

Lake Spokane 2012 Nutrient Monitoring Data



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Lake Spokane Monitoring Stations



Discrete Depth Sampling Stations

Lake Spokane Sampling Station and Discrete Depth						
	LL0	LL1	LL2	LL3	LL4	LL5
Depths	0.5	0.5	0.5	0.5	0.5	0.5
	5	5	5	5	B-1	B-1
	15	20	15	10		
	30	B-1	B-1	B-1		
	B-1					

At each depth samples were analyzed for:

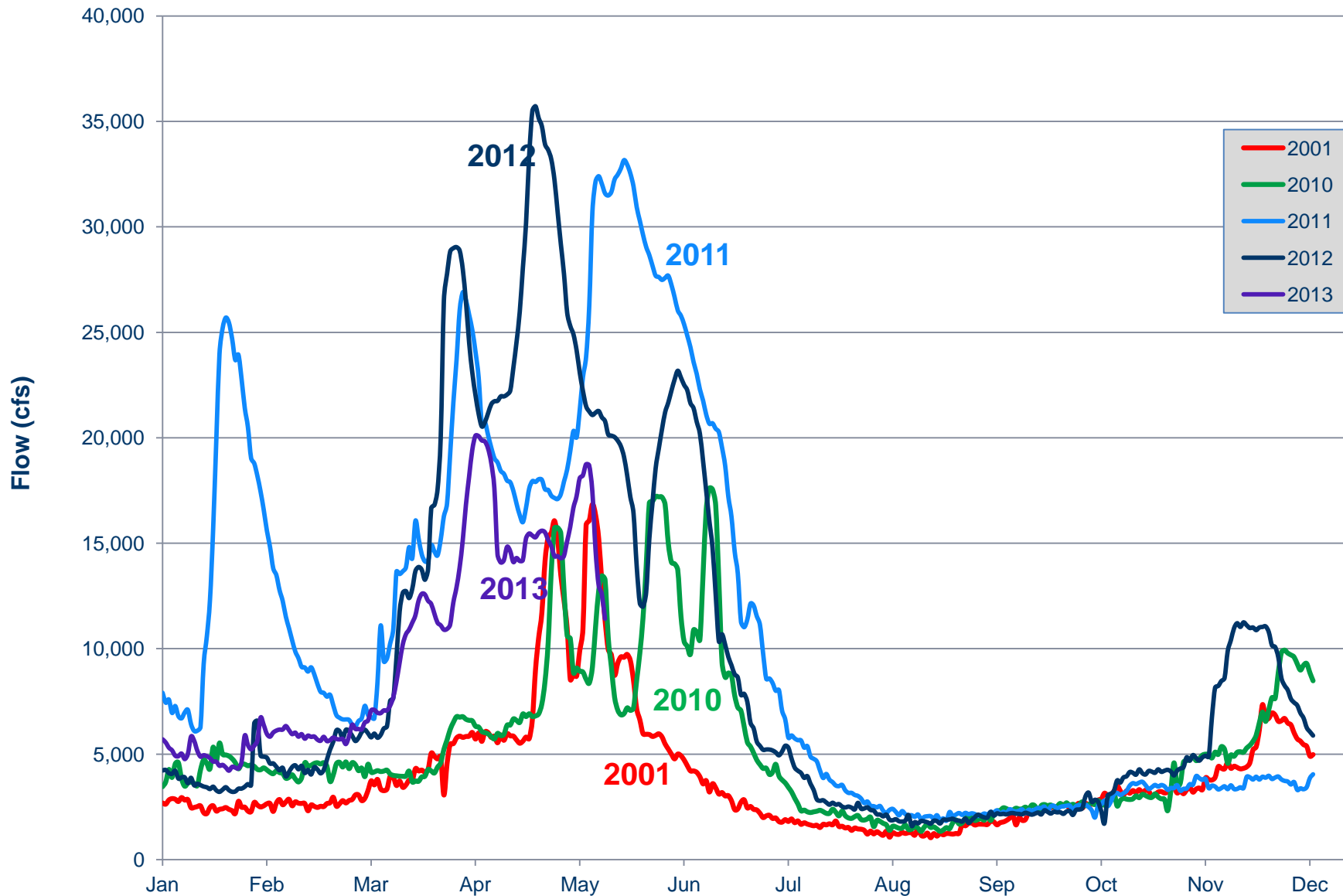
- Nitrate plus nitrite
- Total persulfate nitrogen (TN)
- Soluble reactive phosphorus (SRP)
- Total phosphorus (TP)
- Chlorophyll *a* (chl)

At each station profiles were completed of:

