APPENDIX A

AMBIENT WATER QUALITY DATA

BACTERIA DATA — 2002 TO 2009

TURBIDITY AND TOTAL SUSPENDED SOLIDS DATA — 1998 TO 2009

Ambient Water Quality Bacteria Data, 2002-2009

Waterbody ID	WQM Station	Date[1]	FC[2]	EC[2]	ENT[2]
OK311100010290_00	OK311100-01-0290D	8/30/2004		10	20
OK311100010290_00	OK311100-01-0290D	5/9/2005		175	5
OK311100010290_00	OK311100-01-0290D	6/6/2005		>1000	>1000
OK311100010290_00	OK311100-01-0290D	7/5/2005		>1000	>1000
OK311100010290_00	OK311100-01-0290D	8/9/2005		1380	800
OK311100010290_00	OK311100-01-0290D	9/13/2005		<0.6	30
OK311100010290_00	OK311100-01-0290D	6/6/2006		240	170
OK311100010290_00	OK311100-01-0290D	7/11/2006		30	70
OK311100010290_00	OK311100-01-0290D	5/27/2009		500	800
OK311100010290_00	OK311100-01-0290D	9/14/2009		4600	6900
OK311200000030_00	OK311200-00-0030L	8/31/2004		130	120
OK311200000030_00	OK311200-00-0030L	5/9/2005		40	4.9
OK311200000030_00	OK311200-00-0030L	6/6/2005		510	260
OK311200000030_00	OK311200-00-0030L	7/5/2005		320	170
OK311200000030_00	OK311200-00-0030L	8/8/2005		30	70
OK311200000030_00	OK311200-00-0030L	9/13/2005		20	35
OK311200000030_00	OK311200-00-0030L	6/5/2006		110	70
OK311200000030_00	OK311200-00-0030L	7/10/2006		9.9	9.9
OK311200000030_00	OK311200-00-0030L	5/26/2009		800	700
OK311200000030_00	OK311200-00-0030L	9/14/2009		660	1340
OK311200000080_00	OK311200000080G	5/15/2000	<100		
OK311200000080_00	OK311200000080G	6/19/2000	2100		
OK311200000080_00	OK311200000080G	5/7/2001	3000	588	8000
OK311200000080_00	OK311200000080G	6/11/2001	220	160	400
OK311200000080_00	OK311200000080G	7/16/2001	250	263	106
OK311200000080_00	OK311200000080G	8/20/2001	260	225	185
OK311310030010_00	OK311310-03-0010D	8/31/2004		200	160
OK311310030010_00	OK311310-03-0010D	5/9/2005		105	435
OK311310030010_00	OK311310-03-0010D	6/6/2005		420	860
OK311310030010_00	OK311310-03-0010D	7/11/2005		220	80
OK311310030010_00	OK311310-03-0010D	8/15/2005		>10000	>10000
OK311310030010_00	OK311310-03-0010D	9/19/2005		430	280
OK311310030010_00	OK311310-03-0010D	5/1/2006		>1000	150
OK311310030010_00	OK311310-03-0010D	6/5/2006		120	180
OK311310030010_00	OK311310-03-0010D	7/10/2006		170	300
OK311310030010_00	OK311310-03-0010D	5/26/2009		200	<100
OK311310030010_00	OK311310-03-0010D	6/29/2009		60	390
OK311500010080_00	OK311500-01-0080F	8/30/2004		>1000	530
OK311500010080_00	OK311500-01-0080F	5/9/2005		55	10
OK311500010080_00	OK311500-01-0080F	6/6/2005		>2000	>2000
OK311500010080_00	OK311500-01-0080F	7/11/2005		340	420
OK311500010080_00	OK311500-01-0080F	8/15/2005		60	140
OK311500010080_00	OK311500-01-0080F	9/19/2005		460	420
OK311500010080_00	OK311500-01-0080F	5/1/2006		35	35

Waterbody ID	WQM Station	Date[1]	FC[2]	EC[2]	ENT[2]
OK311500010080_00	OK311500-01-0080F	6/5/2006		90	90
OK311500010080_00	OK311500-01-0080F	7/10/2006		40	30
OK311500010080_00	OK311500-01-0080F	5/26/2009		400	500
OK311500010080_00	OK311500-01-0080F	6/29/2009		110	130
OK311510020120_00	311510020120-03	8/25/2004		280	130
OK311510020120_00	311510020120-03	9/27/2004		160	270
OK311510020120_00	311510020120-03	5/31/2005		>1000	420
OK311510020120_00	311510020120-03	7/12/2005		370	280
OK311510020120_00	311510020120-03	8/15/2005		700	340
OK311510020120_00	311510020120-03	9/19/2005		>500	285
OK311510020120_00	311510020120-03	5/1/2006		100	90
OK311510020120_00	311510020120-03	5/30/2006		460	190
OK311510020120_00	311510020120-03	6/26/2006		275	170
OK311510020120_00	311510020120-03	5/18/2009		470	60
OK311510020120_00	311510020120-03	6/22/2009		320	420
OK311600010020_00	21-4-1	8/30/2004		60	150
OK311600010020_00	21-4-1	5/10/2005		250	85
OK311600010020_00	21-4-1	6/7/2005		980	660
OK311600010020_00	21-4-1	7/12/2005		50	120
OK311600010020_00	21-4-1	8/15/2005		100	560
OK311600010020_00	21-4-1	9/20/2005		90	170
OK311600010020_00	21-4-1	5/1/2006		235	85
OK311600010020_00	21-4-1	6/5/2006		60	45
OK311600010020_00	21-4-1	7/10/2006		35	>500
OK311600010020_00	21-4-1	5/27/2009		100	200
OK311600010020_00	21-4-1	6/29/2009		130	740
OK311800000040_00	OK311800-00-0040D	8/24/2004		25	20
OK311800000040_00	OK311800-00-0040D	9/28/2004		110	490
OK311800000040_00	OK311800-00-0040D	6/1/2005		>2000	>2000
OK311800000040_00	OK311800-00-0040D	7/11/2005		100	230
OK311800000040_00	OK311800-00-0040D	8/16/2005		1400	4800
OK311800000040_00	OK311800-00-0040D	9/20/2005		115	55
OK311800000040_00	OK311800-00-0040D	5/2/2006		100	150
OK311800000040_00	OK311800-00-0040D	5/31/2006		>1000	170
OK311800000040_00	OK311800-00-0040D	6/27/2006		145	110
OK311800000040_00	OK311800-00-0040D	5/19/2009		70	60
OK311800000040_00	OK311800-00-0040D	6/23/2009		105	>500
OK311510010010_10	311510010010-001AT	05/07/2003		41	100
OK311510010010_10	311510010010-001AT	05/19/2003		318	2100
OK311510010010_10	311510010010-001AT	06/03/2003		96	120
OK311510010010_10	311510010010-001AT	06/23/2003		160	300
OK311510010010_10	311510010010-001AT	07/15/2003		20	10
OK311510010010_10	311510010010-001AT	09/24/2003		10	30
OK311510010010_10	311510010010-001AT	05/02/2006		146	74
OK311510010010_10	311510010010-001AT	05/30/2006		20	10
OK311510010010_10	311510010010-001AT	06/14/2006		20	10

Waterbody ID	WQM Station	Date[1]	FC[2]	EC[2]	ENT[2]
OK311510010010_10	311510010010-001AT	06/26/2006		10	10
OK311510010010_10	311510010010-001AT	07/18/2006		61	63
OK311510010010_10	311510010010-001AT	07/18/2006		479	63
OK311510010010_10	311510010010-001AT	08/30/2006		20	41
OK311510010010_10	311510010010-001AT	09/26/2006		10	52
OK311510010010_10	311510010010-001AT	05/14/2008		63	10
OK311510010010_10	311510010010-001AT	06/04/2008		10	10
OK311510010010_10	311510010010-001AT	06/25/2008		41	10
OK311510010010_10	311510010010-001AT	07/16/2008		73	10
OK311510010010_10	311510010010-001AT	08/06/2008		20	10

FC = fecal coliform (STORET Code: 31610); EC = *E. coli* (STORET Code: 31609); ENT = enterococci (STORET Code: 31649)

> 1000 reported as 1000.001 in data analysis

[1] Samples collected during secondary contact recreation season (October 1st and April 30th) are included in Appendix A but were not used in TMDL calculations.

