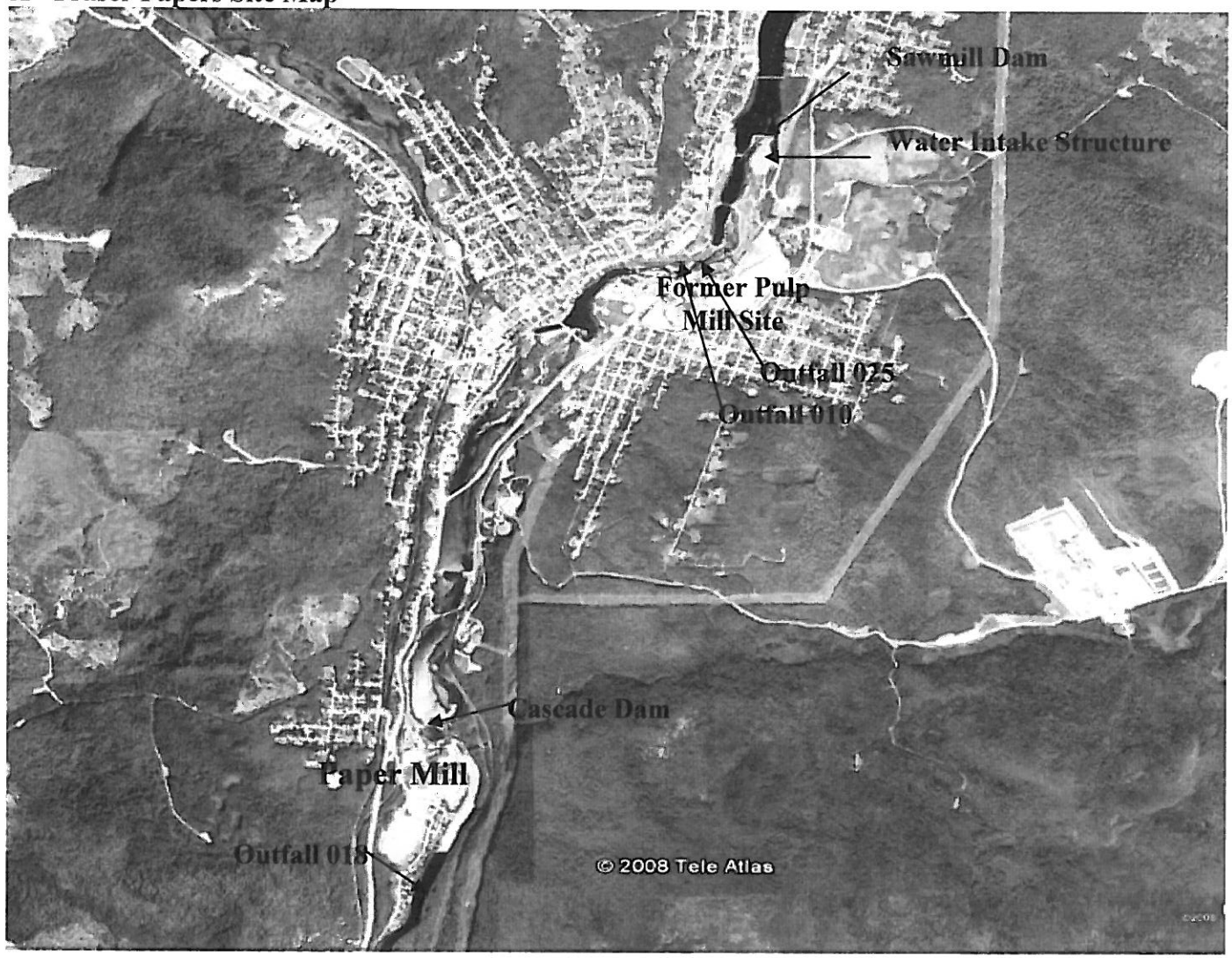
Attachment A - Fraser Papers Site Map



Google Earth

Attachment B
Fraser Papers - Summary of DMR data

Outfall 010		Flow		pH		TSS
		8 Mgal/d	10 Mgal/d	6.5 SU	8 SU	60 mg/L
MP Date	Rec'd Date	MO AVG	DAILY MX	MINIMUM	MAXIMUM	DAILY MX
1/31/1999	2/17/1999	8	8	6.9	7.2	3
2/28/1999	3/16/1999	8	8	7.1	7.5	11.4
3/31/1999	4/12/1999	8	8	6.7	7.1	1.8
4/30/1999	5/13/1999	8	8	6.7	6.9	19.9
5/31/1999	6/14/1999	8	8	6.9	7.2	11.9
6/30/1999	7/14/1999	8	8	7.1	7.2	9.35
7/31/1999	7/10/1999	8	8	6.9	7.4	7
8/31/1999	9/17/1999	8	8	6.9	7	6.2
9/30/1999	10/14/1999	8	8	7.2	7.4	5.5
10/31/1999	11/12/1999	8	8	6.9	7	31
11/30/1999	12/13/1999	8	8	6.3	6.5	28.4
12/31/1999	1/12/2000	8	8	7.1	7.4	5.6
1/31/2000	2/14/2000	8	8	7.2	7.4	5.2
2/29/2000	3/13/2000	8	8	7	7.4	12.5
3/31/2000	4/14/2000	8	8	6.3	6.4	
4/30/2000	5/15/2000	8	8	6.1	6.4	29.9
5/31/2000	6/19/2000	8	8	6.7	6.8	12.8
6/30/2000	7/14/2000	8	8	6.9	7	7.3
7/31/2000	8/18/2000	8	8	6.5	6.6	8.3
8/31/2000	9/18/2000	8	8	6.6	6.7	14.3
9/30/2000	10/16/2000	8	8	6.8	6.8	3.5
10/31/2000	11/16/2000	8	8	6.7	6.9	4.1
11/30/2000	12/15/2000	8	8	6.9	7	4
12/31/2000	1/17/2001	8	8	6.9	7.2	1.8
1/31/2001	2/14/2001	8	8	6.9	7.4	1
2/28/2001	3/16/2001	8	8	6.9	7	3.4
3/31/2001	4/18/2001	8	8	6.9	7.1	2.4
4/30/2001	5/16/2001	8	8	6.8	7.1	2.6
5/31/2001	6/18/2001	8	8	6.5	6.5	40.8
6/30/2001	7/12/2001	8	8	6.5	6.8	7.3
7/31/2001	8/16/2001					
8/31/2001	9/17/2001	8	8	6.6	6.9	2.9
9/30/2001	10/17/2001					
10/31/2001	11/15/2001					
11/30/2001	12/14/2001	8	8	6.6	6.7	8.45
12/31/2001	1/14/2002	8	8	6.6	6.8	1.35
1/31/2002	2/15/2002	8	8	6.6	6.8	0.35
2/28/2002	3/18/2002					
3/31/2002	4/16/2002	8	8	6.7	6.8	0
4/30/2002	5/16/2002	8	8	6.6	6.8	0.05
5/31/2002	6/12/2002	8	8	6.6	6.7	0.25
6/30/2002	7/15/2002	8	8	6.5	6.7	52.8
7/31/2002	8/15/2002	8	8	6.5	6.7	28.45
8/31/2002	9/17/2002	8	8	6.7	6.7	0.4
9/30/2002	10/16/2002					
10/31/2002	11/18/2002	8	8	6.5	6.5	43.25
11/30/2002	12/13/2002	8	8	6	6.1	10.8
12/31/2002	1/15/2003	8	8	6.3	6.8	4.35
1/31/2003	2/15/2003	8	8	6.3	6.5	13.35

2/28/2003	3/17/2003	8	8	6.5	6.7	0.5
3/31/2003	4/14/2003	8	8	6.4	6.5	5.5
4/30/2003	5/15/2003	8	8	6.4	6.4	21.5
5/31/2003	6/13/2003	8	8	6.3	6.5	8.3
6/30/2003	7/14/2003	8	8	6.5	6.6	4.45
7/31/2003	8/11/2003	8	8	6.6	6.7	2.4
8/31/2003	9/15/2003	8	8	7	7	2.3
9/30/2003	10/14/2003	8	8	6.5	6.5	7
10/31/2003	11/13/2003	8	8	6.5	6.6	2.2
11/30/2003	12/15/2003	8	8	6.6	6.7	13.2
12/31/2003	1/15/2004	8	8	6.4	6.5	3.5
1/31/2004	2/12/2004	8	8	6.1	6.3	4.5
2/29/2004	3/15/2004	8	8	6.6	6.8	4.7
3/31/2004	4/12/2004	8	8	5.8	6.1	3.6
4/30/2004	5/17/2004	8	8	5.6	5.7	8.5
5/31/2004	6/14/2004	8	8	5.8	5.8	0.5
6/30/2004	7/12/2004	8	8	6.2	6.3	1.2
7/31/2004	8/16/2004	8	8	6	6	10.2
8/31/2004	9/16/2004	8	8	6.1	6.2	3.1
9/30/2004	10/15/2004	8	8	6	6.2	3.6
10/31/2004	11/11/2004	8	8	5.9	6	2.9
11/30/2004	12/14/2004	8	8	6.5	6.6	1
12/31/2004	1/12/2005	8	8	6.4	6.4	2.3
1/31/2005	2/14/2005	8	8	6.2	6.3	5.3
2/28/2005	3/14/2005	8	8	6.2	6.2	10.7
3/31/2005	4/11/2005	8	8	6.1	6.4	1.6
