

Data Summaries and Graphs for Russian River and Pocket Canyon

2004-2006 Community Clean Water Institute Volunteer Dataset

Applicable Water Quality Objectives:

Nitrate-Nitrogen: < 1.0 mg/L

*EPA water quality goal for nitrate-nitrogen

Total Phosphorous: < 0.1 mg/L

*EPA water quality goal for total phosphate in streams and rivers

pH: > 6.5 and < 8.5

*North Coast Water Quality Control Board's Water Quality Basin Plan Objectives

Dissolved Oxygen: > 7.0 mg/L for salmonid streams

*North Coast Water Quality Control Board's Water Quality Basin Plan Objectives

Conductivity: none applicable

*The North Coast Water Quality Control Board's Water Quality Basin Plan Objectives are based on a weekly mean and apply only to the main stem of the Russian River. The data here consists of monthly grab samples, a weekly mean cannot be calculated.

Water Temperature: none applicable

*The North Coast Water Quality Control Board's Water Quality Basin Plan Objectives do not state numerical cutoff values, and applicable standards used in the 2006 303-d list are based on 7-day means. The data here consists of monthly grab samples, a weekly mean cannot be calculated.

Turbidity: <25 NTU

*John W Sigler's 1984 paper "The Effects of Chronic Turbidity on Density and Growth of Steelheads and Coho Salmon". used in 2006 303-d list.

Pocket Canyon Creek

conductivity					pH				
	PCC020	PCC030	PCC040	ALL		PCC020	PCC030	PCC040	ALL
mean	152	137	131	140	mean	7.4	7.5	7.7	7.5
median	140	140	130	130	median	7.4	7.4	7.7	7.5
std. dev.	38	23	19	29	std. dev.	0.2	0.2	0.2	0.2
min	80	80	80	80	min	7.1	6.9	7.1	6.9
max	250	180	170	250	max	7.9	8.2	8.4	8.4
n	33	32	35	100	n	33	32	35	100
violations	0	0	0	0	violations	0	0	0	0

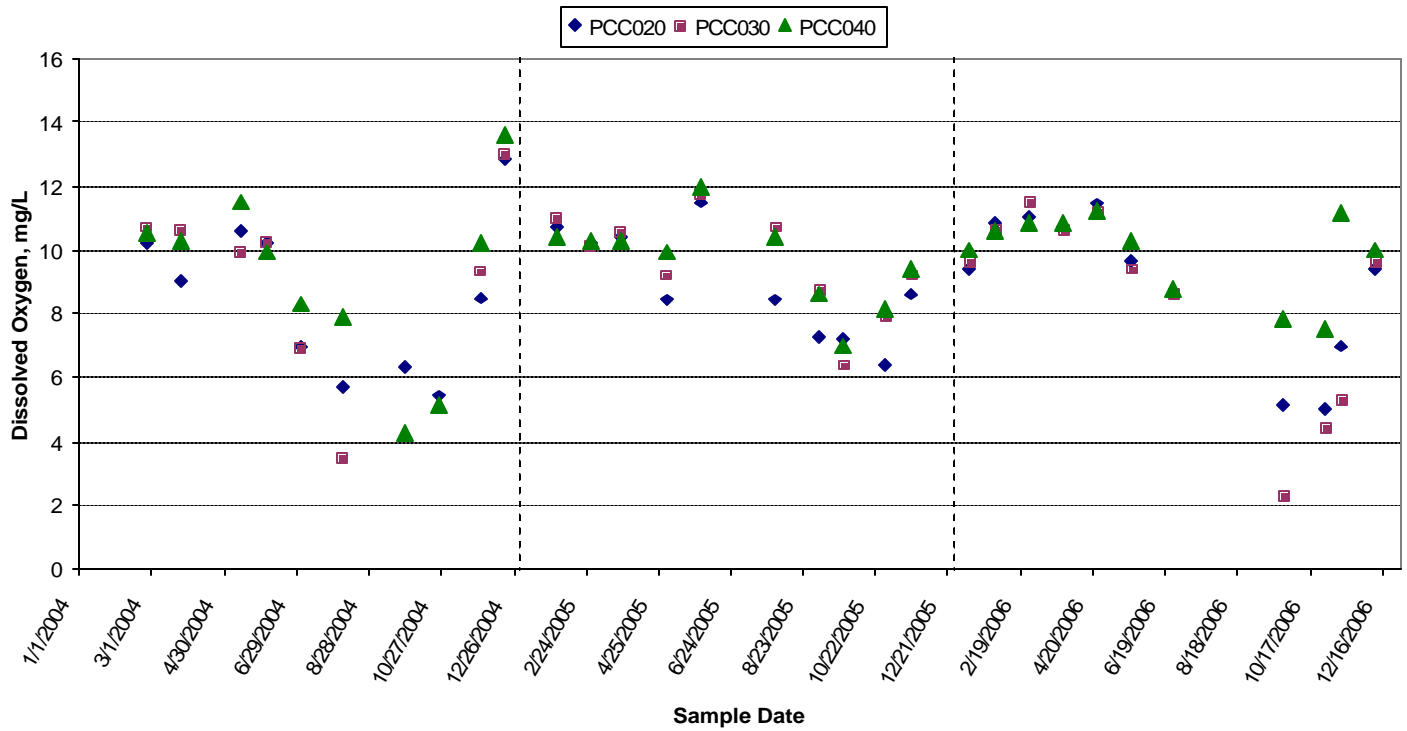
dissolved oxygen					Temperature				
	PCC020	PCC030	PCC040	ALL	Date	PCC020	PCC030	PCC040	ALL
mean	8.8	9.1	9.6	9.1	mean	12.1	12.2	11.7	12.0
median	9.0	9.6	10.2	9.9	median	11.5	11.5	11.3	11.5
std. dev.	2.1	2.5	1.9	2.2	std. dev.	2.1	2.3	2.0	2.1
min	5.0	2.3	4.3	2.3	min	9.0	8.0	8.6	8.0
max	12.8	13.0	13.6	13.6	max	16.0	17.0	15.5	17.0
n	29	28	31	88	n	35	33	35	103
violations	9	7	4	20	violations	na			

phosphorous ion chromatography					Nitrate-nitrogen ion chromatography				
Date	PCC020	PCC030	PCC040	ALL	Date	PCC020	PCC030	PCC040	ALL
mean	0.000	0.000	0.003	0.001	mean	0.049	0.045	0.115	0.069
median	0.000	0.000	0.000	0.000	median	0.000	0.000	0.068	0.000
std. dev.	0.000	0.000	0.010	0.006	std. dev.	0.128	0.128	0.125	0.126
min	0.000	0.000	0.000	0.000	min	0.000	0.000	0.029	0.000
max	0.000	0.000	0.030	0.030	max	0.366	0.362	0.394	0.394
n	9	9	9	62	n	8	8	8	59
violations	0	0	0	0	violations	0	0	0	0

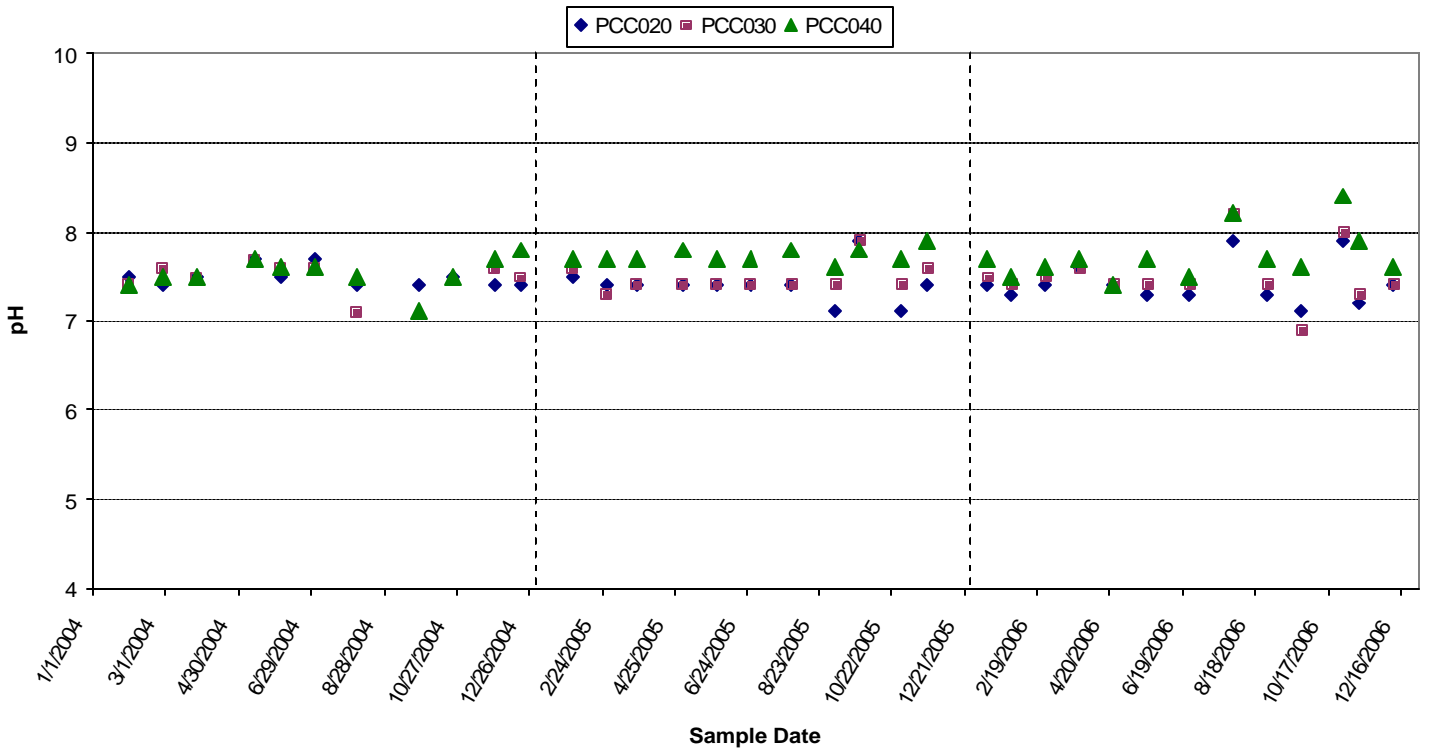
phosphorous colorimetric					Nitrate-nitrogen colorimetric				
	PCC020	PCC030	PCC040	ALL		PCC020	PCC030	PCC040	ALL
mean	0.03	0.02	0.03	0.03	mean	0.05	0.05	0.07	0.06
median	0.00	0.00	0.00	0.00	median	0.03	0.04	0.05	0.04
std. dev.	0.04	0.04	0.04	0.04	std. dev.	0.07	0.07	0.07	0.07
min	0.00	0.00	0.00	0.00	min	0.00	0.00	0.00	0.00
max	0.11	0.11	0.13	0.13	max	0.26	0.28	0.30	0.30
n	27	26	28	116	n	27	26	27	115
violations	2	2	1	5	violations	0		0	0

