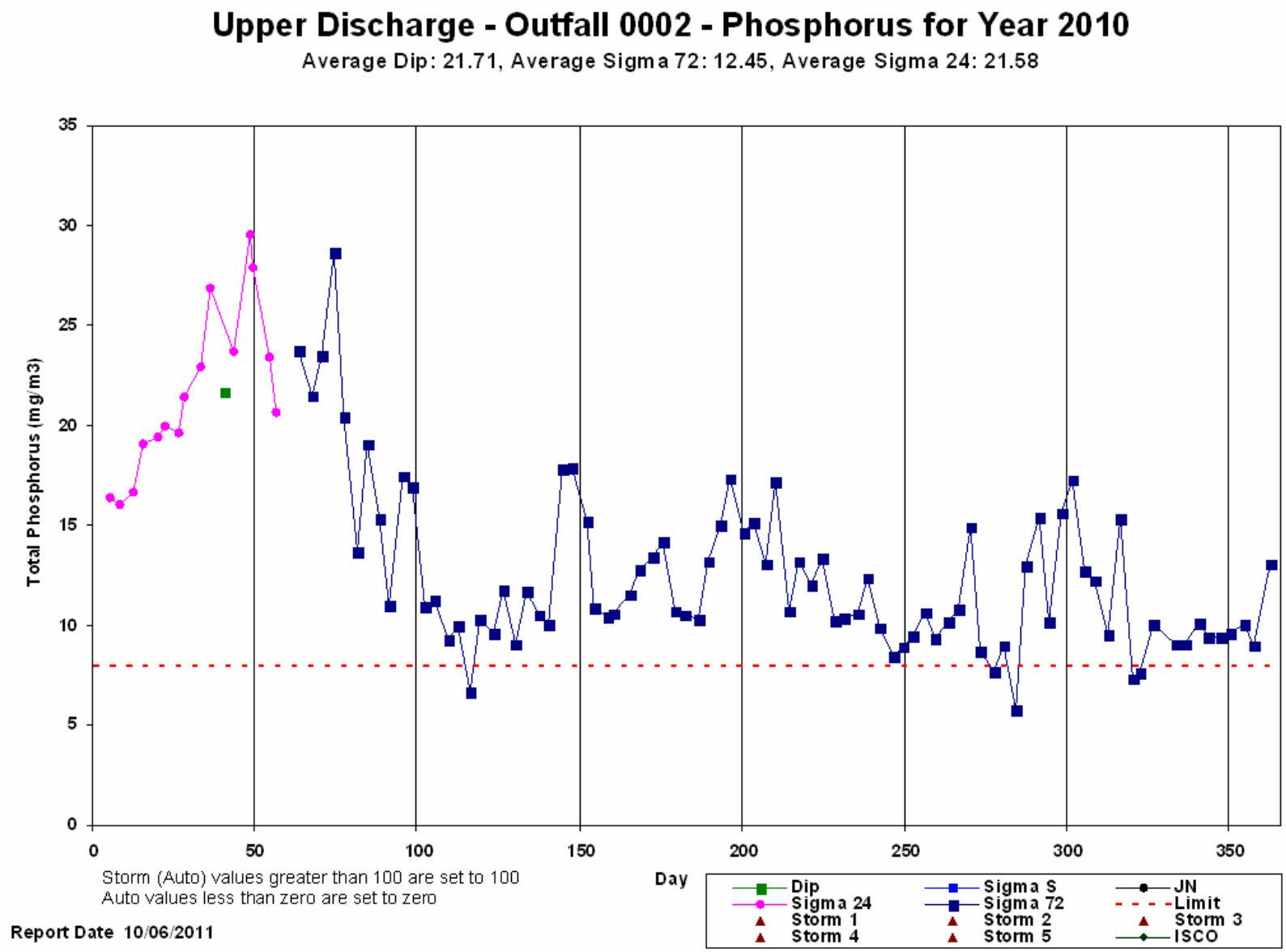
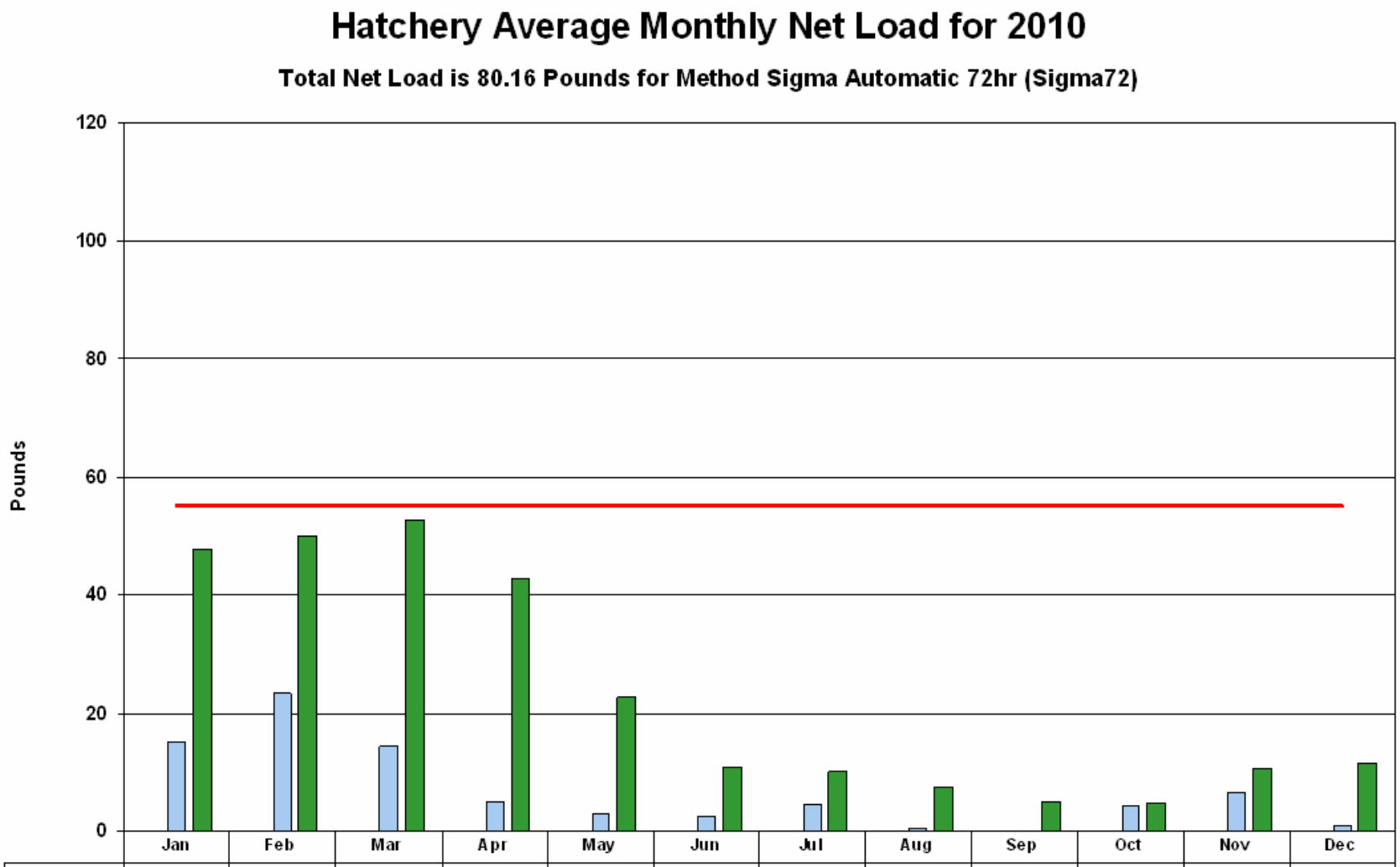