4/30/2005	5/12/2005	8	8	5.6	5.8	20.1
5/31/2005	6/13/2005	8	8	5.9	6.1	2.9
6/30/2005	7/11/2005	8	8	6.7	6.8	25.8
7/31/2005	8/16/2005	8	8	6.2	6.4	0.5
8/31/2005	9/14/2005	8	8	5.9	6.3	0.5
9/30/2005	10/17/2005	8	8	6.2	6.2	32.5
10/31/2005	11/15/2005	8	8	6.3	6.6	3.2
11/30/2005	12/14/2005	8	8	6.1	6.2	7.9
12/31/2005	1/17/2006	8	8	5.9	6	14.4
1/31/2006	2/14/2006	8	8	6.5	6.6	5
2/28/2006	3/14/2006	8	8	5.7	5.9	5.2
3/31/2006	4/14/2006	8	8	5.4	5.5	1.6
4/30/2006	5/11/2006	8	8	5.7	5.8	5.5
5/31/2006	6/12/2006	8	8	5.5	5.5	15.4
6/30/2006	7/17/2006	8	8	5.6	5.7	2.9
7/31/2006	8/15/2006	8	8	5.9	6.2	52.2
8/31/2006	9/19/2006	8	8	5.9	6.1	5.4
9/30/2006	10/18/2006	8	8	5.5	5.6	3.6
10/31/2006	11/14/2006	8	8	6.2	6.3	4.4
11/30/2006	12/18/2006	8	8	5.9	6	5.7
12/31/2006	1/12/2007	8	8	5.9	6	50.4
1/31/2007	2/12/2007	8	8	5.8	6	5.7
2/28/2007	3/13/2007	8	8	5.9	6.1	18.8
3/31/2007	4/11/2007	8	8	6	6.3	15.7
4/30/2007	5/10/2007	8	8	5.93	6.04	10.2
5/31/2007	6/11/2007	8	8	5.48	5.64	15.5
6/30/2007	7/6/2007	8	8	5.86	6.2	16
7/31/2007	8/7/2007	8	8	6.05	6.08	42.4
	Average	**8**	**8**	**6.36**	**6.53**	**10.24**

Outfall 018		Flow	Flow	pH	pH	Temperature	Temperature
		Req. Mon. Mgal/d	Req. Mon. Mgal/d	6.5 SU	8 SU	Req. Mon. deg F	Req. Mon. deg F
MP Date	Rec'd Date	MO AVG	DAILY MX	MINIMUM	MAXIMUM	MO AVG	DAILY MX
1/31/1999	2/17/1999	12.2	13.8	6.5	7.7	51.4	54
2/28/1999	3/16/1999	12.4	13.3	6.5	7.6	50.5	57.2
3/31/1999	4/12/1999	12.7	16	6.5	7.1	53.3	61.3
4/30/1999	5/13/1999	13	15	6.7	7.1	60.1	65.7
5/31/1999	6/14/1999	12.6	14.3	6.6	7.5	71.8	76.5
6/30/1999	6/30/1999	13.1	14.5	6.8	7.2	84.4	90.1
7/31/1999	7/10/1999	13.8	17	6.8	7.2	87.9	91.6
8/31/1999	9/17/1999	13	16.6	7	7.3	85.4	91.4
9/30/1999	10/14/1999	13	18.1	6.7	8.6	81.7	89.8
10/31/1999	11/12/1999	12.6	14.6	6.8	7.3	70.4	77.4
11/30/1999	12/13/1999	12.8	14.3	6.8	7.4	66.1	69.6
12/31/1999	1/12/2000	11.9	13.8	6.8	7.5	60.4	66.7
1/31/2000	2/14/2000	11.3	13.8	6.8	7.7	55.8	61.2
2/29/2000	3/13/2000	12.2	14.3	6.9	7.5	57.9	63.7
3/31/2000	4/14/2000	12.6	12.6	6.8	7.4	61.8	68.4
4/30/2000	5/15/2000	11.9	13.7	6.9	7.3	65.9	70.2
5/31/2000	3/1/2001						
6/30/2000	7/14/2000	11.6	14.4	6.6	7.2	81.8	91.2
7/31/2000	8/18/2000	12.7	16.5	6.9	7.4	86.3	90.1
8/31/2000	9/18/2000	12.6	16.2	6.9	7.4	85.9	88.5
9/30/2000	10/18/2000	12.6	14.5	6.7	7.3	81.8	89.2
10/31/2000	11/16/2000	12.8	15.7	6.7	7.4	71.5	78.8
11/30/2000	12/15/2000	13.7	16.4	7	7.5	60.3	66.7
12/31/2000	1/17/2001	12.5	19.2	7	8.4	53.3	66.7
1/31/2001	2/14/2001	11.9	13.2	6.8	7.5	54.7	58.1
2/28/2001	3/16/2001	11.5	12.6	6.8	7.2	56.1	58.6
3/31/2001	4/18/2001	11.6	12.8	6.9	7.5	58.7	63
4/30/2001	5/16/2001	11.5	12.6	6.9	7.1	64.1	69.4
5/31/2001	6/18/2001	12.3	15	6.6	7.3	74.3	81
6/30/2001	7/15/2001	11.7	15.7	6.6	7.4	82.3	88.9
7/31/2001	8/16/2001	12.3	15.3	6.8	7.3	84.7	91.9
8/31/2001	9/17/2001	9.3	14.9	6.7	7.6	80.9	89.8
9/30/2001	10/17/2001	4.4	9	6.5	7.4	71.3	75.7
10/31/2001	11/15/2001	3.3	3.5	6.7	7.8	54.8	60.1
11/30/2001	12/14/2001	1.6	3.4	6.6	7.3	43.7	47.1
12/31/2001	1/14/2002	1	6.1	6.5	7.4	44.1	54