turbidity						
Date	PCC020	PCC030	PCC040	PCT010	ALL	
mean	3.2	3.0	3.2	7.7	3.1	
median	1.4	1.2	1.6	7.0	1.5	
std. dev.	3.9	3.9	3.7	2.6	3.8	
min	0.6	0.3	0.5	4.8	0.3	
max	19.4	18.0	18.0	11.1	19.4	
n	34	32	35	8	109	
violations	0	0	0	0	0	

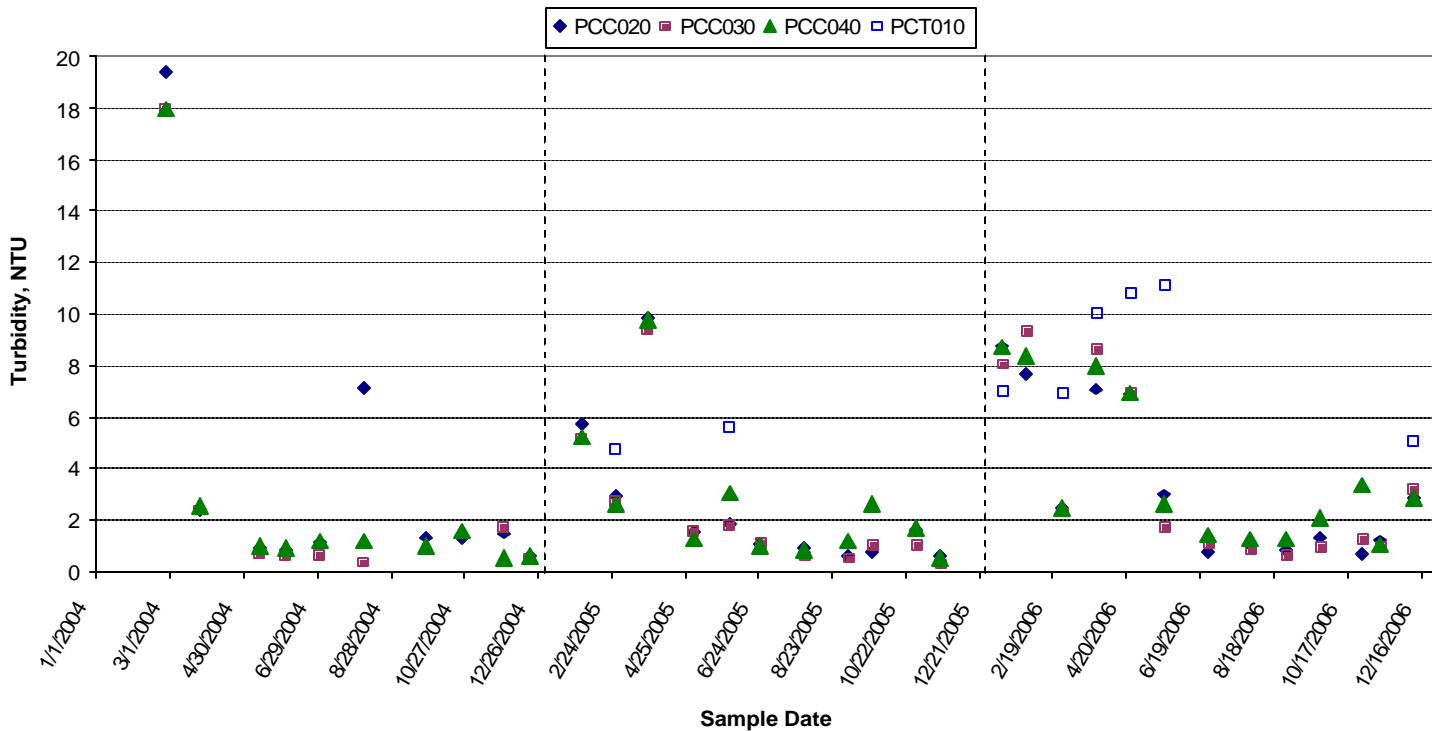
Pocket Canyon Creek Dissolved Oxygen