[2] Units = counts/100 mL

Ambient Water Quality Turbidity and TSS Data, 1998-2009

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311100010290_00	OK311100-01-0290D	8/10/2004	72.6		low flow
OK311100010290_00	OK311100-01-0290D	8/30/2004	14.6	13	low flow
OK311100010290_00	OK311100-01-0290D	10/4/2004	>1000	506	low flow
OK311100010290_00	OK311100-01-0290D	11/15/2004	>1000	862	low flow
OK311100010290_00	OK311100-01-0290D	12/7/2004	337	189	low flow
OK311100010290_00	OK311100-01-0290D	1/18/2005		<10	low flow
OK311100010290_00	OK311100-01-0290D	2/23/2005	19.7	<10	low flow
OK311100010290_00	OK311100-01-0290D	3/28/2005	18.6	11	low flow
OK311100010290_00	OK311100-01-0290D	5/9/2005	35.7	32	low flow
OK311100010290_00	OK311100-01-0290D	6/6/2005	105	49	low flow
OK311100010290_00	OK311100-01-0290D	7/5/2005	194	115	low flow
OK311100010290_00	OK311100-01-0290D	8/9/2005	>1000	212	low flow
OK311100010290_00	OK311100-01-0290D	9/13/2005	14	<10	low flow
OK311100010290_00	OK311100-01-0290D	10/18/2005	9.36	<10	low flow
OK311100010290_00	OK311100-01-0290D	11/29/2005	11	<10	low flow
OK311100010290_00	OK311100-01-0290D	1/9/2006	10.4	<10	low flow
OK311100010290_00	OK311100-01-0290D	2/14/2006	11.8	<10	low flow
OK311100010290_00	OK311100-01-0290D	3/20/2006	>1000	523	low flow
OK311100010290_00	OK311100-01-0290D	4/25/2006	43.4	19	low flow
OK311100010290_00	OK311100-01-0290D	6/6/2006	22.5	52	low flow
OK311100010290_00	OK311100-01-0290D	7/11/2006	58.5	32	low flow
OK311100010290_00	OK311100-01-0290D	5/27/2009		13	low flow
OK311100010300_00	OK311100-01-0300D	8/10/2004	21.1		low flow
OK311100010300_00	OK311100-01-0300D	8/30/2004	49.1	52	low flow
OK311100010300_00	OK311100-01-0300D	10/4/2004	948	326	low flow
OK311100010300_00	OK311100-01-0300D	11/15/2004	298	211	high flow
OK311100010300_00	OK311100-01-0300D	12/7/2004	89.9	83	high flow
OK311100010300_00	OK311100-01-0300D	1/18/2005		<10	low flow
OK311100010300_00	OK311100-01-0300D	2/23/2005	7.08	<10	high flow
OK311100010300_00	OK311100-01-0300D	3/28/2005	8.19	27	low flow
OK311100010300_00	OK311100-01-0300D	5/9/2005	10.1	16	low flow
OK311100010300_00	OK311100-01-0300D	6/6/2005	60.9	0.28	low flow
OK311100010300_00	OK311100-01-0300D	7/5/2005	238	150	low flow
OK311100010300_00	OK311100-01-0300D	9/13/2005	179	115	low flow
OK311100010300_00	OK311100-01-0300D	11/29/2005	11	<10	low flow
OK311100010300_00	OK311100-01-0300D	1/9/2006	10.4	<10	low flow
OK311100010300_00	OK311100-01-0300D	2/14/2006	7.44	<10	low flow
OK311100010300_00	OK311100-01-0300D	3/20/2006	58	39	low flow
OK311100010300_00	OK311100-01-0300D	4/25/2006	33.6	31	low flow
OK311100010300_00	OK311100-01-0300D	6/6/2006	250	77	low flow
OK311100010300_00	OK311100-01-0300D	5/26/2009		<10	low flow
OK311100040010_00	OK311100040010-001AT	11/9/1998	95.3	46	low flow
OK311100040010_00	OK311100040010-001AT	12/14/1998	17	0	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311100040010_00	OK311100040010-001AT	2/1/1999	60	47	low flow
OK311100040010_00	OK311100040010-001AT	3/1/1999	76	45	low flow
OK311100040010_00	OK311100040010-001AT	4/27/1999	1000	1325	high flow
OK311100040010_00	OK311100040010-001AT	6/1/1999	160.5	150	high flow
OK311100040010_00	OK311100040010-001AT	6/28/1999	409	288	high flow
OK311100040010_00	OK311100040010-001AT	7/26/1999	31	25	low flow
OK311100040010_00	OK311100040010-001AT	8/30/1999	60.5	28	low flow
OK311100040010_00	OK311100040010-001AT	9/27/1999	322	156	low flow
OK311100040010_00	OK311100040010-001AT	10/11/1999	115	92	low flow
OK311100040010_00	OK311100040010-001AT	11/8/1999	311	176	low flow
OK311100040010_00	OK311100040010-001AT	12/7/1999	84	54	low flow
OK311100040010_00	OK311100040010-001AT	1/19/2000	37	29	low flow
OK311100040010_00	OK311100040010-001AT	2/14/2000	49	37	low flow
OK311100040010_00	OK311100040010-001AT	3/15/2000	42		low flow
OK311100040010_00	OK311100040010-001AT	4/11/2000	120		low flow
OK311100040010_00	OK311100040010-001AT	5/9/2000	85	74	low flow
OK311100040010_00	OK311100040010-001AT	6/12/2000	297	260	low flow
OK311100040010_00	OK311100040010-001AT	7/19/2000	325	356	low flow
OK311100040010_00	OK311100040010-001AT	8/16/2000	152	172	low flow
OK311100040010_00	OK311100040010-001AT	9/12/2000	116	62	low flow
OK311100040010_00	OK311100040010-001AT	10/10/2000	78	3	low flow
OK311100040010_00	OK311100040010-001AT	11/7/2000	872	456	high flow
OK311100040010_00	OK311100040010-001AT	2/13/2001	81		high flow
OK311100040010_00	OK311100040010-001AT	3/13/2001	31		high flow
OK311100040010_00	OK311100040010-001AT	4/10/2001	42		high flow
OK311100040010_00	OK311100040010-001AT	5/15/2001	99		low flow
OK311100040010_00	OK311100040010-001AT	6/12/2001	51		low flow
OK311100040010_00	OK311100040010-001AT	7/17/2001	65		low flow
OK311100040010_00	OK311100040010-001AT	8/14/2001	35		low flow
OK311100040010_00	OK311100040010-001AT	9/5/2001	91		low flow
OK311100040010_00	OK311100040010-001AT	10/16/2001	376		low flow
OK311100040010_00	OK311100040010-001AT	2/19/2002	37		low flow
OK311100040010_00	OK311100040010-001AT	4/2/2002	745		high flow
OK311100040010_00	OK311100040010-001AT	4/29/2002	277		high flow
OK311100040010_00	OK311100040010-001AT	5/28/2002	78		low flow
OK311100040010_00	OK311100040010-001AT	6/26/2002	59		low flow
OK311100040010_00	OK311100040010-001AT	8/5/2002	414		low flow
OK311100040010_00	OK311100040010-001AT	8/20/2002	36		low flow
OK311100040010_00	OK311100040010-001AT	9/23/2002	388		low flow
OK311100040010_00	OK311100040010-001AT	11/18/2002	125		low flow
OK311100040010_00	OK311100040010-001AT	1/13/2003	301		low flow
OK311100040010_00	OK311100040010-001AT	3/24/2003	37		low flow
OK311100040010_00	OK311100040010-001AT	6/3/2003	98		low flow
OK311100040010_00	OK311100040010-001AT	7/14/2003	86		low flow
OK311100040010_00	OK311100040010-001AT	8/18/2003	69		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311100040010_00	OK311100040010-001AT	9/22/2003	471		low flow
OK311100040010_00	OK311100040010-001AT	10/21/2003	134		low flow
OK311100040010_00	OK311100040010-001AT	11/22/2003	85		low flow
OK311100040010_00	OK311100040010-001AT	1/6/2004	56		low flow
OK311100040010_00	OK311100040010-001AT	2/17/2004	23		low flow
OK311100040010_00	OK311100040010-001AT	3/31/2004	128		low flow
OK311100040010_00	OK311100040010-001AT	4/26/2004	848		high flow
OK311100040010_00	OK311100040010-001AT	6/8/2004	682		high flow
OK311100040010_00	OK311100040010-001AT	7/12/2004	176		high flow
OK311100040010_00	OK311100040010-001AT	8/16/2004	686		low flow
OK311100040010_00	OK311100040010-001AT	9/20/2004	36		low flow
OK311100040010_00	OK311100040010-001AT	10/18/2004	102		low flow
OK311100040010_00	OK311100040010-001AT	1/11/2005	149		high flow
OK311100040010_00	OK311100040010-001AT	3/15/2005	15		high flow
OK311100040010_00	OK311100040010-001AT	5/24/2005	146		low flow
OK311100040010_00	OK311100040010-001AT	7/13/2005	201		low flow
OK311100040010_00	OK311100040010-001AT	8/8/2005	607		low flow
OK311100040010_00	OK311100040010-001AT	9/6/2005	20		low flow
OK311100040010_00	OK311100040010-001AT	6/6/2006	40		low flow
OK311100040010_00	OK311100040010-001AT	7/11/2006	76		low flow
OK311100040010_00	OK311100040010-001AT	11/27/2001	40		low flow
OK311100040010_00	OK311100040010-001AT	10/18/2005	115		low flow
OK311100040010_00	OK311100040010-001AT	11/28/2005	37		low flow
OK311100040010_00	OK311100040010-001AT	1/18/2006	56		low flow
OK311100040010_00	OK311100040010-001AT	2/22/2006	19		low flow
OK311100040010_00	OK311100040010-001AT	3/27/2006	163		low flow
OK311100040010_00	OK311100040010-001AT	5/2/2006	1000		high flow
OK311100040010_00	OK311100040010-001AT	8/14/2006	61		low flow
OK311100040010_00	OK311100040010-001AT	9/25/2006	229		low flow
OK311100040010_00	OK311100040010-001AT	10/30/2006	154		low flow
OK311100040010_00	OK311100040010-001AT	12/4/2006	226		low flow
OK311100040010_00	OK311100040010-001AT	1/22/2007	1000		high flow
OK311100040010_00	OK311100040010-001AT	3/5/2007	282		low flow
OK311100040010_00	OK311100040010-001AT	5/14/2007	338		high flow
OK311100040010_00	OK311100040010-001AT	6/11/2007	57		high flow
OK311100040010_00	OK311100040010-001AT	7/9/2007	95		high flow
OK311100040010_00	OK311100040010-001AT	8/22/2007	1000		high flow
OK311100040010_00	OK311100040010-001AT	9/17/2007	36		low flow
OK311100040010_00	OK311100040010-001AT	10/29/2007	41		low flow
OK311100040010_00	OK311100040010-001AT	12/3/2007	35		low flow
OK311100040010_00	OK311100040010-001AT	1/22/2008	36		low flow
OK311100040010_00	OK311100040010-001AT	3/5/2008	52		low flow
OK311100040010_00	OK311100040010-001AT	4/29/2008	58		low flow
OK311100040010_00	OK311100040010-001AT	5/19/2008	126		low flow
OK311100040010_00	OK311100040010-001AT	7/21/2008	28.3		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311100040010_00	OK311100040010-001AT	9/15/2008	405		low flow
OK311100040010_00	OK311100040010-001AT	11/5/2008	105		low flow
OK311100040010_00	OK311100040010-001AT	2/17/2009	50		low flow
OK311100040010_00	OK311100040010-001AT	3/2/2009	27.25	25	low flow
OK311100040010_00	OK311100040010-001AT	4/6/2009	51	41	low flow
OK311100040010_00	OK311100040010-001AT	6/2/2009		58	low flow
OK311100040010_00	OK311100040010-001AT	8/11/2009		28	low flow
OK311100040080_00	OK311100040080G	7/9/1998	72.1		low flow
OK311100040080_00	OK311100040080G	5/15/2000	57	51	low flow
OK311100040080_00	OK311100040080G	6/7/2000	119		low flow
OK311100040080_00	OK311100040080G	6/19/2000	628	337	low flow
OK311100040080_00	OK311100040080G	7/24/2000	67.3	50	low flow
OK311100040080_00	OK311100040080G	8/28/2000	378	228	low flow
OK311100040080_00	OK311100040080G	10/2/2000	839	324	low flow
OK311100040080_00	OK311100040080G	11/6/2000	487	330	high flow
OK311100040080_00	OK311100040080G	12/11/2000	53.5	22	low flow
OK311100040080_00	OK311100040080G	1/22/2001	58.6	2.8	low flow
OK311100040080_00	OK311100040080G	2/26/2001	171	72	high flow
OK311100040080_00	OK311100040080G	4/2/2001	33.6	6	low flow
OK311100040080_00	OK311100040080G	5/7/2001	27.5	32	low flow
OK311100040080_00	OK311100040080G	6/11/2001	178	106	low flow
OK311100040080_00	OK311100040080G	7/16/2001	58.3	65	low flow
OK311100040080_00	OK311100040080G	8/20/2001	200	161	low flow
OK311100040080_00	OK311100040080G	9/24/2001	443	13	low flow
OK311100040080_00	OK311100040080G	10/29/2001	180	73	low flow
OK311100040080_00	OK311100040080G	12/10/2001	91.1	<10	low flow
OK311100040080_00	OK311100040080G	1/15/2002	60	44	low flow
OK311100040080_00	OK311100040080G	2/19/2002	275	73	low flow
OK311100040080_00	OK311100040080G	3/25/2002	624	93	low flow
OK311200000030_00	OK311200-00-0030L	8/31/2004	97.9	79	low flow
OK311200000030_00	OK311200-00-0030L	10/5/2004	440	274	high flow
OK311200000030_00	OK311200-00-0030L	11/16/2004	582	643	high flow
OK311200000030_00	OK311200-00-0030L	12/7/2004	103	79	high flow
OK311200000030_00	OK311200-00-0030L	1/18/2005		5	high flow
OK311200000030_00	OK311200-00-0030L	2/22/2005	42.3	39	high flow
OK311200000030_00	OK311200-00-0030L	3/28/2005	18	18	low flow
OK311200000030_00	OK311200-00-0030L	5/9/2005	28.9	35	low flow
OK311200000030_00	OK311200-00-0030L	6/6/2005	6.09	40	low flow
OK311200000030_00	OK311200-00-0030L	7/5/2005	109	53	low flow
OK311200000030_00	OK311200-00-0030L	8/8/2005	77.4	59	low flow
OK311200000030_00	OK311200-00-0030L	9/13/2005	34.3	21	low flow
OK311200000030_00	OK311200-00-0030L	9/22/2005	84		low flow
OK311200000030_00	OK311200-00-0030L	10/17/2005	64.4	49	low flow
OK311200000030_00	OK311200-00-0030L	11/27/2005	26.4	18	low flow
OK311200000030_00	OK311200-00-0030L	1/10/2006	23.2	<10	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311200000030_00	OK311200-00-0030L	2/13/2006	36.1	47	low flow
OK311200000030_00	OK311200-00-0030L	3/20/2006	364	261	low flow
OK311200000030_00	OK311200-00-0030L	4/24/2006	29.8	18	low flow
OK311200000030_00	OK311200-00-0030L	6/5/2006	44	31	low flow
OK311200000030_00	OK311200-00-0030L	7/10/2006	60.2	35	low flow
OK311200000060_00	311200000060-01	11/10/1998	80.2	46	low flow
OK311200000060_00	311200000060-01	12/14/1998	71	0	low flow
OK311200000060_00	311200000060-01	2/1/1999	622	440	high flow
OK311200000060_00	311200000060-01	3/1/1999	54	40	low flow
OK311200000060_00	311200000060-01	4/27/1999	381	444	high flow
OK311200000060_00	311200000060-01	6/1/1999	165	94	high flow
OK311200000060_00	311200000060-01	6/28/1999	139	90	high flow
OK311200000060_00	311200000060-01	7/26/1999	33	31	low flow
OK311200000060_00	311200000060-01	8/30/1999	122	78	high flow
OK311200000060_00	311200000060-01	9/21/1999	76	50	low flow
OK311200000060_00	311200000060-01	11/1/1999	591	404	low flow
OK311200000060_00	311200000060-01	11/29/1999		33	low flow
OK311200000060_00	311200000060-01	12/21/1999	46	30	low flow
OK311200000060_00	311200000060-01	1/25/2000	42	24	low flow
OK311200000060_00	311200000060-01	3/1/2000	139	106	low flow
OK311200000060_00	311200000060-01	4/26/2000	91	76	low flow
OK311200000060_00	311200000060-01	5/23/2000	77	102	high flow
OK311200000060_00	311200000060-01	6/27/2000	261	180	low flow
OK311200000060_00	311200000060-01	8/1/2000	47	38	low flow
OK311200000060_00	311200000060-01	11/1/2000	365	295	high flow
OK311200000060_00	311200000060-01	11/28/2000	147	124	high flow
OK311200000060_00	311200000060-01	2/13/2001	39		high flow
OK311200000060_00	311200000060-01	3/13/2001	23		high flow
OK311200000060_00	311200000060-01	4/10/2001	32		high flow
OK311200000060_00	311200000060-01	5/15/2001	63		low flow
OK311200000060_00	311200000060-01	6/12/2001	33		high flow
OK311200000060_00	311200000060-01	7/17/2001	57		low flow
OK311200000060_00	311200000060-01	8/14/2001	75		low flow
OK311200000060_00	311200000060-01	9/5/2001	156		low flow
OK311200000060_00	311200000060-01	10/16/2001	335		low flow
OK311200000060_00	311200000060-01	11/27/2001	73		low flow
OK311200000060_00	311200000060-01	2/20/2002	76		low flow
OK311200000060_00	311200000060-01	4/3/2002	105		low flow
OK311200000060_00	311200000060-01	4/30/2002	59		low flow
OK311200000060_00	311200000060-01	5/28/2002	116		low flow
OK311200000060_00	311200000060-01	6/24/2002	45		low flow
OK311200000060_00	311200000060-01	8/6/2002	110		low flow
OK311200000060_00	311200000060-01	8/21/2002	35		low flow
OK311200000060_00	311200000060-01	9/24/2002	115		low flow
OK311200000060_00	311200000060-01	11/19/2002	42		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311200000060_00	OK311200-00-0060L	8/5/2004	38.1		low flow
OK311200000060_00	OK311200-00-0060L	8/31/2004	78	59	low flow
OK311200000060_00	OK311200-00-0060L	10/4/2004	457	284	low flow
OK311200000060_00	OK311200-00-0060L	11/16/2004	218	173	high flow
OK311200000060_00	OK311200-00-0060L	12/7/2004	160	249	high flow
OK311200000060_00	OK311200-00-0060L	1/19/2005		14	low flow
OK311200000060_00	OK311200-00-0060L	2/22/2005	8.87	<10	high flow
OK311200000060_00	OK311200-00-0060L	3/28/2005	8.68	<10	low flow
OK311200000060_00	OK311200-00-0060L	5/10/2005	15.1	37	low flow
OK311200000060_00	OK311200-00-0060L	6/6/2005	21.3	26	low flow
OK311200000060_00	OK311200-00-0060L	7/6/2005	65	109	high flow
OK311200000060_00	OK311200-00-0060L	8/8/2005	25.6	<10	low flow
OK311200000060_00	OK311200-00-0060L	9/13/2005	16.1	<10	low flow
OK311200000060_00	OK311200-00-0060L	10/17/2005	8.86	<10	low flow
OK311200000060_00	OK311200-00-0060L	11/28/2005	9.53	<10	low flow
OK311200000060_00	OK311200-00-0060L	1/10/2006	48.6	39	low flow
OK311200000060_00	OK311200-00-0060L	2/13/2006	18.7	14	low flow
OK311200000060_00	OK311200-00-0060L	3/20/2006	339	260	low flow
OK311200000060_00	OK311200-00-0060L	4/24/2006	30.1	36	low flow
OK311200000060_00	OK311200-00-0060L	6/5/2006	60.3	41	low flow
OK311200000060_00	OK311200-00-0060L	7/10/2006	83.6	80	low flow
OK311200000080_00	OK311200000080G	5/15/2000	53.7	47	low flow
OK311200000080_00	OK311200000080G	6/19/2000	62.6	118	low flow
OK311200000080_00	OK311200000080G	11/6/2000	195	132	low flow
OK311200000080_00	OK311200000080G	12/11/2000	8.23	2	low flow
OK311200000080_00	OK311200000080G	1/22/2001	5.61	4	low flow
OK311200000080_00	OK311200000080G	2/26/2001	48.2	36	low flow
OK311200000080_00	OK311200000080G	4/2/2001	3.89	<1	low flow
OK311200000080_00	OK311200000080G	5/7/2001	25.8	27	low flow
OK311200000080_00	OK311200000080G	6/11/2001	5.22	<5	low flow
OK311200000080_00	OK311200000080G	6/25/2001	3.22		low flow
OK311200000080_00	OK311200000080G	7/16/2001	3.52	<1	low flow
OK311200000080_00	OK311200000080G	8/20/2001	12.5	11	low flow
OK311200000080_00	OK311200000080G	10/29/2001	>1000	85	low flow
OK311200000080_00	OK311200000080G	12/10/2001	1.77	<10	low flow
OK311200000080_00	OK311200000080G	1/15/2002	4.25	<10	low flow
OK311200000080_00	OK311200000080G	2/19/2002	135	58	low flow
OK311200000080_00	OK311200000080G	3/25/2002	29.8	12	low flow
OK311300010020_00	OKS0104	8/27/2004	83.2		low flow
OK311300010020_00	OKS0104	8/31/2004	92.7	107	low flow
OK311300010020_00	OKS0104	10/5/2004	645	302	high flow
OK311300010020_00	OKS0104	11/16/2004	839	954	high flow
OK311300010020_00	OKS0104	12/7/2004	419	308	high flow
OK311300010020_00	OKS0104	1/19/2005		12	low flow
OK311300010020_00	OKS0104	2/22/2005	23.9	24	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311300010020_00	OKS0104	3/29/2005	17.9	32	low flow
OK311300010020_00	OKS0104	5/10/2005	42.1	47	low flow
OK311300010020_00	OKS0104	6/7/2005	181	200	low flow
OK311300010020_00	OKS0104	7/6/2005	93.7	88	low flow
OK311300010020_00	OKS0104	8/8/2005	102	82	low flow
OK311300010020_00	OKS0104	9/12/2005	55	40	low flow
OK311300010020_00	OKS0104	10/17/2005	36.9	37	low flow
OK311300010020_00	OKS0104	11/28/2005	29.8	23	low flow
OK311300010020_00	OKS0104	1/10/2006	27.4	19	low flow
OK311300010020_00	OKS0104	2/13/2006	24.1	<10	low flow
OK311300010020_00	OKS0104	3/20/2006	219	256	low flow
OK311300010020_00	OKS0104	4/24/2006	91.9	86	low flow
OK311300010020_00	OKS0104	6/5/2006	95.9	76	low flow
OK311300010020_00	OKS0104	7/10/2006	64.8	31	low flow
OK311300010020_10	11300010020-001AT	12/14/1998	24	6	low flow
OK311300010020_10	11300010020-001AT	2/1/1999	604	376	high flow
OK311300010020_10	11300010020-001AT	3/1/1999	10	6	low flow
OK311300010020_10	11300010020-001AT	4/27/1999	435	368	high flow
OK311300010020_10	11300010020-001AT	6/1/1999	171	138	high flow
OK311300010020_10	11300010020-001AT	6/28/1999	187	208	high flow
OK311300010020_10	11300010020-001AT	7/26/1999	77	77	low flow
OK311300010020_10	11300010020-001AT	8/30/1999	96	116	high flow
OK311300010020_10	11300010020-001AT	9/21/1999	101	72	low flow
OK311300010020_10	11300010020-001AT	11/1/1999	104	114	high flow
OK311300010020_10	11300010020-001AT	11/29/1999		30	low flow
OK311300010020_10	11300010020-001AT	12/21/1999	28	28	low flow
OK311300010020_10	11300010020-001AT	1/25/2000	20	26	low flow
OK311300010020_10	11300010020-001AT	3/1/2000	63	58	low flow
OK311300010020_10	11300010020-001AT	4/26/2000		80	low flow
OK311300010020_10	11300010020-001AT	5/23/2000	82	148	high flow
OK311300010020_10	11300010020-001AT	6/27/2000	133	96	low flow
OK311300010020_10	11300010020-001AT	8/1/2000	80	104	low flow
OK311300010020_10	11300010020-001AT	8/30/2000		72	low flow
OK311300010020_10	11300010020-001AT	9/27/2000	61	0	low flow
OK311300010020_10	11300010020-001AT	10/31/2000	465	532	high flow
OK311300010020_10	11300010020-001AT	11/28/2000	60	60	high flow
OK311300010020_10	11300010020-001AT	2/12/2001	77		high flow
OK311300010020_10	11300010020-001AT	3/12/2001	53		high flow
OK311300010020_10	11300010020-001AT	4/9/2001	27		high flow
OK311300010020_10	11300010020-001AT	5/14/2001	43		low flow
OK311300010020_10	11300010020-001AT	6/11/2001	60		high flow
OK311300010020_10	11300010020-001AT	7/16/2001	43		low flow
OK311300010020_10	11300010020-001AT	8/13/2001	48		low flow
OK311300010020_10	11300010020-001AT	9/4/2001	163		low flow
OK311300010020_10	11300010020-001AT	10/15/2001	44		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311300010020_10	11300010020-001AT	11/26/2001	26		low flow
OK311300010020_10	11300010020-001AT	2/20/2002	35		low flow
OK311300010020_10	11300010020-001AT	4/3/2002	42		low flow
OK311300010020_10	11300010020-001AT	4/30/2002	460		high flow
OK311300010020_10	11300010020-001AT	5/28/2002	216		high flow
OK311300010020_10	11300010020-001AT	6/24/2002	67		low flow
OK311300010020_10	11300010020-001AT	8/6/2002	94		low flow
OK311300010020_10	11300010020-001AT	8/21/2002	104		low flow
OK311300010020_10	11300010020-001AT	9/24/2002	91		low flow
OK311300010020_10	11300010020-001AT	10/22/2002	39		low flow
OK311300010020_10	11300010020-001AT	11/19/2002	25		low flow
OK311300010020_10	11300010020-001AT	1/14/2003	8		low flow
OK311300010020_10	11300010020-001AT	3/25/2003	31		low flow
OK311300010020_10	11300010020-001AT	4/30/2003	51		low flow
OK311300010020_10	11300010020-001AT	6/4/2003	89		low flow
OK311300010020_10	11300010020-001AT	7/15/2003	75		low flow
OK311300010020_10	11300010020-001AT	8/19/2003	89		low flow
OK311300010020_10	11300010020-001AT	9/23/2003	50		low flow
OK311300010020_10	11300010020-001AT	10/22/2003	39		low flow
OK311300010020_10	11300010020-001AT	1/6/2004	18		low flow
OK311300010020_10	11300010020-001AT	2/18/2004	26		low flow
OK311300010020_10	11300010020-001AT	3/31/2004	45		low flow
OK311300010020_10	11300010020-001AT	4/26/2004	809		high flow
OK311300010020_10	11300010020-001AT	6/8/2004	76		low flow
OK311300010020_10	11300010020-001AT	7/12/2004	80		low flow
OK311300010020_10	11300010020-001AT	8/16/2004	139		low flow
OK311300010020_10	11300010020-001AT	9/20/2004	52		low flow
OK311300010020_10	11300010020-001AT	10/18/2004	63		low flow
OK311300010020_10	11300010020-001AT	11/21/2004	169		high flow
OK311300010020_10	11300010020-001AT	1/11/2005	45		high flow
OK311300010020_10	11300010020-001AT	3/15/2005	19		high flow
OK311300010020_10	11300010020-001AT	5/24/2005	47		low flow
OK311300010020_10	11300010020-001AT	7/13/2005	93		low flow
OK311300010020_10	11300010020-001AT	8/8/2005	63		low flow
OK311300010020_10	11300010020-001AT	9/6/2005	78		low flow
OK311300010020_10	11300010020-001AT	10/18/2005	25		low flow
OK311300010020_10	11300010020-001AT	11/28/2005	25		low flow
OK311300010020_10	11300010020-001AT	1/18/2006	30		low flow
OK311300010020_10	11300010020-001AT	2/22/2006	52		low flow
OK311300010020_10	11300010020-001AT	3/27/2006	56		low flow
OK311300010020_10	11300010020-001AT	5/2/2006	230		high flow
OK311300010020_10	11300010020-001AT	6/6/2006	7		low flow
OK311300010020_10	11300010020-001AT	8/14/2006	72		low flow
OK311300010020_10	11300010020-001AT	9/26/2006	49		low flow
OK311300010020_10	11300010020-001AT	10/30/2006	19		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311300010020_10	11300010020-001AT	12/4/2006	10		low flow
OK311300010020_10	11300010020-001AT	1/23/2007	222		high flow
OK311300010020_10	11300010020-001AT	3/6/2007	22		low flow
OK311300010020_10	11300010020-001AT	4/2/2007	253		high flow
OK311300010020_10	11300010020-001AT	5/15/2007	107		high flow
OK311300010020_10	11300010020-001AT	6/12/2007	66		high flow
OK311300010020_10	11300010020-001AT	7/10/2007	165		high flow
OK311300010020_10	11300010020-001AT	8/21/2007	198		high flow
OK311300010020_10	11300010020-001AT	9/18/2007	35		high flow
OK311300010020_10	11300010020-001AT	10/29/2007	26		low flow
OK311300010020_10	11300010020-001AT	12/4/2007	12		low flow
OK311300010020_10	11300010020-001AT	1/22/2008	8		low flow
OK311300010020_10	11300010020-001AT	3/4/2008	27		high flow
OK311300010020_10	11300010020-001AT	4/29/2008	48		high flow
OK311300010020_10	11300010020-001AT	5/19/2008	70		high flow
OK311300010020_10	11300010020-001AT	7/21/2008	69		low flow
OK311300010020_10	11300010020-001AT	9/15/2008	31		low flow
OK311300010020_10	11300010020-001AT	11/5/2008	21		low flow
OK311300010020_10	11300010020-001AT	2/17/2009	35.5		low flow
OK311300010020_10	11300010020-001AT	3/2/2009	14.25		low flow
OK311300010020_10	11300010020-001AT	4/6/2009	34.6		low flow
OK311310010070_00	400265	6/15/2004	131		low flow
OK311310010070_00	400265	8/31/2004	64	70	low flow
OK311310010070_00	400265	10/6/2004	243	147	low flow
OK311310010070_00	400265	12/1/2004	21.2	<10	low flow
OK311310010070_00	400265	12/14/2004	3.67	<10	low flow
OK311310010070_00	400265	1/19/2005		<10	low flow
OK311310010070_00	400265	2/22/2005	8.73	15	low flow
OK311310010070_00	400265	3/28/2005	32.7	37	low flow
OK311310010070_00	400265	5/9/2005	85.4	58	low flow
OK311310010070_00	400265	6/6/2005	>1000	1351	high flow
OK311310010070_00	400265	7/11/2005	54	38	low flow
OK311310010070_00	400265	8/15/2005	318	158	low flow
OK311310010070_00	400265	9/19/2005	410	212	low flow
OK311310010070_00	400265	3/27/2006	9.04	<10	low flow
OK311310020010_00	OK311310020010-001AT	11/9/1998	68.3	64	low flow
OK311310020010_00	OK311310020010-001AT	12/14/1998	9	65	low flow
OK311310020010_00	OK311310020010-001AT	2/1/1999	1000	1280	high flow
OK311310020010_00	OK311310020010-001AT	3/1/1999	16	17	low flow
OK311310020010_00	OK311310020010-001AT	4/27/1999	342	332	low flow
OK311310020010_00	OK311310020010-001AT	6/1/1999	1000	1230	high flow
OK311310020010_00	OK311310020010-001AT	6/28/1999	211	146	high flow
OK311310020010_00	OK311310020010-001AT	7/26/1999	23	24	low flow
OK311310020010_00	OK311310020010-001AT	8/30/1999	41	178	low flow
OK311310020010_00	OK311310020010-001AT	9/21/1999	17	6	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311310020010_00	OK311310020010-001AT	11/1/1999	21	44	low flow
OK311310020010_00	OK311310020010-001AT	11/29/1999		17	low flow
OK311310020010_00	OK311310020010-001AT	12/21/1999	105	70	low flow
OK311310020010_00	OK311310020010-001AT	1/25/2000	6	3	low flow
OK311310020010_00	OK311310020010-001AT	3/1/2000	15	14	low flow
OK311310020010_00	OK311310020010-001AT	4/26/2000		24	low flow
OK311310020010_00	OK311310020010-001AT	5/23/2000	39	112	low flow
OK311310020010_00	OK311310020010-001AT	6/27/2000	61	40	low flow
OK311310020010_00	OK311310020010-001AT	8/1/2000	25	10	low flow
OK311310020010_00	OK311310020010-001AT	10/31/2000	750	448	high flow
OK311310020010_00	OK311310020010-001AT	11/28/2000	229	192	high flow
OK311310020010_00	OK311310020010-001AT	2/12/2001	317		high flow
OK311310020010_00	OK311310020010-001AT	3/12/2001	52		high flow
OK311310020010_00	OK311310020010-001AT	5/14/2001	70		high flow
OK311310020010_00	OK311310020010-001AT	6/11/2001	39		low flow
OK311310020010_00	OK311310020010-001AT	7/16/2001	35		low flow
OK311310020010_00	OK311310020010-001AT	8/13/2001	62		low flow
OK311310020010_00	OK311310020010-001AT	9/4/2001	70		low flow
OK311310020010_00	OK311310020010-001AT	10/15/2001	529		low flow
OK311310020010_00	OK311310020010-001AT	11/26/2001	24		low flow
OK311310020010_00	OK311310020010-001AT	2/20/2002	17		low flow
OK311310020010_00	OK311310020010-001AT	4/3/2002	243		high flow
OK311310020010_00	OK311310020010-001AT	4/30/2002	138		high flow
OK311310020010_00	OK311310020010-001AT	5/28/2002	200		low flow
OK311310020010_00	OK311310020010-001AT	6/24/2002	77		high flow
OK311310020010_00	OK311310020010-001AT	8/6/2002	58		low flow
OK311310020010_00	OK311310020010-001AT	8/21/2002	45		high flow
OK311310020010_00	OK311310020010-001AT	9/24/2002	49		low flow
OK311310020010_00	OK311310020010-001AT	11/19/2002	13		low flow
OK311310020010_00	OK311310020010-001AT	1/14/2003	9		low flow
OK311310020010_00	OK311310020010-001AT	3/25/2003	10		low flow
OK311310020010_00	OK311310020010-001AT	6/4/2003	18		low flow
OK311310020010_00	OK311310020010-001AT	7/15/2003	43		low flow
OK311310020010_00	OK311310020010-001AT	8/19/2003	79		low flow
OK311310020010_00	OK311310020010-001AT	9/23/2003	32		low flow
OK311310020010_00	OK311310020010-001AT	1/6/2004	25		low flow
OK311310020010_00	OK311310020010-001AT	2/18/2004	8		low flow
OK311310020010_00	OK311310020010-001AT	3/31/2004	15		low flow
OK311310020010_00	OK311310020010-001AT	4/26/2004	356		high flow
OK311310020010_00	OK311310020010-001AT	6/8/2004	48		low flow
OK311310020010_00	OK311310020010-001AT	7/12/2004	98		low flow
OK311310020010_00	OK311310020010-001AT	8/16/2004	1000		high flow
OK311310020010_00	OK311310-02-0010M	8/31/2004	108	92	high flow
OK311310020010_00	OK311310-02-0010M	10/6/2004	464	134	high flow
OK311310020010_00	OK311310020010-001AT	10/18/2004	72		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311310020010_00	OK311310-02-0010M	11/16/2004	827	629	high flow
OK311310020010_00	OK311310020010-001AT	11/22/2004	829		high flow
OK311310020010_00	OK311310-02-0010M	12/14/2004	7.17	<10	low flow
OK311310020010_00	OK311310020010-001AT	1/11/2005	76		high flow
OK311310020010_00	OK311310-02-0010M	1/18/2005	0	<10	high flow
OK311310020010_00	OK311310020010-001AT	2/16/2005	28		high flow
OK311310020010_00	OK311310-02-0010M	2/22/2005	7.67	<10	high flow
OK311310020010_00	OK311310020010-001AT	3/16/2005	11		low flow
OK311310020010_00	OK311310-02-0010M	3/28/2005	3.05	<10	high flow
OK311310020010_00	OK311310-02-0010M	5/9/2005	2.64	<10	low flow
OK311310020010_00	OK311310020010-001AT	5/24/2005	20		low flow
OK311310020010_00	OK311310-02-0010M	6/6/2005	18.7	20	low flow
OK311310020010_00	OK311310-02-0010M	7/11/2005	34.2	41	low flow
OK311310020010_00	OK311310020010-001AT	7/13/2005	43		low flow
OK311310020010_00	OK311310020010-001AT	8/8/2005	103		low flow
OK311310020010_00	OK311310-02-0010M	8/15/2005	912	507	high flow
OK311310020010_00	OK311310020010-001AT	9/6/2005	10		low flow
OK311310020010_00	OK311310-02-0010M	9/19/2005	15.6	<10	high flow
OK311310020010_00	OK311310020010-001AT	10/18/2005	20		low flow
OK311310020010_00	OK311310020010-001AT	1/18/2006	6		low flow
OK311310020010_00	OK311310020010-001AT	2/22/2006	5		low flow
OK311310020010_00	OK311310020010-001AT	3/27/2006	13		low flow
OK311310020010_00	OK311310-02-0010M	5/1/2006	84.8	73	high flow
OK311310020010_00	OK311310020010-001AT	5/2/2006	200		low flow
OK311310020010_00	OK311310020010-001AT	6/6/2006	6		low flow
OK311310020010_00	OK311310020010-001AT	9/26/2006	46		low flow
OK311310020010_00	OK311310020010-001AT	10/30/2006	35		low flow
OK311310020010_00	OK311310020010-001AT	12/4/2006	6		low flow
OK311310020010_00	OK311310020010-001AT	1/23/2007	622		high flow
OK311310020010_00	OK311310020010-001AT	3/6/2007	6		low flow
OK311310020010_00	OK311310020010-001AT	4/3/2007	375		high flow
OK311310020010_00	OK311310020010-001AT	5/15/2007	308		high flow
OK311310020010_00	OK311310020010-001AT	6/11/2007	44		high flow
OK311310020010_00	OK311310020010-001AT	7/10/2007	252		high flow
OK311310020010_00	OK311310020010-001AT	8/21/2007	373		high flow
OK311310020010_00	OK311310020010-001AT	9/18/2007	43		low flow
OK311310020010_00	OK311310020010-001AT	10/29/2007	16		low flow
OK311310020010_00	OK311310020010-001AT	12/3/2007	7		low flow
OK311310020010_00	OK311310020010-001AT	1/22/2008	8		low flow
OK311310020010_00	OK311310020010-001AT	3/4/2008	23		high flow
OK311310020010_00	OK311310020010-001AT	4/29/2008	25		high flow
OK311310020010_00	OK311310020010-001AT	5/19/2008	57		high flow
OK311310020010_00	OK311310020010-001AT	7/21/2008	44		low flow
OK311310020010_00	OK311310020010-001AT	9/15/2008	22		low flow
OK311310020010_00	OK311310020010-001AT	11/5/2008	15		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311310020010_00	OK311310020010-001AT	2/17/2009	11		low flow
OK311310020010_00	OK311310020010-001AT	3/2/2009	4.6		low flow
OK311310020010_00	OK311310020010-001AT	4/6/2009	3.25		low flow
OK311310030010_00	OK311310-03-0010D	8/31/2004	52.6	299	high flow
OK311310030010_00	OK311310-03-0010D	10/6/2004	>1000	532	high flow
OK311310030010_00	OK311310-03-0010D	12/2/2004	50.4	19	high flow
OK311310030010_00	OK311310-03-0010D	12/14/2004	175	<10	low flow
OK311310030010_00	OK311310-03-0010D	1/18/2005		<10	high flow
OK311310030010_00	OK311310-03-0010D	2/22/2005	33	20	low flow
OK311310030010_00	OK311310-03-0010D	3/28/2005	29	27	low flow
OK311310030010_00	OK311310-03-0010D	5/9/2005	43.5	48	low flow
OK311310030010_00	OK311310-03-0010D	6/6/2005	233	114	low flow
OK311310030010_00	OK311310-03-0010D	7/11/2005	61.3	51	low flow
OK311310030010_00	OK311310-03-0010D	8/15/2005	>1000	839	high flow
OK311310030010_00	OK311310-03-0010D	9/19/2005	568	255	low flow
OK311310030010_00	OK311310-03-0010D	9/23/2005	159		low flow
OK311310030010_00	OK311310-03-0010D	10/24/2005	85.6	35	low flow
OK311310030010_00	OK311310-03-0010D	12/5/2005	97.8	68	low flow
OK311310030010_00	OK311310-03-0010D	1/17/2006	44.5	35	low flow
OK311310030010_00	OK311310-03-0010D	2/21/2006	20.3	13	low flow
OK311310030010_00	OK311310-03-0010D	3/27/2006	44.6	31	low flow
OK311310030010_00	OK311310-03-0010D	5/1/2006	117	50	low flow
OK311310030010_00	OK311310-03-0010D	6/5/2006	146	49	low flow
OK311310030010_00	OK311310-03-0010D	7/10/2006	86.4	38	low flow
OK311310030040_00	OK311310-03-0040D	6/15/2004	40.3		low flow
OK311310030040_00	OK311310-03-0040D	8/31/2004	110	76	low flow
OK311310030040_00	OK311310-03-0040D	12/14/2004	6.93	<10	low flow
OK311310030040_00	OK311310-03-0040D	1/18/2005		34	low flow
OK311310030040_00	OK311310-03-0040D	2/22/2005	303	37	low flow
OK311310030040_00	OK311310-03-0040D	3/28/2005	21.7	25	low flow
OK311310030040_00	OK311310-03-0040D	5/9/2005	55.5	68	low flow
OK311310030040_00	OK311310-03-0040D	7/11/2005	14.4	<10	low flow
OK311310030040_00	OK311310-03-0040D	8/15/2005	>1000	866	low flow
OK311310030040_00	OK311310-03-0040D	9/19/2005	203	111	low flow
OK311310030040_00	OK311310-03-0040D	10/24/2005	16.4	<10	low flow
OK311310030040_00	OK311310-03-0040D	12/5/2005	45.5	<10	low flow
OK311310030040_00	OK311310-03-0040D	1/17/2006	46.2	<10	low flow
OK311310030040_00	OK311310-03-0040D	2/21/2006	44.7	15	low flow
OK311310030040_00	OK311310-03-0040D	3/27/2006	11.5	<10	low flow
OK311310030040_00	OK311310-03-0040D	5/1/2006	38.4	30	low flow
OK311310030040_00	OK311310-03-0040D	6/5/2006	37.7	30	low flow
OK311310030040_00	OK311310-03-0040D	7/10/2006	29.3	27	low flow
OK311310030050_00	OK311310030050G	5/15/2000	114	102	low flow
OK311310030050_00	OK311310030050G	6/5/2000	201		high flow