1/31/2002	2/15/2002	0.7	0.9	6.7	7.3	42.2	55
2/28/2002	3/18/2002	0.6	0.7	6.7	7.1	38.8	41
3/31/2002	4/16/2002	0.6	0.7	6.8	7.2	40.4	41
4/30/2002	5/16/2002	0.7	0.9	6.6	7.4	51.3	58.8
5/31/2002	6/12/2002	0.6	0.7	6.7	7.6	55.8	64
6/30/2002	7/15/2002	7.5	10.5	6.5	7.9	74.1	77.4
7/31/2002	8/15/2002	9.4	10.4	7	7.4	81.7	83.7
8/31/2002	9/16/2002	8.9	10	6.9	7.2	81.6	85.5
9/30/2002	10/16/2002	10.5	12.7	6.8	7.2	75.8	79.5
10/31/2002	11/18/2002	9.7	14.1	6.9	7.3	70	74.5
11/30/2002	12/13/2002	8.3	9.8	6.6	7.4	56.4	63.5
12/31/2002	1/15/2003	8.3	10.2	6.8	7.5	51.1	52.7
1/31/2003	2/15/2003	9.7	10.7	6.7	7.7	48.6	49.8

2/28/2003	3/17/2003	10.4	11.7	7	7.6	54	55
3/31/2003	4/14/2003	10.2	11	6.9	7.4	60.1	62.6
4/30/2003	5/15/2003	10.1	11.7	6.8	7.1	61.4	66
5/31/2003	6/13/2003	10.3	11.6	6.8	7.2	74.4	79
6/30/2003	7/14/2003	11.2	12.6	6.8	7.2	82.3	88.3
7/31/2003	8/11/2003	11.2	12.4	7	7.3	89	92
8/31/2003	9/15/2003	11.5	13.5	6.8	7.2	88.8	91
9/30/2003	10/14/2003	11.6	13.9	7	7.2	81	84
10/31/2003	11/13/2003	10.7	11.7	7.1	7.4	72	77
11/30/2003	12/15/2003	8.6	10.7	7	7.5	57	59
12/31/2003	1/15/2004	8.6	9.7	7	7.6	47	66
1/31/2004	2/12/2004	9.3	10.3	7	7.5	53.9	57.9
2/29/2004	3/15/2004	10.2	11	7	7.6	56.7	57.9
3/31/2004	4/12/2004	10.4	10.8	7	7.2	61.4	63
4/30/2004	5/17/2004	10.2	11	7.1	7.4	64.3	68.4
5/31/2004	6/14/2004	10.8	11.8	6.8	7.2	72.8	79.9
6/30/2004	5/17/2004	10.8	12.2	7	7.3	80.7	83.7
7/31/2004	8/16/2004	10.5	11.5	6.9	7.8	85.6	88
8/31/2004	9/16/2004	9.9	13.2	6.8	7.3	86.1	90.1
9/30/2004	10/15/2004	10	11	6.8	7.3	83	88
10/31/2004	11/11/2004	10.9	15	6.7	7.3	69.9	74.1
11/30/2004	12/14/2004	11	12	7	7.4	63	68
12/31/2004	1/12/2005	11.2	13	6.9	7.8	53.4	55
1/31/2005	2/14/2005	10.8	12.5	7	7.5	54	57
2/28/2005	3/14/2005	10.9	11.6	6.9	7.8	55.7	60.6
3/31/2005	4/11/2005	10.2	11	6.9	7.5	57.5	61.9
4/30/2005	5/12/2005	9.7	10.7	7	7.6	67.1	71.8
5/31/2005	6/13/2005	10.1	11.1	6.9	7.3	64.6	75.6
6/30/2005	7/11/2005	8.4	13.1	6.6	7.4	82.9	90.7
7/31/2005	8/16/2005	11.4	13.2	6.8	7.2	90.2	93
8/31/2005	9/14/2005	11.1	14.1	6.9	7.4	87.6	90.3
9/30/2005	10/17/2005	10.5	11.5	6.9	7.2	81.5	84.6
10/31/2005	11/15/2005	10.2	11.5	6.9	7.4	72.1	78.3
11/30/2005	1/3/2006	9.8	10.7	6.8	7.4	62.8	66.9
12/31/2005	1/17/2006	10.1	11.6	6.6	7.6	53.8	56.8
1/31/2006	2/14/2006	10.3	11.6	6.9	7.6	54.6	56.8
2/28/2006	3/14/2006	10.1	11.1	7.1	7.6	54.8	56.7
3/31/2006	4/14/2006	10.1	10.8	6.9	7.6	59.4	62.8
4/30/2006	5/11/2006	10	10.8	6.9	7.4	63.3	64.9
5/31/2006	6/12/2006	10.4	11.2	6.7	7.1	69.9	76.6
6/30/2006	7/17/2006	10.6	11.8	6.5	7.4	79.7	83.8
7/31/2006	8/15/2006	9.8	10.6	6.6	7.2	86.1	88.5
8/31/2006	9/19/2006	9.8	13.1	6.7	7.4	82.2	88
9/30/2006	10/18/2006	9.5	10.2	6.7	7.2	76	79.9
10/31/2006	11/14/2006	9.5	10	6.7	7.5	67.5	74.5
11/30/2006	12/18/2006	9.2	10.4	6.8	7.3	62.2	66.7
12/31/2006	1/12/2007	9	9.7	6.9	7.5	56.1	57
1/31/2007	2/12/2007	9.06	10	7.23	7.6	51.98	55.58
2/28/2007	3/13/2007	8.8	9.6	6.8	7.6	51.1	53.8
3/31/2007	4/11/2007	8.68	11.5	6.7	7.6	55.5	59.2
4/30/2007	5/10/2007	8.4	9.4	6.6	7.7	57.41	65.48