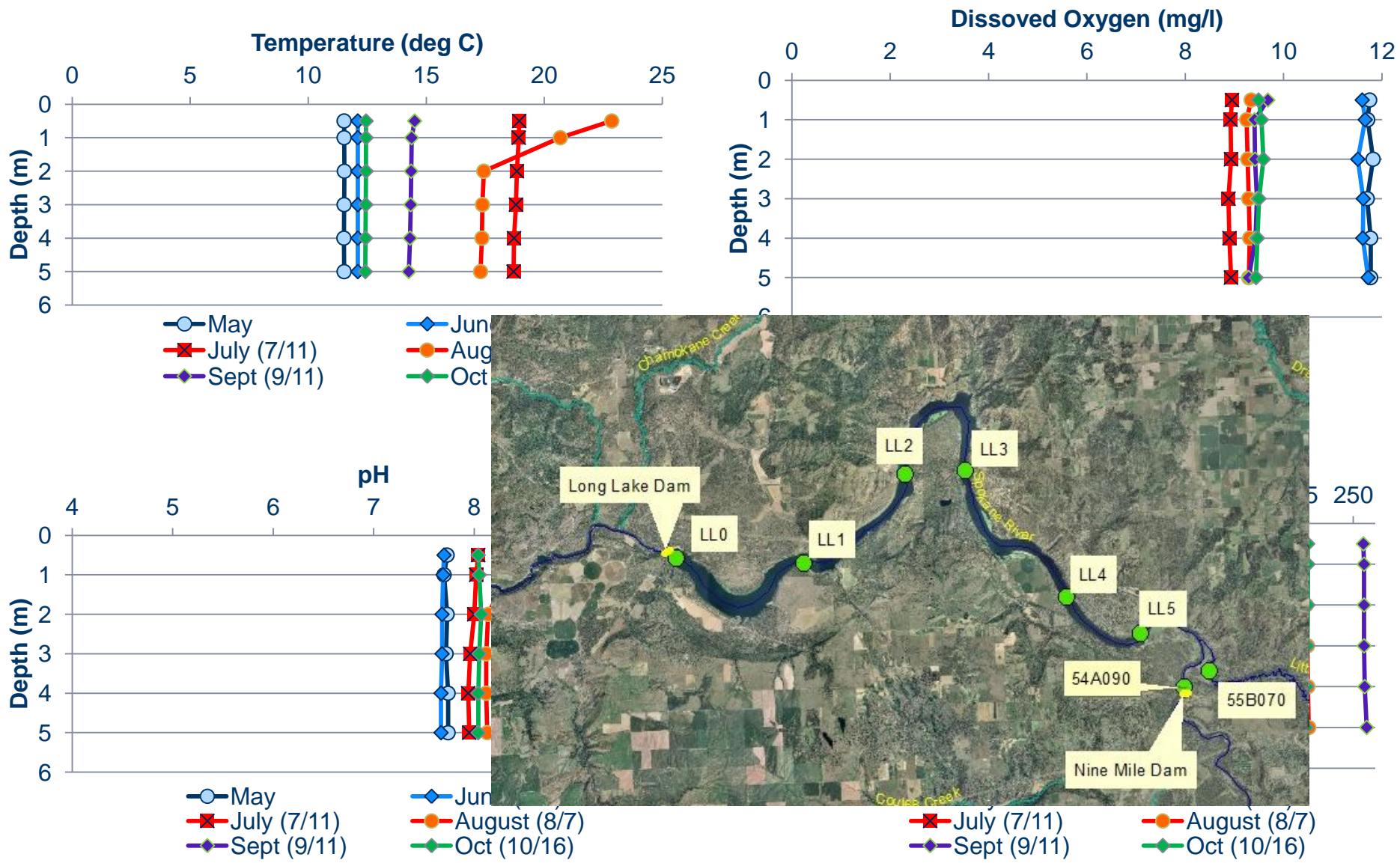
- Water temperature
- Dissolved oxygen
- pH
- Conductivity

**Secchi Disc Depth, phytoplankton, and zooplankton also collected at each station

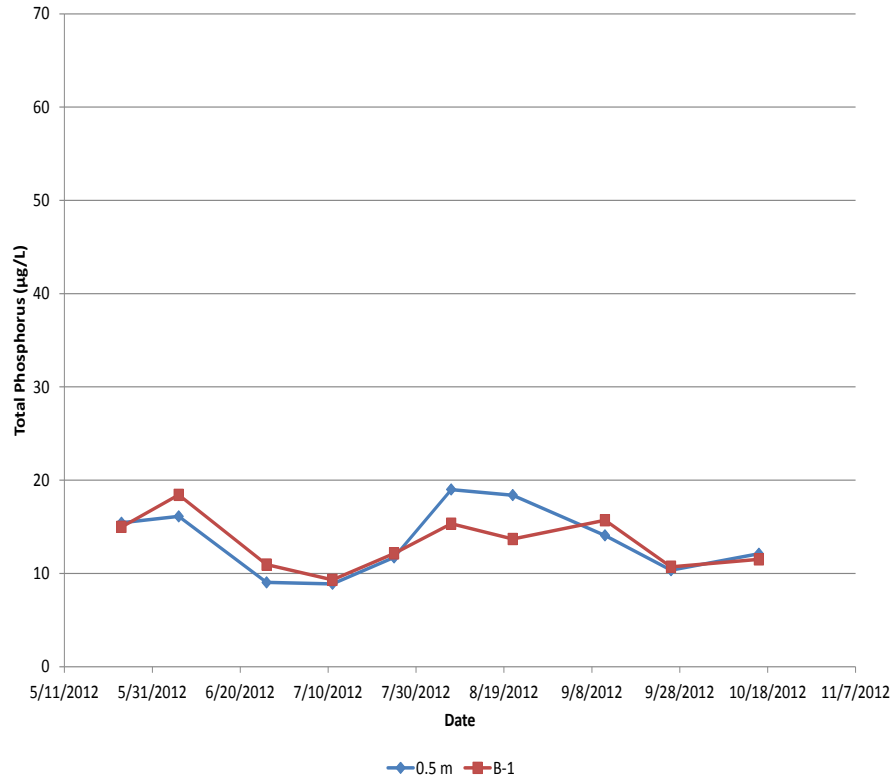
Long Lake Dam Inflows: 2001, 2010, 2011, 2012, and 2013