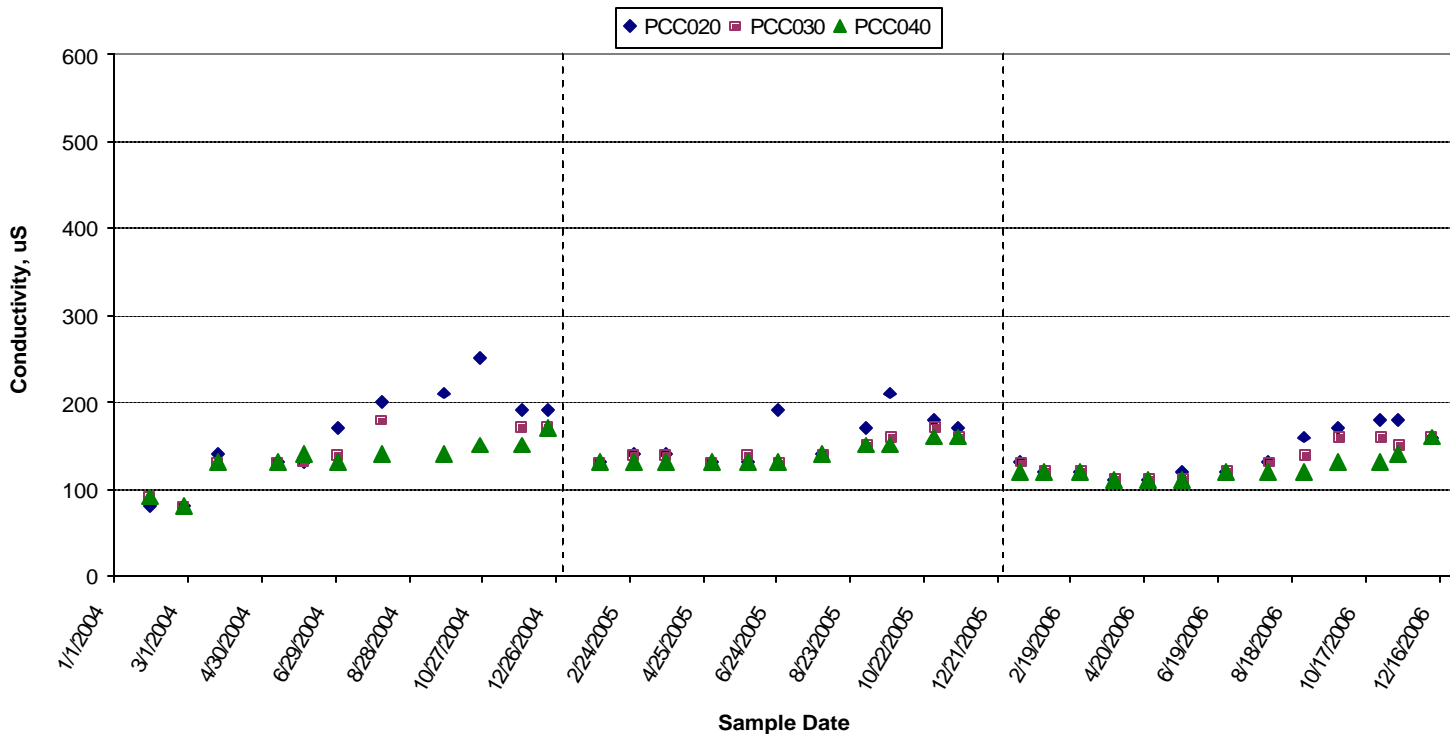
Pocket Canyon Creek pH



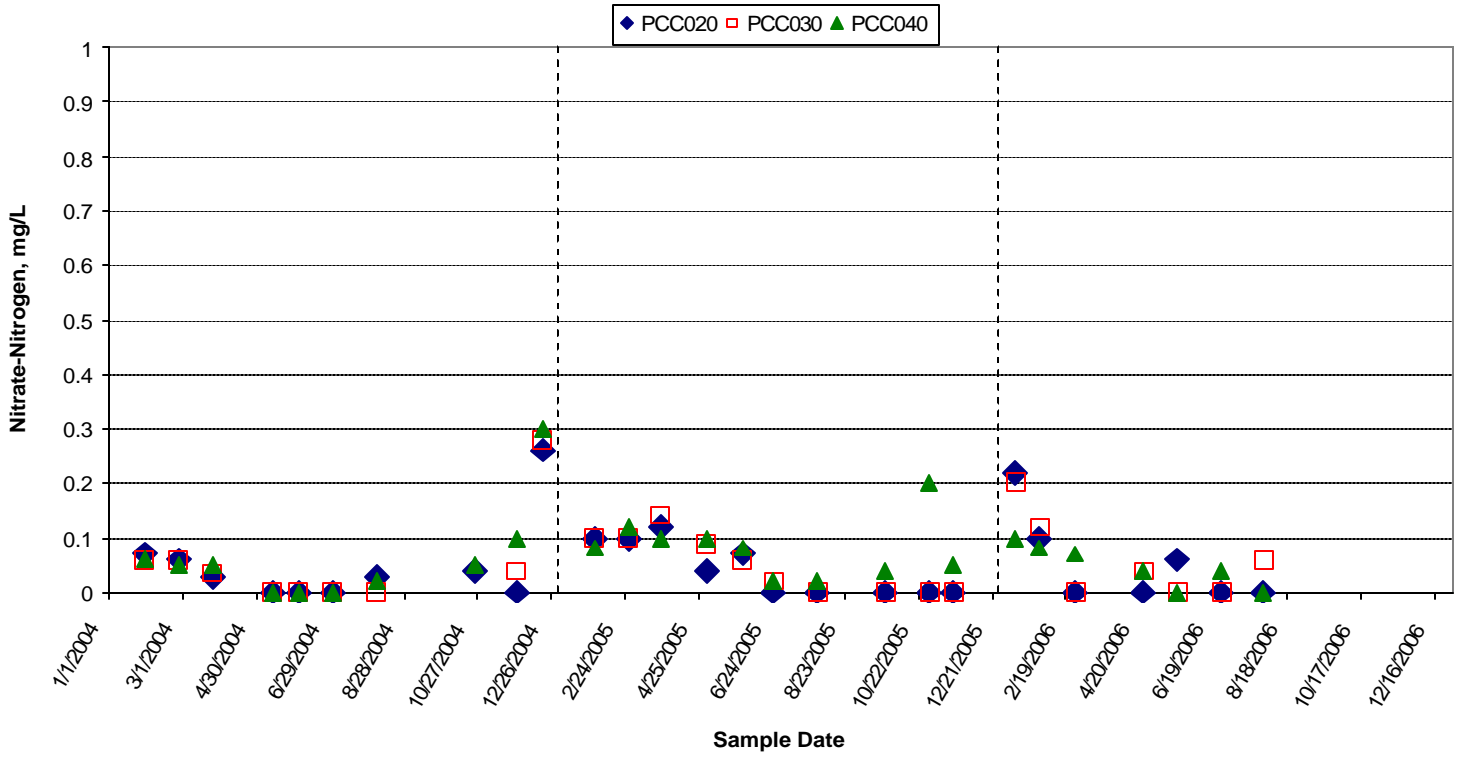
Pocket Canyon Creek Turbidity



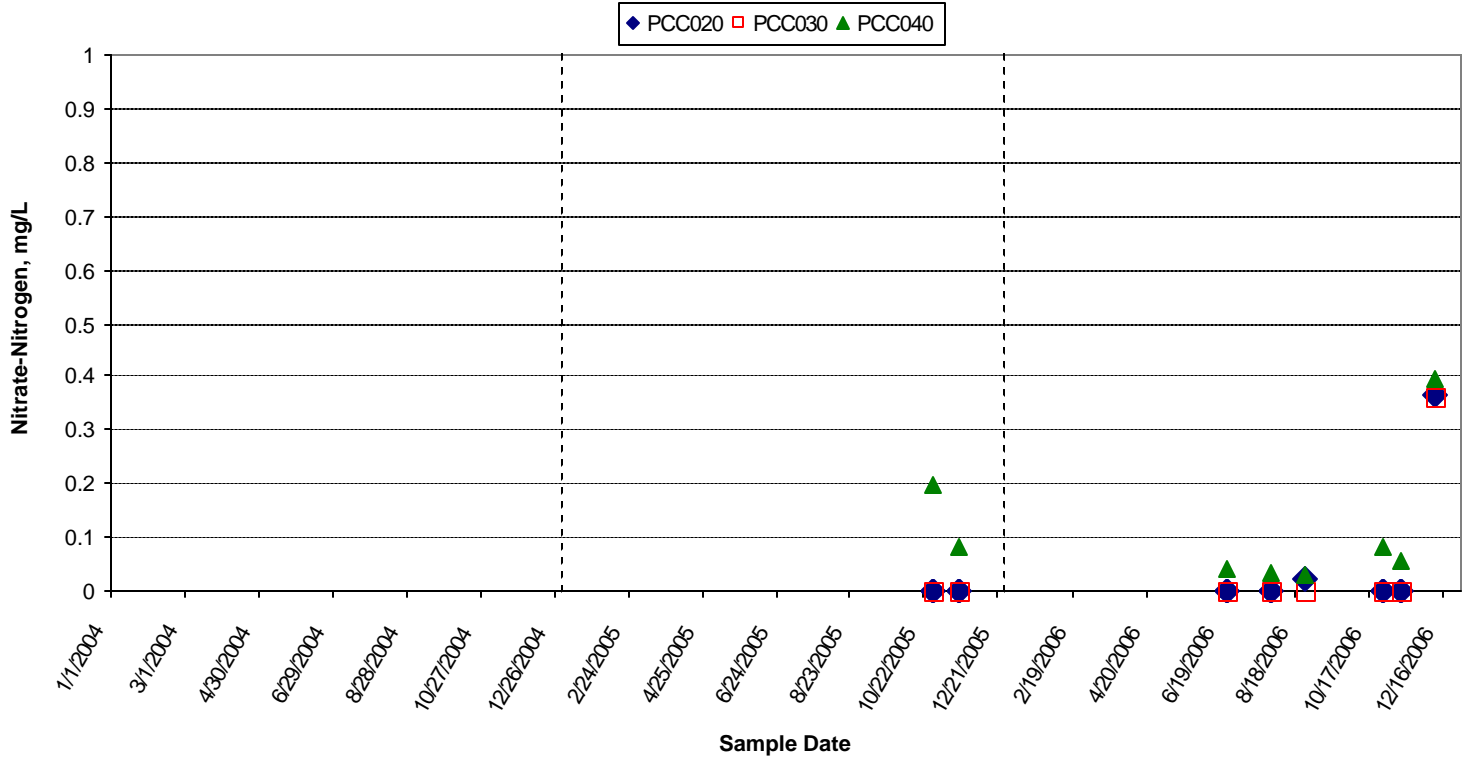
Pocket Canyon Creek Conductivity



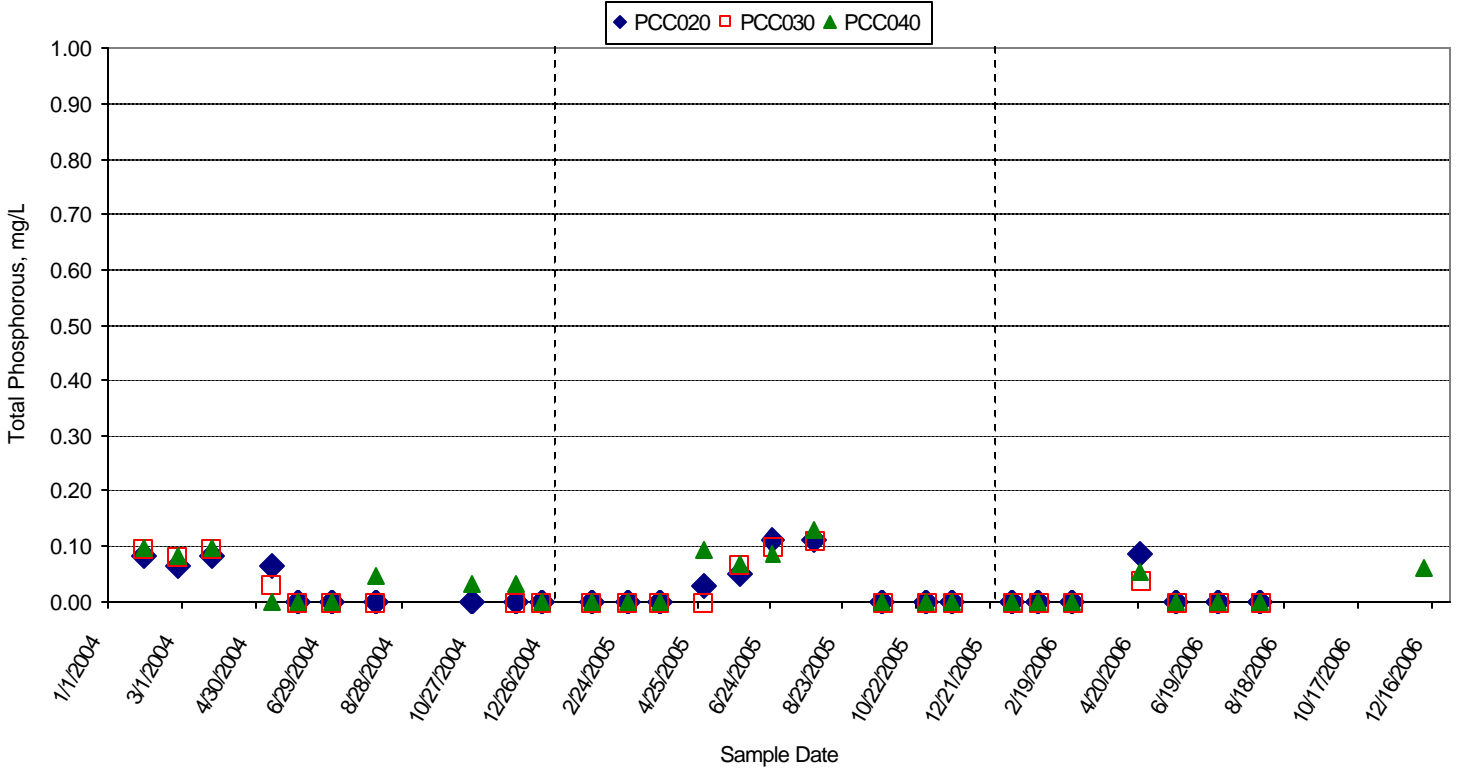
Pocket Canyon Creek Nitrate-Nitrogen, colorimetric