5/31/2007	6/11/2007	8.4	9.5	6.7	7.4	69.01	77
6/30/2007	7/6/2007	8.1	9.4	6.8	7.3	7.84	80.8
7/31/2007	8/7/2007	8.5	10.7	6.9	7.4	80.9	85.3
8/31/2007							
	Average	**9.89**	**11.69**	**6.81**	**7.43**	**66.04**	**71.62**

Outfall 018		LC50 Statre 48Hr Acute Ceriodaphnia	LC50 Statre 48Hr Acute Pimephales	Noel Statre 7Day Chronic Ceriodaphnia	Noel Statre 7Day Chronic Pimephales
		Req. Mon. %	Req. Mon. %	Req. Mon. %	Req. Mon. %
MP Date	Rec'd Date	DAILY MN	DAILY MN	DAILY MN	DAILY MN
1/31/1999	2/17/1999	100	100	10	100
4/30/1999	5/13/1999	100	100	10	10
7/31/1999	7/10/1999	100	100	100	100
10/31/1999	11/12/1999	100	100	32	10
1/31/2000	2/14/2000	100	100	10	1.1
4/30/2000	5/15/2000				
7/31/2000	8/18/2000	100	100	32	100
10/31/2000	11/16/2000	100	100	32	56
1/31/2001	2/14/2001	100	100	10	100
4/30/2001	5/16/2001	100	100	32	56
7/31/2001	8/16/2001			56	
10/31/2001	11/15/2001				
1/31/2002	2/15/2002	100	100	100	100
4/30/2002	5/16/2002	100	100	56	100
7/31/2002	8/15/2002	100	100	100	100
10/31/2002	11/18/2002	100	100	100	1.1
1/31/2003	2/15/2003	100	100	56	100
4/30/2003	5/15/2003	100	100	100	100
7/31/2003	8/11/2003	74.8	100	56	10
10/31/2003	11/13/2003	100	100	100	100
1/31/2004	2/12/2004	100	100	10	10
4/30/2004	5/17/2004	100	100	32	100
7/31/2004	8/16/2004	100	100	32	100
10/31/2004	11/11/2004	100	100	100	10
1/31/2005	2/14/2005	100	100	100	3
4/30/2005	5/12/2005	43.8	100	10	100
7/31/2005	8/16/2005	100	100	100	10
10/31/2005	11/15/2005	100	100	100	1.1
1/31/2006	2/14/2006	100	100	56	3
4/30/2006	8/15/2006	100	100	100	32
7/31/2006	8/15/2006	100	100	100	100
10/31/2006	11/14/2006	100	100	100	32
1/31/2007	2/12/2007	100	100	100	32
4/30/2007	5/10/2007	100	100	32	10
7/31/2007	8/7/2007	100	100	56	100
	Average	**97.5**	**100**	**61.2**	**55.9**

Sum Outfall 016 & 018

BOD, 5-day, 20 deg. C (July 1 - Sept 30)						
Limit Value Type Code			Q1	Q2	C2	C3
Limit Value Consolidation			13400	25600	Req. Mon	Req. Mon
Limit Unit Short Desc			lb/d	lb/d	mg/L	mg/L
Statistical Base Short Desc			MO AVG	DAILY MX	MO AVG	DAILY MX
7/31/2000			10,166	146.7	18,091	84
8/31/2000			10,572	158 7	18,418	91
9/30/2000			110 3	13,178	83 3	9,391
7/31/2001			53	5,554	90	9,343
8/31/2001			2,675	37 1	4,622	68 3
9/30/2001			20	3,582	52 8	919
7/31/2002			4,227	55 6	7,100 70	96.9
8/31/2002			202.7	4,543 40	65.6	9,015 90
9/30/2002			4,026 70	47 8	6,000.20	65 6
7/31/2003			101	10,701	162	17,648
8/31/2003			144 6	16,839	90 4	9,983
9/30/2003			117	12,494	78	8,601
7/31/2004			107 8	11,480	6,914	69 3
8/31/2004			120 9	13,479	85 4	8,553
9/30/2004			141	15,642	8,963	91 4
7/31/2005			107	12,294	73 1	7,961
8/31/2005			10,217	109	74 9	8,252
9/30/2005			10,403	108 8	7,702	77.5
7/31/2006			3,758	50	5,485	76 6
8/31/2006			3,953	53 8	5,939	76 1
9/30/2006			101 7	4,576	70.6	7,254
		avg	2920 22	5958 57	4293 38	4653 22
		max	10,572	16,839	18,418	17,648

BOD, 5-day, 20 deg. C (October 1 - June 30)						
Limit Value Type Code			Q1	Q2	C2	C3
Limit Value Consolidation			14000	27000	Req. Mon.	Req. Mon