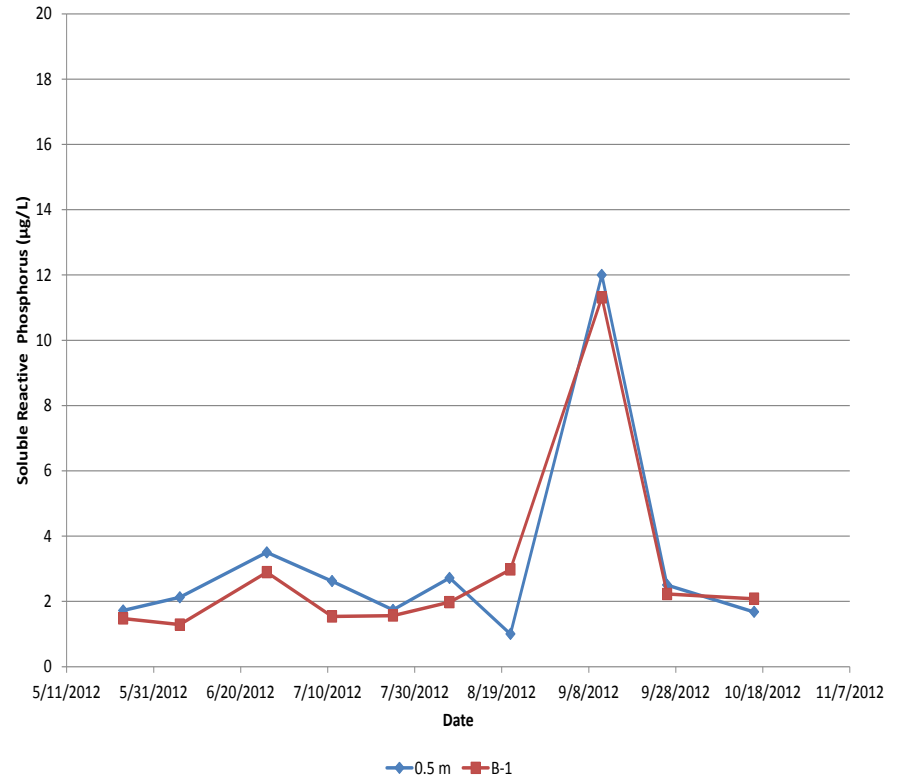
2012 LL5 Profiles



2012 TP and SRP Concentrations ($\mu\text{g/L}$) at LL5 (May through October)

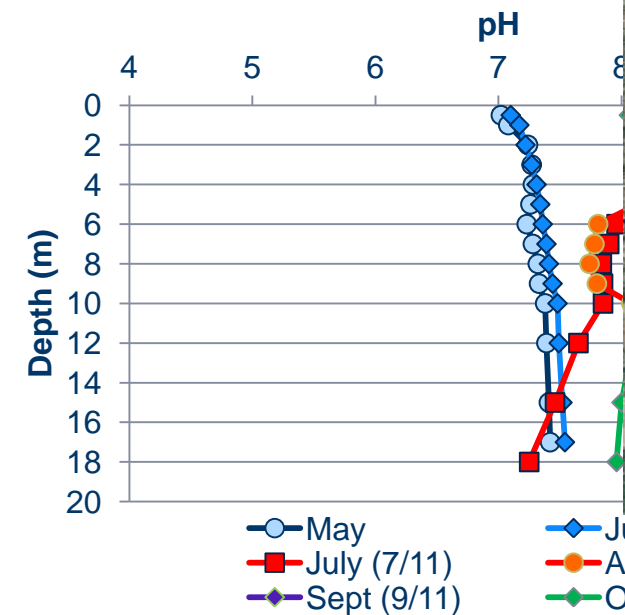
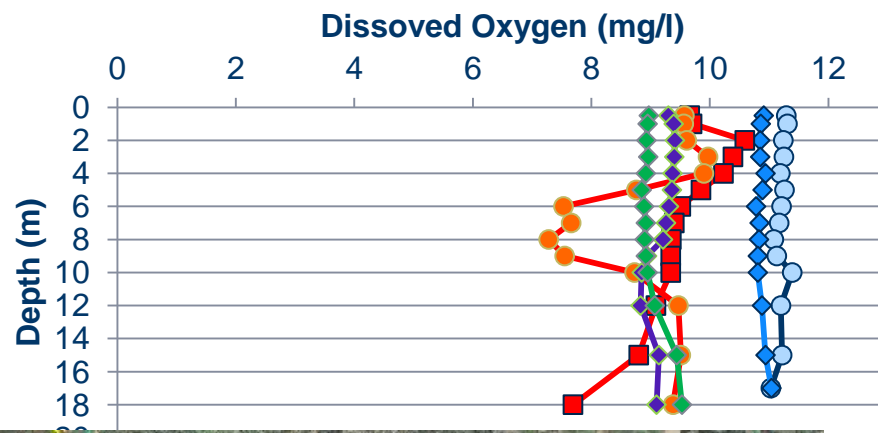
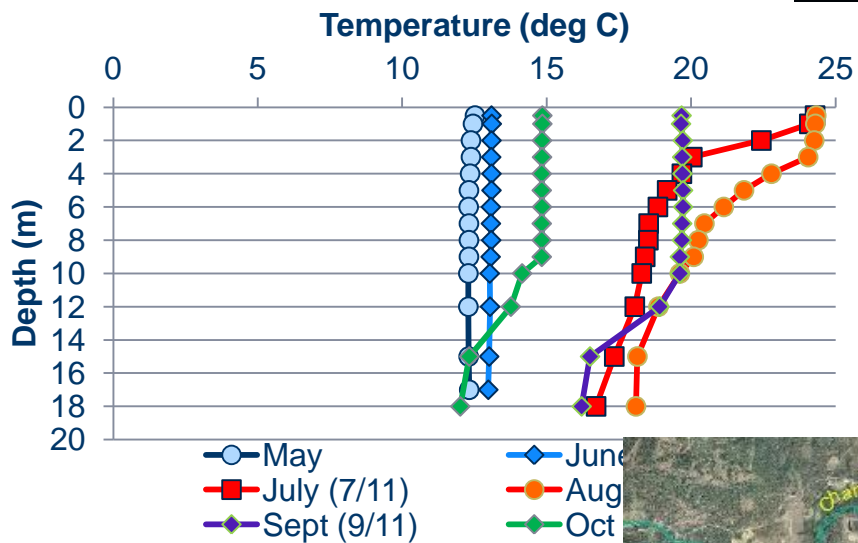