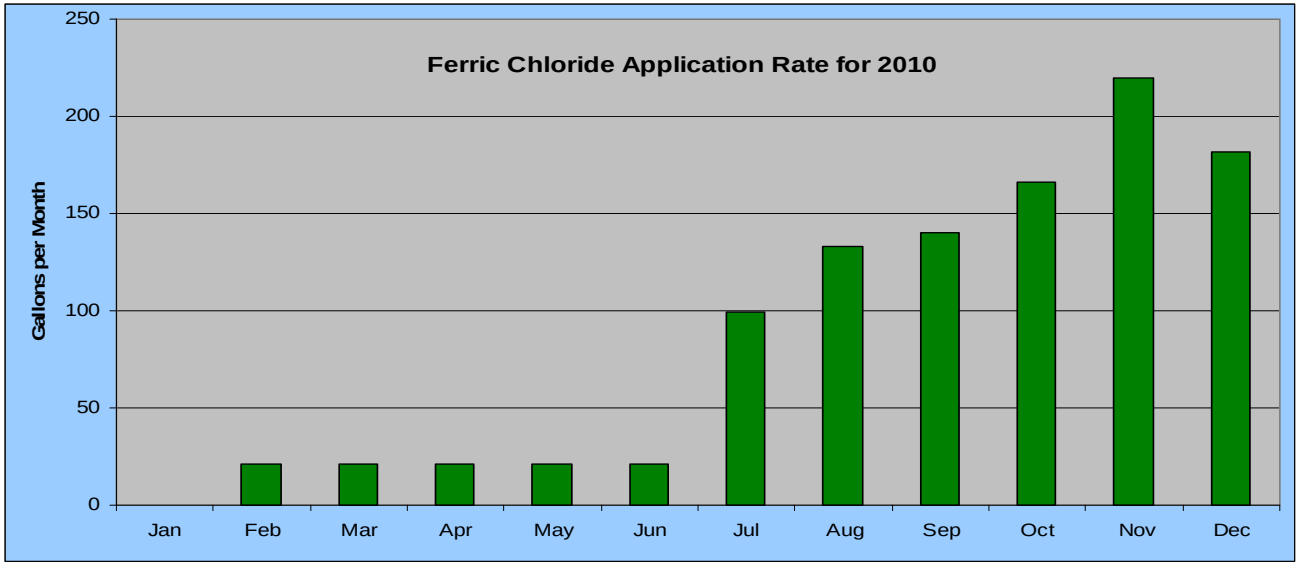
Figure 3. Measured phosphorus concentrations at the Upper Discharge in 2010.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bypass	0	0	0	0	0	0	0	0	0	0	0	0
Outfall	15.08	23.34	14.25	5.14	3.13	2.54	4.5	0.54	0	4.2	6.43	1.01
3 Mon	47.88	50.08	52.67	42.73	22.53	10.82	10.18	7.58	5.04	4.73	10.62	11.63
Limit	55	55	55	55	55	55	55	55	55	55	55	55