Limit Unit Short Desc			lb/d	lb/d	mg/L	mg/L
Statistical Base Short Desc			MO AVG	DAILY MX	MO AVG	DAILY MX
1/31/2000			147 8	20,383	86	9,751
2/29/2000			103.5	12,923	166 5	22,220
3/31/2000			10,164	136.3	20,424	82.4
4/30/2000			10,097	137	18,900	81 6
5/31/2000			318	44,116	80 6	9,571
6/30/2000			154 4	18,816	87 4	9,512
10/31/2000			116.8	13,592	66 7	7,389
11/30/2000			128 5	15,618	74 9	8,516
12/31/2000			178 8	21,239	85 2	9,293
1/31/2001			204 5	22,946	87 3	9,319
2/28/2001			201 8	23,369	87.5	9,362
3/31/2001			118 2	13,279	75 5	7,702
4/30/2001			106 3	11,617	74 6	7,653
5/31/2001			115	13,428	77	8,048
6/30/2001			10,715	113 5	66 7	6,848
10/31/2001			1,199	25	340	9
11/30/2001			1,030	149	31	7,510
12/31/2001			1,182 70	198	4,785 70	60 3
1/31/2002			153	3,172 80	41 8	935 9
2/28/2002			1,331 10	25 4	576 9	60
3/31/2002			28.6	48.4	657 9	847.5
4/30/2002			1,417 70	154 5	64 6	684 5
5/31/2002			2,276 90	29 3	478 7	60
6/30/2002			112 5	3,874 30	57.4	8,472 50
10/31/2002			5,044.90	6,287 40	68	91 8
11/30/2002			100 8	126 6	6,728 70	8,979 40
12/31/2002			122.5	6,214.70	8,823 70	91 7
1/31/2003			105 4	11,207 40	139	8,169 50
2/28/2003			12,722.60	147	8,323	98 3
3/31/2003			10,671	113	147	8,762
4/30/2003			11,128	138	15,878	190 2
5/31/2003			11,472	126 3	17,000	172.7
6/30/2003			134	13,615	174.5	19,062
10/31/2003			10,786	115	7,767	82
11/30/2003			10,475	125 9	5,577	72 5
12/31/2003			10,217	115 9	7,243	90.2
1/31/2004			10,223	137 3	7,591	90 4
2/29/2004			11,808	130 6	7,430	82 5
3/31/2004			12,397	133.5	8,333	90 4
4/30/2004			13,267	137	8,402	91 6
5/31/2004			12,461	128.8	8,172	83 5
6/30/2004			71 7	7,236	99	9,965
10/31/2004			12,824	186	8,176	98 6
11/30/2004			112	12,368	83 5	8,459
12/31/2004			11,335	120	8,470	86
1/31/2005			12,666	127	8,424	87
2/28/2005			12,178	125.1	148 8	27,575
3/31/2005			101	12,356	138	9,391
4/30/2005			10,789	110 8	9,224	98 7
5/31/2005			115 2	11,866	7,442	78.8
6/30/2005			5,472	64	8,170	85
10/31/2005			13,454	153.5	8,091	86.4
11/30/2005			118 1	11,936	7,679	83.7
12/31/2005			11,138	117 8	7,342	79.5
1/31/2006			11,434	118	7,958	87
2/28/2006			11,297	130 2	7,740	86.3
3/31/2006			12,764	146 4	8,542	94 3
4/30/2006			242	27,408	8,313	91 6
5/31/2006			117 8	6,065	73 1	9,861
6/30/2006			4,830	58 9	6,548	74 4
10/31/2006			128 6	5,653	7,560	91.9
11/30/2006			108	176 1	5,685	9,768
12/31/2006			100 9	135 2	6,681	9,950
1/31/2007			132 5	222 3	7,417	9,502
2/28/2007			120 6	166 2	6,365	8,035
3/31/2007			126.7	213	5,937	9,863
4/30/2007			7,374	14,038	239	418
5/31/2007			6,613	14,445	447 8	642 5
6/30/2007			431 3	5,163	597 5	9,292
		avg	4796.10	5931 79	4621 18	4555 35
		max	13454	44116	20424	27575

Solids, total suspended						
Limit Value Type Code			Q1	Q2	C2	C3
Limit Value Consolidation			28000	52200	Req. Mon.	Req. Mon
Limit Unit Short Desc			lb/d	lb/d	mg/L	mg/L
Statistical Base Short Desc			MO AVG	DAILY MX	MO AVG	DAILY MX
1/31/2000			197 6	24,004	57 9	8,174