TP Concentrations



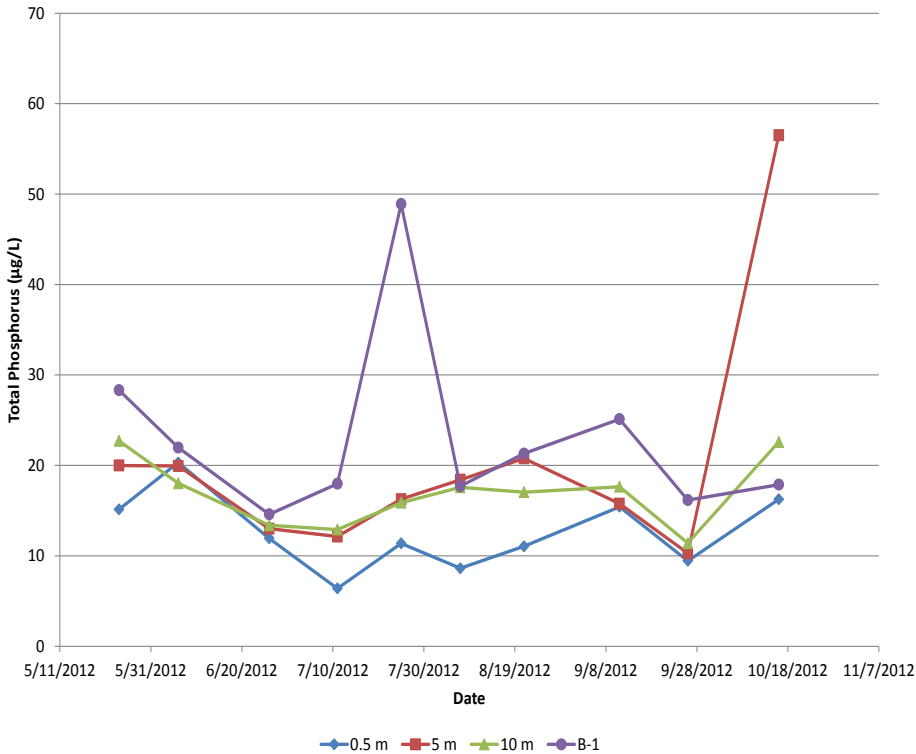
SRP Concentrations

2012 LL3 Profiles

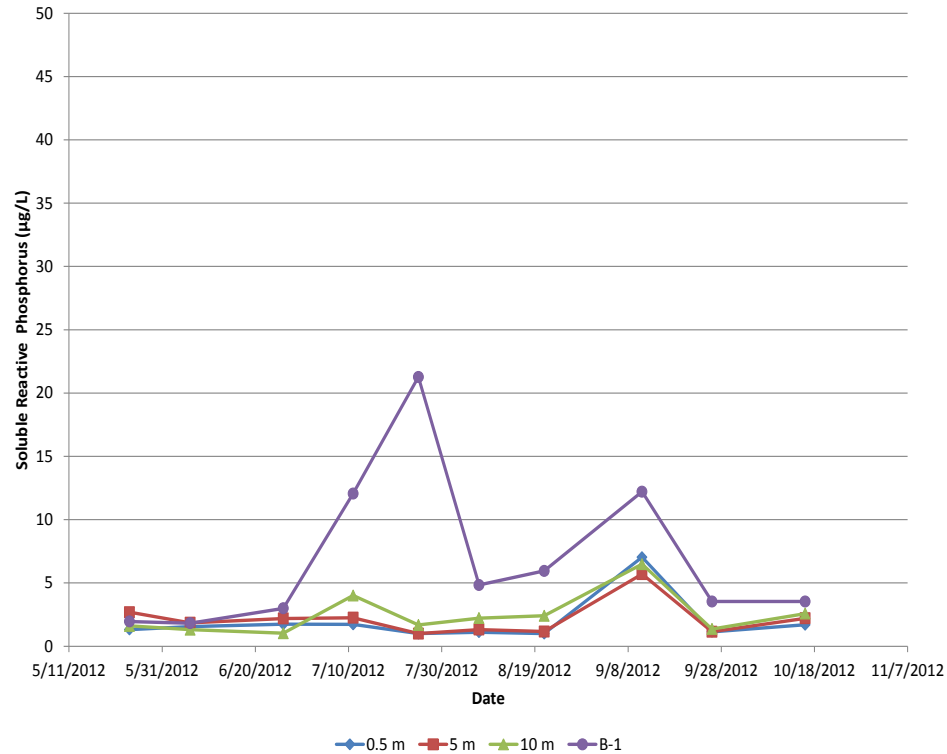


2012 TP and SRP Concentrations ($\mu\text{g/L}$) at LL3