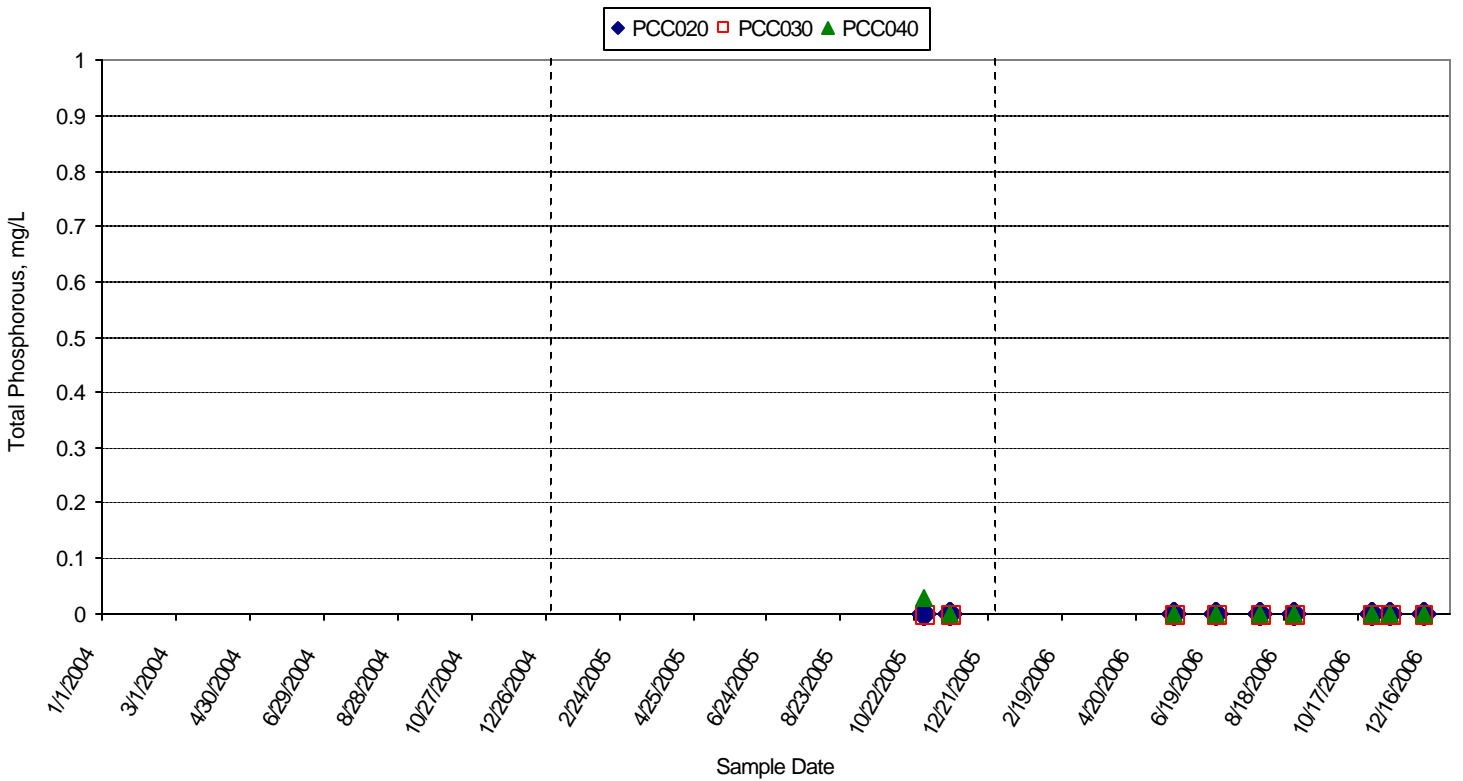
Pocket Canyon Creek Nitrate-Nitrogen, ion chromatography



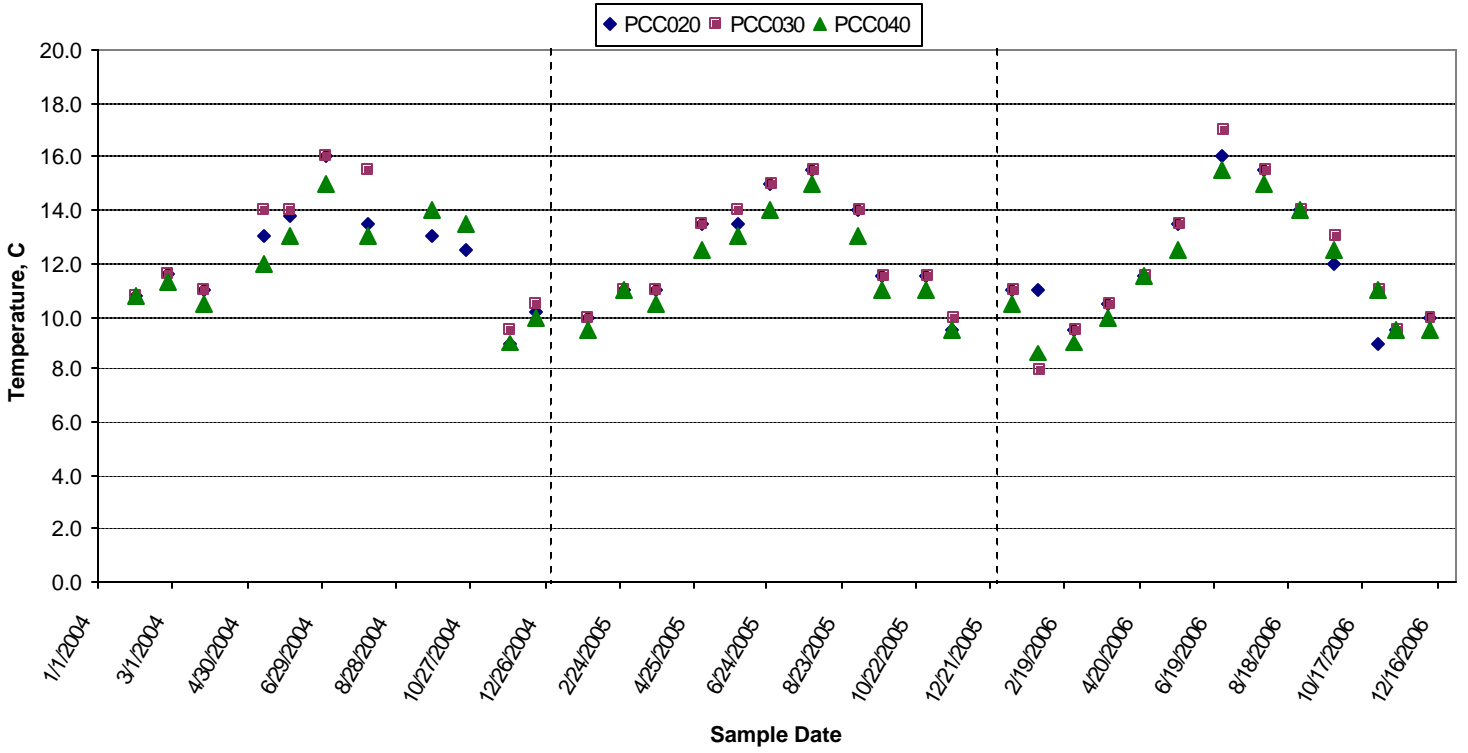
Pocket Canyon Creek Total Phosphorous, colorimetric



Pocket Canyon Creek Total Phosphorous, ion chromatography



Pocket Canyon Creek Temperature



Lower Russian River

conductivity * ALL excludes RUS010 due to salt water influence									
	RUS010	RUS030	RUS040	RUS050	RUS046	RUS047	RUS049	RUS049a	ALL
mean	6700	259	259	270	242	247	250	252	254
median	1500	270	270	270	240	245	260	260	260
std. dev.	9512	47	46		37	42	35	33	40
min	170	120	120	270	190	190	180	190	120
max	34000	320	320	270	310	340	310	300	340
n	22	31	31	1	11	12	28	29	143
violations	na								
dissolved oxygen									
	RUS010	RUS030	RUS040	RUS050	RUS046	RUS047	RUS049	RUS049a	ALL
mean	10.9	8.9	9.7	9.5	11.1	11.2	10.8	10.5	10.2
median	10.4	9.2	9.4	9.5	10.4	10.7	10.5	10.5	10.0
std. dev.	2.6	1.7	2.1		2.9	2.7	2.3	1.6	2.3
min	6.4	5.0	5.9	9.5	8.9	8.4	6.9	7.8	5.0
max	18.0	12.1	15.9	9.5	18.5	18.1	18.5	15.6	18.5
n	25	30	28	1	9	10	25	26	154
violations	1	6	2	0	0	0	0	0	9
pH									
	RUS010	RUS030	RUS040	RUS050	RUS046	RUS047	RUS049	RUS049a	ALL
mean	8.0	8.1	8.1	8.2	8.1	8.0	8.1	8.0	8.1
median	8.0	8.1	8.2	8.2	8.2	8.1	8.1	8.0	8.1
std. dev.	0.3	0.3	0.4		0.2	0.3	0.2	0.2	0.3
min	7.4	7.5	6.9	8.2	7.7	7.4	7.7	7.6	6.9
max	8.4	9.0	8.9	8.2	8.3	8.4	8.6	8.3	9.0
n	29	33	31	1	11	12	28	29	174
violations	0	2	3	0	0	0	1	0	6
turbidity									
	RUS010	RUS030	RUS040	RUS050	RUS046	RUS047	RUS049	RUS049a	ALL
mean	28.7	18.9	19.5	1.8	33.4	30.3	22.6	22.1	23.4
median	5.5	2.5	3.8	1.8	7.4	5.6	6.3	4.8	4.5
std. dev.	82.1	78.4	74.1		45.5	43.9	33.9	33.7	61.5
min	1.2	1.0	0.9	1.8	1.3	1.2	1.8	2.1	0.9
max	423.0	446.0	416.0	1.8	140.0	135.0	153.0	143.0	446.0
n	28	32	31	1	11	12	29	28	172
violations	3	2	3	0	4	4	5	6	27
water temperature									
	RUS010	RUS030	RUS040	RUS050	RUS046	RUS047	RUS049	RUS049a	ALL
mean	14.8	17.7	18.5	17.0	15.9	15.3	15.3	15.1	16.2
median	14.0	18.0	18.0	17.0	12.0	12.0	15.8	14.5	16.0
std. dev.	3.8	5.5	5.8		6.1	5.5	4.5	4.4	5.1
min	8.5	9.8	10.0	17.0	10.0	10.0	9.0	9.0	8.5
max	22.0	29.9	29.5	17.0	25.0	24.0	23.0	22.5	29.9
n	29	33	31	1	11	12	28	29	174
violations	na								