2/29/2000			11,346	205	31,650	75 7
3/31/2000			274 8	45,210	60 8	9,140
4/30/2000			119 2	18,257	62 2	8,944
5/31/2000			11,462	52.5	6,678	96 8
6/30/2000			122	14,210	79 4	8,887
7/31/2000			10,473	120 8	15,575	80 4
8/31/2000			10,676	168 2	22,761	84 6
9/30/2000			101.8	12,733	63 4	7,768
10/31/2000			10,075	59.2	6,907	86.2
11/30/2000			201.8	24,531	75 6	8,922
12/31/2000			246 6	31,715	59 2	6,888
1/31/2001			548 2	66,221	70 2	8,369
2/28/2001			112 8	13,208	458 8	57,423
3/31/2001			36 5	4,155	82.6	9,923
4/30/2001			35 3	3,942	6,326	65 2
5/31/2001			46 2	4,829	95 8	9.91
6/30/2001			12,973	156.8	64 9	6,941
7/31/2001			38 5	4,128	59 8	6,722
8/31/2001			2,231	35 9	4,607	75
9/30/2001			104	1,158	32	3,999
10/31/2001			1,314	16	30	677
11/30/2001			1,030	149	31	7,510
12/31/2001			24 3	33 2	545 4	804 3
1/31/2002			16 1	33.2	368.3	812 9
2/28/2002			20	223 2	460 5	9 9
3/31/2002			16.8	25 4	359 7	528 9
4/30/2002			11 9	151 2	19 6	465 1
5/31/2002			19 5	2,459	395	64 8
6/30/2002			1,613 40	314 6	34 3	6,541 10
7/31/2002			1,625 10	23 8	2,382.70	36 9
8/31/2002			16,634 40	2,500 70	252	36 7
9/30/2002			119	2,147 10	37 1	5,562
10/31/2002			3,427 70	46,590	59 7	615 4
11/30/2002			1,788.20	2,993 50	36 1	64.2
12/31/2002			1,055 30	20 4	2,665 90	64 8
1/31/2003			1,668 90	27 9	5,256 80	80 8
2/28/2003			1,273 60	21 5	2,636 60	37 4
3/31/2003			1,699	37 3	6,993	86
4/30/2003			10,133	194 2	4,622	68 2
5/31/2003			4,020	41 2	8,071	81 8
6/30/2003			102 6	12,988	61 5	7,172
7/31/2003			137	17,313	62	7,443
8/31/2003			123 3	15,710	58 3	7,299
9/30/2003			102	12,547	50	6,283
10/31/2003			29	3,200	48	6,097
11/30/2003			3,176	34 6	5,921	61
12/31/2003			49 1	4,941	92.4	9,405
1/31/2004			3,955	40.7	58	6,156
2/29/2004			32 6	3,430	45 6	4,945
3/31/2004			24	24 6	4,399	7,240
4/30/2004			121	13,123	42 7	4,408
5/31/2004			100	39 7	4,374	9,752
6/30/2004			23 4	43 3	5,029	9,609
7/31/2004			136 8	19,065	67.1	8,303
8/31/2004			12,151	24,838	26 6	30.7
9/30/2004			104 2	13,609	60.1	7,365
10/31/2004			11,173	121 4	3,734	46.3
11/30/2004			10,787	54 7	6,320	89 2
12/31/2004			34	3,790	46	5,775
1/31/2005			29	3,098	43	4,936
2/28/2005			16,193	182	56 3	5,951
3/31/2005			31 4	3,346	51.1	5,495
4/30/2005			38 7	4,326	59 8	6,558
5/31/2005			24 8	27 1	3,031	5,247
6/30/2005			3,631	39	69	6,937
7/31/2005			43 5	5,490	61 8	8,295
8/31/2005			110 8	12,770	45 4	5,874
9/30/2005			35 5	4,101	6,209	62.4
10/31/2005			114 8	36 5	3,861	9,935
11/30/2005			22 3	2,993	40	4,630
12/31/2005			29 9	3,269	55 6	5,951
1/31/2006			28 6	3,091	43 6	4,946
2/28/2006			30.2	3,179	42	4,421
3/31/2006			33 5	3,591	55 6	5,606
4/30/2006			384.2	48,058	53 8	5,583
5/31/2006			3,005	38 5	5,323	67 2
6/30/2006			2,800	35 4	5,644	60 1
7/31/2006			2,796	4,447	47	79 8
8/31/2006			129	3,744	7 14	8,198
9/30/2006			2,020	2,622	40 3	52.4
10/31/2006			2,079	3,278	47 5	79
11/30/2006			11 1	16 1	2,940	5,755
12/31/2006			2,921	57 3	6,198	89 4
1/31/2007			154	1,954	4,816	61 9
2/28/2007			1,464	3,352	44 3	82.5