OK311310030050_00	OK311310030050G	6/19/2000	925	408	high flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311310030050_00	OK311310030050G	7/24/2000	293	244	low flow
OK311310030050_00	OK311310030050G	11/7/2000	47.9	38	high flow
OK311310030050_00	OK311310030050G	12/11/2000	2.4	<1	high flow
OK311310030050_00	OK311310030050G	1/22/2001	4.98	34	low flow
OK311310030050_00	OK311310030050G	2/26/2001	87.2	96	high flow
OK311310030050_00	OK311310030050G	4/2/2001	26.5	66	low flow
OK311310030050_00	OK311310030050G	5/7/2001	384	408	low flow
OK311310030050_00	OK311310030050G	6/11/2001	45.5	72	low flow
OK311310030050_00	OK311310030050G	7/16/2001	63.3	54	low flow
OK311310030050_00	OK311310030050G	8/20/2001	261	155	low flow
OK311310030050_00	OK311310030050G	9/24/2001	160	<10	low flow
OK311310030050_00	OK311310030050G	10/29/2001	211	150	low flow
OK311310030050_00	OK311310030050G	12/10/2001	11	11	low flow
OK311310030050_00	OK311310030050G	1/15/2002	8.06	15	low flow
OK311310030050_00	OK311310030050G	2/19/2002	22.5	12	low flow
OK311310030050_00	OK311310030050G	3/25/2002	32.8	43	low flow
OK311500010020_10	OK311500010020-001AT	11/4/1998	899	568	high flow
OK311500010020_10	OK311500010020-001AT	12/7/1998	7	24	low flow
OK311500010020_10	OK311500010020-001AT	1/25/1999	7	53	low flow
OK311500010020_10	OK311500010020-001AT	2/22/1999	7	82	low flow
OK311500010020_10	OK311500010020-001AT	3/15/1999	1000	1150	high flow
OK311500010020_10	OK311500010020-001AT	4/19/1999	134	178	low flow
OK311500010020_10	OK311500010020-001AT	5/24/1999		110	low flow
OK311500010020_10	OK311500010020-001AT	6/21/1999	660	472	low flow
OK311500010020_10	OK311500010020-001AT	7/19/1999	24	32	low flow
OK311500010020_10	OK311500010020-001AT	8/16/1999	42	58	low flow
OK311500010020_10	OK311500010020-001AT	9/20/1999	9	26	low flow
OK311500010020_10	OK311500010020-001AT	10/31/1999	1000	680	high flow
OK311500010020_10	OK311500010020-001AT	11/28/1999		12	low flow
OK311500010020_10	OK311500010020-001AT	12/20/1999	18	48	low flow
OK311500010020_10	OK311500010020-001AT	1/24/2000	6	37	low flow
OK311500010020_10	OK311500010020-001AT	2/29/2000	23	38	low flow
OK311500010020_10	OK311500010020-001AT	4/5/2000	590		high flow
OK311500010020_10	OK311500010020-001AT	5/22/2000	21	54	low flow
OK311500010020_10	OK311500010020-001AT	6/26/2000	57	102	low flow
OK311500010020_10	OK311500010020-001AT	7/31/2000	10	26	low flow
OK311500010020_10	OK311500010020-001AT	8/29/2000	5	18	low flow
OK311500010020_10	OK311500010020-001AT	9/26/2000	7	0	low flow
OK311500010020_10	OK311500010020-001AT	10/30/2000	153	112	high flow
OK311500010020_10	OK311500010020-001AT	11/27/2000	6	21	low flow
OK311500010020_10	OK311500010020-001AT	2/28/2001	1000		low flow
OK311500010020_10	OK311500010020-001AT	3/20/2001	25		low flow
OK311500010020_10	OK311500010020-001AT	4/17/2001	25		low flow
OK311500010020_10	OK311500010020-001AT	5/21/2001	1000		high flow
OK311500010020_10	OK311500010020-001AT	7/23/2001	6		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500010020_10	OK311500010020-001AT	8/20/2001	22		low flow
OK311500010020_10	OK311500010020-001AT	9/17/2001	1000		high flow
OK311500010020_10	OK311500010020-001AT	10/22/2001	9		low flow
OK311500010020_10	OK311500010020-001AT	11/14/2001	4		low flow
OK311500010020_10	OK311500010020-001AT	2/19/2002	5		low flow
OK311500010020_10	OK311500010020-001AT	4/2/2002	33		low flow
OK311500010020_10	OK311500010020-001AT	4/30/2002	33		low flow
OK311500010020_10	OK311500010020-001AT	5/28/2002	1000		low flow
OK311500010020_10	OK311500010020-001AT	8/6/2002	55		low flow
OK311500010020_10	OK311500010020-001AT	8/20/2002	6		low flow
OK311500010020_10	OK311500010020-001AT	9/24/2002	6		low flow
OK311500010020_10	OK311500010020-001AT	10/22/2002	1000		high flow
OK311500010020_10	OK311500010020-001AT	11/19/2002	26		low flow
OK311500010020_10	OK311500010020-001AT	1/14/2003	17		low flow
OK311500010020_10	OK311500010020-001AT	2/18/2003	15		low flow
OK311500010020_10	OK311500010020-001AT	3/25/2003	35		low flow
OK311500010020_10	OK311500010020-001AT	4/30/2003	41		low flow
OK311500010020_10	OK311500010020-001AT	6/3/2003	1000		high flow
OK311500010020_10	OK311500010020-001AT	7/14/2003	12		low flow
OK311500010020_10	OK311500010020-001AT	8/19/2003	16		low flow
OK311500010020_10	OK311500010020-001AT	9/23/2003	35		low flow
OK311500010020_10	OK311500010020-001AT	10/21/2003	4		low flow
OK311500010020_10	OK311500010020-001AT	11/22/2003	2		low flow
OK311500010020_10	OK311500010020-001AT	2/18/2004	4		low flow
OK311500010020_10	OK311500010020-001AT	3/22/2004	13		low flow
OK311500010020_10	OK311500010020-001AT	4/27/2004	999		low flow
OK311500010020_10	OK311500010020-001AT	6/7/2004	7		low flow
OK311500010020_10	OK311500010020-001AT	7/12/2004	85		low flow
OK311500010020_10	OK311500010020-001AT	8/16/2004	4		low flow
OK311500010020_10	OK311500010020-001AT	9/20/2004	8		low flow
OK311500010020_10	OK311500010020-001AT	11/22/2004	1000		high flow
OK311500010020_10	OK311500010020-001AT	2/15/2005	19		low flow
OK311500010020_10	OK311500010020-001AT	4/20/2005	10		low flow
OK311500010020_10	OK311500010020-001AT	5/17/2005	375		high flow
OK311500010020_10	OK311500010020-001AT	7/19/2005	13		low flow
OK311500010020_10	OK311500010020-001AT	8/17/2005	1000		low flow
OK311500010020_10	OK311500010020-001AT	9/12/2005	115		low flow
OK311500010020_10	OK311500010020-001AT	10/17/2005	42		low flow
OK311500010020_10	OK311500010020-001AT	11/30/2005	3		low flow
OK311500010020_10	OK311500010020-001AT	1/18/2006	8		low flow
OK311500010020_10	OK311500010020-001AT	2/22/2006	21		low flow
OK311500010020_10	OK311500010020-001AT	3/28/2006	4		low flow
OK311500010020_10	OK311500010020-001AT	5/2/2006	16		low flow
OK311500010020_10	OK311500010020-001AT	5/31/2006	1000		low flow
OK311500010020_10	OK311500010020-001AT	6/6/2006	52		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500010020_10	OK311500010020-001AT	6/13/2006	10.4		low flow
OK311500010020_10	OK311500010020-001AT	6/26/2006	126		low flow
OK311500010020_10	OK311500010020-001AT	7/12/2006	23		low flow
OK311500010020_10	OK311500010020-001AT	7/24/2006	9		low flow
OK311500010020_10	OK311500010020-001AT	8/8/2006	5		low flow
OK311500010020_10	OK311500010020-001AT	8/21/2006	3		low flow
OK311500010020_10	OK311500010020-001AT	9/6/2006	467		low flow
OK311500010020_10	OK311500010020-001AT	9/20/2006	404		low flow
OK311500010020_10	OK311500010020-001AT	10/3/2006	6		low flow
OK311500010020_10	OK311500010020-001AT	10/16/2006	1000		high flow
OK311500010020_10	OK311500010020-001AT	10/30/2006	13		low flow
OK311500010020_10	OK311500010020-001AT	11/14/2006	7		low flow
OK311500010020_10	OK311500010020-001AT	11/29/2006	5		low flow
OK311500010020_10	OK311500010020-001AT	12/14/2006	1		low flow
OK311500010020_10	OK311500010020-001AT	12/26/2006	53		low flow
OK311500010020_10	OK311500010020-001AT	2/5/2007	7		low flow
OK311500010020_10	OK311500010020-001AT	2/20/2007	46		low flow
OK311500010020_10	OK311500010020-001AT	5/15/2007	188		high flow
OK311500010020_10	OK311500010020-001AT	5/30/2007	166		high flow
OK311500010020_10	OK311500010020-001AT	6/12/2007	227		high flow
OK311500010020_10	OK311500010020-001AT	6/26/2007	296		high flow
OK311500010020_10	OK311500010020-001AT	7/10/2007	25		high flow
OK311500010020_10	OK311500010020-001AT	7/24/2007	27		high flow
OK311500010020_10	OK311500010020-001AT	8/7/2007	77		high flow
OK311500010020_10	OK311500010020-001AT	8/21/2007	260		high flow
OK311500010020_10	OK311500010020-001AT	9/4/2007	10		low flow
OK311500010020_10	OK311500010020-001AT	9/17/2007	14		low flow
OK311500010020_10	OK311500010020-001AT	10/2/2007	101		high flow
OK311500010020_10	OK311500010020-001AT	10/15/2007	64		low flow
OK311500010020_10	OK311500010020-001AT	10/30/2007	6		low flow
OK311500010020_10	OK311500010020-001AT	11/13/2007	5		low flow
OK311500010020_10	OK311500010020-001AT	11/27/2007	3		low flow
OK311500010020_10	OK311500010020-001AT	12/17/2007	32		low flow
OK311500010020_10	OK311500010020-001AT	1/2/2008	11		low flow
OK311500010020_10	OK311500010020-001AT	1/16/2008	10		low flow
OK311500010020_10	OK311500010020-001AT	1/28/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	2/12/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	2/25/2008	22		low flow
OK311500010020_10	OK311500010020-001AT	3/11/2008	7		low flow
OK311500010020_10	OK311500010020-001AT	4/8/2008	12		low flow
OK311500010020_10	OK311500010020-001AT	4/22/2008	21		high flow
OK311500010020_10	OK311500010020-001AT	5/5/2008	20		low flow
OK311500010020_10	OK311500010020-001AT	5/20/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	6/3/2008	34		low flow
OK311500010020_10	OK311500010020-001AT	6/16/2008	11		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500010020_10	OK311500010020-001AT	6/30/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	7/14/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	7/29/2008	5		low flow
OK311500010020_10	OK311500010020-001AT	8/11/2008	8		low flow
OK311500010020_10	OK311500010020-001AT	8/25/2008	46		low flow
OK311500010020_10	OK311500010020-001AT	9/9/2008	9		low flow
OK311500010020_10	OK311500010020-001AT	9/22/2008	37		low flow
OK311500010020_10	OK311500010020-001AT	10/8/2008	1000		high flow
OK311500010020_10	OK311500010020-001AT	10/20/2008	180		high flow
OK311500010020_10	OK311500010020-001AT	11/4/2008	25		low flow
OK311500010020_10	OK311500010020-001AT	11/17/2008	10		low flow
OK311500010020_10	OK311500010020-001AT	12/1/2008	5		low flow
OK311500010020_10	OK311500010020-001AT	12/15/2008	6		low flow
OK311500010020_10	OK311500010020-001AT	1/12/2009	6		low flow
OK311500010020_10	OK311500010020-001AT	2/2/2009	8		low flow
OK311500010020_10	OK311500010020-001AT	2/23/2009	3		low flow
OK311500010020_10	OK311500010020-001AT	3/10/2009	3.6		low flow
OK311500010020_10	OK311500010020-001AT	3/23/2009	5		low flow
OK311500010020_10	OK311500010020-001AT	4/6/2009	4.3		low flow
OK311500010020_10	OK311500010020-001AT	4/21/2009	10.5		low flow
OK311500010050_00	OK311500010050G	5/15/2000	35.1	58	low flow
OK311500010050_00	OK311500010050G	6/19/2000	1000	900	high flow
OK311500010050_00	OK311500010050G	7/24/2000	295	314	low flow
OK311500010050_00	OK311500010050G	8/28/2000	139	164	low flow
OK311500010050_00	OK311500010050G	10/2/2000	23.6	44	low flow
OK311500010050_00	OK311500010050G	11/7/2000	14.5	32	low flow
OK311500010050_00	OK311500010050G	12/11/2000	4.15	11	low flow
OK311500010050_00	OK311500010050G	1/22/2001	4.36	26	low flow
OK311500010050_00	OK311500010050G	2/26/2001	58.1	36	low flow
OK311500010050_00	OK311500010050G	4/2/2001	27.7	58	low flow
OK311500010050_00	OK311500010050G	5/7/2001	139	138	low flow
OK311500010050_00	OK311500010050G	6/11/2001	134	160	low flow
OK311500010050_00	OK311500010050G	6/26/2001	28.6		low flow
OK311500010050_00	OK311500010050G	7/16/2001	104	95	low flow
OK311500010050_00	OK311500010050G	8/20/2001	136	130	low flow
OK311500010050_00	OK311500010050G	9/24/2001	32.6	41	low flow
OK311500010050_00	OK311500010050G	10/29/2001	56.8	69	low flow
OK311500010050_00	OK311500010050G	12/10/2001	18.9	26	low flow
OK311500010050_00	OK311500010050G	1/15/2002	10.9	14	low flow
OK311500010050_00	OK311500010050G	2/19/2002	31.3	57	low flow
OK311500010050_00	OK311500010050G	3/25/2002	25.1	38	low flow
OK311500010080_00	OK311500-01-0080F	8/26/2004	81.9		low flow
OK311500010080_00	OK311500-01-0080F	8/30/2004	>1000	289	low flow
OK311500010080_00	OK311500-01-0080F	10/5/2004	20.3	17	low flow
OK311500010080_00	OK311500-01-0080F	11/16/2004		655	high flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500010080_00	OK311500-01-0080F	12/13/2004	32.1	20	low flow
OK311500010080_00	OK311500-01-0080F	2/22/2005	46.8	41	low flow
OK311500010080_00	OK311500-01-0080F	3/28/2005	21.3	27	low flow
OK311500010080_00	OK311500-01-0080F	5/9/2005	28.8	25	low flow
OK311500010080_00	OK311500-01-0080F	6/6/2005	729	461	high flow
OK311500010080_00	OK311500-01-0080F	7/11/2005	120	66	low flow
OK311500010080_00	OK311500-01-0080F	8/15/2005	21.4	<10	low flow
OK311500010080_00	OK311500-01-0080F	9/19/2005	199	97	low flow
OK311500010080_00	OK311500-01-0080F	10/24/2005	93.6	60	low flow
OK311500010080_00	OK311500-01-0080F	12/5/2005	3.95	<10	low flow
OK311500010080_00	OK311500-01-0080F	1/17/2006	26.9	25	low flow
OK311500010080_00	OK311500-01-0080F	2/21/2006	5.34	12	low flow
OK311500010080_00	OK311500-01-0080F	3/27/2006	30.8	57	low flow
OK311500010080_00	OK311500-01-0080F	5/1/2006	17.2	17	low flow
OK311500010080_00	OK311500-01-0080F	6/5/2006	66.9	54	low flow
OK311500010080_00	OK311500-01-0080F	7/10/2006	34.2	33	high flow
OK311500030010_00	OK311500030010-001AT	11/5/1998	216	188	low flow
OK311500030010_00	OK311500030010-001AT	12/7/1998	121	392	low flow
OK311500030010_00	OK311500030010-001AT	1/25/1999	15	57	low flow
OK311500030010_00	OK311500030010-001AT	2/22/1999	12	22	low flow
OK311500030010_00	OK311500030010-001AT	3/15/1999	110	124	low flow
OK311500030010_00	OK311500030010-001AT	5/24/1999	78	79	low flow
OK311500030010_00	OK311500030010-001AT	6/21/1999	840	860	low flow
OK311500030010_00	OK311500030010-001AT	7/19/1999	30	36	low flow
OK311500030010_00	OK311500030010-001AT	8/16/1999	36	43	low flow
OK311500030010_00	OK311500030010-001AT	9/20/1999	23	29	low flow
OK311500030010_00	OK311500030010-001AT	10/31/1999	281	190	low flow
OK311500030010_00	OK311500030010-001AT	11/28/1999		20	low flow
OK311500030010_00	OK311500030010-001AT	12/20/1999	36	48	low flow
OK311500030010_00	OK311500030010-001AT	1/24/2000	16	38	low flow
OK311500030010_00	OK311500030010-001AT	2/29/2000	44	60	low flow
OK311500030010_00	OK311500030010-001AT	4/4/2000	555		low flow
OK311500030010_00	OK311500030010-001AT	5/22/2000		56	low flow
OK311500030010_00	OK311500030010-001AT	6/26/2000	88	220	low flow
OK311500030010_00	OK311500030010-001AT	7/31/2000	43	92	low flow
OK311500030010_00	OK311500030010-001AT	8/29/2000	46	50	low flow
OK311500030010_00	OK311500030010-001AT	9/26/2000	21	0	low flow
OK311500030010_00	OK311500030010-001AT	10/9/2000	8	2	low flow
OK311500030010_00	OK311500030010-001AT	11/6/2000	90	74	low flow
OK311500030010_00	OK311500030010-001AT	2/27/2001	504		low flow
OK311500030010_00	OK311500030010-001AT	3/20/2001	40		low flow
OK311500030010_00	OK311500030010-001AT	4/17/2001	28		low flow
OK311500030010_00	OK311500030010-001AT	5/21/2001	1000		low flow
OK311500030010_00	OK311500030010-001AT	7/23/2001	37		low flow
OK311500030010_00	OK311500030010-001AT	8/20/2001	43		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500030010_00	OK311500030010-001AT	9/17/2001	1000		low flow
OK311500030010_00	OK311500030010-001AT	10/22/2001	21		low flow
OK311500030010_00	OK311500030010-001AT	11/13/2001	14		low flow
OK311500030010_00	OK311500030010-001AT	2/19/2002	57		low flow
OK311500030010_00	OK311500030010-001AT	4/2/2002	13		low flow
OK311500030010_00	OK311500030010-001AT	4/30/2002	21		low flow
OK311500030010_00	OK311500030010-001AT	5/28/2002	66		low flow
OK311500030010_00	OK311500030010-001AT	8/6/2002	77		low flow
OK311500030010_00	OK311500030010-001AT	8/21/2002	78		low flow
OK311500030010_00	311500030010-002AT	9/24/2002	42		low flow
OK311500030010_00	311500030010-002AT	10/22/2002	1000		low flow
OK311500030010_00	311500030010-002AT	11/19/2002	16		low flow
OK311500030010_00	311500030010-002AT	1/15/2003	16		low flow
OK311500030010_00	311500030010-002AT	2/19/2003	36		low flow
OK311500030010_00	311500030010-002AT	3/25/2003	28		low flow
OK311500030010_00	311500030010-002AT	4/30/2003	154		low flow
OK311500030010_00	311500030010-002AT	6/3/2003	59		low flow
OK311500030010_00	311500030010-002AT	7/15/2003	47		low flow
OK311500030010_00	311500030010-002AT	8/20/2003	64		low flow
OK311500030010_00	311500030010-002AT	9/24/2003	111		low flow
OK311500030010_00	311500030010-002AT	10/21/2003	61		low flow
OK311500030010_00	311500030010-002AT	11/23/2003	12		low flow
OK311500030010_00	311500030010-002AT	1/7/2004	7		low flow
OK311500030010_00	311500030010-002AT	2/18/2004	11		low flow
OK311500030010_00	311500030010-002AT	3/23/2004	39		low flow
OK311500030010_00	311500030010-002AT	4/27/2004	130		low flow
OK311500030010_00	W84ELEC09	5/20/2004	40.3		low flow
OK311500030010_00	311500030010-002AT	6/7/2004	38		low flow
OK311500030010_00	311500030010-002AT	7/12/2004	71		low flow
OK311500030010_00	311500030010-002AT	8/16/2004	32		low flow
OK311500030010_00	W84ELEC09	8/30/2004	122	108	low flow
OK311500030010_00	311500030010-002AT	9/20/2004	85		low flow
OK311500030010_00	W84ELEC09	10/5/2004	99.4	83	low flow
OK311500030010_00	311500030010-002AT	11/3/2004	483		low flow
OK311500030010_00	W84ELEC09	11/15/2004	>1000	1994	low flow
OK311500030010_00	311500030010-002AT	11/22/2004	1000		low flow
OK311500030010_00	W84ELEC09	12/13/2004	52.1	64	low flow
OK311500030010_00	W84ELEC09	1/19/2005		32	high flow
OK311500030010_00	W84ELEC09	2/23/2005	24.4	38	high flow
OK311500030010_00	W84ELEC09	3/24/2005	11.4	12	low flow
OK311500030010_00	311500030010-002AT	4/19/2005	27		low flow
OK311500030010_00	W84ELEC09	5/10/2005	36.9	43	low flow
OK311500030010_00	311500030010-002AT	5/17/2005	378		low flow
OK311500030010_00	W84ELEC09	6/7/2005	176	146	high flow
OK311500030010_00	W84ELEC09	7/12/2005	41.1	41	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500030010_00	311500030010-002AT	7/20/2005	80		low flow
OK311500030010_00	W84ELEC09	8/16/2005	477	380	low flow
OK311500030010_00	311500030010-002AT	8/17/2005	204		low flow
OK311500030010_00	311500030010-002AT	9/14/2005			low flow
OK311500030010_00	W84ELEC09	9/20/2005	179	125	low flow
OK311500030010_00	311500030010-002AT	10/17/2005	35		low flow
OK311500030010_00	W84ELEC09	10/25/2005	2.76	<10	low flow
OK311500030010_00	311500030010-002AT	11/30/2005	11		low flow
OK311500030010_00	W84ELEC09	12/6/2005	1.46	<10	low flow
OK311500030010_00	311500030010-002AT	1/18/2006	15		low flow
OK311500030010_00	W84ELEC09	1/18/2006	13.6	39	low flow
OK311500030010_00	311500030010-002AT	2/22/2006	13		low flow
OK311500030010_00	W84ELEC09	2/22/2006	3.98	<10	low flow
OK311500030010_00	311500030010-002AT	3/28/2006	20		low flow
OK311500030010_00	311500030010-002AT	3/28/2006	28		low flow
OK311500030010_00	W84ELEC09	3/28/2006	32.7	41	low flow
OK311500030010_00	W84ELEC09	5/2/2006	57.4	83	low flow
OK311500030010_00	311500030010-002AT	6/6/2006	130		low flow
OK311500030010_00	311500030010-002AT	6/6/2006	88		low flow
OK311500030010_00	W84ELEC09	6/6/2006	73	73	low flow
OK311500030010_00	311500030010-002AT	6/12/2006	75		low flow
OK311500030010_00	311500030010-002AT	6/13/2006			low flow
OK311500030010_00	311500030010-002AT	7/11/2006	65		low flow
OK311500030010_00	W84ELEC09	7/11/2006	760	271	low flow
OK311500030010_00	311500030010-002AT	7/12/2006	330		low flow
OK311500030010_00	311500030010-002AT	8/7/2006	59		low flow
OK311500030010_00	311500030010-002AT	8/8/2006	73		low flow
OK311500030010_00	311500030010-002AT	9/5/2006	47		low flow
OK311500030010_00	311500030010-002AT	9/6/2006	135		low flow
OK311500030010_00	311500030010-002AT	9/20/2006	268		low flow
OK311500030010_00	311500030010-002AT	10/3/2006	54		low flow
OK311500030010_00	311500030010-002AT	10/16/2006	1000		low flow
OK311500030010_00	311500030010-002AT	11/14/2006	13		low flow
OK311500030010_00	311500030010-002AT	11/28/2006	33		low flow
OK311500030010_00	311500030010-002AT	12/14/2006	3		low flow
OK311500030010_00	311500030010-002AT	12/26/2006	59		low flow
OK311500030010_00	311500030010-002AT	2/6/2007	30		low flow
OK311500030010_00	311500030010-002AT	2/21/2007	56		low flow
OK311500030010_00	311500030010-002AT	5/15/2007	188		low flow
OK311500030010_00	311500030010-002AT	5/29/2007	45		low flow
OK311500030010_00	311500030010-002AT	6/12/2007	47		low flow
OK311500030010_00	311500030010-002AT	6/25/2007	557		low flow
OK311500030010_00	311500030010-002AT	7/11/2007	36		high flow
OK311500030010_00	311500030010-002AT	7/23/2007	56		low flow
OK311500030010_00	311500030010-002AT	8/6/2007	41		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311500030010_00	311500030010-002AT	8/21/2007	1000		high flow
OK311500030010_00	311500030010-002AT	8/22/2007	126		high flow
OK311500030010_00	311500030010-002AT	9/5/2007	15		low flow
OK311500030010_00	311500030010-002AT	9/18/2007	52		low flow
OK311500030010_00	311500030010-002AT	10/2/2007	66		low flow
OK311500030010_00	311500030010-002AT	10/16/2007	1000		low flow
OK311500030010_00	311500030010-002AT	10/30/2007	13		low flow
OK311500030010_00	311500030010-002AT	11/13/2007	6		low flow
OK311500030010_00	311500030010-002AT	11/27/2007	5		low flow
OK311500030010_00	311500030010-002AT	12/18/2007	28		low flow
OK311500030010_00	311500030010-002AT	1/3/2008	10		low flow
OK311500030010_00	311500030010-002AT	1/17/2008	8		low flow
OK311500030010_00	311500030010-002AT	1/28/2008	14		low flow
OK311500030010_00	311500030010-002AT	2/11/2008	7		low flow
OK311500030010_00	311500030010-002AT	2/26/2008	30		low flow
OK311500030010_00	311500030010-002AT	3/13/2008	28		low flow
OK311500030010_00	311500030010-002AT	3/24/2008			low flow
OK311500030010_00	311500030010-002AT	4/9/2008	33		low flow
OK311500030010_00	311500030010-002AT	4/22/2008	34		low flow
OK311500030010_00	311500030010-002AT	5/6/2008	37		low flow
OK311500030010_00	311500030010-002AT	5/20/2008	36		low flow
OK311500030010_00	311500030010-002AT	6/2/2008	22		low flow
OK311500030010_00	311500030010-002AT	6/17/2008	95		low flow
OK311500030010_00	311500030010-002AT	7/1/2008	49		low flow
OK311500030010_00	311500030010-002AT	7/14/2008	26		low flow
OK311500030010_00	311500030010-002AT	7/29/2008	35		low flow
OK311500030010_00	311500030010-002AT	8/11/2008	54		low flow
OK311500030010_00	311500030010-002AT	8/25/2008	52		low flow
OK311500030010_00	311500030010-002AT	9/8/2008	67		low flow
OK311500030010_00	311500030010-002AT	9/22/2008	23		low flow
OK311500030010_00	311500030010-002AT	10/8/2008	35		low flow
OK311500030010_00	311500030010-002AT	10/20/2008	1000		low flow
OK311500030010_00	311500030010-002AT	11/5/2008	28		low flow
OK311500030010_00	311500030010-002AT	11/17/2008	7		low flow
OK311500030010_00	311500030010-002AT	12/1/2008	5		low flow
OK311500030010_00	311500030010-002AT	12/15/2008	6		low flow
OK311500030010_00	311500030010-002AT	1/12/2009	8		low flow
OK311500030010_00	311500030010-002AT	2/2/2009			low flow
OK311500030010_00	311500030010-002AT	2/23/2009	13		low flow
OK311500030010_00	311500030010-002AT	3/10/2009	3.5		low flow
OK311500030010_00	311500030010-002AT	3/23/2009	14		low flow
OK311500030010_00	311500030010-002AT	4/6/2009	3.75		low flow
OK311500030010_00	311500030010-002AT	4/21/2009	47.25		low flow
OK311510010010_10	311510010010-001AT	12/8/1998	33	69	high flow
OK311510010010_10	311510010010-001AT	1/26/1999	15	51	high flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311510010010_10	311510010010-001AT	2/23/1999	23	40	high flow
OK311510010010_10	311510010010-001AT	3/15/1999	122	200	high flow
OK311510010010_10	311510010010-001AT	4/20/1999	17	62	high flow
OK311510010010_10	311510010010-001AT	5/25/1999	337	222	high flow
OK311510010010_10	311510010010-001AT	6/21/1999	104	76	low flow
OK311510010010_10	311510010010-001AT	7/20/1999	9	15	low flow
OK311510010010_10	311510010010-001AT	8/17/1999	6	9	low flow
OK311510010010_10	311510010010-001AT	9/20/1999	2	4	low flow
OK311510010010_10	311510010010-001AT	10/31/1999	4	8	low flow
OK311510010010_10	311510010010-001AT	11/28/1999		10	low flow
OK311510010010_10	311510010010-001AT	12/20/1999	12	39	low flow
OK311510010010_10	311510010010-001AT	1/24/2000	30	78	low flow
OK311510010010_10	311510010010-001AT	2/29/2000	28	47	low flow
OK311510010010_10	311510010010-001AT	4/4/2000	193		high flow
OK311510010010_10	311510010010-001AT	5/22/2000	7	22	low flow
OK311510010010_10	311510010010-001AT	6/26/2000	303	508	high flow
OK311510010010_10	311510010010-001AT	7/31/2000	10	32	low flow
OK311510010010_10	311510010010-001AT	8/29/2000	3	1	low flow
OK311510010010_10	311510010010-001AT	10/30/2000	466	36	high flow
OK311510010010_10	311510010010-001AT	11/27/2000	19	4	low flow
OK311510010010_10	311510010010-001AT	2/27/2001	212		high flow
OK311510010010_10	311510010010-001AT	3/20/2001	52		high flow
OK311510010010_10	311510010010-001AT	4/17/2001	23		high flow
OK311510010010_10	311510010010-001AT	5/21/2001	1000		high flow
OK311510010010_10	311510010010-001AT	7/23/2001	4		low flow
OK311510010010_10	311510010010-001AT	8/20/2001	5		low flow
OK311510010010_10	311510010010-001AT	9/17/2001	3		low flow
OK311510010010_10	311510010010-001AT	10/22/2001	13		low flow
OK311510010010_10	311510010010-001AT	11/13/2001	3		low flow
OK311510010010_10	311510010010-001AT	2/19/2002	32		low flow
OK311510010010_10	311510010010-001AT	4/3/2002	39		low flow
OK311510010010_10	311510010010-001AT	5/1/2002	37		low flow
OK311510010010_10	311510010010-001AT	5/29/2002	22		low flow
OK311510010010_10	311510010010-001AT	6/24/2002	12		low flow
OK311510010010_10	311510010010-001AT	8/7/2002	5		low flow
OK311510010010_10	311510010010-001AT	10/23/2002	88		low flow
OK311510010010_10	311510010010-001AT	11/20/2002	44		low flow
OK311510010010_10	311510010010-001AT	2/12/2003	70		high flow
OK311510010010_10	311510010010-001AT	2/19/2003	80		high flow
OK311510010010_10	311510010010-001AT	3/24/2003	35		high flow
OK311510010010_10	311510010010-001AT	4/29/2003	28		low flow
OK311510010010_10	311510010010-001AT	6/2/2003	41		low flow
OK311510010010_10	311510010010-001AT	6/3/2003	14		low flow
OK311510010010_10	311510010010-001AT	7/15/2003	7		low flow
OK311510010010_10	311510010010-001AT	7/23/2003	13		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311510010010_10	311510010010-001AT	9/24/2003	14		low flow
OK311510010010_10	311510010010-001AT	10/20/2003	7		low flow
OK311510010010_10	311510010010-001AT	11/23/2003	3		low flow
OK311510010010_10	311510010010-001AT	1/7/2004	11		low flow
OK311510010010_10	311510010010-001AT	2/17/2004	14		low flow
OK311510010010_10	311510010010-001AT	3/23/2004	23		high flow
OK311510010010_10	311510010010-001AT	4/26/2004	22		high flow
OK311510010010_10	311510010010-001AT	6/7/2004	4		low flow
OK311510010010_10	311510010010-001AT	7/12/2004	27		low flow
OK311510010010_10	311510010010-001AT	8/16/2004	425		low flow
OK311510010010_10	311510010010-001AT	9/20/2004	18		low flow
OK311510010010_10	311510010010-001AT	11/2/2004	10		low flow
OK311510010010_10	311510010010-001AT	11/22/2004	244		high flow
OK311510010010_10	311510010010-001AT	1/4/2005	37		high flow
OK311510010010_10	311510010010-001AT	2/15/2005	38		high flow
OK311510010010_10	311510010010-001AT	4/19/2005	17		low flow
OK311510010010_10	311510010010-001AT	5/18/2005	35		low flow
OK311510010010_10	311510010010-001AT	7/19/2005	6		low flow
OK311510010010_10	311510010010-001AT	8/16/2005	183		high flow
OK311510010010_10	311510010010-001AT	9/12/2005	6		low flow
OK311510010010_10	311510010010-001AT	10/17/2005	5		low flow
OK311510010010_10	311510010010-001AT	11/29/2005	5		low flow
OK311510010010_10	311510010010-001AT	1/17/2006	14		low flow
OK311510010010_10	311510010010-001AT	2/21/2006	18		low flow
OK311510010010_10	311510010010-001AT	3/27/2006	30		low flow
OK311510010010_10	311510010010-001AT	6/5/2006	31		low flow
OK311510010010_10	311510010010-001AT	9/26/2006	3		low flow
OK311510010010_10	311510010010-001AT	10/31/2006	3		low flow
OK311510010010_10	311510010010-001AT	12/5/2006	12		low flow
OK311510010010_10	311510010010-001AT	1/23/2007	74		low flow
OK311510010010_10	311510010010-001AT	3/6/2007	9		low flow
OK311510010010_10	311510010010-001AT	4/3/2007	286		high flow
OK311510010010_10	311510010010-001AT	5/15/2007	147		high flow
OK311510010010_10	311510010010-001AT	6/12/2007	57		high flow
OK311510010010_10	311510010010-001AT	7/10/2007	55		high flow
OK311510010010_10	311510010010-001AT	8/21/2007	43		low flow
OK311510010010_10	311510010010-001AT	9/18/2007	51		low flow
OK311510010010_10	311510010010-001AT	10/30/2007	18		low flow
OK311510010010_10	311510010010-001AT	12/4/2007	13		low flow
OK311510010010_10	311510010010-001AT	1/23/2008	19		low flow
OK311510010010_10	311510010010-001AT	3/4/2008	21		low flow
OK311510010010_10	311510010010-001AT	4/21/2008	21		low flow
OK311510010010_10	311510010010-001AT	5/21/2008	16		low flow
OK311510010010_10	311510010010-001AT	7/28/2008	9		low flow
OK311510010010_10	311510010010-001AT	9/23/2008	17		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311510010010_10	311510010010-001AT	11/18/2008	14		low flow
OK311510010010_10	311510010010-001AT	2/25/2009	13		low flow
OK311510010010_10	311510010010-001AT	3/24/2009	14.25		low flow
OK311510010010_10	311510010010-001AT	4/21/2009	125		high flow
OK311510020120_00	311510020120-03	5/26/2004	41.6		low flow
OK311510020120_00	311510020120-03	8/25/2004	47.9	74	low flow
OK311510020120_00	311510020120-03	9/27/2004	19.6	30	low flow
OK311510020120_00	311510020120-03	11/1/2004	20.6	39	low flow
OK311510020120_00	311510020120-03	11/29/2004	37.3	64	low flow
OK311510020120_00	311510020120-03	1/10/2005		84	high flow
OK311510020120_00	311510020120-03	2/14/2005	31.5	57	low flow
OK311510020120_00	311510020120-03	3/21/2005	31.8	73	low flow
OK311510020120_00	311510020120-03	4/25/2005	39.8	71	low flow
OK311510020120_00	311510020120-03	5/31/2005	241	280	low flow
OK311510020120_00	311510020120-03	7/12/2005	55.6	54	low flow
OK311510020120_00	311510020120-03	8/15/2005	2.16	<10	low flow
OK311510020120_00	311510020120-03	9/19/2005	3.26	<10	low flow
OK311510020120_00	311510020120-03	10/24/2005	2.66	<10	low flow
OK311510020120_00	311510020120-03	12/5/2005	10.2	<10	high flow
OK311510020120_00	311510020120-03	1/17/2006	18.3	22	low flow
OK311510020120_00	311510020120-03	2/21/2006	46.2	86	low flow
OK311510020120_00	311510020120-03	3/27/2006	71.7	103	low flow
OK311510020120_00	311510020120-03	5/1/2006	22.2	25	low flow
OK311510020120_00	311510020120-03	5/30/2006	40.2	57	low flow
OK311510020120_00	311510020120-03	6/26/2006	24.5	15	low flow
OK311600010020_00	21-4-1	5/19/2004	111		low flow
OK311600010020_00	21-4-1	8/30/2004	90	88	low flow
OK311600010020_00	21-4-1	10/5/2004	27.3	44	low flow
OK311600010020_00	21-4-1	11/16/2004	453	228	high flow
OK311600010020_00	21-4-1	12/13/2004	6.96	22	low flow
OK311600010020_00	21-4-1	1/19/2005		18	low flow
OK311600010020_00	21-4-1	2/23/2005	12.5	13	low flow
OK311600010020_00	21-4-1	3/29/2005	40.8	59	low flow
OK311600010020_00	21-4-1	5/10/2005	345	377	low flow
OK311600010020_00	21-4-1	6/7/2005	>1000	807	low flow
OK311600010020_00	21-4-1	7/12/2005	42.3	58	low flow
OK311600010020_00	21-4-1	8/15/2005	101	150	low flow
OK311600010020_00	21-4-1	9/20/2005	12.6	5	low flow
OK311600010020_00	21-4-1	10/24/2005	6.53	10	low flow
OK311600010020_00	21-4-1	12/5/2005	6.49	<10	low flow
OK311600010020_00	21-4-1	1/17/2006	9.49	14	low flow
OK311600010020_00	21-4-1	2/21/2006	11.7	21	low flow
OK311600010020_00	21-4-1	3/28/2006	3.14	<10	low flow
OK311600010020_00	21-4-1	5/1/2006	12.4	20	low flow
OK311600010020_00	21-4-1	6/5/2006	21.5	56	low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311600010020_00	21-4-1	7/10/2006	5.05	<10	low flow
OK311600010040_00	OK311600010040-001AT	11/4/1998	15.2	60	low flow
OK311600010040_00	OK311600010040-001AT	12/7/1998	10	62	low flow
OK311600010040_00	OK311600010040-001AT	1/25/1999	14	34	low flow
OK311600010040_00	OK311600010040-001AT	2/22/1999	25	64	low flow
OK311600010040_00	OK311600010040-001AT	3/15/1999	42	100	low flow
OK311600010040_00	OK311600010040-001AT	4/19/1999	62	106	low flow
OK311600010040_00	OK311600010040-001AT	5/24/1999	145	138	low flow
OK311600010040_00	OK311600010040-001AT	6/21/1999	48	74	low flow
OK311600010040_00	OK311600010040-001AT	7/19/1999	42	90	low flow
OK311600010040_00	OK311600010040-001AT	8/16/1999	85	144	low flow
OK311600010040_00	OK311600010040-001AT	9/20/1999	106	158	low flow
OK311600010040_00	OK311600010040-001AT	10/31/1999	31	62	low flow
OK311600010040_00	OK311600010040-001AT	11/28/1999		17	low flow
OK311600010040_00	OK311600010040-001AT	12/20/1999	6	20	low flow
OK311600010040_00	OK311600010040-001AT	1/24/2000	10	5	low flow
OK311600010040_00	OK311600010040-001AT	2/29/2000	45	79	low flow
OK311600010040_00	OK311600010040-001AT	4/4/2000	419		low flow
OK311600010040_00	OK311600010040-001AT	5/22/2000	40	148	low flow
OK311600010040_00	OK311600010040-001AT	6/26/2000	57	96	low flow
OK311600010040_00	OK311600010040-001AT	7/31/2000	48	356	low flow
OK311600010040_00	OK311600010040-001AT	8/29/2000	5	1	low flow
OK311600010040_00	OK311600010040-001AT	9/26/2000	26	0	low flow
OK311600010040_00	OK311600010040-001AT	10/30/2000	51	70	low flow
OK311600010040_00	OK311600010040-001AT	11/27/2000	8	17	low flow
OK311600010040_00	OK311600010040-001AT	3/21/2001	25		low flow
OK311600010040_00	OK311600010040-001AT	4/18/2001	34		low flow
OK311600010040_00	OK311600010040-001AT	5/22/2001	1000		low flow
OK311600010040_00	OK311600010040-001AT	7/24/2001	118		low flow
OK311600010040_00	OK311600010040-001AT	8/21/2001	149		low flow
OK311600010040_00	OK311600010040-001AT	9/18/2001	55		low flow
OK311600010040_00	OK311600010040-001AT	10/23/2001	17		low flow
OK311600010040_00	OK311600010040-001AT	11/14/2001	7		low flow
OK311600010040_00	OK311600010040-001AT	2/19/2002	7		low flow
OK311600010040_00	OK311600010040-001AT	4/3/2002	29		low flow
OK311600010040_00	OK311600010040-001AT	5/1/2002	90		low flow
OK311600010040_00	OK311600010040-001AT	5/29/2002	149		low flow
OK311600010040_00	OK311600010040-001AT	8/7/2002	97		low flow
OK311600010040_00	OK311600010040-001AT	8/20/2002	100		low flow
OK311600010040_00	OK311600010040-001AT	9/24/2002	93		low flow
OK311600010040_00	OK311600010040-001AT	10/23/2002	47		low flow
OK311600010040_00	OK311600010040-001AT	11/19/2002	11		low flow
OK311600010040_00	OK311600010040-001AT	1/14/2003	29		low flow
OK311600010040_00	OK311600010040-001AT	2/18/2003	36		low flow
OK311600010040_00	OK311600010040-001AT	3/24/2003	48		low flow