Report Date 10/06/2011

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.



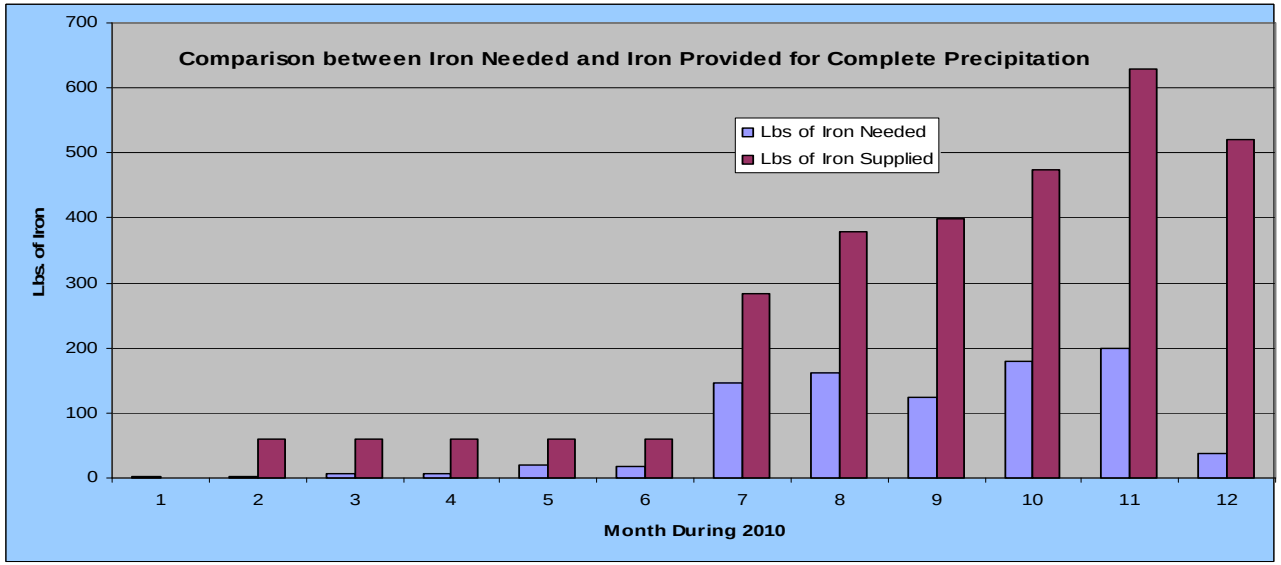


Figure 5 (a) and (b). Monthly application rates of ferric chloride to reduce phosphorus in the Hatchery loadings to the Platte River.