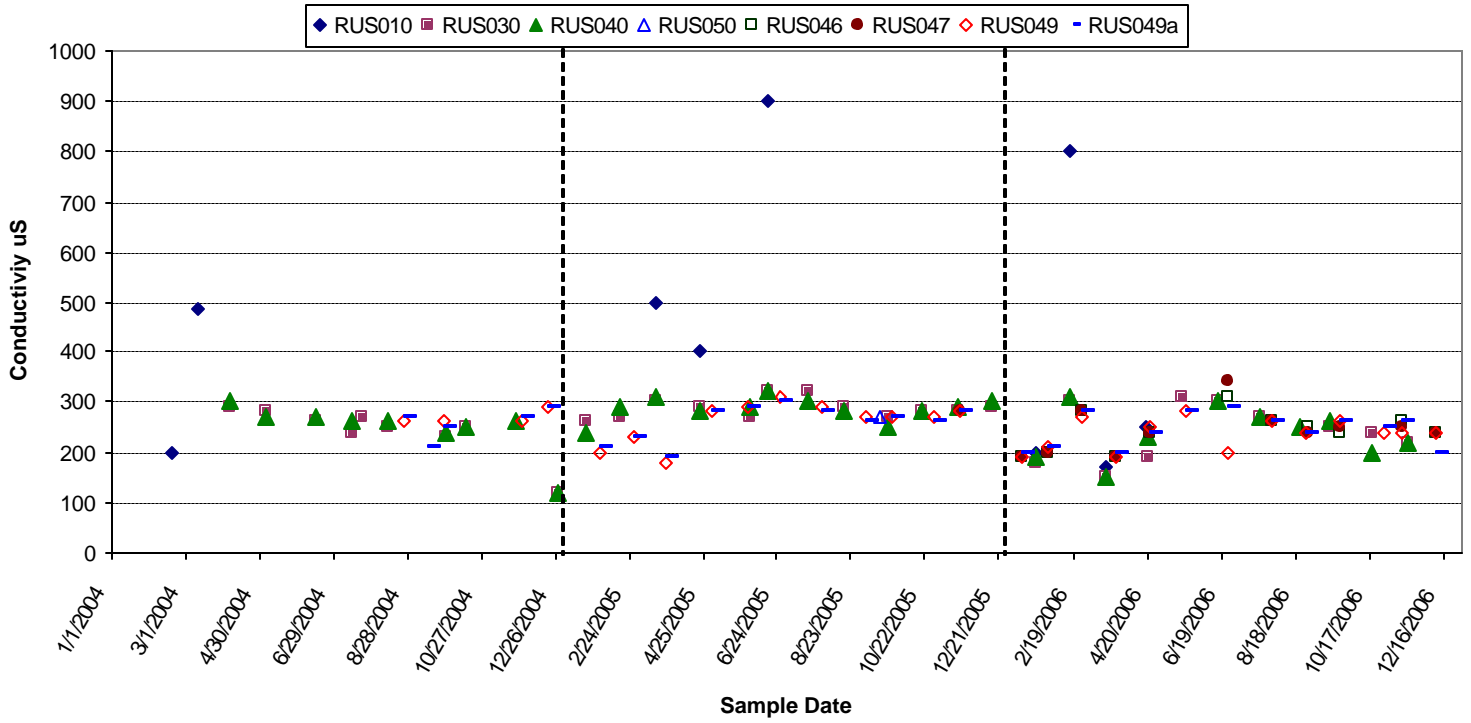
Nitrate-nitrogen, ion chromatography							
	RUS030	RUS040	RUS046	RUS047	RUS049	RUS049a	ALL
mean	0.086	0.074	0.084	0.108	0.054	0.071	0.077
median	0.031	0.029	0.000	0.011	0.043	0.026	0.024
std. dev.	0.132	0.123	0.156	0.200	0.077	0.106	0.125
min	0.000	0.000	0.000	0.000	0.000	0.000	0.000
max	0.388	0.388	0.388	0.506	0.239	0.309	0.506
n	8	9	6	6	9	8	46
violations	0	0	0	0	0	0	0

Nitrate-nitrogen, colorimetric								
	RUS010	RUS030	RUS040	RUS046	RUS047	RUS049	RUS049a	ALL
mean	0.12	0.12	0.13	0.20	0.21	0.12	0.13	0.13
median	0.10	0.06	0.09	0.23	0.28	0.11	0.14	0.10
std. dev.	0.13	0.14	0.15	0.19	0.18	0.12	0.11	0.14
min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
max	0.40	0.53	0.48	0.42	0.42	0.40	0.40	0.53
n	28	26	25	6	7	20	21	133
violations	0	0	0	0	0	0	0	0

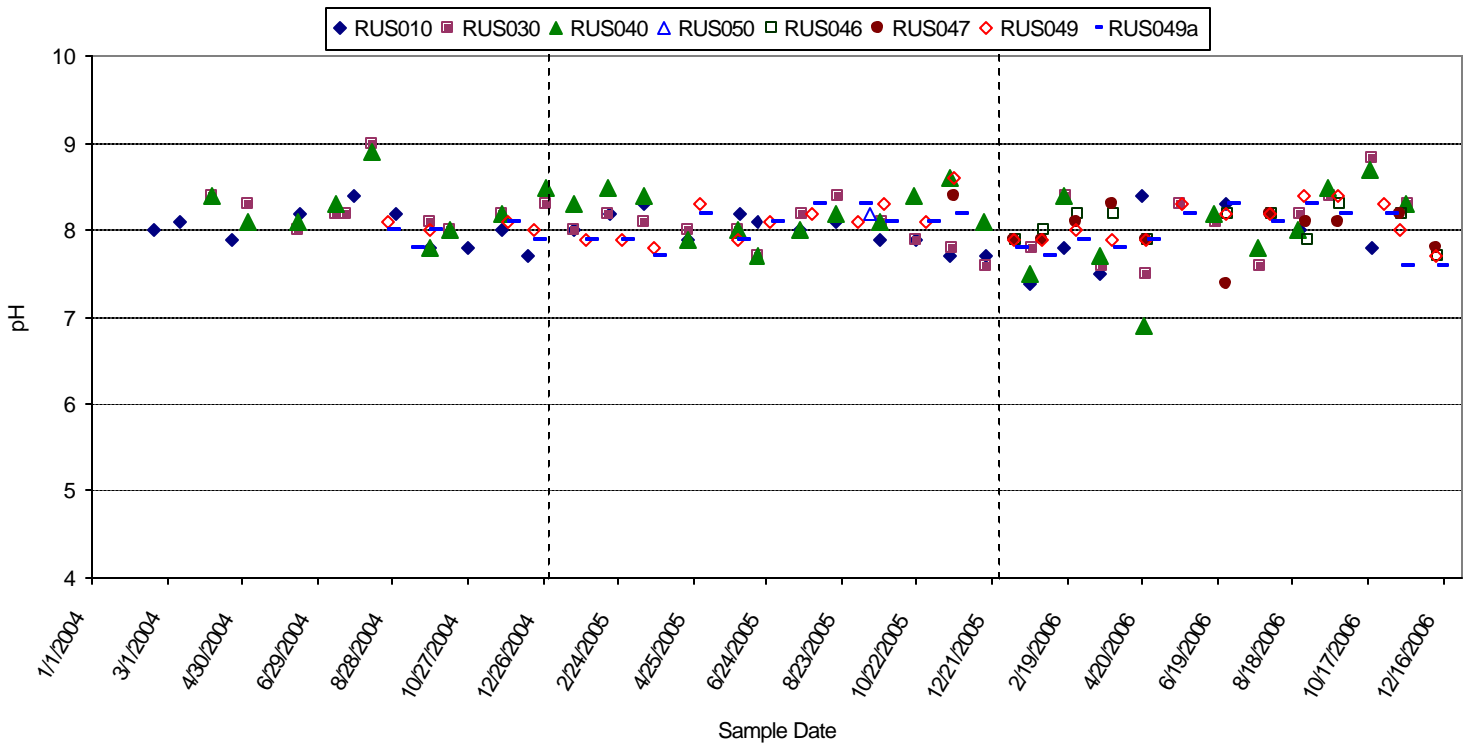
Total Phosphorous, ion chromatography							
	RUS030	RUS040	RUS046	RUS047	RUS049	RUS049a	ALL
mean	0.014	0.017	0.016	0.007	0.018	0.020	0.016
median	0.000	0.000	0.000	0.000	0.000	0.000	0.000
std. dev.	0.030	0.030	0.023	0.017	0.024	0.025	0.025
min	0.000	0.000	0.000	0.000	0.000	0.000	0.000
max	0.075	0.073	0.046	0.042	0.055	0.064	0.075
n	11	11	5	6	10	9	52
violations	0	0	0	0	0	0	0