Waterbody ID	WQM Station	Date	Turbidity (NTU) 82079	TSS (mg/L) 00530	Flow condition
OK311600010040_00	OK311600010040-001AT	4/29/2003	70		low flow
OK311600010040_00	OK311600010040-001AT	7/15/2003	89		low flow
OK311600010040_00	OK311600010040-001AT	8/19/2003	92		low flow
OK311600010040_00	OK311600010040-001AT	9/23/2003	108		low flow
OK311600010040_00	OK311600010040-001AT	10/20/2003	29		low flow
OK311600010040_00	OK311600010040-001AT	11/23/2003	21		low flow
OK311600010040_00	OK311600010040-001AT	1/6/2004	5		low flow
OK311600010040_00	OK311600010040-001AT	2/17/2004	31		low flow
OK311600010040_00	OK311600010040-001AT	3/22/2004	20		low flow
OK311600010040_00	OK311600010040-001AT	4/26/2004	949		low flow
OK311600010040_00	SWQ3	5/19/2004	58.3		low flow
OK311600010040_00	OK311600010040-001AT	6/8/2004	32		low flow
OK311600010040_00	OK311600010040-001AT	7/12/2004	56		low flow
OK311600010040_00	OK311600010040-001AT	8/17/2004	72		low flow
OK311600010040_00	SWQ3	8/30/2004	280	250	low flow
OK311600010040_00	OK311600010040-001AT	9/21/2004	87		low flow
OK311600010040_00	SWQ3	10/5/2004	33.7	48	low flow
OK311600010040_00	OK311600010040-001AT	11/2/2004	11		low flow
OK311600010040_00	OK311600010040-001AT	11/22/2004	617		low flow
OK311600010040_00	SWQ3	12/1/2004	14.4	15	low flow
OK311600010040_00	SWQ3	12/13/2004	8.69	16	low flow
OK311600010040_00	OK311600010040-001AT	1/4/2005	7		low flow
OK311600010040_00	SWQ3	1/19/2005		<10	low flow
OK311600010040_00	SWQ3	2/22/2005	129	12	low flow
OK311600010040_00	SWQ3	3/29/2005	39.6	56	low flow
OK311600010040_00	OK311600010040-001AT	4/19/2005	57		low flow
OK311600010040_00	SWQ3	5/10/2005	39.6	59	low flow
OK311600010040_00	OK311600010040-001AT	5/18/2005	66		low flow
OK311600010040_00	SWQ3	6/7/2005	81.1	159	low flow
OK311600010040_00	SWQ3	7/12/2005	6.8	16	low flow
OK311600010040_00	OK311600010040-001AT	7/19/2005	99		low flow
OK311600010040_00	OK311600010040-001AT	8/16/2005	57		low flow
OK311600010040_00	SWQ3	8/16/2005	14.5	34	low flow
OK311600010040_00	OK311600010040-001AT	9/12/2005	67		low flow
OK311600010040_00	SWQ3	9/20/2005	12.1	31	low flow
OK311600010040_00	OK311600010040-001AT	10/17/2005	37		low flow
OK311600010040_00	SWQ3	10/25/2005	4.73	14	low flow
OK311600010040_00	OK311600010040-001AT	11/29/2005	6		low flow
OK311600010040_00	SWQ3	12/6/2005	7.75	10	low flow
OK311600010040_00	OK311600010040-001AT	1/17/2006	11		low flow
OK311600010040_00	SWQ3	1/18/2006	5.55	<10	low flow
OK311600010040_00	OK311600010040-001AT	2/22/2006	7		low flow
OK311600010040_00	SWQ3	2/22/2006	3.73	<10	low flow
OK311600010040_00	OK311600010040-001AT	3/27/2006	53		low flow
OK311600010040_00	SWQ3	3/28/2006	24.2	43	low flow