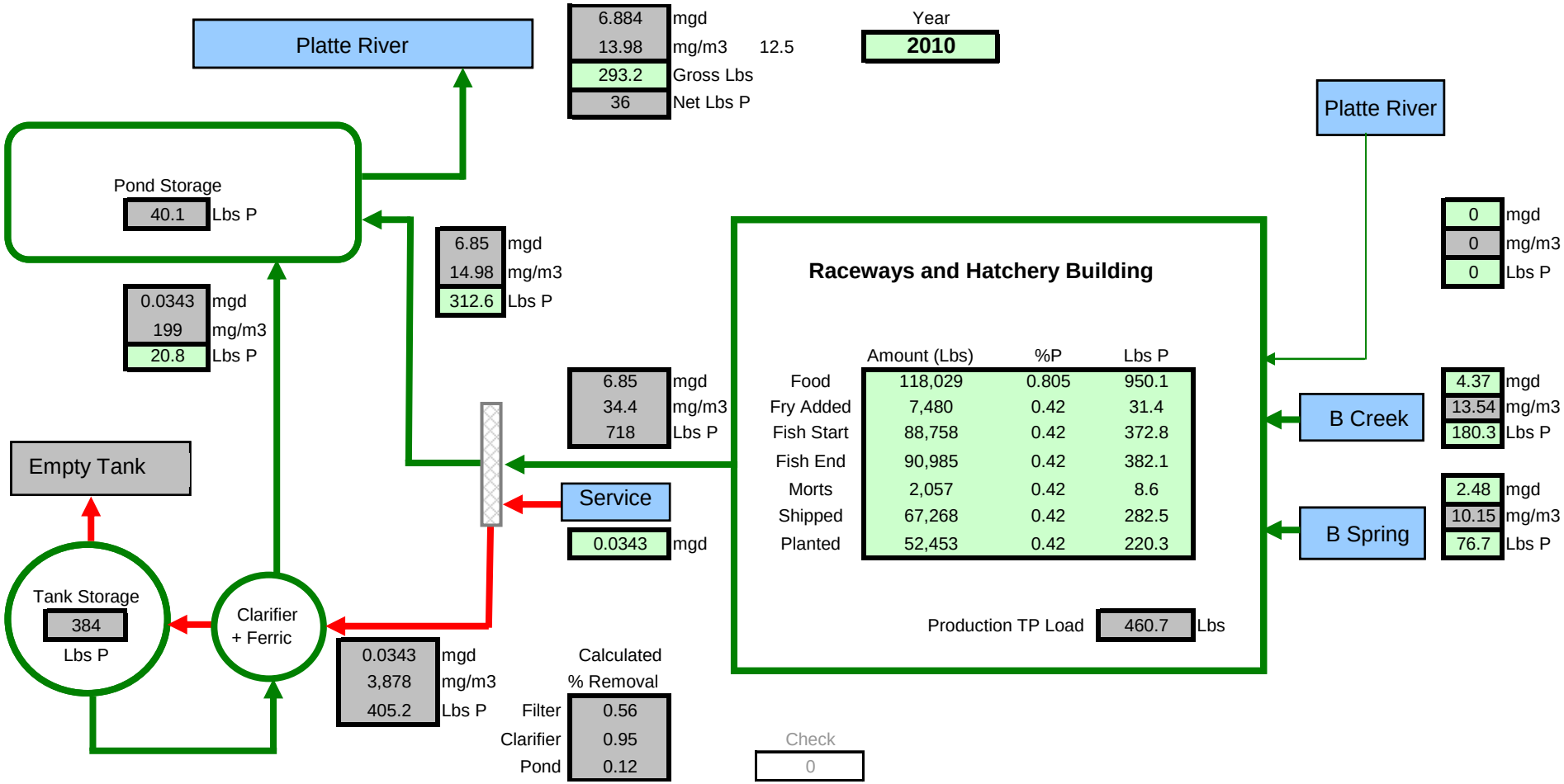


Figure 6. Annual summary of the 2010 Hatchery phosphorus mass balance model.