Total Phosphorous, colorimetric								
	RUS010	RUS030	RUS040	RUS046	RUS047	RUS049	RUS049a	ALL
mean	0.03	0.03	0.03	0.02	0.02	0.04	0.05	0.03
median	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
std. dev.	0.05	0.04	0.05	0.03	0.03	0.05	0.06	0.05
min	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
max	0.16	0.13	0.15	0.07	0.08	0.16	0.20	0.20
n	28	26	25	7	8	21	22	137
violations	5	4	4	0	0	4	7	24

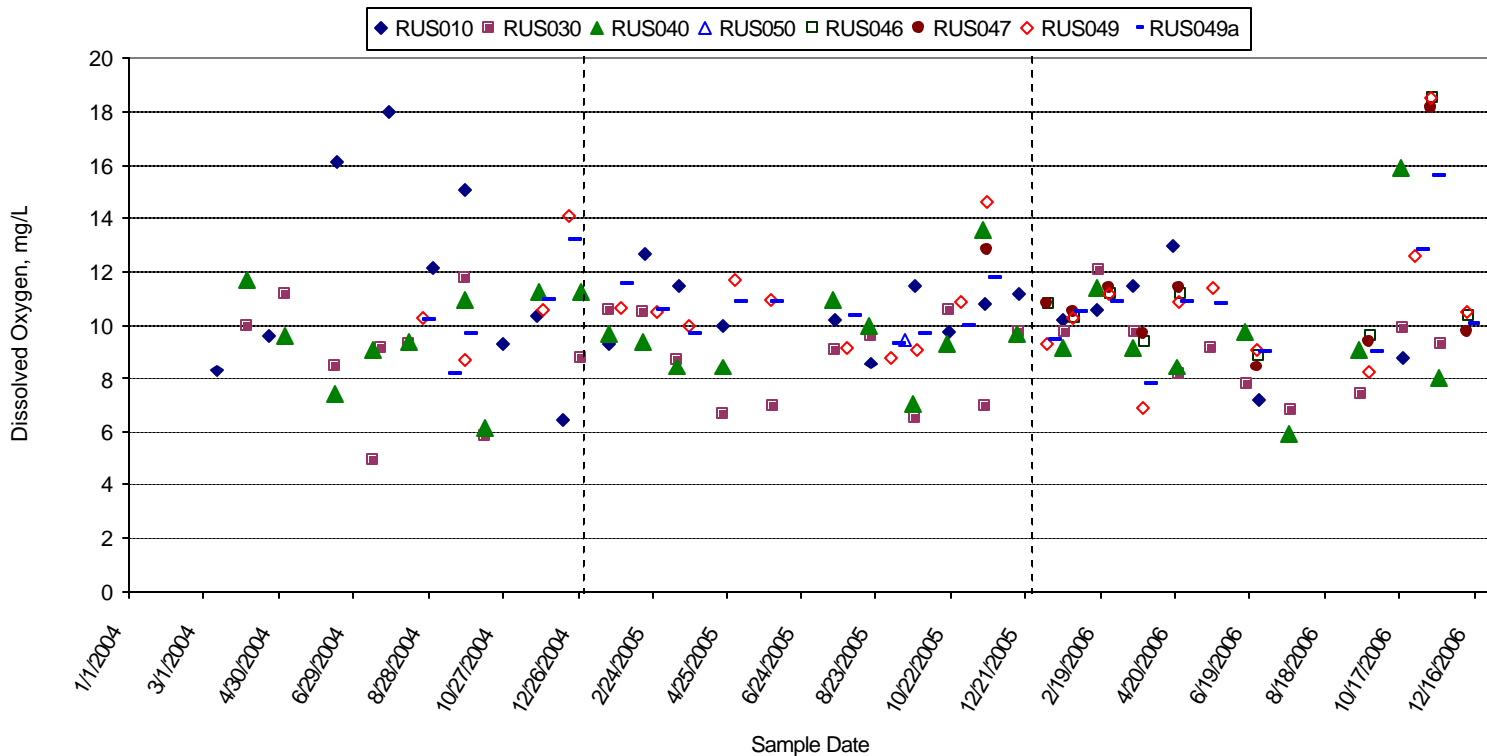
Russian River Conductivity



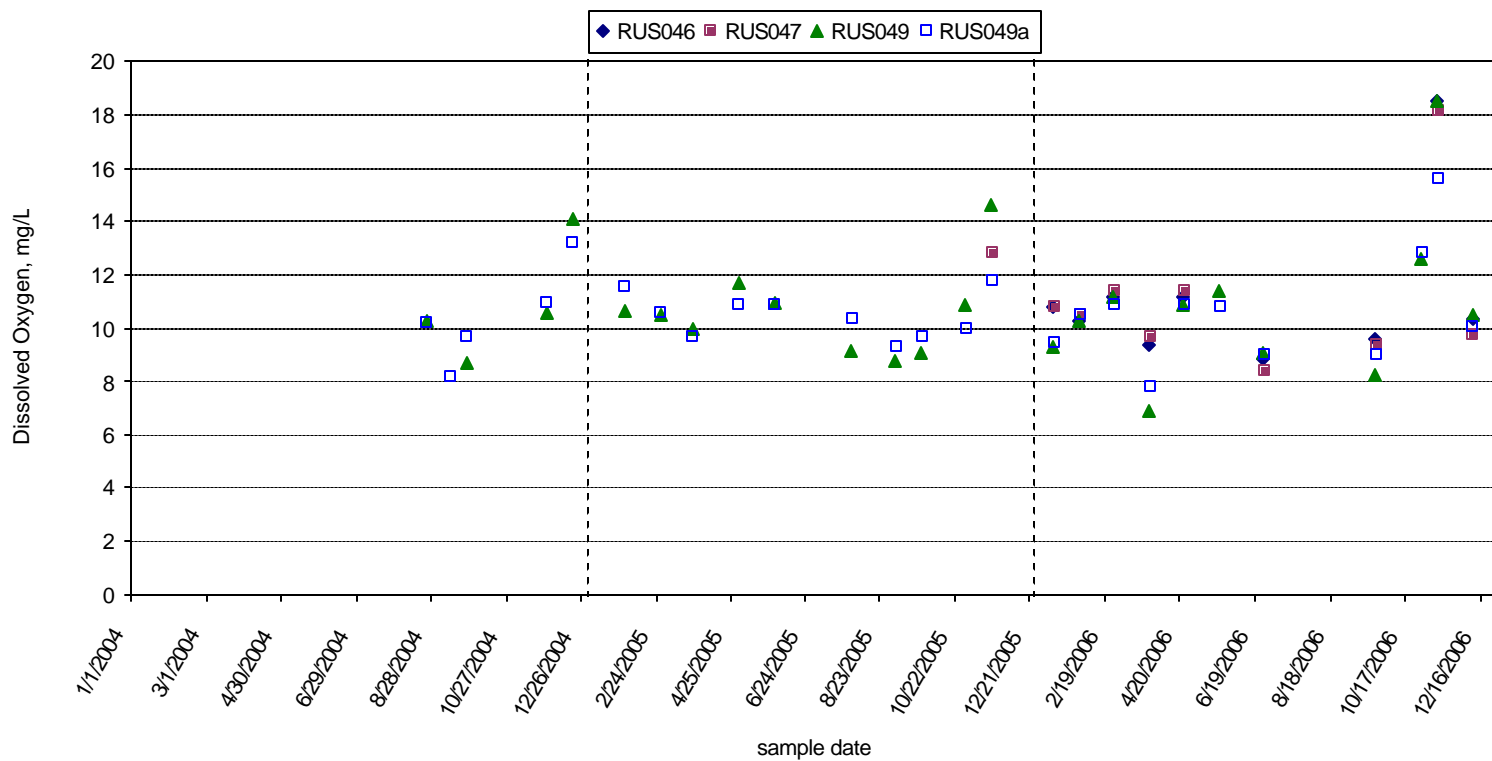
Russian River pH



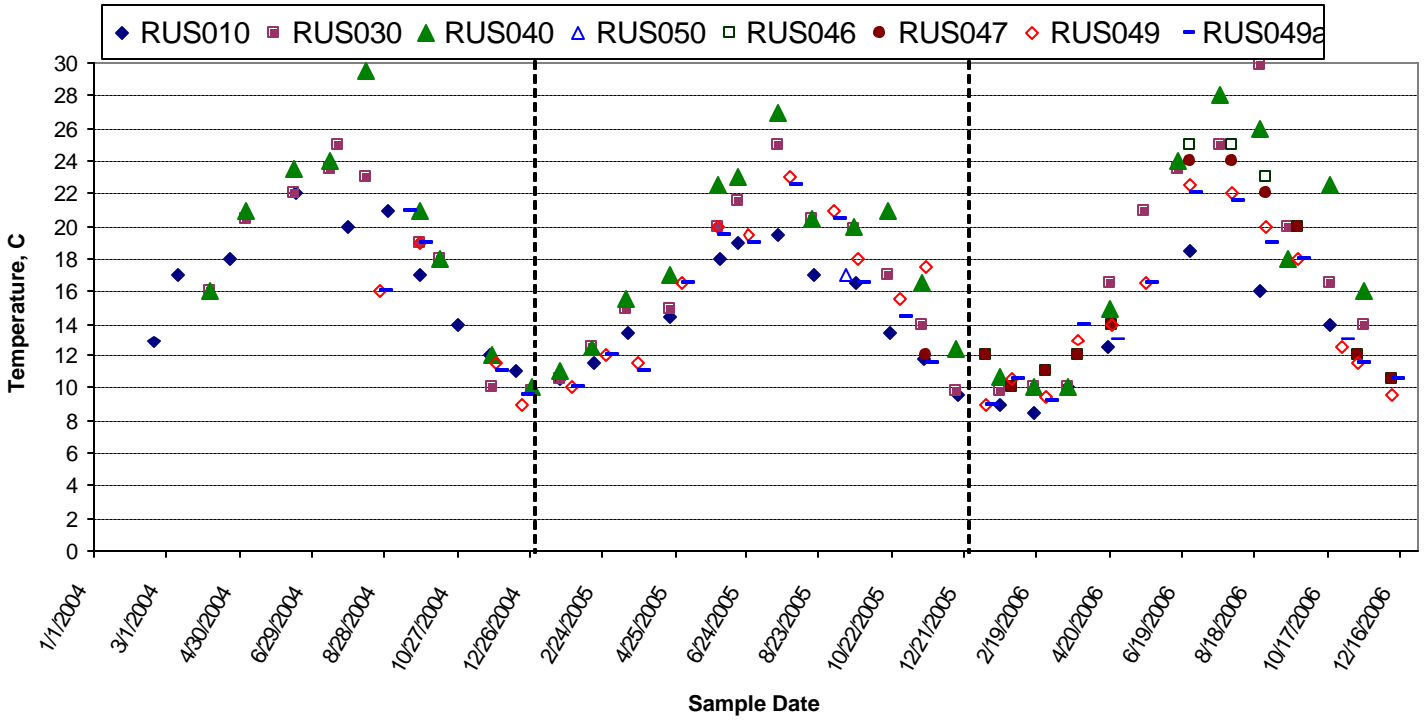
Russian River Dissolved Oxygen



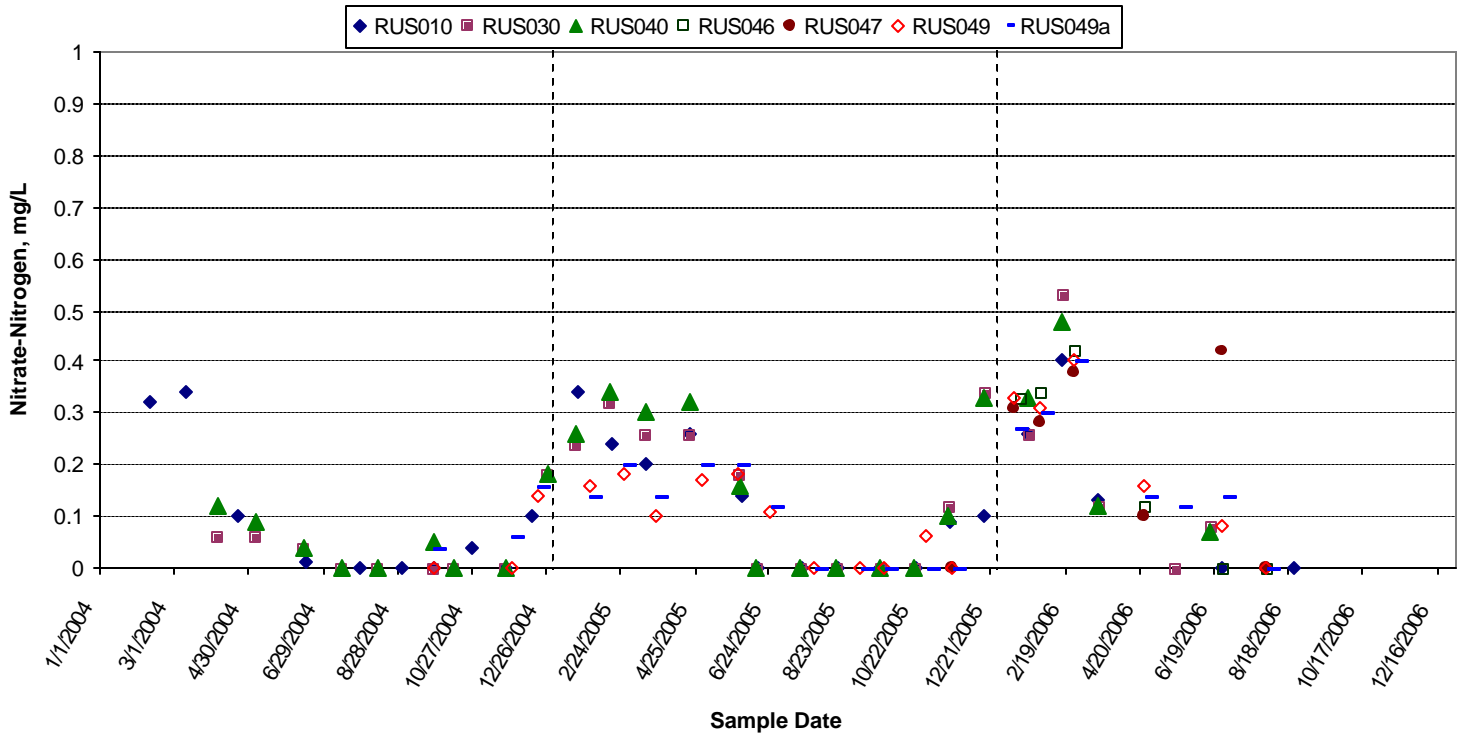
Russian River near Geurneville, Dissolved Oxygen