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OK311600010040_00	OK311600010040-001AT	5/1/2006	52		low flow
OK311600010040_00	SWQ3	5/2/2006	7.8	18	low flow
OK311600010040_00	OK311600010040-001AT	6/5/2006	72		low flow
OK311600010040_00	SWQ3	6/6/2006	12.8	23	low flow
OK311600010040_00	SWQ3	7/11/2006	11	15	low flow
OK311600010040_00	OK311600010040-001AT	7/17/2006	90		low flow
OK311600010040_00	OK311600010040-001AT	8/15/2006	84		low flow
OK311600010040_00	OK311600010040-001AT	9/26/2006	89		low flow
OK311600010040_00	OK311600010040-001AT	10/31/2006	21		low flow
OK311600010040_00	OK311600010040-001AT	12/5/2006	52		low flow
OK311600010040_00	OK311600010040-001AT	1/23/2007	10		low flow
OK311600010040_00	OK311600010040-001AT	3/6/2007	45		low flow
OK311600010040_00	OK311600010040-001AT	4/3/2007	21		low flow
OK311600010040_00	OK311600010040-001AT	5/15/2007	73		low flow
OK311600010040_00	OK311600010040-001AT	6/12/2007	40		low flow
OK311600010040_00	OK311600010040-001AT	7/10/2007	85		low flow
OK311600010040_00	OK311600010040-001AT	8/21/2007	132		low flow
OK311600010040_00	OK311600010040-001AT	9/18/2007	49		low flow
OK311600010040_00	OK311600010040-001AT	10/30/2007	25		low flow
OK311600010040_00	OK311600010040-001AT	12/4/2007	4		low flow
OK311600010040_00	OK311600010040-001AT	1/16/2008	5		low flow
OK311600010040_00	OK311600010040-001AT	3/11/2008	13		low flow
OK311600010040_00	OK311600010040-001AT	4/22/2008	89		low flow
OK311600010040_00	OK311600010040-001AT	5/20/2008	60		low flow
OK311600010040_00	OK311600010040-001AT	7/29/2008	139		low flow
OK311600010040_00	OK311600010040-001AT	9/22/2008	52		low flow
OK311600010040_00	OK311600010040-001AT	11/17/2008	14		low flow
OK311600010040_00	OK311600010040-001AT	2/23/2009	17		low flow
OK311600010040_00	OK311600010040-001AT	3/23/2009	55		low flow
OK311600010040_00	OK311600010040-001AT	4/20/2009	50		low flow
OK311800000040_00	OK311800-00-0040D	6/14/2004	69.8		low flow
OK311800000040_00	OK311800-00-0040D	8/24/2004	32.2	27	low flow
OK311800000040_00	OK311800-00-0040D	9/28/2004	41.1	23	low flow
OK311800000040_00	OK311800-00-0040D	11/2/2004	28.7	11	low flow
OK311800000040_00	OK311800-00-0040D	11/30/2004	54.1	15	low flow
OK311800000040_00	OK311800-00-0040D	1/11/2005		45	low flow
OK311800000040_00	OK311800-00-0040D	2/15/2005	41.2	43	low flow
OK311800000040_00	OK311800-00-0040D	3/22/2005	28.4	33	low flow
OK311800000040_00	OK311800-00-0040D	4/26/2005	37.1	51	low flow
OK311800000040_00	OK311800-00-0040D	6/1/2005	>1000	4945	low flow
OK311800000040_00	OK311800-00-0040D	7/11/2005	80.4	60	low flow
OK311800000040_00	OK311800-00-0040D	8/16/2005	910	305	low flow
OK311800000040_00	OK311800-00-0040D	9/20/2005	18.4	26	low flow
OK311800000040_00	OK311800-00-0040D	10/25/2005	17.3	<10	low flow
OK311800000040_00	OK311800-00-0040D	12/6/2005	9.12	<10	low flow

