

15-mile Creek data

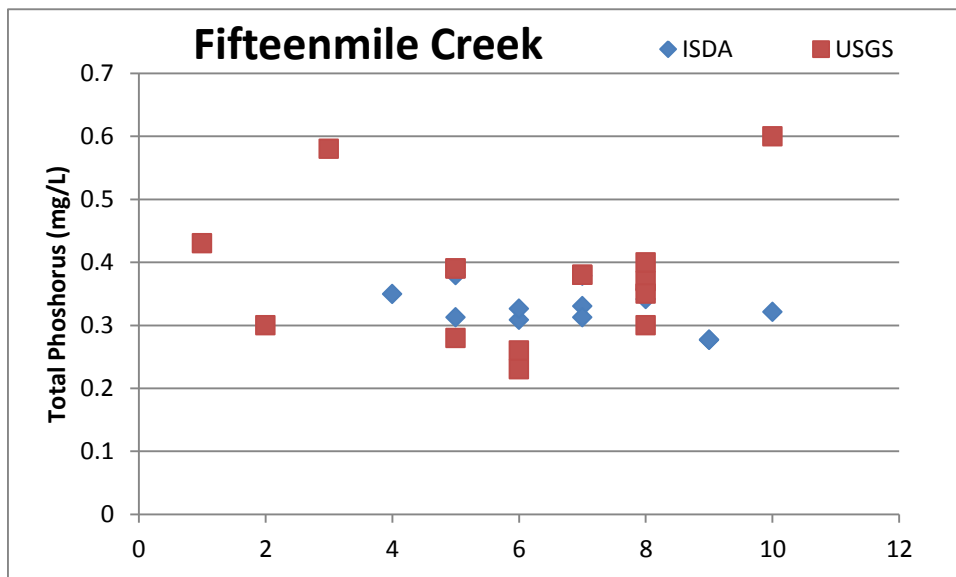
Presentation to LBWC:

Fivemile and Tenmile Creek water quality sampling results showing seasonal and longitudinal variations in “Pollutants of Concern” presented Jack Harrison, PhD, P.E. at the 23 Annual Water Quality Workshop in February 2013.

The presentation summarizes the results from 2012 water quality sampling conducted by Ada County Highway District (ACHD) in Fivemile and Tenmile Creeks.

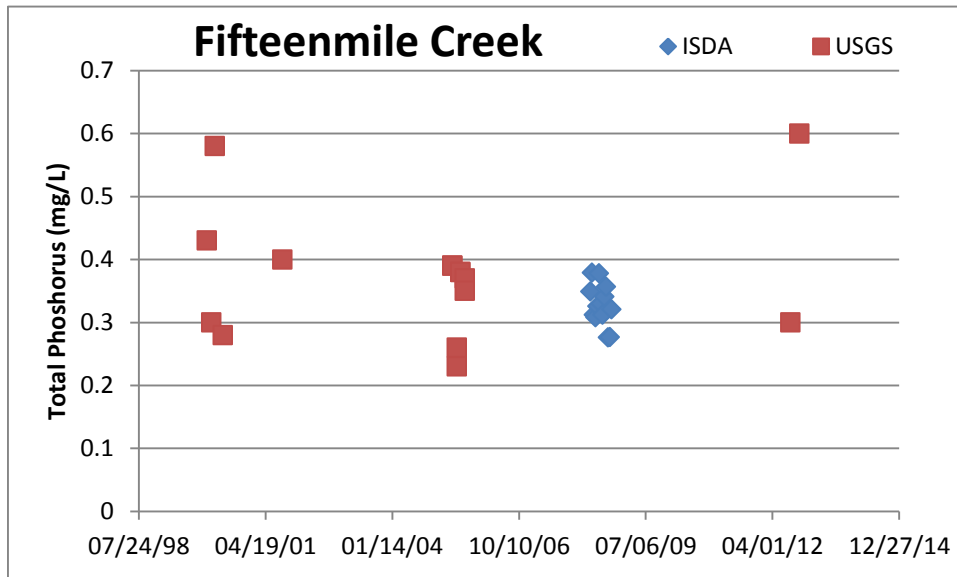
Also included is summary of ACHD data was data by others:

Idaho State Department of Agriculture (ISDA), U. S. Geological Survey (USGS) and the IDEQ have historically collected water quality samples in the Fifteenmile Creek watershed. Water quality data collected at the mouth of Fifteenmile Creek after 2000 by these State and Federal agencies were compiled and summarized (Figures below and Attachment A). The data were grouped to compare water quality during the summer irrigation season, represented by data collected April through September, with water quality during the winter non-irrigation season represented by data collected October through March.