3/31/2007			127 5	1,633	1,940	7,048
4/30/2007			122	1,992	3,176	72
5/31/2007			257.2	2,660	4,626	89 1
6/30/2007			105	2,436	3,704	71 4

Outfall 016		Tetrachlorodibenzofuran		Tetrachlorodibenzo-p-dioxin		Phosphorus, total	
		Mon. ug/d	Mon. ppq	108 ug/d	Mon. ppq	Req. Mon. lb/d	Req. Mon. mg/L
MP Date	Rec'd Date	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX	DAILY MX
3/31/1999	4/12/1999					281	2.3
6/30/1999	7/14/1999					480.5	3.45
9/30/1999	10/14/1999					261.83	1.95
12/31/1999	1/12/2000					262.51	1.955
3/31/2000	4/14/2000			9		418.58	2.39
6/30/2000	7/14/2000	0	0	0	0	126.9	0.805
9/30/2000	10/16/2000			9		582.7	4.11
12/31/2000	1/17/2001			9		380.2	3.08
3/31/2001	4/18/2001			9		389	3.07
6/30/2001	8/16/2001			9		461.47	3.48
9/30/2001	10/17/2001			2			
12/31/2001	1/14/2002			2		29.3	1.1
3/31/2002	4/15/2002			2		51	1.7
6/30/2002	7/15/2002			2		61.7	1
9/30/2002	10/16/2002			2		50.04	1
12/31/2002	1/15/2003			2		18.4	0.4
3/31/2003	4/14/2003			2		14.96	0.46
6/30/2003	7/14/2003	0	0	0	0	724.9	5.3
9/30/2003	10/14/2003	0	0	0	0	206	1.5
12/31/2003	1/15/2004	0	0	0	0	149.5	1.1
3/31/2004	4/12/2004			9		177.2	1.7
6/30/2004	5/17/2004			9		30.6	0.28
9/30/2004	10/15/2004			9		25	0.21
12/31/2004	1/12/2005	0	0	0	0	77.9	0.58
3/31/2005	4/11/2005	0	0	0	0	84.1	0.72
6/30/2005	7/11/2005			9		136.7	1.1
9/30/2005	10/17/2005			9		57.4	0.42
12/31/2005	1/17/2006			9		68.8	0.55
3/31/2006	4/14/2006			9		29.4	0.24
6/30/2006	7/17/2006	**0**	**0**	**0**	**0**	**186**	**1.6**
9/30/2006	10/18/2006	**0**	**0**	**0**	**0**	**121.1**	**3.3**
12/31/2006	1/12/2007	**0**	**0**	**0**	**0**	**25.7**	**0.68**
3/31/2007	4/11/2007	**0**	**0**	**0**	**0**	**1.1**	**0.32**
6/30/2007							
	Average	**0**	**0**	**4.21**	**0**	**186.61**	**1.62**

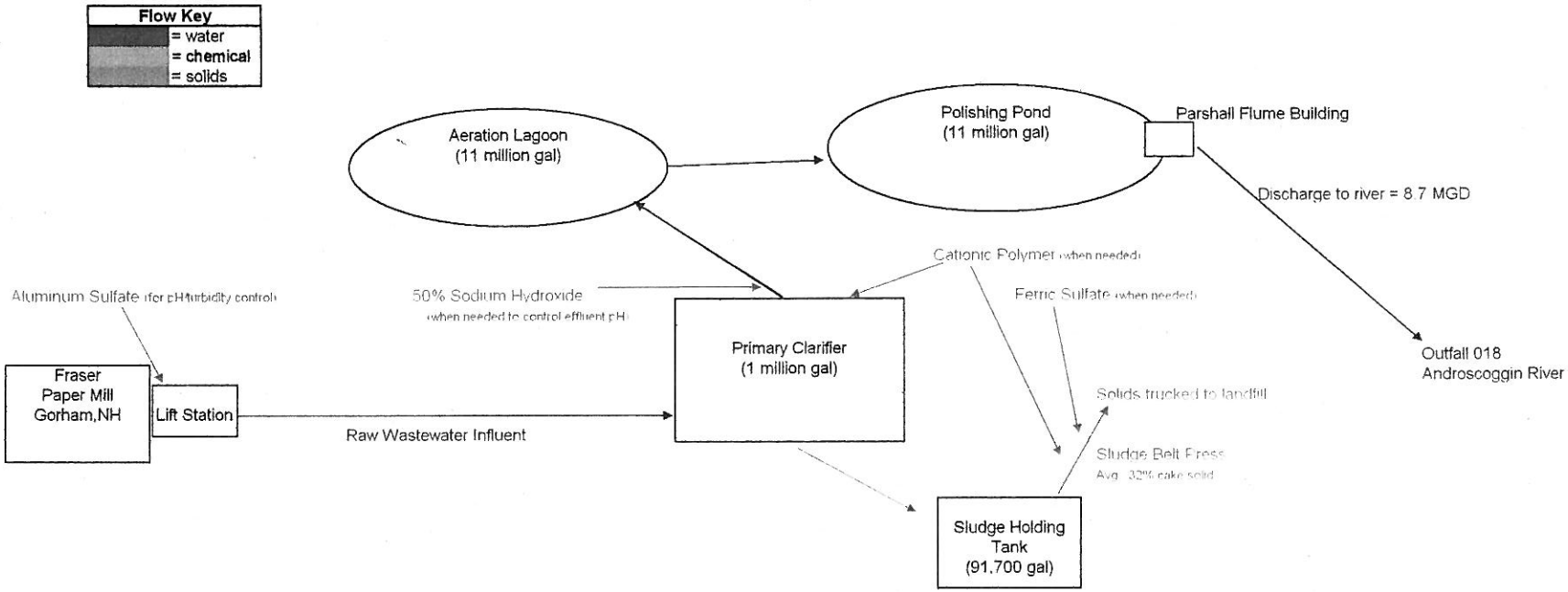
Outfall 016		Flow		Chlorine		Flow		Total adsorbable Halogens		Nitrogen, ammonia total (as N)	pH		Temperature	
		77 lb/d	134 lb/d	Req. Mon. mg/L	Req. Mon. mg/L	Req. Mon. Mgal/d	Req. Mon. Mgal/d	Req. Mon. kg/d	Req. Mon. mg/L	Req. Mon. mg/L	6.5 SU	8 SU	Req. Mon. deg F	Req. Mon. deg F
MP Date	Rec'd Date	MO AVG	DAILY MX	MO AVG	DAILY MX	MO AVG	DAILY MX	MO AVG	MO AVG	DAILY MX	MINIMUM	MAXIMUM	MO AVG	DAILY MX
1/31/1999	2/17/1999					15.6	16.6	0.2	2.53	0.2	6.8	7.6	78	80.1
2/28/1999	3/16/1999					15.6	16.8	0.31	3.7	0.1	6.6	7.4	78.4	78.8
3/31/1999	4/12/1999					16.4	17.7	0.24	2.85	0	6.9	7.8	79.4	82
4/30/1999	5/13/1999	4.7	10.3	0.04	0.08	15.5	16.9	0.24	2.9	1.07	6.7	7.7	82.3	84
5/31/1999	6/14/1999	2.1	2.8	0.015	0.02	14.6	17.1	0.24	2.67	5.81	6.9	8.8	88.2	94.1
6/30/1999	7/14/1999					15.3	16.7	0.18	2.24	0.57	6.9	7.4	99.9	101.8
7/31/1999	7/10/1999					15.6	16.5	0.21	2.77	3.44	7	7.4	96.4	101.1
8/31/1999	9/17/1999					16	18.6	0.16	2.06	6.56	6.9	7.7	96.7	98.4
9/30/1999	10/14/1999					16.3	20.7	0.12	1.19	4.69	6.9	7.9	88.3	100
10/31/1999	11/12/1999					16.4	17.9	0.2	2.5	0.32	6.8	7.5	88	90.1
11/30/1999	12/13/1999					16.9	16.9	0.17	2.05	0.66	7	7.6	83.8	88.9