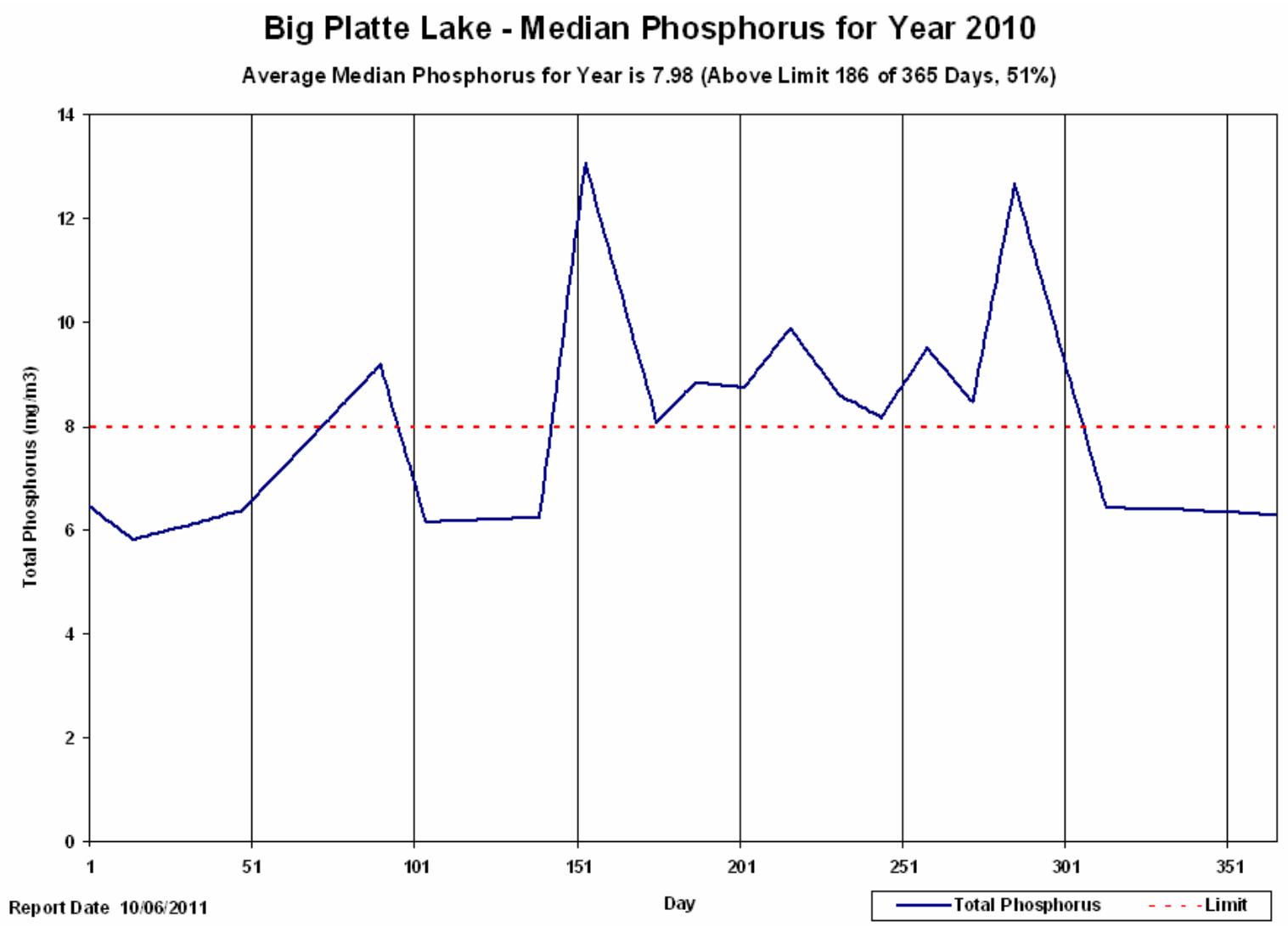


Figure 7. Volume-weighted total phosphorus concentrations in Big Platte Lake during 2010.