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OK311800000040_00	OK311800-00-0040D	1/18/2006	27.6	54	low flow
OK311800000040_00	OK311800-00-0040D	2/22/2006	29.4	32	low flow
OK311800000040_00	OK311800-00-0040D	3/28/2006	29.4	28	low flow
OK311800000040_00	OK311800-00-0040D	5/2/2006	122	66	low flow
OK311800000040_00	OK311800-00-0040D	5/31/2006	50.9	45	low flow
OK311800000040_00	OK311800-00-0040D	6/27/2006	43.2	23	low flow
OK311800000070_00	OK311800000070C	5/16/2000	50.4	58	low flow
OK311800000070_00	OK311800000070C	6/20/2000	79.4	75	low flow
OK311800000070_00	OK311800000070C	7/25/2000	12.2	70	low flow
OK311800000070_00	OK311800000070C	8/29/2000	41.1	62	low flow
OK311800000070_00	OK311800000070C	10/3/2000	31	48	low flow
OK311800000070_00	OK311800000070C	1/23/2001	8.34	14	low flow
OK311800000070_00	OK311800000070C	2/27/2001	99.1	96	low flow
OK311800000070_00	OK311800000070C	4/3/2001	44.8	30	low flow
OK311800000070_00	OK311800000070C	5/8/2001	221	204	low flow
OK311800000070_00	OK311800000070C	6/12/2001	84.4	72	low flow
OK311800000070_00	OK311800000070C	6/26/2001	9.26		low flow
OK311800000070_00	OK311800000070C	7/17/2001	17.4	10	low flow
OK311800000070_00	OK311800000070C	8/21/2001	140	53	low flow
OK311800000070_00	OK311800000070C	9/25/2001	68.3	45	low flow
OK311800000070_00	OK311800000070C	10/30/2001	39.4	33	low flow
OK311800000070_00	OK311800000070C	12/11/2001	8.2	<10	low flow
OK311800000070_00	OK311800000070C	1/16/2002	10.1	19	low flow
OK311800000070_00	OK311800000070C	2/20/2002	17.6	14	low flow
OK311800000070_00	OK311800000070C	3/26/2002	10.8	11	low flow

APPENDIX B

GENERAL METHOD FOR ESTIMATING FLOW FOR UNGAGED STREAMS

AND

ESTIMATED FLOW EXCEEDANCE PERCENTILES

Appendix B
General Method for Estimating Flow for Ungaged Streams

Flows duration curve will be developed using existing USGS measured flow where the data exist from a gage on the stream segment of interest, or by estimating flow for stream segments with no corresponding flow record. Flow data to support flow duration curves and load duration curves will be derived for each Oklahoma stream segment in the following priority:

i) In cases where a USGS flow gage occurs on, or within one-half mile upstream or downstream of the Oklahoma stream segment.

   a. If simultaneously collected flow data matching the water quality sample collection date are available, these flow measurements will be used.

   b. If flow measurements at the coincident gage are missing for some dates on which water quality samples were collected, the gaps in the flow record will be filled, or the record will be extended, by estimating flow based on measured streamflows at a nearby gages. All gages within 150 km radius are identified. For each of the identified gage with a minimum of 99 flow measurements on matching dates, four different regressions are calculated including linear, log linear, logarithmic and exponential regressions. The regression with the lowest root mean square error (RMSE) is chosen for each gage. The potential filling gages are ranked by RMSE from lowest to highest. The record is filled from the first gage (lowest RMSE) for those dates that exist in both records. If dates remain unfilled in the desired timespan of the timeseries, the filling process is repeated with the next gage with the next lowest RMSE and proceeds in this fashion until all missing values in the desired timespan are filled.

   c. The flow frequency for the flow duration curves will be based on measured flows only. The filled timeseries described above is used to match flows to sampling dates to calculate loads.

   d. On a stream impounded by dams to form reservoirs of sufficient size to impact stream flow, only flows measured after the date of the most recent impoundment will be used to develop the flow duration curve. This also applies to reservoirs on major tributaries to the stream.

ii) In the case no coincident flow data are available for a stream segment, but flow gage(s) are present upstream and/or downstream without a major reservoir between, flows will be estimated for the stream segment from an upstream or downstream gage using a watershed area ratio method derived by delineating subwatersheds, and relying on the NRCS runoff curve numbers and antecedent rainfall condition. Drainage subbasins will first be delineated for all impaired 303(d)-listed WQM stations, along with all USGS flow stations located in the 8-digit HUCs with impaired streams. Parsons will then identify all the USGS gage stations upstream and downstream of the subwatersheds with 303(d) listed WQM stations.

   a. Watershed delineations are performed using ESRI Arc Hydro with a 30 m resolution National Elevation Dataset digital elevation model, and National

Hydrography Dataset (NHD) streams. The area of each watershed will be calculated following watershed delineation.

b. The watershed average curve number is calculated from soil properties and land cover as described in the U.S. Department of Agriculture (USDA) Publication *TR-55: Urban Hydrology for Small Watersheds*. The soil hydrologic group is extracted from NRCS STATSGO soil data, and land use category from the 2001 National Land Cover Dataset (NLCD). Based on land use and the hydrologic soil group, SCS curve numbers are estimated at the 30-meter resolution of the NLCD grid as shown in the table below. The average curve number is then calculated from all the grid cells within the delineated watershed.

c. The average rainfall is calculated for each watershed from gridded average annual precipitation datasets for the period 1971-2000 (Spatial Climate Analysis Service, Oregon State University, http://www.ocs.oregonstate.edu/prism/, created February 20, 2004).

Runoff Curve Numbers for Various Land Use Categories and Hydrologic Soil Groups

NLCD Land Use Category	Curve number for hydrologic soil group			
	A	B	C	D
0 in case of zero	100	100	100	100
11 Open Water	100	100	100	100
12 Perennial Ice/Snow	100	100	100	100
21 Developed, Open Space	39	61	74	80
22 Developed, Low Intensity	57	72	81	86
23 Developed, Medium Intensity	77	85	90	92
24 Developed, High Intensity	89	92	94	95
31 Barren Land (Rock/Sand/Clay)	77	86	91	94
32 Unconsolidated Shore	77	86	91	94
41 Deciduous Forest	37	48	57	63
42 Evergreen Forest	45	58	73	80
43 Mixed Forest	43	65	76	82
51 Dwarf Scrub	40	51	63	70
52 Shrub/Scrub	40	51	63	70
71 Grasslands/Herbaceous	40	51	63	70
72 Sedge/Herbaceous	40	51	63	70
73 Lichens	40	51	63	70
74 Moss	40	51	63	70
81 Pasture/Hay	35	56	70	77
82 Cultivated Crops	64	75	82	85
90-99 Wetlands	100	100	100	100

d. The method used to project flow from a gaged location to an ungaged location was adapted by combining aspects of two other flow projection methodologies developed by Furness (Furness 1959) and Wurbs (Wurbs 1999).

Furness Method

The Furness method has been employed in Kansas by both the USGS and Kansas Department of Health and Environment to estimate flow-duration curves. The method typically uses maps, graphs, and computations to identify six unique factors of flow duration for ungaged sites. These factors include:

- the mean streamflow and percentage duration of mean streamflow;
- the ratio of 1-percent-duration streamflow to mean streamflow;
- the ratio of 0.1-percent-duration streamflow to 1-percent-duration streamflow;
- the ratio of 50-percentduration streamflow to mean streamflow;
- the percentage duration of appreciable (0.10 ft /s) streamflow; and
- average slope of the flow-duration curve.

Furness defined appreciable flow as 0.10 ft/s. This value of streamflow was important because, for many years, this was the smallest non-zero streamflow value reported in most Kansas streamflow records. The average slope of the duration curve is a graphical approximation of the variability index, which is the standard deviation of the logarithms of the streamflows (Furness 1959, p. 202-204, figs. 147 and 148). On a duration curve that fits the log-normal distribution exactly, the variability index is equal to the ratio of the streamflow at the 15.87-percent-duration point to the streamflow at the 50-percent-duration point. Because duration curves usually do not exactly fit the log-normal distribution, the average-slope line is drawn through an arbitrary point, and the slope is transferred to a position approximately defined by the previously estimated points.

The method provides a means of both describing shape of the flow duration curve and scaling the magnitude of the curve to another location, basically generating a new flow duration curve with a very similar shape but different magnitude at the ungaged location.

Wurbs Modified NRCS Method

As a part of the Texas water availability modeling (WAM) system developed by Texas Natural Resources Conservation Commission, now known as the Texas Commission on Environmental Quality (TCEQ), and partner agencies, various contractors developed models of all Texas rivers. As a part of developing the model code to be used, Dr. Ralph Wurbs of Texas A&M University researched methods to distribute flows from gaged locations to ungaged locations. (Wurbs 2006) His results included the development of a modified NRCS curve-number (CN) method for distributing flows from gaged locations to ungaged locations.

This modified NRCS method is based on the following relationship between rainfall depth, P in inches, and runoff depth, Q in inches (NRCS 1985; McCuen 2005):

$$Q = \frac{(P - I_a)^2}{(P - I_a) + S} \quad (1)$$

where:

Q = runoff depth (inches)

P = rainfall (inches)

S = potential maximum retention after runoff begins (inches)

I_a = initial abstraction (inches)

If P < 0.2, Q = 0. Initial abstraction has been found to be empirically related to S by the equation

$$I_a = 0.2*S \quad (2)$$

Thus, the runoff curve number equation can be rewritten:

$$Q = \frac{(P - 0.2S)^2}{P + 0.8S} \quad (3)$$

S is related to the curve number (CN) by:

$$S = \frac{1000}{CN} - 10 \quad (4)$$

P and Q in inches must be multiplied by the watershed area to obtain volumes. The potential maximum retention, S in inches, represents an upper limit on the amount of water that can be abstracted by the watershed through surface storage, infiltration, and other hydrologic abstractions. For convenience, S is expressed in terms of a curve number CN, which is a dimensionless watershed parameter ranging from 0 to 100. A CN of 100 represents a limiting condition of a perfectly impervious watershed with zero retention and thus all the rainfall becoming runoff. A CN of zero conceptually represents the other extreme with the watershed abstracting all rainfall with no runoff regardless of the rainfall amount.

First, S is calculated from the average curve number for the gaged watershed. Next, the daily historic flows at the gage are converted to depth basis (as used in equations 1 and 3) by dividing by its drainage area, then converted to inches. Equation 3 is then solved for daily precipitation depth of the gaged site, Pgaged. The daily precipitation depth for the ungaged site is then calculated as the precipitation depth of the gaged site multiplied by the ratio of the long-term average precipitation in the watersheds of the ungaged and gaged sites:

$$P_{ungaged} = P_{gaged}\left(\frac{M_{ungaged}}{M_{gaged}}\right) \quad (5)$$

where M is the mean annual precipitation of the watershed in inches. The daily precipitation depth for the ungaged watershed, along with the average curve number of the ungaged watershed, are then used to calculate the depth equivalent daily flow Q of the ungaged site. Finally, the volumetric flow rate at the ungaged site is calculated by multiplying by the area of the watershed of the ungaged site and converted to cubic feet.

In a subsequent study (Wurbs 2006), Wurbs evaluated the predictive ability of various flow distribution methods including:

- Distribution of flows in proportion to drainage area;
- Flow distribution equation with ratios for various watershed parameters;
- Modified NRCS curve-number method;
- Regression equations relating flows to watershed characteristics;
- Use of recorded data at gaging stations to develop precipitation-runoff relationships; and
- Use of watershed (precipitation-runoff) computer models such as SWAT.

As a part of the analysis, the methods were used to predict flows at one gaged station to another gage station so that fit statistics could be calculated to evaluate the efficacy of each of the methods. Based upon similar analyses performed for many gaged sites which reinforced the tests performed as part of the study, Wurbs observed that temporal variations in flows are dramatic, ranging from zero flows to major floods. Mean flows are reproduced reasonably well with the all flow distribution methods and the NRCS CN method reproduces the mean closest. Accuracy in predicting mean flows is much better than the accuracy of predicting the flow-frequency relationship. Performance in reproducing flow-frequency relationships is better than for reproducing flows for individual flows.

Wurbs concluded that the NRCS CN method, the drainage area ratio method, and drainage area – CN – mean annual precipitation depth (MP) ratio methods all yield similar levels of accuracy. If the CN and MP are the same for the gaged and ungaged watersheds, the three alternative methods yield identical results. Drainage area is the most important watershed parameter. However, the NRCS method adaptation is preferable in those situations in which differences in CN (land use and soil type) and long-term MP are significantly different between the gaged and ungaged watersheds. The CN and MP are usually similar but not identical.

Generalized Flow Projection Methodology

In the first several versions of the Oklahoma TMDL toolbox, all flows at ungaged sites that required projection from a gaged site were performed with the Modified NRCS CN method. This led a number of problems with flow projections in the early versions. As described previously, the NRCS method, in common with all others, reproduces the mean or central tendency best but the accuracy of the fit degrades

towards the extremes of the frequency spectrum. Part of the degradation in accuracy is due to the quite non-linear nature of the NRCS equations. On the low flow end of the frequency spectrum, Equation 2 above constitutes a low flow limit below which the NRCS equations are not applicable at all. Given the flashy nature of most streams in locations for which the toolbox was developed, high and low flows are relatively more common and spurious results from the limits of the equations abounded.

In an effort to increase the flow prediction efficacy and remedy the failure of the NRCS CN method at the extremes of the flow spectrum, a hybrid of the NRCS CN method and the Furness method was developed. Noting the facts that all tested projection methods, and particularly the NRCS CN method, perform best near the central tendency or mean and that none of the methods predict the entire flow frequency spectrum well, an assumption that is implicit in the Furness method is applied. The Furness method implicitly assumes that the shape of the flow frequency curve at an upstream site is related to and similar to the shape of the flow frequency curve at a site downstream. As described previously, the Furness method employs several relationships derived between the mean flows and flows at differing frequencies to replicate the shape of the flow frequency curve at the projected site, while utilizing other regressed relationships to scale the magnitude of the curve. Since, as part of the toolbox calculations, the entire flow frequency curve at a 1% interval is calculated for every USGS gage utilizing very long periods of record, this vector in association with the mean flow was used to project the flow frequency curve.

In the ideal situation flows are projected from an ungaged location from a downstream gaged location. The toolbox also has the capability to project flows from and upstream gaged location if there is no useable downstream gage.

iii) In the rare case where no coincident flow data are available for a WQM station and no gages are present upstream or downstream, flows will be estimated for the WQM station from a gage on an adjacent watershed of similar size and properties, via the same procedure described above for upstream or downstream gages.

References

Furness, L.W., 1959, *Kansas Streamflow Characteristics- Part 1, Flow Duration*: Kansas Water Resources Board Technical Report No. 1.

Wurbs, R.A., and E.D. Sisson, *Evaluation of Methods for Distributing Naturalized Streamflows from Gaged Watersheds to Ungaged Subwatersheds*, Technical Report 179, Texas Water Resources Institute and Texas Natural Resource Conservation Commission, August 1999.

