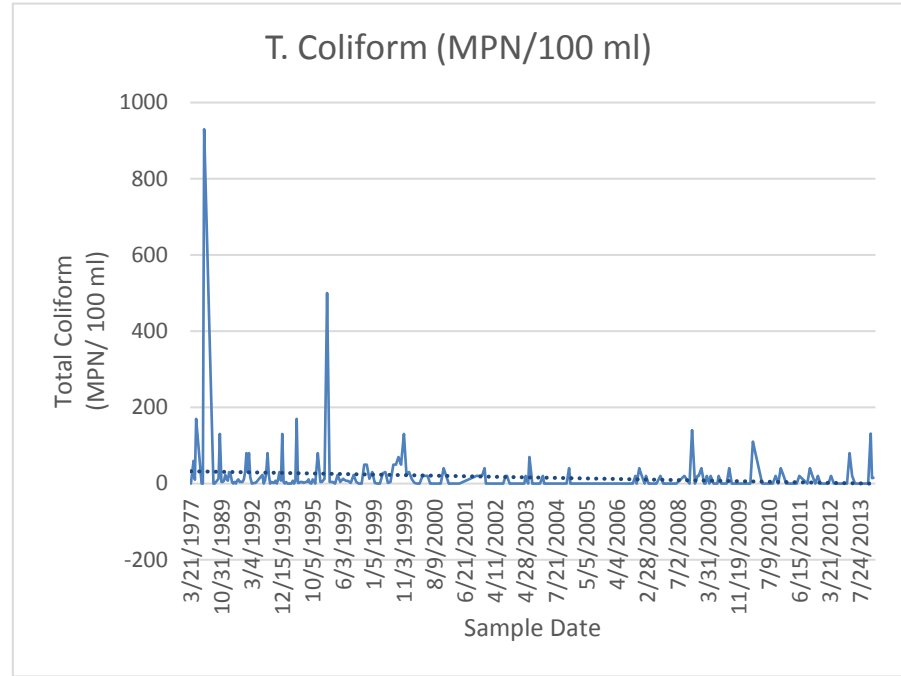


## Appendix L-3 Surface Water Quality



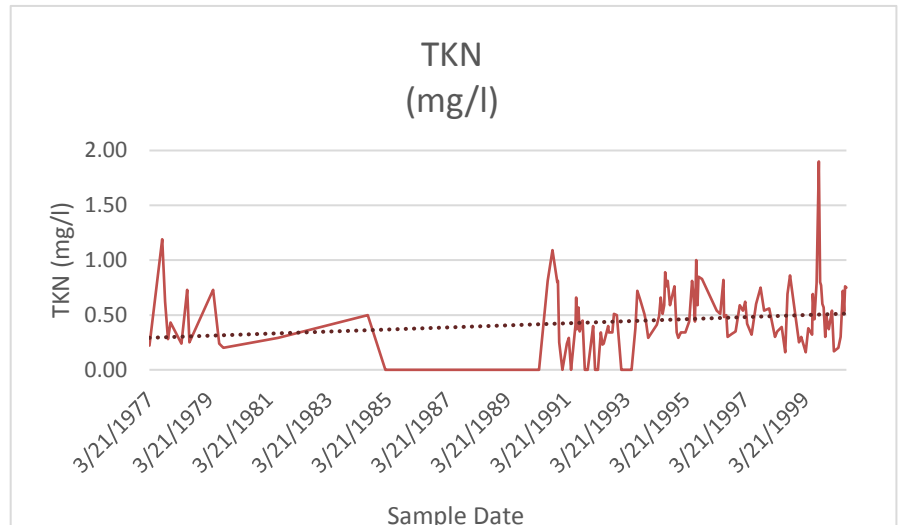
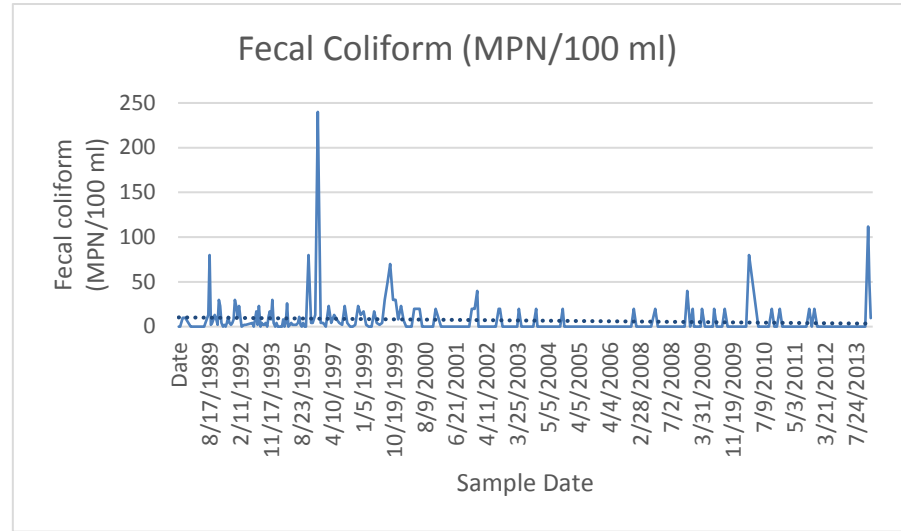
Suffolk County Department of Health Services  
Office of Ecology  
Bureau of Marine Resources  
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1976 - 2013

Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
3/21/1977	< 10	< 10	0.22		
8/25/1977			1.19		
9/27/1977	60	10	0.62		
11/2/1977	10	10	0.28		
12/5/1977	170	10	0.43		
4/18/1978			0.24		
6/27/1978			0.73		
7/25/1978			0.25		
5/9/1979	< 10	< 10	0.73		
7/25/1979	< 30	< 10	0.24		
9/11/1979	930	< 30	0.20		
7/14/1981			0.29		
8/19/1981					
9/23/1981					
9/30/1981					
12/8/1982					
4/12/1983					
7/17/1984	< 30	< 30	0.50		
1/2/1985	< 3	< 3			
2/19/1985	4	4	< 0.10		
4/9/1985			< 0.10		
5/15/1989	13	13	< 0.05		
8/17/1989	130	80	< 0.05		6,220
#####	4	2	< 0.05		207
4/16/1990	4	4	< 0.05		
7/12/1990	8	8			446,314
7/31/1990	23	13	0.81		282,244
9/27/1990	13	8	1.09		69,074
#####	8	2	0.80		629,090
12/6/1990	30	30	0.81		580,070
#####	23	23	0.25		320,673
1/30/1991	4	4	< 0.05		2,270
3/25/1991	< 2	< 2	0.24		2,384