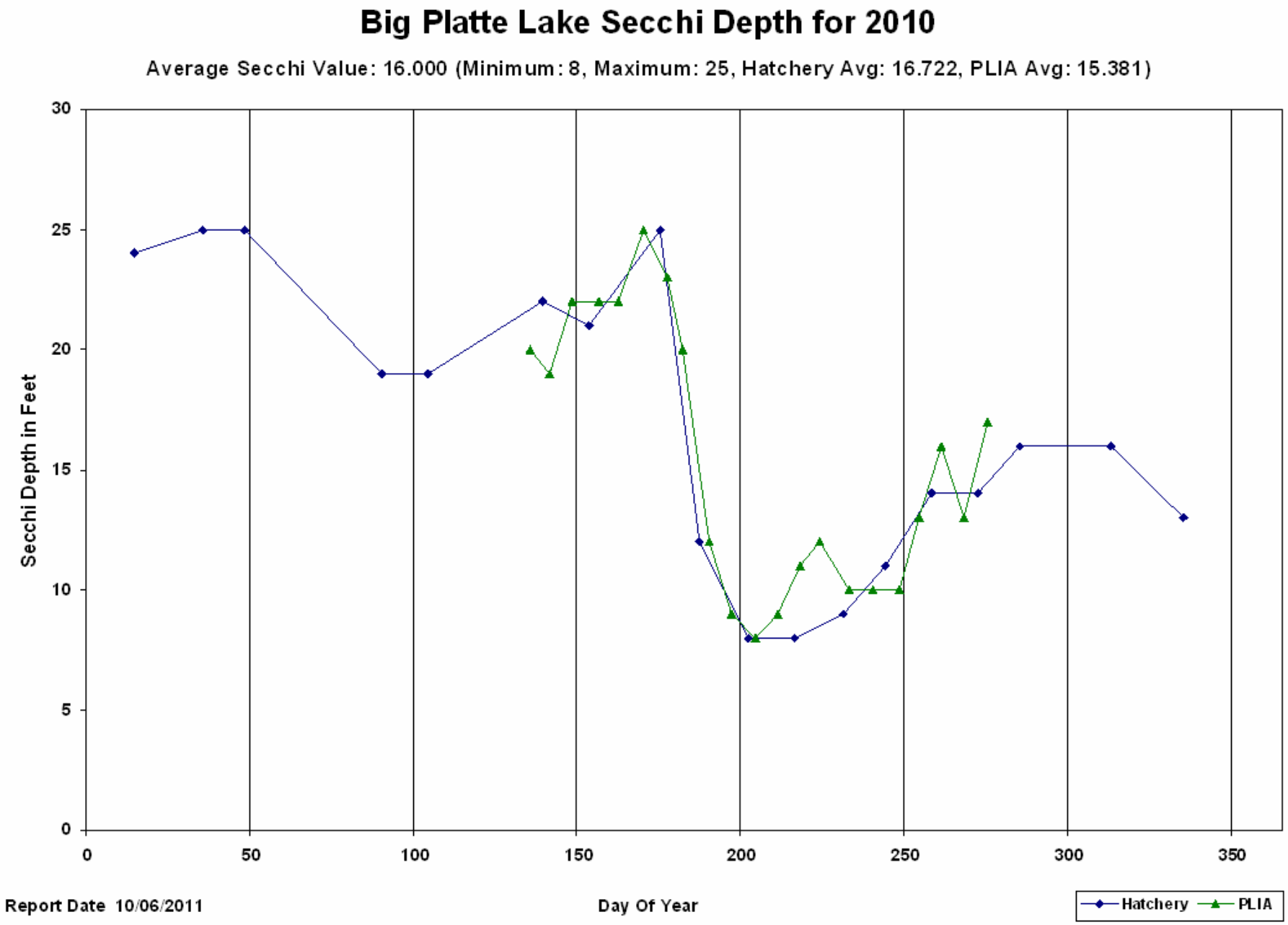


Figure 8. Big Platte Lake Secchi depth measurements for 2010.

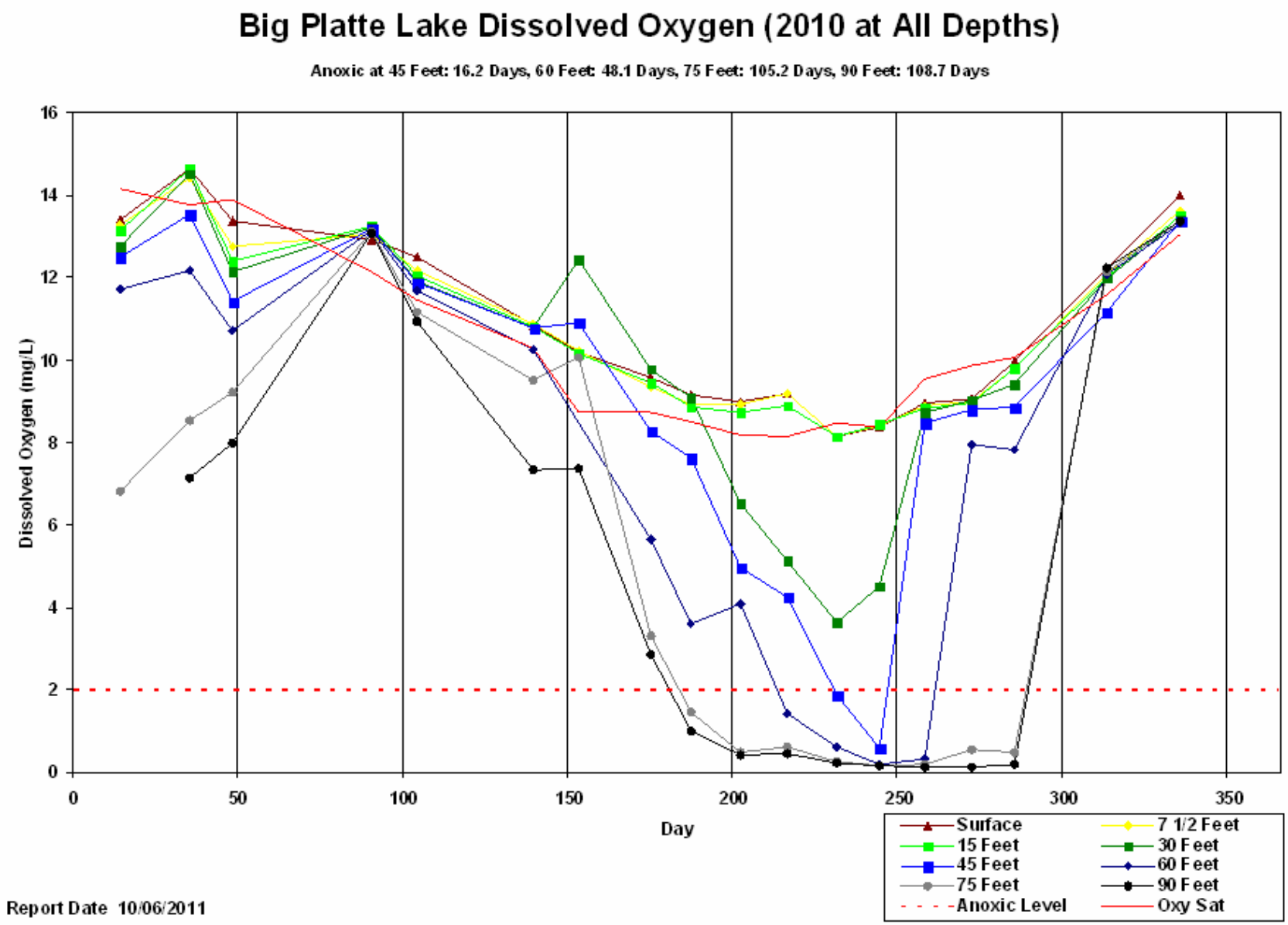


Figure 9. Dissolved oxygen measurements by depth in Big Platte Lake during 2010.