Graph A – TP by month for period beginning 2000 to 2012(in presentation)

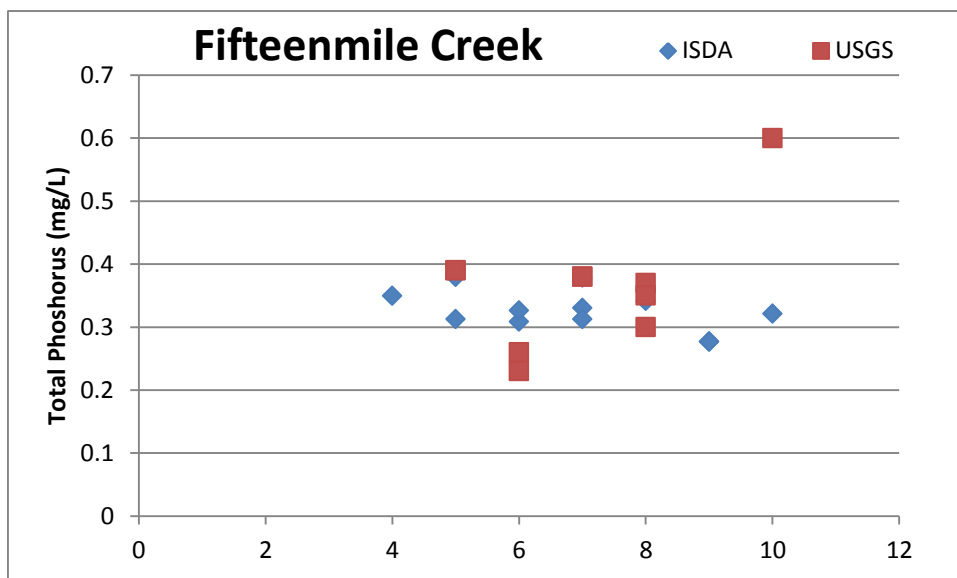
There was a question regarding possible changes in phosphorus levels after 2005. The following graph was requested:



Graph B – TP by year for period beginning 2000 to 2012(in presentation)

Note some “apparent” decrease in USGS data (Graph B) between 2000 and 2005 time period as suggested. However, fall 2012 is still a bit high.

The TP data by month without pre-2005 data would look like the following:



Graph C– TP by month for period beginning 2005 to 2012(revised)

Attachment A – Fifteenmile Creek Water Quality after Year 2000

The following water quality results are from samples collected after 2000 from Fifteenmile Creek near the discharge to the Boise River:

Table A1. Idaho State Department of Agriculture (ISDA 2009).

Date	Q (cfs)	SSC (mg/L)	TP (mg/L)	OP (mg/L)	<i>E. coli</i> (MPN/100mL)
04/24/08	187.4	70.4	0.349	0.228	39
05/08/08	70.1	56.5	0.379	0.279	170
05/22/08	191.1	66	0.312	0.18	980
06/05/08	309.8	37.1	0.308	0.187	980
06/19/08	112.7	76.4	0.326	0.231	1400
07/02/08	98.7	91.4	0.378	0.229	1400
07/17/08	85.8	85	0.33	0.213	580
07/31/08	93.7	80.7	0.312	0.218	290
08/14/08	98.3	40.8	0.341	0.263	490
08/28/08	104.2	29.7	0.357	0.286	370
09/11/08	108.6	18.2	0.276	0.224	240
09/25/08	111.8	27.8	0.277	0.219	180
10/09/08	82.1	12.8	0.321	0.261	610

Idaho State Department of Agriculture (ISDA). 2009. Water Quality Monitoring Report Lower Boise River and Snake River Tributaries April 24 through October 9, 2008. Idaho State Department of Agriculture Technical Report Summary W-29. January 2009.

Table A2 US Geological Survey data (USGS 2012)

Date	Q (cfs)	SSC (mg/L)	TP (mg/L)	OP (mg/L)	<i>E. coli</i> (MPN/100mL)
01/12/00	35	34	0.43	0.35	330
02/16/00	26	17	0.3	0.49	54
03/16/00	28	14	0.58	0.51	370
05/16/00	172	136	0.28	0.16	770
08/29/01	57	30	0.4	0.33	550
05/02/05	61	69	0.39	0.28	1900
05/02/05	61	69	0.39	--	1900
06/06/05	102	54	0.23	0.16	650
06/06/05	102	54	0.26	--	650
07/05/05	85	--	0.38	0.24	1200
07/05/05	85	72	0.38	--	1200
08/08/05	79	--	0.37	0.23	1200
08/08/05	79	97	0.35	--	1200
08/21/12	93	69	0.30	0.216	--
10/30/12	31	12	0.60	0.611	--

U.S. Geological Survey (USGS). 2012. Water-quality data web page.

<http://waterdata.usgs.gov/nwis/qw>. Accessed on: December, 2012.