(May through October)



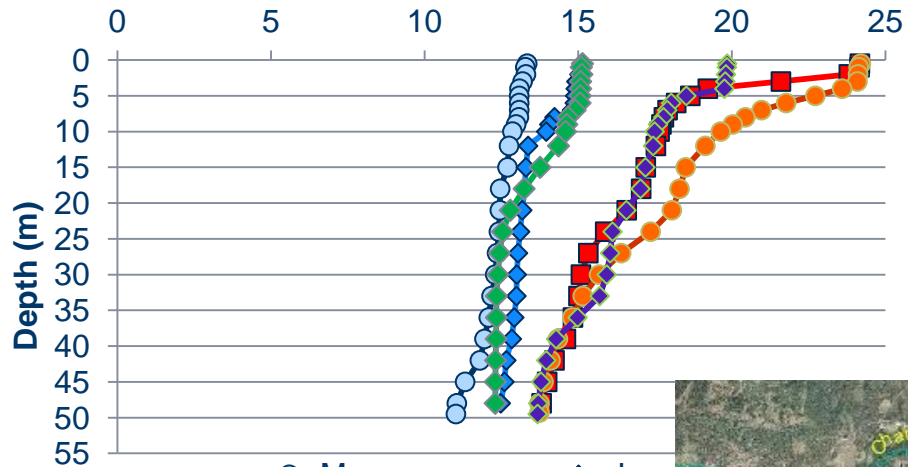
TP Concentrations



SRP Concentrations

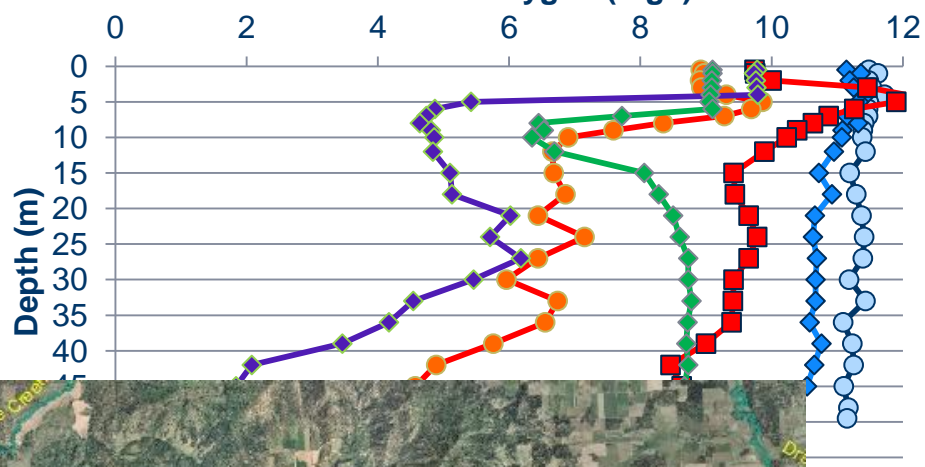
2012 LLO Profiles

Temperature (deg C)