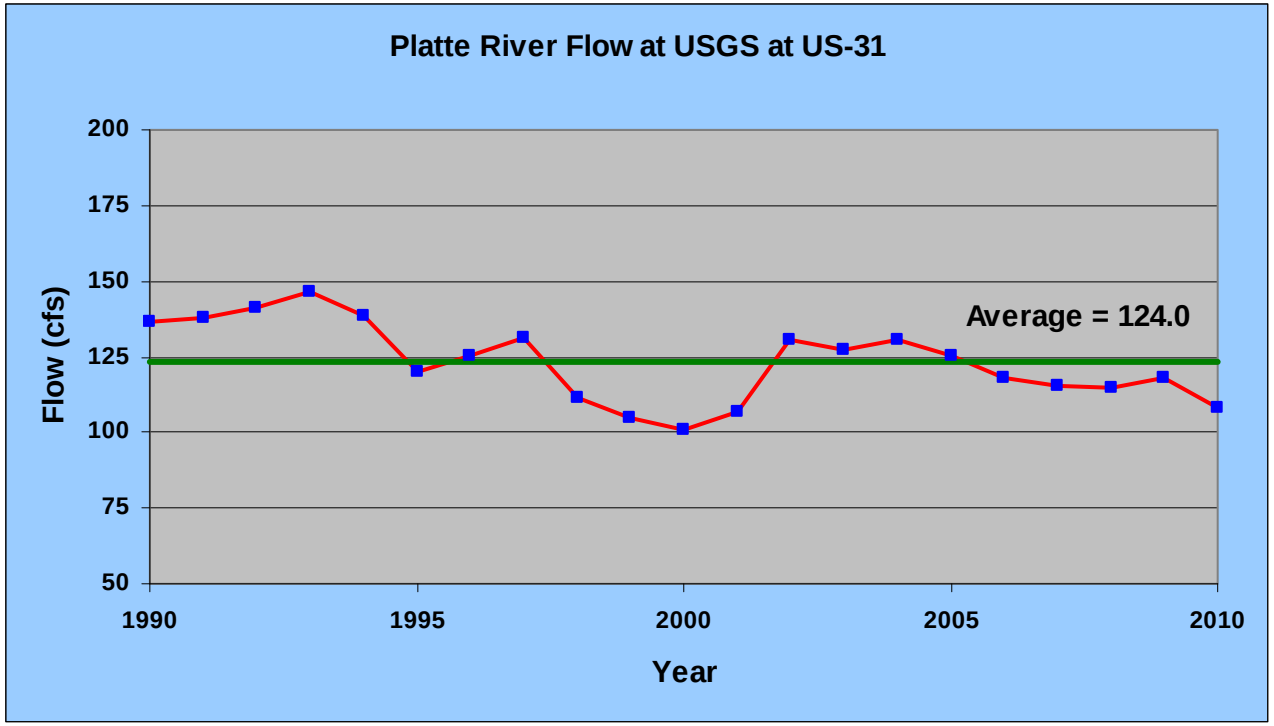


Figure 10. Average annual discharge of the Platte River at the USGS Gauging Station 04126740 at Honor, MI.

