

**APPENDIX 2A: Data Summaries For Individual Waters**

**Sturgeon Lake (25-0017-01)**

**Perch Lake (69-0688-00)**

**St. Louis River Estuary (69-1291-04)**

**STURGEON LAKE (25-0017-01)**

**KEY**

	Sulfate measurement below 10 mg/L
	Sulfate measurement above 10 mg/L
	Highlighted due to multiple samples collected on this date

wid	type	Sample Date	WU_Station	Origin Station ID	Origin Organization ID	Sample Fraction	Parameter	Units	Result	Sample Depth	Sample Depth Units	Detect Description	Analytic Method
25-0017-01	Lake	5/28/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	34.5				
25-0017-01	Lake	5/28/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	35.6				
25-0017-01	Lake	6/11/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	43.7				
25-0017-01	Lake	6/11/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	38.9				
25-0017-01	Lake	7/16/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	83.5				
25-0017-01	Lake	7/16/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	73.4				
25-0017-01	Lake	7/24/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	69				
25-0017-01	Lake	7/24/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	66.2				
25-0017-01	Lake	7/30/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	55.6				
25-0017-01	Lake	7/30/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	57.3				
25-0017-01	Lake	8/6/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	58.3				
25-0017-01	Lake	8/6/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	58.1				
25-0017-01	Lake	8/12/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	54.1				
25-0017-01	Lake	8/12/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	55.5				
25-0017-01	Lake	8/19/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	50				
25-0017-01	Lake	8/19/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	51.6				
25-0017-01	Lake	9/2/2014	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	48.3				
25-0017-01	Lake	9/2/2014	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	45				
25-0017-01	Lake	5/12/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	45.9				
25-0017-01	Lake	5/12/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	43.1				
25-0017-01	Lake	5/27/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	45.3				
25-0017-01	Lake	5/27/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	48.5				
25-0017-01	Lake	6/9/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	66.2				
25-0017-01	Lake	6/9/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	57.1				
25-0017-01	Lake	6/23/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	80.9				
25-0017-01	Lake	6/23/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	81.4				
25-0017-01	Lake	7/8/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	65.3				
25-0017-01	Lake	7/8/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	69.9				
25-0017-01	Lake	7/20/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	56.1				
25-0017-01	Lake	7/20/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	52.4				
25-0017-01	Lake	8/5/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	47.4				
25-0017-01	Lake	8/5/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	41.9				
25-0017-01	Lake	8/11/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	36.8				
25-0017-01	Lake	8/11/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	36.4				
25-0017-01	Lake	8/24/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	39.7				
25-0017-01	Lake	8/24/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	36.2				
25-0017-01	Lake	9/16/2015	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	43.1				
25-0017-01	Lake	9/16/2015	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	41.8				
25-0017-01	Lake	5/17/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	76.8				
25-0017-01	Lake	5/17/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	83.3				
25-0017-01	Lake	6/9/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	90.7				
25-0017-01	Lake	6/9/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	85.1				
25-0017-01	Lake	6/28/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	70.9				
25-0017-01	Lake	6/28/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	66.3				

25-0017-01	Lake	7/5/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	59.2				
25-0017-01	Lake	7/5/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	56.3				
25-0017-01	Lake	8/3/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	28.3				
25-0017-01	Lake	8/3/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	26.1				
25-0017-01	Lake	8/8/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	26.6				
25-0017-01	Lake	8/8/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	25.2				
25-0017-01	Lake	8/15/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	23.3				
25-0017-01	Lake	8/15/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	22.1				
25-0017-01	Lake	8/30/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	59.2				
25-0017-01	Lake	8/30/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	59				
25-0017-01	Lake	9/19/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	53.8				
25-0017-01	Lake	9/19/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	52.6				
25-0017-01	Lake	9/28/2016	77520	SL1	PHIC_WQX	Total	Sulfate	mg/L	36.4				
25-0017-01	Lake	9/28/2016	77521	SL2	PHIC_WQX	Total	Sulfate	mg/L	32.7				

5/28/2014	35.6
6/11/2014	43.7
7/16/2014	83.5
7/24/2014	69
7/30/2014	57.3
8/6/2014	58.3
8/12/2014	55.5
8/19/2014	51.6
9/2/2014	48.3
5/12/2015	45.9
5/27/2015	48.5
6/9/2015	66.2
6/23/2015	81.4
7/8/2015	69.9
7/20/2015	56.1
8/5/2015	47.4
8/11/2015	36.8
8/24/2015	39.7
9/16/2015	43.1
5/17/2016	83.3
6/9/2016	90.7
6/28/2016	70.9
7/5/2016	59.2
8/3/2016	28.3
8/8/2016	26.6
8/15/2016	23.3
8/30/2016	59.2
9/19/2016	53.8
9/28/2016	36.4

10/1/2008 to 9/30/2018	
N	29.00
Number of Observations greater than 10 mg/L	29 of 29
Percent Observations above 10 mg/L	100%

<b>Mean</b>	54.12
<b>StDev</b>	17.66
<b>Min</b>	23.30
<b>Max</b>	90.70

**PERCH LAKE (69-0688-00)**

**KEY**

	Sulfate measurement below 10 mg/L
	Sulfate measurement above 10 mg/L
	Highlighted due to multiple samples collected on this date

wid	type	Sample Date	Station ID	Station Origin Code	Sample Fraction	Parameter	Units	Result	Sample Depth	Sample Depth Units	Detect Description	Analytic Method
69-0688-00	Lake	7/8/2015	140099-MONI0000000012	TEMPO_WW	Total	Sulfate	mg/L	100				
69-0688-00	Lake	7/13/2016	140099-MONI0000000012	TEMPO_WW	Total	Sulfate	mg/L	68.6				
69-0688-00	Lake	7/10/2017	140099-MONI0000000012	TEMPO_WW	Total	Sulfate	mg/L	75.9				
69-0688-00	Lake	7/12/2018	140099-MONI0000000012	TEMPO_WW	Total	Sulfate	mg/L	66.5				