Wurbs, R.A . 2006. *Methods for Developing Naturalized Monthly Flows at Gaged and Ungaged Sites*. Journal of Hydrologic Engineering, January/February 2006, ASCE

Estimated Flow Exceedance Percentiles

WBID	OK311100010290_00	OK311100010300_00	OK311100040010_00	OK311100040080_00	OK311200000030_00	OK311200000060_00	OK311200000080_00	OK311300010020_00	OK311310010070_00	OK311310020010_00	OK311310030010_00	OK311310030040_00	OK311310030050_00	OK311500010020_10	OK311500010050_00	OK311500010080_00	OK311500030010_00	OK311510020120_00	OK311600010020_00	OK311600010040_00	OK311800000040_00	OK311800000070_00	OK311300010020_10	OK311510010010_10
ProjGage	2930	2715	2949	2949	2753	2753	2930	2753	2930	2745	2745	2745	2745	3774	2930	3040	3027	2552	2930	2930	2930	2930	2753	2544
Area (sq. mile)	63.2	16.5	161.4	108.2	84.8	61.1	49.1	19.9	64.0	76.3	163.0	85.3	27.7	173.0	123.3	69.8	48.2	142.2	104.1	153.7	115.6	46.2	31.4	144.2
CN	65.1	60.3	64.6	66.9	68.1	66.1	66.2	74.3	78.6	75.4	76.8	79.0	80.7	66.6	73.4	75.8	75.3	53.0	74.2	71.5	69.6	71.0	72.3	65.1
Rain (inch)	33.7	33.2	34.7	34.0	33.2	34.3	35.4	32.6	30.2	32.4	30.9	30.6	31.1	29.4	29.3	29.9	29.3	23.7	28.1	26.6	28.7	27.2	33.6	28.1
ProjType	A	A	U	D	A	A	A	U	A	U	U	D	D	D	A	U	U	U	A	A	A	A	U	U
NN	2453	14336	18009	18009	24077	24077	2453	24077	2453	21920	21920	21920	21920	9232	2453	3019	17349	8569	2453	2453	2453	2453	24077	
QAQC	AD:2930:0730058 0,A;-CN,-R,USG:0	AD:2715:0731120 0,A;-CN,-R,USG:0	U:2949:07315700, +CN,+R	D:2949:07315700, +CN,+R,USG:0	AD:2753:07311000,A;-CN,-R,USG:0	AD:2753:0731100 0,A;-CN,-R,USG:0	AD:2930:0730058 0,A;-CN,-R,USG:0	U:2753:07311000, +CN,+R	AD:2930:0730058 0,A;-CN,-R,USG:0	U:2745:07311500, +CN,+R	U:2745:07311500, +CN,+R	D:2745:07311500, +CN,+R,USG:0	D:2745:07311500, +CN,+R,USG:0	D:3774:07307028, +CN,+R,USG:0	AU:2930:07300580, A;-CN,-R	U:3040:07307010,+ CN,+R	U:3027:07304500, +CN,+R	U:2552:07301420 ,+CN,+R	AU:2930:0730058 0,A;-CN,-R	AU:2930:0730058 0,A;-CN,-R	AU:2930:0730058 0,A;-CN,-R	AD:2930:0730058 0,A;-CN,-R,USG:0	U:2753:07311000, +CN,+R	
Percentile	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)
0	14367.87	1809.79	38171.96	10057.29	34600.00	9748.03	11174.69	41907.67	14558.21	21667.94	46300.00	21317.90	5928.65	27953.44	28040.67	3720.00	26747.57	960.72	23657.13	82922.36	30487.16	10502.89	39651.43	801696.10
1	2396.19	154.53	3746.51	987.10	3500.00	986.07	1863.65	4239.22	2427.94	1736.24	3710.00	1708.19	475.06	4932.96	4676.47	608.00	2053.61	169.24	3945.40	13829.32	5084.48	1751.61	4010.98	60417.68
2	1509.37	77.26	2272.14	598.65	2080.00	586.01	1173.92	2519.31	1529.36	950.02	2030.00	934.67	259.94	2931.18	2945.71	209.00	1096.52	122.16	2485.22	8711.11	3202.72	1103.34	2383.67	32067.84
3	1139.24	52.90	1494.56	393.78	1470.00	414.15	886.05	1780.47	1154.34	603.71	1290.00	593.95	165.18	2044.68	2223.37	152.00	698.48	100.53	1875.80	6575.00	2417.36	832.78	1684.61	22501.71
4	876.59	38.98	1161.32	305.98	1080.00	304.27	681.77	1308.10	888.20	407.15	870.00	400.57	111.40	1644.32	1710.78	95.00	480.44	86.53	1443.33	5059.14	1860.04	640.79	1237.68	17583.09
5	690.31	32.02	857.35	225.89	871.00	245.39	536.89	1054.96	699.46	292.96	626.00	288.23	80.16	1351.20	1347.23	85.00	361.28	78.89	1136.62	3984.05	1464.77	504.62	998.16	14523.48
6	577.21	27.15	640.24	168.69	721.00	203.13	448.93	873.28	584.86	212.47	454.00	209.04	58.13	1122.43	1126.50	77.00	281.42	72.53	950.40	3331.31	1224.78	421.94	826.26	12432.10
7	506.46	23.67	492.80	129.84	614.00	172.99	393.90	743.68	513.17	164.26	351.00	161.61	44.95	993.74	988.42	61.00	235.78	67.44	833.90	2922.98	1074.66	370.22	703.64	11076.57
8	426.54	20.88	384.75	101.37	529.00	149.04	331.74	640.73	432.19	128.70	275.00	126.62	35.21	843.61	832.44	37.00	202.83	63.62	702.31	2461.71	905.07	311.80	606.23	10069.61
9	378.07	18.10	299.92	79.02	463.00	130.44	294.05	560.79	383.08	101.09	216.00	99.45	27.66	736.37	737.86	28.00	180.01	59.81	622.51	2182.01	802.23	276.37	530.60	9295.03
10	342.74	16.71	237.31	62.53	412.00	116.07	266.57	499.02	347.29	80.96	173.00	79.65	22.15	667.74	668.91	23.00	162.26	57.26	564.34	1978.11	727.27	250.55	472.15	8597.90
11	300.45	14.62	198.94	52.41	367.00	103.40	233.68	444.51	304.43	65.99	141.00	64.92	18.05	612.69	586.36	20.00	145.78	55.99	494.70	1734.00	637.52	219.63	420.58	8094.42
12	276.37	13.23	167.63	44.17	331.00	93.25	214.95	400.91	280.03	54.29	116.00	53.41	14.85	550.49	539.37	18.00	130.57	53.44	455.05	1595.04	586.43	202.03	379.32	7590.94
13	258.51	12.53	146.43	38.58	289.00	81.42	201.05	350.04	261.93	45.86	98.00	45.12	12.55	507.59	504.51	15.00	117.89	50.90	425.64	1491.94	548.52	188.97	331.19	7242.38
14	239.90	11.14	126.23	33.26	255.00	71.84	186.59	308.86	243.08	39.31	84.00	38.68	10.76	471.85	468.20	14.00	107.75	49.63	395.01	1384.57	509.05	175.37	292.23	6855.08
15	219.82	10.44	110.07	29.00	227.00	63.95	170.97	274.94	222.74	34.63	74.00	34.07	9.48	436.10	429.01	12.00	100.14	47.08	361.95	1268.69	466.45	160.69	260.14	6506.52
16	201.01	9.75	100.98	26.61	202.00	56.91	156.33	244.66	203.67	29.95	64.00	29.47	8.20	411.08	392.29	12.00	91.27	45.81	330.96	1160.09	426.52	146.94	231.49	6157.96
17	186.89	9.05	89.88	23.68	186.00	52.40	145.35	225.28	189.36	26.21	56.00	25.78	7.17	384.63	364.73	10.00	84.93	44.54	307.72	1078.60	396.56	136.61	213.16	5886.85
18	171.83	8.35	81.80	21.55	169.00	47.61	133.64	204.69	174.11	22.93	49.00	22.56	6.27	358.18	335.35	9.50	77.33	43.26	282.92	991.70	364.61	125.61	193.67	5654.48
19	161.43	7.66	74.73	19.69	155.00	43.67	125.56	187.74	163.57	20.59	44.00	20.26	5.63	336.01	315.06	8.90	72.26	43.26	265.80	931.69	342.54	118.01	177.63	5422.10
20	148.85	6.96	67.66	17.83	142.00	40.01	115.77	171.99	150.82	18.25	39.00	17.96	4.99	320.28	290.50	8.50	68.45	41.99	245.09	859.08	315.85	108.81	162.73	5150.99
21	137.61	6.61	61.60	16.23	129.00	36.34	107.03	156.25	139.43	16.38	35.00	16.12	4.48	300.27	268.56	8.00	64.65	40.72	226.58	794.19	291.99	100.59	147.83	4918.62
22	126.37	6.13	56.55	14.90	119.00	33.53	98.29	144.13	128.05	14.98	32.00	14.73	4.10	285.25	246.63	7.60	60.85	39.45	208.08	729.35	268.15	92.38	136.37	4724.97
23	114.42	5.71	51.50	13.57	108.00	30.43	88.99	130.81	115.94	13.10	28.00	12.89	3.59	269.53	223.31	7.10	57.04	39.45	188.40	660.38	242.79	83.64	123.77	4531.33
24	99.20	5.29	47.46	12.51	101.00	28.46	77.16	122.33	100.52	11.70	25.00	11.51	3.20	258.09	193.61	6.80	55.78	38.17	163.34	572.54	210.50	72.52	115.75	4337.68
25	88.60	4.87	44.43	11.71	95.00	26.76	68.91	115.06	89.77	10.76	23.00	10.59	2.95	244.50	172.91	6.40	51.97	36.90	145.88	511.34	188.00	64.77	108.87	4182.76
26	76.16	4.45	41.40	10.91	90.00	25.36	59.24	109.01	77.17	9.83	21.00	9.67	2.69	235.21	148.64	6.10	50.71	36.90	125.41	439.57	161.61	55.68	103.14	4027.85
27	64.69	4.11	38.37	10.11	83.00	23.38	50.31	100.53	65.55	8.89	19.00	8.75	2.43	225.20	126.25	5.90	48.17	35.63	106.51	373.35	137.27	47.29	95.12	3872.93
28	54.42	3.83	35.34	9.31	79.00	22.26	42.33	95.69	55.14	8.42	18.00	8.29	2.30	214.48	106.21	5.60	45.64	35.63	89.61	314.10	115.48	39.78	90.53	3756.74
29	47.12	3.62	33.32	8.78	75.00	21.13	36.65	90.84	47.74	7.49	16.00	7.37	2.05	208.04	91.96	5.40	44.37	34.36	77.58	271.94	99.98	34.44	85.95	3640.55
30	38.48	3.41	30.30	7.98	71.00	20.00	29.93	86.00	38.99	7.02	15.00	6.91	1.92	200.89	75.10	5.20	41.83	34.36	63.36	222.09	81.65	28.13	81.37	3524.36
31	32.67	3.13	28.28	7.45	68.00	19.16	25.41	82.36	33.10	6.55	14.00	6.45	1.79	193.03	63.76	5.00	40.57	33.08	53.79	188.54	69.32	23.88	77.93	3408.18
32	27.40	2.85	26.26	6.92	64.00	18.03	21.31	77.52	27.76	6.08	13.00	5.99	1.66	185.16	53.47	4.80	39.30	33.08	45.12	158.14	58.14	20.03	73.34	3291.99
33	24.05	2.71	24.24	6.39	61.00	17.19	18.70	73.88	24.37	5.62	12.00	5.53	1.54	176.59	46.93	4.60	38.03	31.81	39.59	138.79	51.03	17.58	69.91	3137.07
34	20.63	2.51	22.22	5.85	59.00	16.62	16.05	71.46	20.91	5.62	12.00	5.53	1.54	169.44	40.27	4.30	36.76	31.81	33.97	119.08	43.78	15.08	67.61	3020.88
35	18.22	2.30	20.20	5.32	57.00	16.06	14.17	69.04	18.46	5.15	11.00	5.06	1.41	160.86	35.55	4.20	35.49	30.54	30.00	105.14	38.66	13.32	65.32	2943.43
36	16.89	2.09	19.19	5.06	55.00	15.50	13.13	66.62	17.11	4.68	10.00	4.60	1.28	152.99	32.96	4.00	34.23	30.54	27.81	97.47	35.83	12.34	63.03	2788.51
37	15.76	1.95	18.18	4.79	53.00	14.93	12.26	64.19	15.97	4.49	9.60	4.42	1.23	146.56	30.75	3.80	32.96	29.27	25.94	90.94	33.44	11.52	60.74	2711.05
38	14.42	1.81	17.17	4.52	52.00	14.65	11.21	62.98	14.61	4.21	9.00	4.14	1.15	141.55	28.14	3.70	31.69	29.27	23.74	83.22	30.60	10.54	59.59	2594.86
39	13.28	1.67	16.16	4.26	50.00	14.09	10.33	60.56	13.46	4.02	8.60	3.96	1.10	135.84	25.92	3.50	30.42	29.27	21.87	76.65	28.18	9.71	57.30	2517.40
40	12.08	1.53	15.15	3.99	48.00	13.52	9.40	58.14	12.24	3.79	8.10	3.73	1.04	130.12	23.58	3.40	29.16	27.99	19.89	69.73	25.64	8.83	55.01	2401.22
41	11.30	1.39	14.14	3.72	47.00	13.24	8.79	56.93	11.45	3.65	7.80	3.59	1.00	124.40	22.05	3.20	27.89	27.99	18.60	65.20	23.97	8.26	53.86	2323.76
42	10.71	1.32	13.13	3.46	46.00	12.96	8.33	55.72	10.85	3.42	7.30	3.36	0.93	120.82	20.91	3.10	26.62	27.99	17.64	61.83	22.73	7.83	52.72	2246.30
43	10.16	1.25	12.12	3.19	45.00	12.68	7.90	54.50	10.29	3.23	6.90	3.18	0.88	115.82	19.83	3.00	25.35	26.72	16.73	58.63	21.56	7.43	51.57	2130.11
44	9.86	1.11	11.11	2.93	43.00	12.11	7.67	52.08	9.99	3.04	6.50	2.99	0.83	112.24	19.24	2.80	25.35	26.72	16.23	56.90	20.92	7.21	49.28	2052.65
45	9.47	1.04	10.10	2.66	42.00	11.83	7.37	50.87	9.60	2.90	6.20	2.85	0.79	107.24	18.49	2.60	24.09	26.72	15.60	54.68	20.10	6.93	48.13	1975.19
46	9.05	0.97	9.49	2.50	41.00	11.55	7.04	49.66	9.17	2.76	5.90	2.72	0.76	104.38	17.66	2.30	22.82	25.45	14.90	52.24	19.21	6.62	46.99	1897.74
47	8.57	0.97	8.89	2.34	40.00	11.27	6.67	48.45	8.69	2.62	5.60	2.58	0.72	100.80	16.73	2.10	22.82	25.45	14.12	49.49	18.19	6.27	45.84	1820.28
48	8.38	0.90	8.28	2.18	39.00	10.99	6.52	47.24	8.49	2.53	5.40	2.49	0.69	99.37	16.36	2.00	21.55	25.45	13.80	48.38	17.79	6.13	44.69	1781.55
49	7.92	0.84	7.57	2.00	39.00	10.99	6.16	47.24	8.03	2.34	5.00	2.30	0.64	95.80	15.46	1.80	20.28	24.18	13.04	45.71	16.81	5.79	44.69	1704.09
50	7.63	0.77	7.07	1.86	38.00	10.71	5.93	46.03	7.73	2.25	4.80	2.21	0.61	93.65	14.89	1.60	20.28	24.18	12.56	44.03	16.19	5.58	43.55	1626.63