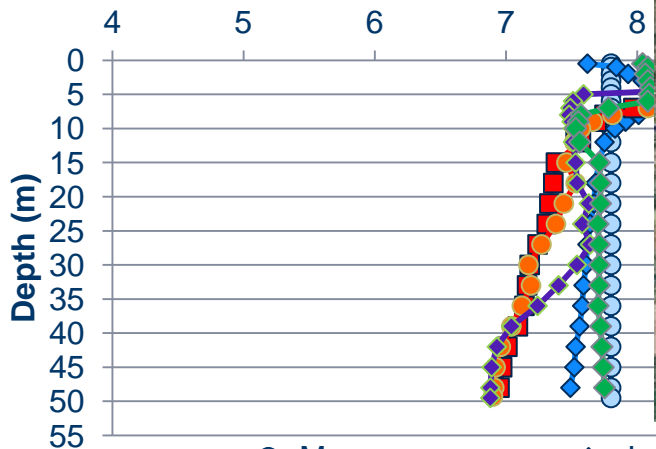


- May
- July (7/10)
- ◆ June
- August
- ◆ Sept (9/10)
- ◆ Oct

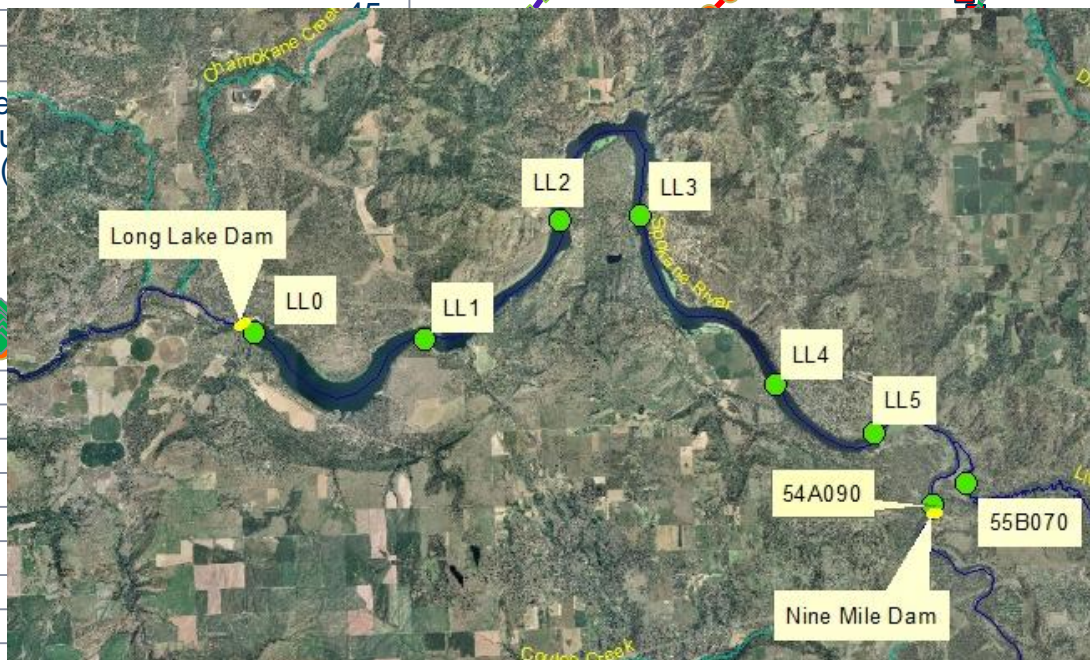
Dissolved Oxygen (mg/l)