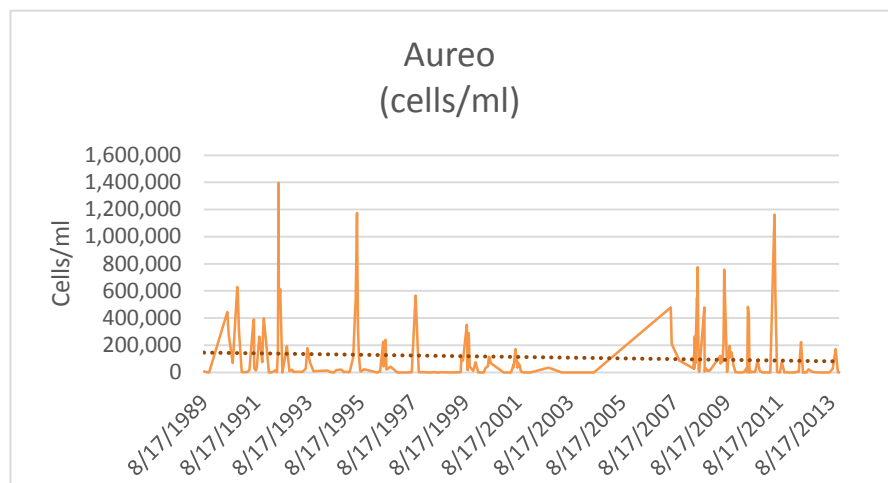
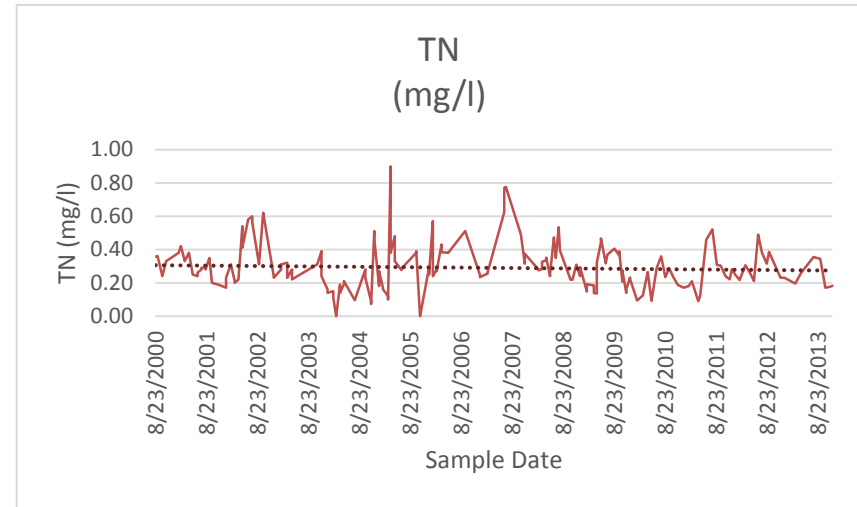
Suffolk County Department of Health Services  
Office of Ecology  
Bureau of Marine Resources  
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South Shore Bays  
1976 - 2013

Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
4/15/1991	4	2	0.29		965
5/15/1991	< 2	< 2	< 0.05		15,436
7/10/1991	8	4	0.41		364,382
7/16/1991	11	11	0.66		392,160
7/23/1991	4	4	0.37		29,412
8/14/1991	4	2	0.57		12,650
8/28/1991	4	4	0.35		37,079
10/2/1991	11	8	0.45		263,362
#####	30	30	< 0.05		150,982
#####	80	23	< 0.05		74,158
#####	30	11	< 0.05		323,169
12/3/1991	80	23	< 0.05		398,696
2/11/1992	17	11	0.40		249
3/4/1992	< 2	< 2	< 0.05		106
4/9/1992			< 0.05		5,281
5/12/1992	2	2	0.34		16,100
6/3/1992	2	2	0.23		2,723
6/17/1992			0.24		161,766
6/25/1992					1,395,903
6/30/1992					472,044
7/19/1992					611,842
8/12/1992	23	4	0.40		87,828
8/19/1992	< 2	< 2	0.34		84
9/30/1992	8	8	0.34		123,004
#####	30	17	0.51		192,812
#####	80	2	0.50		9,612
#####	23	23	0.18		19,914
1/19/1993	< 2	< 2	< 0.05		3,210
3/9/1993	4	4	< 0.05		
4/7/1993	2	2	< 0.05		
5/26/1993	2	2	< 0.05		4,408
7/12/1993	8	4	0.38		28,595
8/4/1993	< 2	< 2	0.72		178,515
9/9/1993	11	11	0.64		74,040