WBID	OK311100010290_00	OK311100010300_00	OK311100040010_00	OK311100040080_00	OK311200000030_00	OK311200000060_00	OK311200000080_00	OK311300010020_00	OK311310010070_00	OK311310020010_00	OK311310030010_00	OK311310030040_00	OK311310030050_00	OK311500010020_10	OK311500010050_00	OK311500010080_00	OK311500030010_00	OK311510020120_00	OK311600010020_00	OK311600010040_00	OK311800000040_00	OK311800000070_00	OK311300010020_10	OK311510010010_10
ProjGage	2930	2715	2949	2949	2753	2753	2930	2753	2930	2745	2745	2745	2745	3774	2930	3040	3027	2552	2930	2930	2930	2930	2753	2544
Area (sq. mile)	63.2	16.5	161.4	108.2	84.8	61.1	49.1	19.9	64.0	76.3	163.0	85.3	27.7	173.0	123.3	69.8	48.2	142.2	104.1	153.7	115.6	46.2	31.4	144.2
CN	65.1	60.3	64.6	66.9	68.1	66.1	66.2	74.3	78.6	75.4	76.8	79.0	80.7	66.6	73.4	75.8	75.3	53.0	74.2	71.5	69.6	71.0	72.3	65.1
Rain (inch)	33.7	33.2	34.7	34.0	33.2	34.3	35.4	32.6	30.2	32.4	30.9	30.6	31.1	29.4	29.3	29.9	29.3	23.7	28.1	26.6	28.7	27.2	33.6	28.1
ProjType	A	A	U	D	A	A	A	U	A	U	U	D	D	D	A	U	U	U	A	A	A	A	U	U
NN	2453	14336	18009	18009	24077	24077	2453	24077	2453	21920	21920	21920	21920	9232	2453	3019	17349	8569	2453	2453	2453	2453	24077	
QAQC	AD:2930:0730058 0,A;-CN,-R,USG:0	AD:2715:0731120 0,A;-CN,-R,USG:0	U:2949:07315700, +CN,+R	D:2949:07315700, +CN,+R,USG:0	AD:2753:07311000,A;-CN,-R,USG:0	AD:2753:0731100 0,A;-CN,-R,USG:0	AD:2930:0730058 0,A;-CN,-R,USG:0	U:2753:07311000, +CN,+R	AD:2930:0730058 0,A;-CN,-R,USG:0	U:2745:07311500, +CN,+R	U:2745:07311500, +CN,+R	D:2745:07311500, +CN,+R,USG:0	D:2745:07311500, +CN,+R,USG:0	D:3774:07307028, +CN,+R,USG:0	AU:2930:07300580, A;-CN,-R	U:3040:07307010,+ CN,+R	U:3027:07304500, +CN,+R	U:2552:07301420 ,+CN,+R	AU:2930:0730058 0,A;-CN,-R	AU:2930:07300580 ,A;-CN,-R	AU:2930:07300580 ,A;-CN,-R	AD:2930:07300580 ,A;-CN,-R,USG:0	U:2753:07311000, +CN,+R	
Percentile	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)	Q (cfs)
51	7.45	0.70	6.56	1.73	37.00	10.42	5.80	44.81	7.55	2.11	4.50	2.07	0.58	91.51	14.54	1.50	19.01	22.90	12.27	43.01	15.81	5.45	42.40	1549.17
52	7.25	0.66	6.16	1.62	36.00	10.14	5.64	43.60	7.35	2.01	4.30	1.98	0.55	87.94	14.15	1.40	19.01	22.90	11.94	41.85	15.39	5.30	41.26	1471.71
53	7.01	0.62	5.76	1.52	35.00	9.86	5.45	42.39	7.10	1.92	4.10	1.89	0.52	85.79	13.67	1.30	17.75	22.90	11.54	40.43	14.87	5.12	40.11	1394.25
54	6.80	0.59	5.35	1.41	34.00	9.58	5.29	41.18	6.89	1.83	3.90	1.80	0.50	84.36	13.27	1.20	17.75	22.90	11.19	39.23	14.42	4.97	38.96	1355.53
55	6.62	0.55	5.05	1.33	33.00	9.30	5.15	39.97	6.71	1.78	3.80	1.75	0.49	82.93	12.92	1.10	16.48	21.63	10.90	38.21	14.05	4.84	37.82	1278.07
56	6.46	0.52	4.65	1.22	33.00	9.30	5.02	39.97	6.55	1.68	3.60	1.66	0.46	80.79	12.61	1.00	16.48	21.63	10.64	37.28	13.71	4.72	37.82	1200.61
57	6.28	0.50	4.34	1.14	32.00	9.02	4.88	38.76	6.36	1.59	3.40	1.57	0.44	79.36	12.25	0.97	15.21	21.63	10.33	36.22	13.32	4.59	36.67	1123.15
58	6.01	0.45	3.94	1.04	31.00	8.73	4.67	37.55	6.09	1.50	3.20	1.47	0.41	77.93	11.72	0.89	15.21	20.36	9.89	34.66	12.74	4.39	35.53	1045.69
59	5.77	0.41	3.64	0.96	30.00	8.45	4.49	36.34	5.84	1.45	3.10	1.43	0.40	76.50	11.26	0.81	13.94	20.36	9.50	33.29	12.24	4.22	34.38	1006.96
60	5.58	0.37	3.33	0.88	30.00	8.45	4.34	36.34	5.66	1.36	2.90	1.34	0.37	75.07	10.90	0.74	13.94	19.09	9.19	32.22	11.85	4.08	34.38	929.50
61	5.35	0.31	3.13	0.82	29.00	8.17	4.16	35.12	5.42	1.31	2.80	1.29	0.36	72.92	10.45	0.68	12.68	19.09	8.81	30.89	11.36	3.91	33.23	852.04
62	5.26	0.27	2.93	0.77	28.00	7.89	4.09	33.91	5.33	1.22	2.60	1.20	0.33	71.49	10.27	0.62	12.68	17.81	8.66	30.36	11.16	3.85	32.09	813.31
63	5.09	0.23	2.73	0.72	27.00	7.61	3.96	32.70	5.16	1.17	2.50	1.15	0.32	70.06	9.94	0.57	12.17	17.81	8.38	29.38	10.80	3.72	30.94	735.86
64	4.95	0.19	2.52	0.67	27.00	7.61	3.85	32.70	5.02	1.08	2.30	1.06	0.29	68.63	9.67	0.53	11.66	17.81	8.15	28.58	10.51	3.62	30.94	697.13
65	4.81	0.17	2.32	0.61	26.00	7.33	3.74	31.49	4.87	1.03	2.20	1.01	0.28	67.20	9.38	0.49	11.16	16.54	7.91	27.74	10.20	3.51	29.80	658.40
66	4.71	0.14	2.12	0.56	26.00	7.33	3.66	31.49	4.77	0.98	2.10	0.97	0.27	65.06	9.19	0.44	10.65	16.54	7.75	27.16	9.99	3.44	29.80	580.94
67	4.49	0.12	1.92	0.51	25.00	7.04	3.49	30.28	4.55	0.89	1.90	0.87	0.24	63.63	8.76	0.39	10.01	15.27	7.39	25.92	9.53	3.28	28.65	542.21
68	4.29	0.10	1.72	0.45	24.00	6.76	3.34	29.07	4.35	0.84	1.80	0.83	0.23	62.20	8.37	0.36	9.63	15.27	7.07	24.77	9.11	3.14	27.50	503.48
69	4.14	0.08	1.51	0.40	24.00	6.76	3.22	29.07	4.19	0.80	1.70	0.78	0.22	60.77	8.07	0.30	9.13	14.00	6.81	23.88	8.78	3.02	27.50	464.75
70	3.98	0.06	1.41	0.37	23.00	6.48	3.09	27.86	4.03	0.75	1.60	0.74	0.20	59.34	7.76	0.26	8.49	14.00	6.55	22.95	8.44	2.91	26.36	387.29
71	3.80	0.06	1.21	0.32	23.00	6.48	2.95	27.86	3.85	0.66	1.40	0.64	0.18	57.91	7.41	0.22	7.99	12.72	6.26	21.93	8.06	2.78	26.36	333.07
72	3.59	0.04	1.11	0.29	22.00	6.20	2.79	26.65	3.64	0.61	1.30	0.60	0.17	56.48	7.01	0.16	7.61	12.72	5.91	20.73	7.62	2.63	25.21	290.47
73	3.42	0.03	1.00	0.26	22.00	6.20	2.66	26.65	3.47	0.56	1.20	0.55	0.15	55.05	6.68	0.11	7.23	12.22	5.63	19.75	7.26	2.50	25.21	243.99
74	3.28	0.02	0.88	0.23	21.00	5.92	2.55	25.44	3.32	0.51	1.10	0.51	0.14	53.62	6.39	0.08	6.85	11.58	5.39	18.91	6.95	2.39	24.07	209.14
75	3.08	0.01	0.87	0.20	20.00	5.63	2.40	24.22	3.12	0.47	1.00	0.46	0.13	52.19	6.02	0.05	6.47	10.94	5.08	17.80	6.54	2.25	22.92	174.28
76	2.95	0.01	0.68	0.18	20.00	5.63	2.29	24.22	2.98	0.42	0.90	0.41	0.12	50.76	5.75	0.01	5.96	10.18	4.85	17.00	6.25	2.15	22.92	139.43
77	2.80	0.00	0.59	0.15	19.00	5.35	2.18	23.01	2.84	0.37	0.80	0.37	0.10	49.33	5.46	0.00	5.58	9.29	4.61	16.16	5.94	2.05	21.77	108.44
78	2.71	0.00	0.50	0.13	19.00	5.35	2.11	23.01	2.75	0.34	0.72	0.33	0.09	47.90	5.30	0.00	5.20	8.65	4.47	15.67	5.76	1.98	21.77	81.33
79	2.55	0.00	0.44	0.12	18.00	5.07	1.99	21.80	2.59	0.31	0.67	0.31	0.09	46.47	4.98	0.00	4.82	7.89	4.20	14.74	5.42	1.87	20.63	54.22
80	2.46	0.00	0.39	0.10	18.00	5.07	1.91	21.80	2.49	0.28	0.60	0.28	0.08	45.04	4.80	0.00	4.44	7.38	4.05	14.20	5.22	1.80	20.63	30.98
81	2.37	0.00	0.32	0.09	17.00	4.79	1.84	20.59	2.40	0.23	0.50	0.23	0.06	43.61	4.62	0.00	4.06	6.87	3.90	13.67	5.03	1.73	19.48	11.62
82	2.31	0.00	0.29	0.08	17.00	4.79	1.79	20.59	2.34	0.19	0.40	0.18	0.05	42.18	4.50	0.00	3.68	6.24	3.80	13.31	4.90	1.69	19.48	0.00
83	2.21	0.00	0.23	0.06	16.00	4.51	1.72	19.38	2.24	0.16	0.34	0.16	0.04	40.75	4.32	0.00	3.17	5.60	3.65	12.78	4.70	1.62	18.34	0.00
84	2.10	0.00	0.20	0.05	16.00	4.51	1.63	19.38	2.13	0.14	0.30	0.14	0.04	39.32	4.10	0.00	2.79	5.09	3.46	12.12	4.45	1.53	18.34	0.00
85	1.99	0.00	0.17	0.05	15.00	4.23	1.55	18.17	2.02	0.09	0.20	0.09	0.03	37.89	3.89	0.00	2.54	4.58	3.28	11.50	4.23	1.46	17.19	0.00
86	1.88	0.00	0.12	0.03	15.00	4.23	1.47	18.17	1.91	0.08	0.18	0.08	0.02	36.46	3.68	0.00	2.03	4.20	3.10	10.87	4.00	1.38	17.19	0.00
87	1.83	0.00	0.10	0.03	14.00	3.94	1.42	16.96	1.85	0.05	0.10	0.05	0.01	35.75	3.57	0.00	1.77	3.82	3.01	10.56	3.88	1.34	16.04	0.00
88	1.73	0.00	0.06	0.02	13.00	3.66	1.35	15.75	1.75	0.04	0.08	0.04	0.01	34.32	3.38	0.00	1.39	3.44	2.85	9.99	3.67	1.26	14.90	0.00
89	1.59	0.00	0.02	0.01	12.00	3.38	1.24	14.53	1.61	0.00	0.00	0.00	0.00	32.89	3.11	0.00	1.25	2.93	2.62	9.19	3.38	1.16	13.75	0.00
90	1.43	0.00	0.00	0.00	12.00	3.38	1.11	14.53	1.45	0.00	0.00	0.00	0.00	31.46	2.79	0.00	1.01	2.54	2.36	8.26	3.04	1.05	13.75	0.00
91	1.28	0.00	0.00	0.00	11.00	3.10	0.99	13.32	1.29	0.00	0.00	0.00	0.00	29.31	2.49	0.00	0.76	2.16	2.10	7.37	2.71	0.93	12.61	0.00
92	1.04	0.00	0.00	0.00	10.00	2.82	0.81	12.11	1.05	0.00	0.00	0.00	0.00	27.17	2.03	0.00	0.58	1.65	1.71	5.99	2.20	0.76	11.46	0.00
93	0.79	0.00	0.00	0.00	9.50	2.68	0.62	11.51	0.80	0.00	0.00	0.00	0.00	25.02	1.55	0.00	0.38	1.40	1.30	4.57	1.68	0.58	10.89	0.00
94	0.66	0.00	0.00	0.00	8.40	2.37	0.51	10.17	0.67	0.00	0.00	0.00	0.00	23.59	1.29	0.00	0.25	1.13	1.09	3.82	1.40	0.48	9.63	0.00
95	0.54	0.00	0.00	0.00	7.40	2.08	0.42	8.96	0.55	0.00	0.00	0.00	0.00	21.45	1.05	0.00	0.13	0.94	0.89	3.11	1.14	0.39	8.48	0.00
96	0.44	0.00	0.00	0.00	6.40	1.80	0.34	7.75	0.44	0.00	0.00	0.00	0.00	19.30	0.86	0.00	0.00	0.79	0.72	2.53	0.93	0.32	7.33	0.00
97	0.32	0.00	0.00	0.00	5.20	1.47	0.25	6.30	0.33	0.00	0.00	0.00	0.00	17.16	0.63	0.00	0.00	0.59	0.53	1.86	0.69	0.24	5.96	0.00
98	0.20	0.00	0.00	0.00	3.00	0.85	0.16	3.63	0.20	0.00	0.00	0.00	0.00	12.87	0.39	0.00	0.00	0.38	0.33	1.15	0.42	0.15	3.44	0.00
99	0.00	0.00	0.00	0.00	0.30	0.08	0.00	0.36	0.00	0.00	0.00	0.00	0.00	7.15	0.00	0.00	0.00	0.22	0.00	0.00	0.00	0.00	0.34	0.00
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.86	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

APPENDIX C

NPDES DISCHARGE MONITORING REPORT DATA

Summary of Data from NPDES Discharge Monitoring Report

NPDES Permit No.	Monitoring Date	Monthly Average Flow (mgd)	Daily Maximum Flow (mgd)	Maximum TSS Concentration (mg/L)	Average TSS Concentration (mg/L)
OKG950015	1/31/07	0	0	0	0
OKG950015	2/28/07	NR	NR	0	0
OKG950015	3/31/07	0	0	0	0
OKG950015	4/30/07	0	0	0	0
OKG950015	5/31/07	0	0	0	0
OKG950015	6/30/07	0.06	1.19	42	42
OKG950015	7/31/07	0	0	0	0
OKG950015	8/31/07	0	0	0	0
OKG950015	9/30/07	0	0	0	0
OKG950015	10/31/07	0	0	0	0
OKG950015	11/30/07	0	0	0	0
OKG950015	12/31/07	0	0	0	0
OKG950015	1/31/08	0	0	0	0

APPENDIX D

STATE OF OKLAHOMA ANTIDEGRADATION POLICY

Appendix D
State of Oklahoma Antidegradation Policy

785:45-3-1. Purpose; Antidegradation policy statement

(a) Waters of the state constitute a valuable resource and shall be protected, maintained and improved for the benefit of all the citizens.

(b) It is the policy of the State of Oklahoma to protect all waters of the state from degradation of water quality, as provided in OAC 785:45-3-2 and Subchapter 13 of OAC 785:46.

785:45-3-2. Applications of antidegradation policy

(a) Application to outstanding resource waters (ORW). Certain waters of the state constitute an outstanding resource or have exceptional recreational and/or ecological significance. These waters include streams designated "Scenic River" or "ORW" in Appendix A of this Chapter, and waters of the State located within watersheds of Scenic Rivers. Additionally, these may include waters located within National and State parks, forests, wilderness areas, wildlife management areas, and wildlife refuges, and waters which contain species listed pursuant to the federal Endangered Species Act as described in 785:45-5-25(c)(2)(A) and 785:46-13-6(c). No degradation of water quality shall be allowed in these waters.

(b) Application to high quality waters (HQW). It is recognized that certain waters of the state possess existing water quality which exceeds those levels necessary to support propagation of fishes, shellfishes, wildlife, and recreation in and on the water. These high quality waters shall be maintained and protected.

(c) Application to beneficial uses. No water quality degradation which will interfere with the attainment or maintenance of an existing or designated beneficial use shall be allowed.

(d) Application to improved waters. As the quality of any waters of the state improve, no degradation of such improved waters shall be allowed.

785:46-13-1. Applicability and scope

(a) The rules in this Subchapter provide a framework for implementing the antidegradation policy stated in OAC 785:45-3-2 for all waters of the state. This policy and framework includes three tiers, or levels, of protection.

(b) The three tiers of protection are as follows:

(1) Tier 1. Attainment or maintenance of an existing or designated beneficial use.

(2) Tier 2. Maintenance or protection of High Quality Waters and Sensitive Public and Private Water Supply waters.

(3) Tier 3. No degradation of water quality allowed in Outstanding Resource Waters.

(c) In addition to the three tiers of protection, this Subchapter provides rules to implement the protection of waters in areas listed in Appendix B of OAC 785:45. Although Appendix B areas are not mentioned in OAC 785:45-3-2, the framework for

protection of Appendix B areas is similar to the implementation framework for the antidegradation policy.

(d) In circumstances where more than one beneficial use limitation exists for a waterbody, the most protective limitation shall apply. For example, all antidegradation policy implementation rules applicable to Tier 1 waterbodies shall be applicable also to Tier 2 and Tier 3 waterbodies or areas, and implementation rules applicable to Tier 2 waterbodies shall be applicable also to Tier 3 waterbodies.

(e) Publicly owned treatment works may use design flow, mass loadings or concentration, as appropriate, to calculate compliance with the increased loading requirements of this section if those flows, loadings or concentrations were approved by the Oklahoma Department of Environmental Quality as a portion of Oklahoma's Water Quality Management Plan prior to the application of the ORW, HQW or SWS limitation.

785:46-13-2. Definitions

The following words and terms, when used in this Subchapter, shall have the following meaning, unless the context clearly indicates otherwise:

"Specified pollutants" means

(A) Oxygen demanding substances, measured as Carbonaceous Biochemical Oxygen Demand (CBOD) and/or Biochemical Oxygen Demand (BOD);

(B) Ammonia Nitrogen and/or Total Organic Nitrogen;

(C) Phosphorus;

(D) Total Suspended Solids (TSS); and

(E) Such other substances as may be determined by the Oklahoma Water Resources Board or the permitting authority.

785:46-13-3. Tier 1 protection; attainment or maintenance of an existing or designated beneficial use

(a) General.

(1) Beneficial uses which are existing or designated shall be maintained and protected.

(2) The process of issuing permits for discharges to waters of the state is one of several means employed by governmental agencies and affected persons which are designed to attain or maintain beneficial uses which have been designated for those waters. For example, Subchapters 3, 5, 7, 9 and 11 of this Chapter are rules for the permitting process. As such, the latter Subchapters not only implement numerical and narrative criteria, but also implement Tier 1 of the antidegradation policy.

(b) Thermal pollution. Thermal pollution shall be prohibited in all waters of the state. Temperatures greater than 52 degrees Centigrade shall constitute thermal pollution and shall be prohibited in all waters of the state.

(c) Prohibition against degradation of improved waters. As the quality of any waters of the state improves, no degradation of such improved waters shall be allowed.

785:46-13-4. Tier 2 protection; maintenance and protection of High Quality Waters and Sensitive Water Supplies

(a) General rules for High Quality Waters. New point source discharges of any pollutant after June 11, 1989, and increased load or concentration of any specified pollutant from any point source discharge existing as of June 11, 1989, shall be prohibited in any waterbody or watershed designated in Appendix A of OAC 785:45 with the limitation "HQW". Any discharge of any pollutant to a waterbody designated "HQW" which would, if it occurred, lower existing water quality shall be prohibited. Provided however, new point source discharges or increased load or concentration of any specified pollutant from a discharge existing as of June 11, 1989, may be approved by the permitting authority in circumstances where the discharger demonstrates to the satisfaction of the permitting authority that such new discharge or increased load or concentration would result in maintaining or improving the level of water quality which exceeds that necessary to support recreation and propagation of fishes, shellfishes, and wildlife in the receiving water.

(b) General rules for Sensitive Public and Private Water Supplies. New point source discharges of any pollutant after June 11, 1989, and increased load of any specified pollutant from any point source discharge existing as of June 11, 1989, shall be prohibited in any waterbody or watershed designated in Appendix A of OAC 785:45 with the limitation "SWS". Any discharge of any pollutant to a waterbody designated "SWS" which would, if it occurred, lower existing water quality shall be prohibited. Provided however, new point source discharges or increased load of any specified pollutant from a discharge existing as of June 11, 1989, may be approved by the permitting authority in circumstances where the discharger demonstrates to the satisfaction of the permitting authority that such new discharge or increased load will result in maintaining or improving the water quality in both the direct receiving water, if designated SWS, and any downstream waterbodies designated SWS.

(c) Stormwater discharges. Regardless of subsections (a) and (b) of this Section, point source discharges of stormwater to waterbodies and watersheds designated "HQW" and "SWS" may be approved by the permitting authority.

(d) Nonpoint source discharges or runoff. Best management practices for control of nonpoint source discharges or runoff should be implemented in watersheds of waterbodies designated "HQW" or "SWS" in Appendix A of OAC 785:45.

785:46-13-5. Tier 3 protection; prohibition against degradation of water quality in outstanding resource waters

(a) General. New point source discharges of any pollutant after June 11, 1989, and increased load of any pollutant from any point source discharge existing as of June 11, 1989, shall be prohibited in any waterbody or watershed designated in Appendix A of OAC 785:45 with the limitation "ORW" and/or "Scenic River", and in any waterbody located within the watershed of any waterbody designated with the limitation "Scenic River". Any discharge of any pollutant to a waterbody designated "ORW" or "Scenic River" which would, if it occurred, lower existing water quality shall be prohibited.

(b) Stormwater discharges. Regardless of 785:46-13-5(a), point source discharges of stormwater from temporary construction activities to waterbodies and watersheds designated "ORW" and/or "Scenic River" may be permitted by the permitting authority. Regardless of 785:46-13-5(a), discharges of stormwater to waterbodies and watersheds designated "ORW" and/or "Scenic River" from point sources existing as of June 25, 1992, whether or not such stormwater discharges were permitted as point sources prior to June 25, 1992, may be permitted by the permitting authority; provided, however, increased load of any pollutant from such stormwater discharge shall be prohibited.

(c) Nonpoint source discharges or runoff. Best management practices for control of nonpoint source discharges or runoff should be implemented in watersheds of waterbodies designated "ORW" in Appendix A of OAC 785:45, provided, however, that development of conservation plans shall be required in sub-watersheds where discharges or runoff from nonpoint sources are identified as causing or significantly contributing to degradation in a waterbody designated "ORW".

(d) LMFO's. No licensed managed feeding operation (LMFO) established after June 10, 1998 which applies for a new or expanding license from the State Department of Agriculture after March 9, 1998 shall be located...[w]ithin three (3) miles of any designated scenic river area as specified by the Scenic Rivers Act in 82 O.S. Section 1451 and following, or [w]ithin one (1) mile of a waterbody [2:9-210.3(D)] designated in Appendix A of OAC 785:45 as "ORW".

785:46-13-6. Protection for Appendix B areas

(a) General. Appendix B of OAC 785:45 identifies areas in Oklahoma with waters of recreational and/or ecological significance. These areas are divided into Table 1, which includes national and state parks, national forests, wildlife areas, wildlife management areas and wildlife refuges; and Table 2, which includes areas which contain threatened or endangered species listed as such by the federal government pursuant to the federal Endangered Species Act as amended.

(b) Protection for Table 1 areas. New discharges of pollutants after June 11, 1989, or increased loading of pollutants from discharges existing as of June 11, 1989, to waters within the boundaries of areas listed in Table 1 of Appendix B of OAC 785:45 may be approved by the permitting authority under such conditions as ensure that the recreational and ecological significance of these waters will be maintained.

(c) Protection for Table 2 areas. Discharges or other activities associated with those waters within the boundaries listed in Table 2 of Appendix B of OAC 785:45 may be restricted through agreements between appropriate regulatory agencies and the United States Fish and Wildlife Service. Discharges or other activities in such areas shall not substantially disrupt the threatened or endangered species inhabiting the receiving water.

(d) Nonpoint source discharges or runoff. Best management practices for control of nonpoint source discharges or runoff should be implemented in watersheds located within areas listed in Appendix B of OAC 785:45.

APPENDIX E

RESPONSE TO COMMENTS

Comments from Oklahoma Farm Bureau were received on August 30, 2010:

Comment #1: We appreciate the opportunity to provide comments on these draft TMDLs. As we have on their draft TMDLs, we continue to comment that sewer overflows and bypasses should be included into the point source allocation as a contributor to bacteria impairment.

Response #1: *Sewer overflows and bypasses are not permitted and therefore cannot be added to the point source allocations. All SSOs are considered unpermitted discharges under State statute and DEQ regulations and will be dealt through enforcement actions as described in the last paragraph of Section 3.1.2. No changes were made.*

Comment #2: With regard to these bacteria TMDLs, we concur three approaches to revising the pathogen provisions of Oklahoma's water quality standards -- removing the primary body contact recreation use, modifying application of the existing criteria, and revising the existing numeric criteria – should be considered.

Response #2*: Thank you for the comments*.