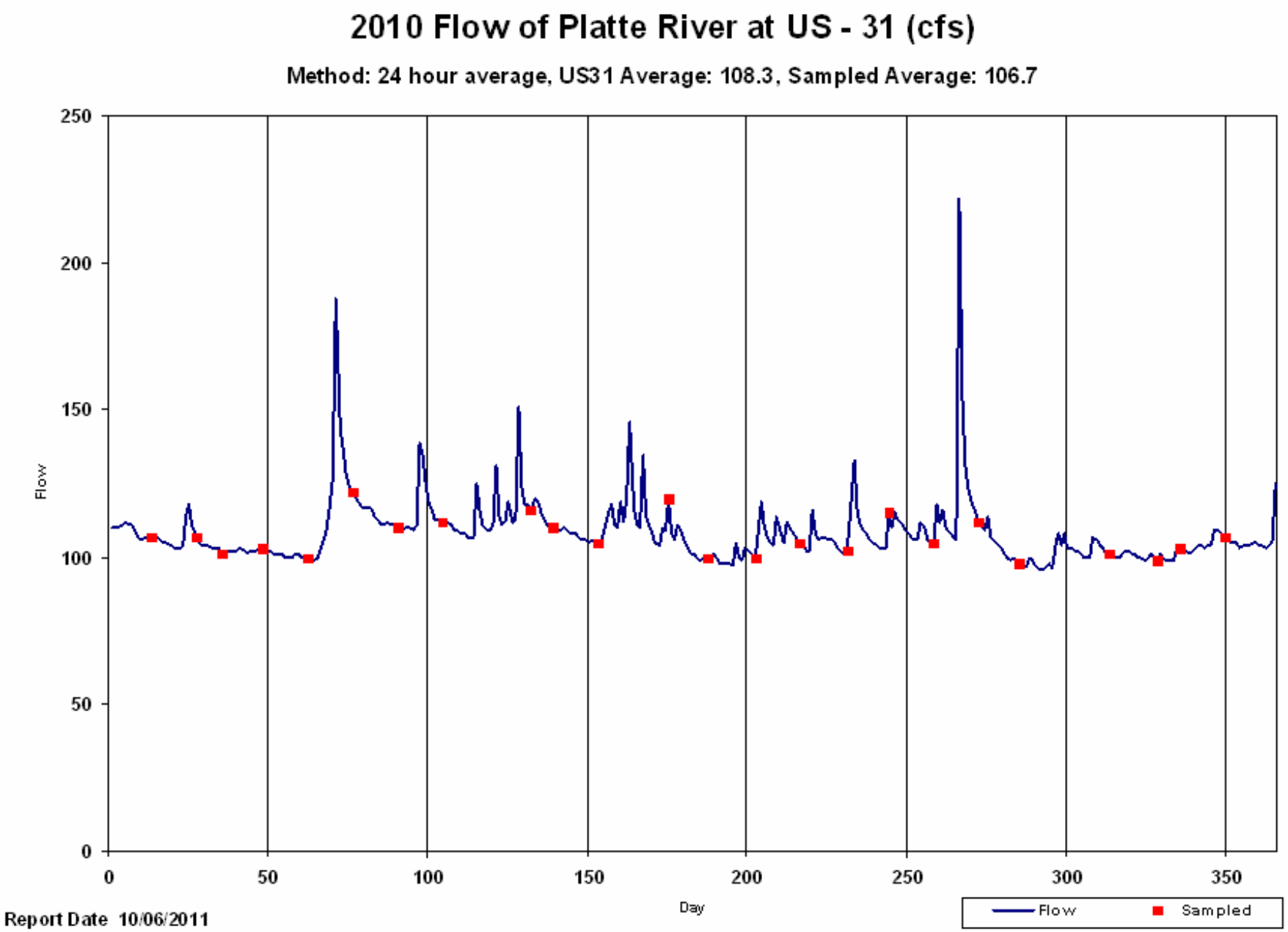


Figure 11. Daily average flows of Platte River in 2010 at the USGS Station 04126740 at Honor, MI and on dates when water quality sampling occurred at that site.

2010 Lake	
vs (m/yr)	11.8
Area (km^2)	10.2
TP (mg/m^3)	7.98
Sediment	145.7
Atmos (Lbs/yr)	124.7
Lost Fish (Lbs/yr)	86.36
Settling (Lbs/yr)	2116.1
Outflow (Lbs/yr)	2082.8
% Retained	50.4

2010 Stream Location	slope	Int	Flow cfs	Dry TP mg/m^3	Wet TP mg/m^3	Dry Load LbsP/Yr	Wet Load LbsP/Yr	Dry + Wet LbsP/Yr
Fewins	0.471	-2.41	48.59	10.41	45.35	972.1	104.6	1076.6
NP = Fewins to Stone			3.22			64.4	6.9	71.3
Stone Bridge Site	0.540	-6.69	51.81	10.41	45.35	1036.4	111.5	1147.9
Brundage Cr	0.129	-2.99	4.26	14.08	67.95	115.8	11.0	126.8
Hatchery			10.65			48.1	0	48.1
NP = Stone to Vets			4.34			152.2	18.9	171.1
Vets Site	0.722	-7.16	71.05			1352.5	141.3	1493.9
NP = Vets to Pioneer			11.28			395.9	49.0	445.0
Carter Cr	0.086	-3.54	5.79	13.43	67.95	150.0	14.9	165.0
Pioneer Site	1.119	-33.07	88.12			1898.5	205.3	2103.8
Collision Cr	0.085	-8.89	0.33	28.18	67.95	17.8	0.8	18.6
NP = Pioneer to USGS			19.86			696.7	86.3	783.0
USGS Site			108.3	12.59	51.1	2613.1	292.4	2905.5
North Branch	0.245	-7.68	18.85	13.55	45.35	490.8	40.6	531.4
NP = Direct			5.39			385.8	19.5	405.3
M22 Site	1.273	-5.31	132.54	7.98	7.98	2026.9	55.9	2082.8
		Events	13					
		% dry	95.2				% dry	90.8
		% strom	4.8				% strom	9.20

Figure 12. Platte River Watershed discharge and phosphorus mass balance summary for 2010.