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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
#####	30	17	0.51		8,510
#####	8	8	0.44		
#####	130	30	0.29		
3/30/1994	4	4	0.41		
4/27/1994	< 2	< 2	0.49		
5/18/1994	4	4	0.66		14,388
6/8/1994	< 2	< 2	0.51		3,319
6/29/1994	< 2	< 2	0.59		3,200
7/13/1994	< 2	< 2			
7/13/1994	< 2	< 2	0.89		136
7/27/1994	8	8	0.76		
8/10/1994	< 2	< 2	0.81		100
9/8/1994	8	4	0.59		16,388
11/2/1994	170	26	0.76		19,856
12/1/1994	2	< 2	0.34		19,131
#####	2	2	0.29		2,312
1/18/1995	4	4	0.34		4,016
3/14/1995	4	2	0.34		1,459
5/3/1995	2	2	0.44		107,508
6/7/1995			0.81		543,577
6/27/1995	4	2	0.66		1,173,212
7/11/1995	4	4	0.44		332,247
7/25/1995	11	11	1.00		126,635
8/10/1995	2	2	0.59		13,072
8/23/1995	< 2	< 2	0.85		6,945
10/5/1995	11	4	0.83		22,468
4/2/1996	8	< 2	0.54		23
5/15/1996	< 2	< 2	0.51		6,018
5/15/1996					
6/26/1996	80	80	0.82		225,216
6/26/1996					
7/2/1996	4	4	0.48		45,344
7/30/1996	4	4	0.50		239,381
7/30/1996					



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8/13/1996	13	13	0.30		21,760
8/13/1996					
10/9/1996	500	240	0.33		42,840
10/9/1996					
#####	4	4	0.35		
#####					
1/9/1997	4	4	0.59		408
1/9/1997					
2/19/1997	< 2	< 2	0.54		68
2/19/1997					
3/19/1997	23	23	0.62		
3/19/1997					
4/10/1997	4	4	0.42		
4/10/1997					
6/3/1997	13	13	0.32		408
6/3/1997					
7/30/1997	8	8	0.60		1,838
7/30/1997					
9/24/1997	7	4	0.75		566,181
9/24/1997					
11/6/1997	2	2	0.54		1,157
11/6/1997					
1/7/1998	23	23	0.56		1,498
1/7/1998					
3/18/1998	4	4	0.30		
3/18/1998					
4/14/1998	< 2	< 2	0.35		136
4/14/1998					
6/9/1998	< 2	< 2	0.39		885
6/9/1998					
7/23/1998	50	2	0.16		68
7/23/1998					
8/19/1998	50	23	0.69		34
8/19/1998					

Sample Date

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
9/17/1998	13	13	0.86		2,179
9/17/1998					
1/5/1999	30	17	0.25		68
1/5/1999					
2/2/1999	2	2	0.30		
2/2/1999					
3/30/1999	< 2	< 2	0.16		
3/30/1999					
4/29/1999	< 2	< 2	0.38		
4/29/1999					
6/15/1999	27	17	0.32		817
6/15/1999					
6/23/1999	30	4	0.69		105,665
6/23/1999					
7/15/1999	2	2	0.46		87,419
7/15/1999					
8/10/1999	4	4	0.79		
8/10/1999					
9/8/1999	50	30	1.90		350,629
9/8/1999					
9/23/1999	50	50	0.80		15,795
9/23/1999					
10/5/1999	70	70	0.77		290,035
10/5/1999					
#####	50	30	0.60		43,710
#####					
11/3/1999	130	30	0.57		34,859
11/3/1999					
#####	23	8	0.30		
#####					
12/7/1999	30	23	0.50		11,710
12/7/1999					
1/6/2000	11	7	0.37		74,619
1/6/2000					

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2/15/2000	2	< 2	0.54		204
2/15/2000					
3/9/2000	< 2	< 2	0.17		64
3/9/2000					
5/3/2000	< 2	< 2	0.20		< 20
5/3/2000					
5/31/2000	20	20	0.30		34,657
5/31/2000					
6/28/2000	20	20	0.72		43,710
6/28/2000					
7/12/2000	20	20	0.53		115,008
7/12/2000					
7/25/2000	< 20	< 20	0.76		103,850
7/25/2000					
8/9/2000	< 20	< 20	0.75		67,146
8/9/2000					
8/23/2000	< 20	< 20		0.36	
8/23/2000					
9/7/2000	< 20	< 20		0.36	
9/7/2000					
#####	< 20	< 20		0.24	
#####					
11/8/2000	40	20		0.33	
11/8/2000					
#####					
#####					
2/6/2001	< 20	< 20		0.38	< 20
2/6/2001					
2/21/2001	< 20	< 20		0.42	< 20
2/21/2001					
3/21/2001	< 20	< 20		0.33	< 20
3/21/2001					
4/19/2001	< 20	< 20		0.38	65
4/19/2001					