pH



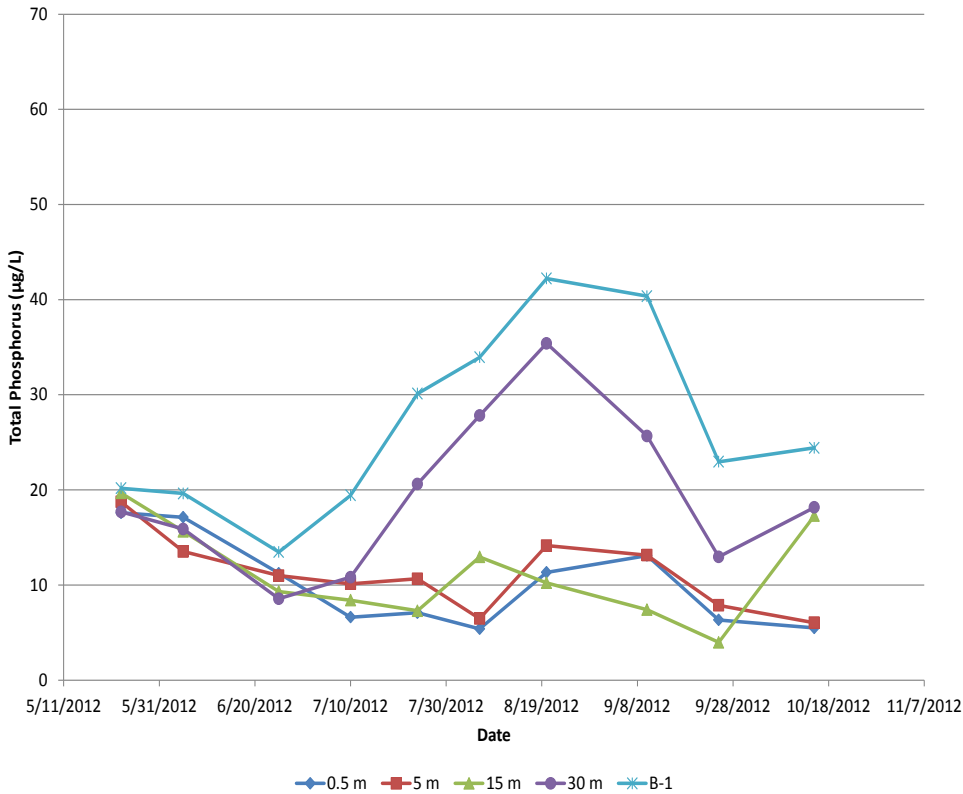
- May
- July (7/10)
- ◆ June (6/5)
- August (8/6)
- ◆ Sept (9/10)
- ◆ Oct (10/15)



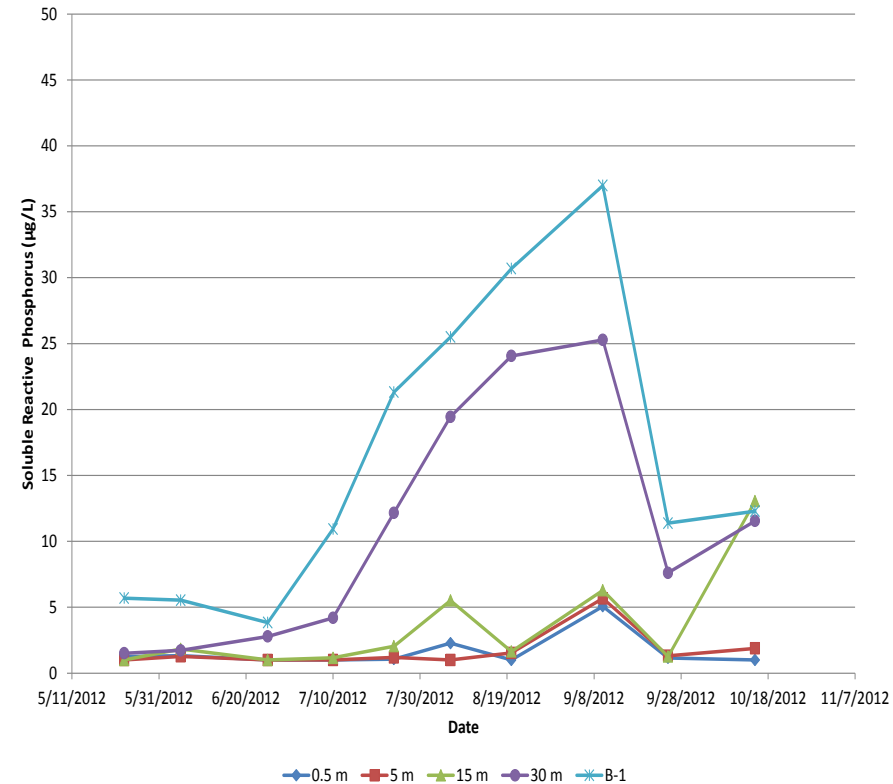
- May
- July (7/10)
- ◆ June (6/5)
- August (8/6)
- ◆ Sept (9/10)
- ◆ Oct (10/15)

2012 TP and SRP Concentrations ($\mu\text{g/L}$) at LL0

(May through October)