10/1/2008 to 9/30/2018	
N	4.00
Number of Observations greater than 10 mg/L	4 of 4
Percent Observations above 10 mg/L	100%
Mean	77.75
StDev	15.37
Min	66.50
Max	100.00

**ST. LOUIS RIVER ESTUARY (69-1291-04)**

**KEY**

	Sulfate measurement below 10 mg/L
	Sulfate measurement above 10 mg/L
	Highlighted due to multiple samples collected on this date

wid	type	Sample Date	Station ID	Sample Fraction	Parameter	Units	Result	Sample Depth	Sample Depth Units	Detect Description	Analytic Method
69-1291-04	River/Stream	5/7/2009	S000-021	Total	Sulfate	mg/L	9.69				300.1
69-1291-04	River/Stream	5/20/2009	S000-021	Dissolved	Sulfate	mg/L	12				300
69-1291-04	River/Stream	6/8/2009	S000-021	Dissolved	Sulfate	mg/L	14.1				300
69-1291-04	River/Stream	6/23/2009	S000-021	Dissolved	Sulfate	mg/L	15				300
69-1291-04	River/Stream	7/9/2009	S000-021	Dissolved	Sulfate	mg/L	20				300
69-1291-04	River/Stream	7/29/2009	S000-021	Dissolved	Sulfate	mg/L	23				300
69-1291-04	River/Stream	8/11/2009	S000-021	Dissolved	Sulfate	mg/L	23				300
69-1291-04	River/Stream	8/17/2009	S007-516	Total	Sulfate	mg/L	13.2				300
69-1291-04	River/Stream	8/17/2009	S007-507	Total	Sulfate	mg/L	23.8				300
69-1291-04	River/Stream	8/17/2009	S007-510	Total	Sulfate	mg/L	8				300
69-1291-04	River/Stream	8/17/2009	S007-512	Total	Sulfate	mg/L	13.1				300
69-1291-04	River/Stream	8/25/2009	S000-021	Dissolved	Sulfate	mg/L	15				300
69-1291-04	River/Stream	9/10/2009	S000-021	Dissolved	Sulfate	mg/L	20.8				300
69-1291-04	River/Stream	9/23/2009	S000-021	Dissolved	Sulfate	mg/L	19.1				300
69-1291-04	River/Stream	10/26/2009	S000-021	Total	Sulfate	mg/L	23.7				300.1
69-1291-04	River/Stream	11/30/2009	S000-021	Total	Sulfate	mg/L	18.7				300.1
69-1291-04	River/Stream	1/25/2010	S000-021	Total	Sulfate	mg/L	5.78				300.1
69-1291-04	River/Stream	3/1/2010	S000-021	Total	Sulfate	mg/L	16.6				300.1
69-1291-04	River/Stream	4/26/2010	S000-021	Total	Sulfate	mg/L	16.1				300.1
69-1291-04	River/Stream	5/11/2010	S000-021	Total	Sulfate	mg/L	15.9				300.1
69-1291-04	River/Stream	6/7/2010	S000-021	Total	Sulfate	mg/L	13.4				300.1
69-1291-04	River/Stream	7/18/2010	S000-021	Total	Sulfate	mg/L	14.7				300.1
69-1291-04	River/Stream	8/22/2010	S000-021	Total	Sulfate	mg/L	9.21				300.1
69-1291-04	River/Stream	9/27/2010	S000-021	Total	Sulfate	mg/L	10				300.1
69-1291-04	River/Stream	9/5/2012	S007-206	Total	Sulfate	mg/L	16	0.1	m		300.1
69-1291-04	River/Stream	5/27/2013	S007-444	Total	Sulfate	mg/L	9.4	0.1	m		300.1
69-1291-04	River/Stream	6/24/2013	S007-444	Total	Sulfate	mg/L	8.1	0.1	m		300.1
69-1291-04	River/Stream	7/22/2013	S007-444	Total	Sulfate	mg/L	6.71	0.1	m		300.1
69-1291-04	River/Stream	8/26/2013	S007-444	Total	Sulfate	mg/L	13.9	0.1	m		300.1

5/7/2009	9.69
5/20/2009	12
6/8/2009	14.1
6/23/2009	15
7/9/2009	20
7/29/2009	23
8/11/2009	23
8/17/2009	23.8
8/25/2009	15
9/10/2009	20.8

9/23/2009	19.1
10/26/2009	23.7
11/30/2009	18.7
1/25/2010	5.78
3/1/2010	16.6
4/26/2010	16.1
5/11/2010	15.9
6/7/2010	13.4
7/18/2010	14.7
8/22/2010	9.21
9/27/2010	10
9/5/2012	16
5/27/2013	9.4
6/24/2013	8.1
7/22/2013	6.71
8/26/2013	13.9

10/1/2008 to 9/30/2018	
N	26.00
Number of Observations greater than 10 mg/L	20 of 26
Percent Observations above 10 mg/L	77%
Mean	15.14
StDev	5.32
Min	5.78
Max	23.80