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
5/18/2001	< 20	< 20		0.25	< 20
5/18/2001					
6/21/2001				0.24	55,470
6/21/2001					
6/21/2001				0.26	36,698
7/18/2001				0.28	169,725
7/18/2001					
7/18/2001				0.29	170,481
8/16/2001				0.29	35,948
8/16/2001					
8/16/2001				0.28	76,662
9/14/2001				0.35	53,377
9/14/2001					
10/3/2001	20	< 20		0.20	6,873
10/3/2001					
#####	20	20		0.19	58
#####					
1/10/2002	20	20		0.17	272
1/10/2002					
1/10/2002	40	40		0.23	< 20
2/14/2002	< 20	< 20		0.31	545
2/14/2002					
3/13/2002	< 20	< 20		0.21	
3/13/2002					
3/13/2002	< 20	< 20		0.20	
4/11/2002	< 20	< 20		0.22	
4/11/2002					
4/11/2002	< 20	< 20		0.23	
5/9/2002	< 20	< 20		0.54	
5/9/2002					
5/9/2002	< 20	< 20		0.41	
6/19/2002	< 20	< 20		0.58	
6/19/2002					
7/17/2002	< 20	< 20		0.60	



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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
7/17/2002					
7/17/2002	20	20		0.56	
9/5/2002	20	20		0.31	
9/5/2002					
10/3/2002	< 20	< 20		0.62	
10/3/2002					
#####					35,173
#####	< 20	< 20		0.24	
#####					
#####	< 20	< 20		0.23	
2/10/2003	< 20	< 20		0.28	
2/10/2003					
2/10/2003	< 20	< 20		0.31	
3/25/2003	< 20	< 20		0.32	
3/25/2003					
3/25/2003	< 20	< 20		0.23	
4/28/2003	20	20		0.28	381
4/28/2003					
4/28/2003	< 20	< 20		0.22	331
#####	70	< 20		0.31	
#####					
#####	< 20	< 20		0.39	
#####					
#####	< 20	< 20		0.24	
1/8/2004	< 20	< 20		0.16	
1/8/2004					
1/8/2004	< 20	< 20		0.14	
2/19/2004	< 20	< 20		0.15	
2/19/2004					
2/19/2004	20	20		0.11	
3/10/2004	< 20	< 20		< 0.05	
3/10/2004					
3/10/2004	< 20	< 20		< 0.05	
4/7/2004	< 20	< 20		0.19	

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
4/7/2004					
4/7/2004	< 20	< 20		0.14	
5/5/2004	< 20	< 20		0.19	
5/5/2004					
5/5/2004	< 20	< 20		0.21	
7/21/2004	< 20	< 20		0.10	112
7/21/2004					
10/5/2004	< 20	< 20		0.28	
10/5/2004					
10/5/2004	< 20	< 20		0.23	
#####	< 20	< 20		0.09	
#####					
#####	< 20	< 20		0.07	
12/8/2004	< 20	< 20		0.51	
12/8/2004					
12/8/2004	40	20		0.46	
1/11/2005	< 20	< 20		0.18	
1/11/2005					
1/11/2005	< 20	< 20		0.27	
2/8/2005	< 20	< 20		0.17	
2/8/2005					
2/8/2005	< 20	< 20		0.16	
3/16/2005	< 20	< 20		0.12	
3/16/2005					
3/16/2005	< 20	< 20		0.10	
4/5/2005	< 20	< 20		0.90	
4/5/2005					
4/5/2005	< 20	< 20		0.38	
5/5/2005	< 20	< 20		0.48	
5/5/2005					
5/5/2005	< 20	< 20		0.33	
6/21/2005	< 20	< 20		0.28	
6/21/2005					
6/21/2005	< 20	< 20		0.29	