TP Concentrations

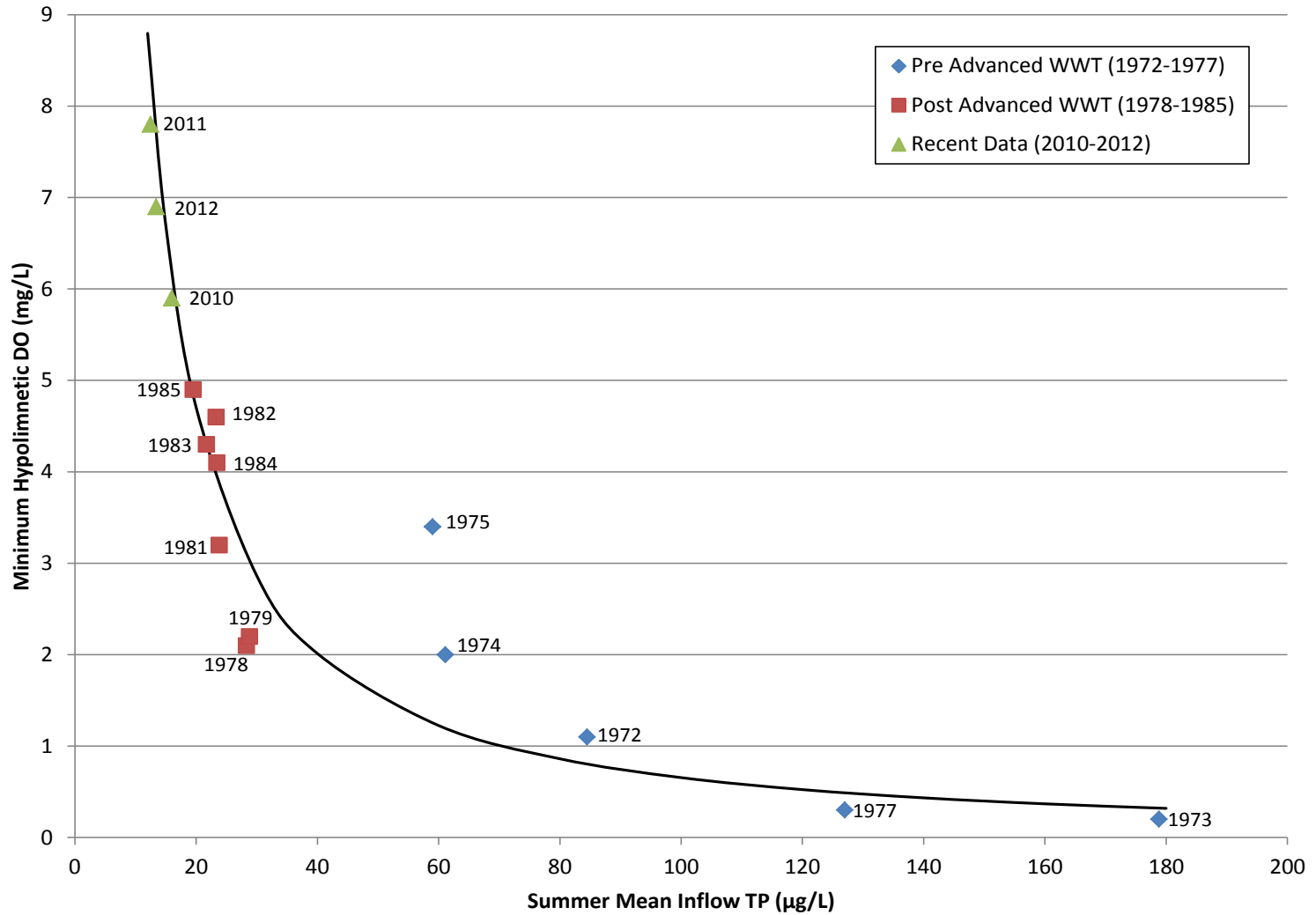


SRP Concentrations

Volume Weighted Water Column TP Concentrations from 2012 Monitoring

2012 Sampling Event	Volume-weighted Water Column TP ($\mu\text{g/L}$)					
	LL0	LL1	LL2	LL3	LL4	LL5
May 23-24	18.6	18.6	16.2	21.1	15.8	15.3
June 5-6	15.5	17.3	18.2	19.6	15.4	16.9
June 25-26	9.9	10.5	12.4	13.1	11.0	9.7
July 10-11	10.0	10.9	10.9	12.1	13.2	9.0
July 24-25	13.6	10.3	15.1	19.5	42.0	11.9
August 6-7	16.3	14.9	13.1	16.1	16.6	17.8
August 20-21	21.0	14.4	19.2	17.7	14.4	16.8
September 10-11	17.0	14.3	12.8	17.6	19.5	14.6
September 25-26	9.1	8.2	8.1	11.3	11.9	10.5
October 15-16	13.8	10.3	8.3	32.4	10.9	11.9
Mean	14.5	13.0	13.4	18.0	17.1	13.4
Summer Mean (Jun-Sep)	14.1	12.6	13.7	15.9	18.0	13.4

Minimum Hypolimnetic DO in Lake Spokane below 15 m Compared to Summer Mean Inflow TP Before and After Wastewater Phosphorus in 1977



QUESTIONS?