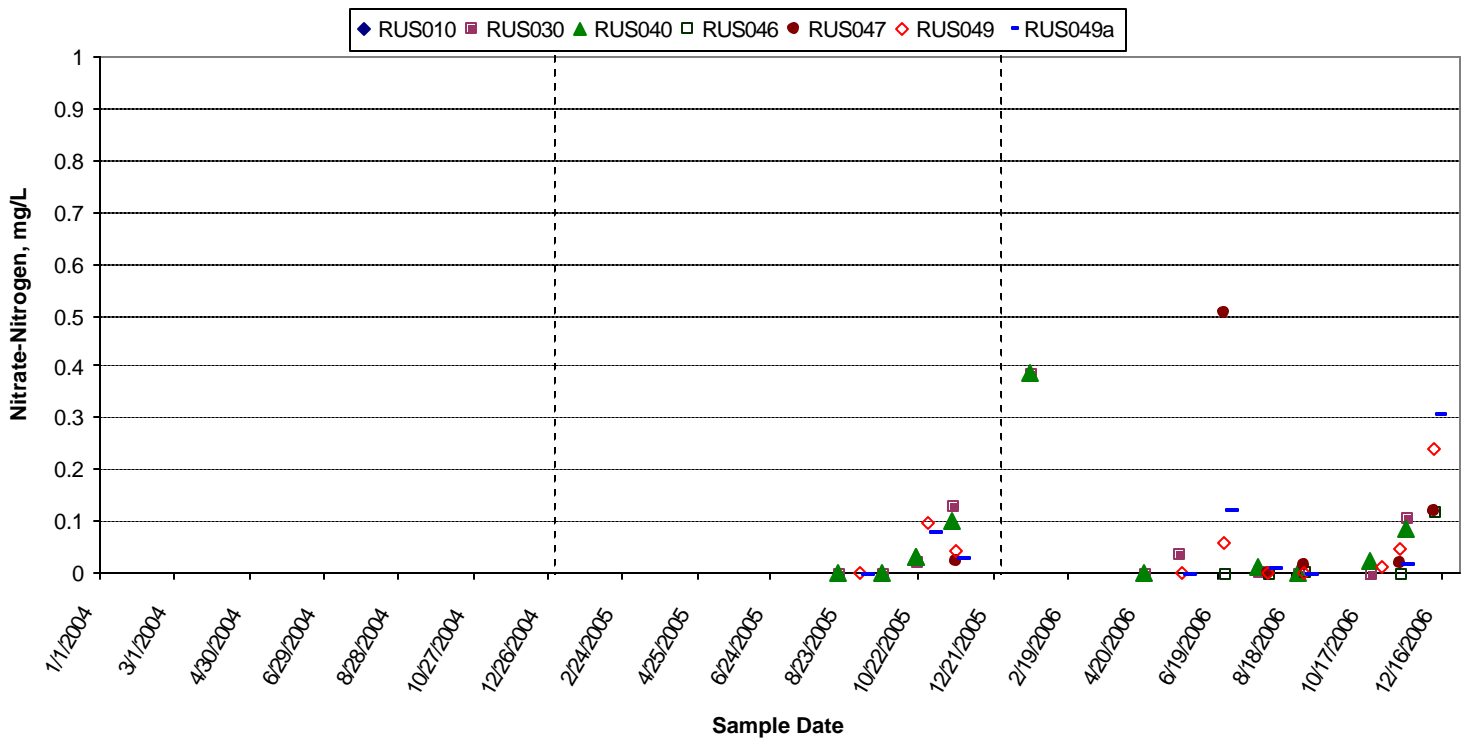
Russian River Temperature, C



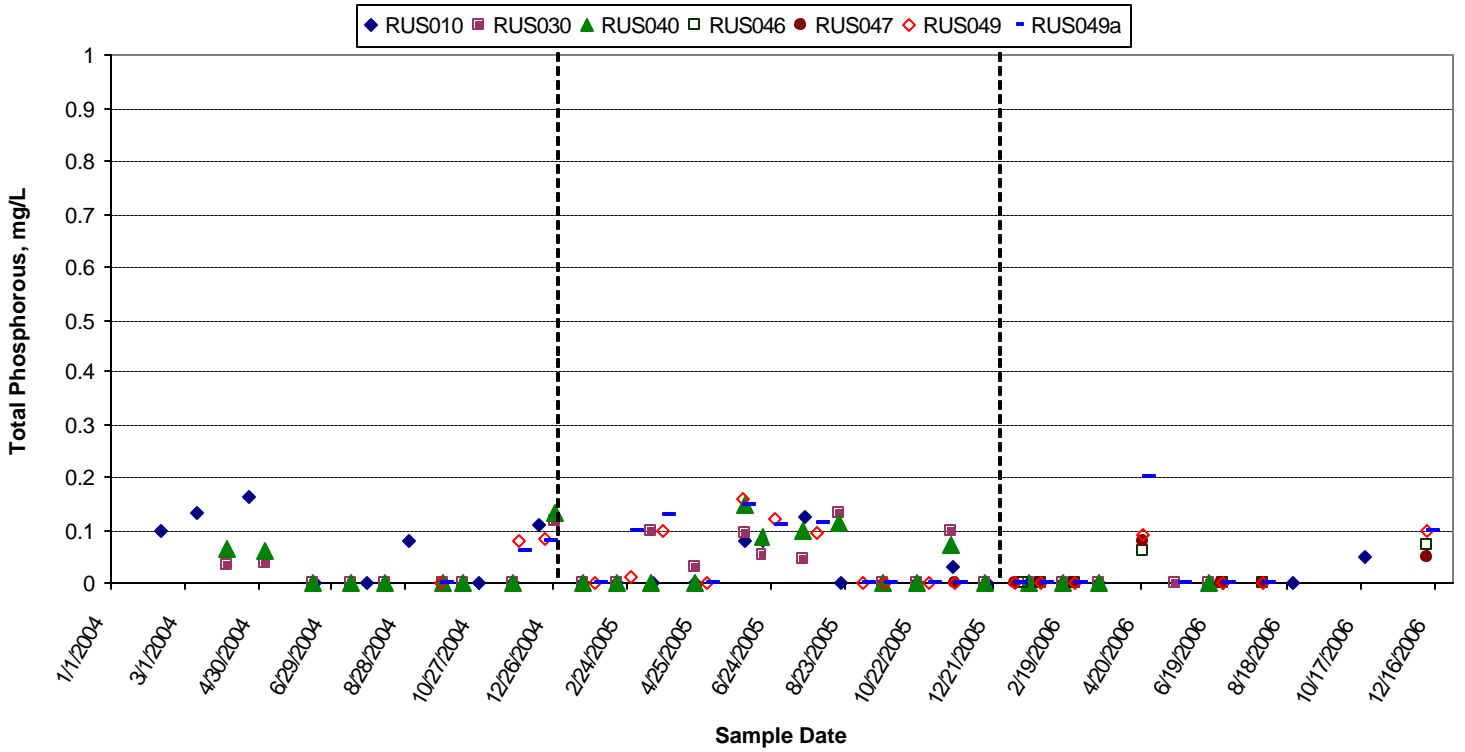
Russian River Nitrate-Nitrogen, colorimetric



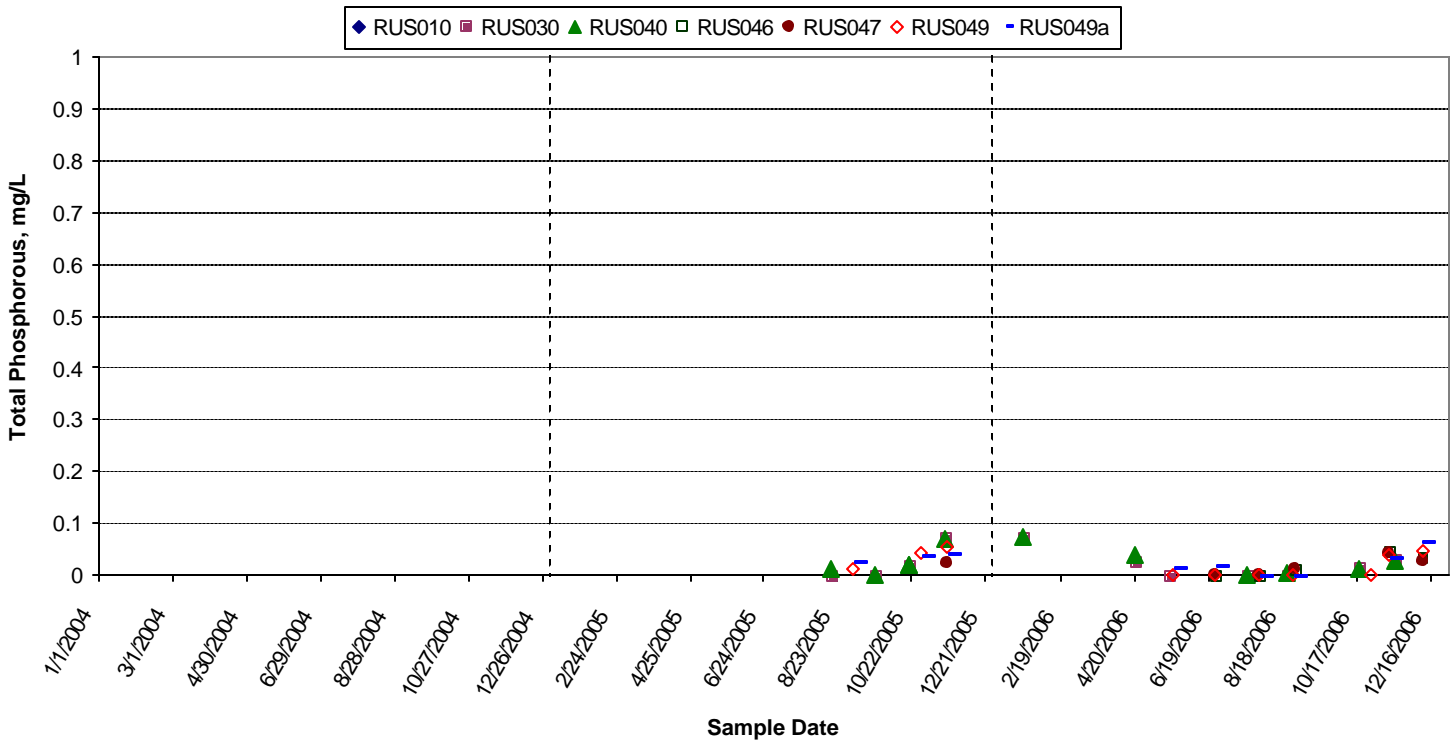
Russian River Nitrate-Nitrogen, ion chromatograph



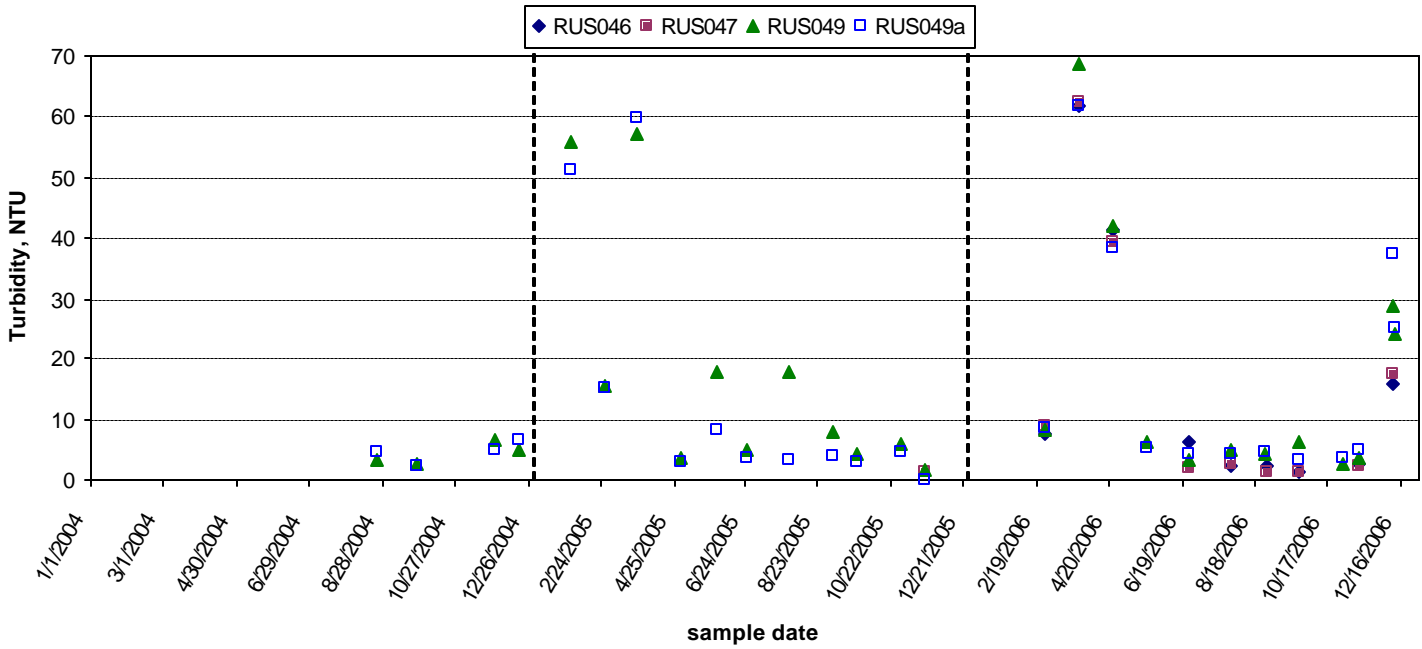
Russian River Total Phosphorous, colorimetric



Russian River Total Phosphorous, ion chromatograph



Russian River near Geurneville, Turbidity



Russian River Turbidity