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
10/4/2005				0.38	
10/4/2005					
10/4/2005				0.39	
11/1/2005	< 20	< 20		< 0.05	
11/1/2005					
11/1/2005	< 20	< 20		< 0.05	
1/4/2006	< 20	< 20		0.29	
1/4/2006					
1/4/2006	< 20	< 20		0.25	
2/1/2006	< 20	< 20		0.57	
2/1/2006					
2/1/2006	< 20	< 20		0.24	
2/28/2006	< 20	< 20		0.28	
2/28/2006	< 20	< 20		0.27	
2/28/2006					
4/4/2006	< 20	< 20		0.43	
4/4/2006					
4/4/2006	< 20	< 20		0.38	
5/23/2006	< 20	< 20		0.38	
5/23/2006					
5/23/2006	< 20	< 20		0.38	
9/21/2006	< 20	< 20		0.51	
9/21/2006					
1/4/2007	< 20	< 20		0.25	
1/4/2007					
1/4/2007	< 20	< 20		0.23	
3/1/2007	< 20	< 20		0.26	
3/1/2007					
3/1/2007	< 20	< 20		0.26	
6/28/2007	< 20	< 20		0.62	478,966
6/28/2007					
6/28/2007	20	< 20		0.77	
7/10/2007	< 20	< 20		0.78	208,367
7/10/2007					

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
#####	40	20		0.49	87,713
#####					
#####	20	< 20		0.31	
#####					
#####	< 20	< 20		0.37	
2/28/2008	20	< 20		0.28	
2/28/2008					
2/28/2008	< 20	< 20		0.27	
3/26/2008	< 20	< 20		0.28	
3/26/2008					
3/26/2008	< 20	< 20		0.33	
4/24/2008	< 20	< 20		0.34	
4/24/2008					
4/24/2008	< 20	< 20		0.35	
5/16/2008					28,867
5/16/2008					
5/21/2008	20	20		0.24	124,731
5/21/2008					
5/21/2008	< 20	< 20		0.25	28,532
5/28/2008					263,528
5/28/2008					
6/6/2008					66,894
6/12/2008					150,010
6/12/2008					
6/18/2008	< 20	< 20		0.47	305,603
6/18/2008					
6/27/2008					551,104
6/27/2008					
7/2/2008	< 20	< 20		0.35	484,166
7/2/2008					
7/9/2008					774,740
7/9/2008					
7/23/2008				0.53	15,006
7/23/2008					

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
7/31/2008	20	< 20		0.39	4,167
7/31/2008					
10/8/2008					477,696
10/8/2008					
#####	< 20	< 20		0.22	5,530
#####					
#####	140	40		0.22	30,613
#####					
#####	< 20	< 20		0.31	10,280
#####					
#####	20	20		0.31	10,790
#####	20	< 20		0.24	15,306
#####					
#####	40	< 20		0.29	12,890
2/10/2009					
2/10/2009	< 20	< 20		0.15	
2/10/2009	< 20	< 20		0.19	
3/31/2009	20	20		0.18	
3/31/2009					
3/31/2009	< 20	< 20		0.14	
4/22/2009	20	< 20		0.14	
4/22/2009					
4/22/2009	< 20	< 20		0.32	
5/21/2009	< 20	< 20		0.44	121,716
5/21/2009					
5/21/2009	< 20	< 20		0.47	65,950
6/24/2009	20	20		0.32	81,279
6/24/2009					
7/7/2009	< 20	< 20		0.37	227,888
7/7/2009					
7/15/2009					757,264
7/15/2009					
8/26/2009	< 20	< 20		0.41	4,288
8/26/2009					

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Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
9/30/2009	40	20		0.36	195,070
9/30/2009					
9/30/2009	< 20	< 20		0.39	107,590
#####	< 20	< 20		0.21	136,952
#####					
#####	< 20	< 20		0.28	151,050
#####	< 20	< 20		0.14	85,781
#####					
#####	< 20	< 20		0.16	63,300
#####	< 20	< 20		0.23	2,905
#####					
#####	< 20	< 20		0.22	
2/4/2010	< 20	< 20		0.09	< 110
2/4/2010					
3/18/2010	< 20	< 20		0.12	< 120
3/18/2010					
4/22/2010	< 20	< 20		0.26	3,959
4/22/2010					
5/19/2010	110	80		0.09	31,217
5/19/2010					
5/26/2010					28,811
5/26/2010					
6/2/2010					369
6/2/2010					
6/11/2010					482,673
6/24/2010	< 20	< 20		0.29	419,718
6/24/2010					
7/1/2010					103
7/1/2010					
7/9/2010					13,780
7/9/2010					
7/16/2010					8,157
7/16/2010					
7/27/2010	< 20	< 20		0.36	1,079

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1976 - 2013

Date	T. Coliform (MPN/100 ml)	F. Coliform (MPN/100 ml)	TKN (mg/l)	TN (mg/l)	Aureo (cells/ml)
7/27/2010					
8/26/2010	20	20		0.23	4,532
8/26/2010					
9/22/2010	< 20	< 20		0.29	3,534
9/22/2010					
#####	40	< 20		0.23	87,911
#####					
#####	20	20		0.19	11,782
#####					
1/4/2011	< 20	< 20		0.17	297
1/4/2011					
2/10/2011	< 20	< 20		0.18	< 20
2/10/2011					
3/3/2011	< 20	< 20		0.21	< 20
3/3/2011					
4/20/2011	< 20	< 20		0.09	< 20
4/20/2011					
5/3/2011	< 20	< 20		0.12	
5/3/2011					
6/15/2011	20	< 20		0.46	1,162,078
6/15/2011					
6/29/2011					548,922
6/29/2011					
7/21/2011					12,308
7/21/2011					
7/28/2011	< 20	< 20		0.52	1,162
7/28/2011					
8/31/2011	40	< 20		0.31	355
8/31/2011					
9/27/2011	20	20		0.30	73,712
9/27/2011					
11/1/2011	< 20	< 20		0.24	128
11/1/2011					
#####	20	20		0.22	1,722

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#####					
#####	< 20	< 20		0.28	566
#####					
1/11/2012	< 20	< 20		0.25	< 114
1/11/2012					
2/8/2012	< 20	< 20		0.22	342
2/8/2012					
3/21/2012	< 20	< 20		0.31	< 20
3/21/2012					
4/19/2012	20	< 20		0.27	3,764
4/19/2012					
5/22/2012	< 20	< 20		0.21	3,067
5/22/2012					
6/20/2012	< 20	< 20		0.49	223,489
6/20/2012					
7/19/2012	< 20	< 20		0.38	347
7/19/2012					
8/21/2012	< 20	< 20		0.32	
8/21/2012					
9/6/2012	< 20	< 20		0.39	208
9/6/2012					
10/3/2012	< 20	< 20		0.34	23,412
10/3/2012					
#####	80	< 20		0.23	3,076
#####					
#####	20	< 20		0.23	989
#####					
3/14/2013	< 20	< 20		0.20	< 20
4/24/2013	< 20	< 20		0.26	59
4/24/2013					
7/24/2013				0.36	< 20
7/24/2013					
9/10/2013	< 20	< 20		0.34	27,601
#####	< 20	< 20		0.17	170,519



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#####					
#####	< 20	< 20		0.18	717
#####					
12/5/2013	< 20	< 20		0.18	< 20
12/5/2013					
13408	131	112	111	171	187
36.73425	14	48	59	21	56
	15.4211421	9.590673	53.15%	12.28%	29.95%
			0.52	0.30	