12/31/1999	1/12/2000	0	0	0	0	18	19.7	0.23	2.75	2.02	6.8	7.6	82.6	86.2
1/31/2000	2/14/2000					19.4	21.2	0.21	2.16	0.14	6.7	7.7	76.1	78.6
2/29/2000	3/13/2000	1.7	14.8	0.032	0.09	18.9	20.2	0.27	2.93	0.59	7	7.8	79.6	82.4
3/31/2000	4/14/2000					19.7	21.1	0.28	2.89	0.26	6.8	7.2	72.5	82.9
4/30/2000	5/15/2000					20	21	0.18	1.98	1.24	6.9	7.2	84.4	87.1
5/31/2000	6/19/2000					18.4	20.8	0.24	2.15	0.305	7	8	86.7	91.9
6/30/2000	7/14/2000					15.1	17.7	0.2	2.34	0.532	6.6	7.8	89.8	100.4
7/31/2000	8/18/2000					16.4	17.3	0.19	2.35	0	6.7	7.5	99.1	100.2
8/31/2000	9/18/2000					15.8	17.7	0.18	2.49	3.67	7	7.4	95.7	99.5
9/30/2000	10/16/2000					15.6	17.9	0.16	2.1	0.78	7	7.7	93.1	98.1
10/31/2000	11/16/2000					14.6	16	0.19	2.47	2.69	6.7	7.6	87.3	93.7
11/30/2000	12/15/2000	2.21	9.01	0.02	0.1	14.4	15.9	0.18	2.46	2.08	6.7	7.7	85.4	87.1
12/31/2000	1/17/2001					15.1	17.4	0.19	2.42	1.1	6.8	7.4	75.2	82
1/31/2001	2/14/2001					15.2	16.2	0.18	2.34	0	6.5	7.1	77.2	81.1
2/28/2001	3/16/2001					15.2	16.5	0.22	2.65	2.92	6.4	7.5	73.3	76.3
3/31/2001	4/18/2001					15.4	16	0.21	2.63	0.12	6.4	7.4	76.6	77.9
4/30/2001	5/16/2001					16	17.3	0.19	2.05	0.18	6.8	7.3	75.2	85.1
5/31/2001	6/18/2001					13.9	17.5	0.188	1.43	0	6.6	7.4	84.6	87.3
6/30/2001	8/16/2001							0.166	1.64	0.17	6.6	7.4	91.9	96.1
7/31/2001	8/16/2001					13.2	15.3				6.7	7.4	90.5	94.8
8/31/2001	9/17/2001					6.2	12.8				6.5	7.9	78.7	93.4
9/30/2001	10/17/2001	3.7	5.3			3.7	5.3				6.5	9	61.9	60.7
10/31/2001	11/15/2001					4.7	6				7.4	8	49.5	57.2
11/30/2001	12/14/2001					4	6.3			0	7.1	7.6	62	72
12/31/2001	1/14/2002					2.8	3.2			0	6.7	7.5	63.6	69.8
1/31/2002	2/15/2002					2.9	3.1			1.2	7	7.5	57.2	62.6
2/28/2002	3/18/2002					2.9	3.2			0.82	6.5	7.4	56.5	61
3/31/2002	4/15/2002					3	3.6			0.054	6.8	7.3	59.8	61.7
4/30/2002	5/16/2002					1.8	3.4			0.0866	6.9	7.5	57.7	64.9
5/31/2002	6/12/2002					2.1	4.7			0.05	6.9	8	50.5	58.6
6/30/2002	7/15/2002					4.7	7.4			0.13	6.5	7.8	60.3	64.8
7/31/2002	8/15/2002					4.2	4.6			0.05	7	7.6	68.3	70
8/31/2002	9/16/2002					4.1	4.8			0.97	6.9	7.7	69.9	71.8
9/30/2002	10/16/2002					4.6	6			0.22	6.5	7.7	68.5	79.9
10/31/2002	11/18/2002					3.9	7.9			2.9	6.9	7.8	50.8	57.9
11/30/2002	12/13/2002					5.1	8			1.1	7	8.6	49.4	56.3
12/31/2002	1/15/2003					4.1	5.5			2.4	7	7.6	47.6	48
1/31/2003	2/15/2003					3.5	4.4			1.7	6.9	8.1	39.9	39.9
2/28/2003	3/17/2003					3.9	4.2			1.7	6.6	7.4	43	44.1
3/31/2003	4/14/2003					2.4	3.9			5.2	6.8	8	52	61.5
4/30/2003	5/15/2003					8	10.9			0.27	6.5	7.9	73.5	90

5/31/2003	6/13/2003					12.8	16.2	0.12	0.89	0.51	7	7.2	92.2	96.8
6/30/2003	7/14/2003					15	16.4	0.13	1.459	0.1	6.9	7.4	98.8	105.1
7/31/2003	8/11/2003					15.8	17.6	0.13	1.529	0.41	6.8	7.3	100	106
8/31/2003	9/15/2003					16.4	18.1	0.18	2.067	0.59	6.8	7.2	105.5	107.8
9/30/2003	10/14/2003					16.5	17.6			9.1	7	7.3	95	99
10/31/2003	11/13/2003					14.9	17.3	0.14	1346.5	0.4	6.9	7.3	90	94
11/30/2003	12/15/2003					12.4	13.8	0.22	1.26	6.6	6.9	7.1	84	87.2
12/31/2003	1/15/2004					13.2	15.7	0.17	1.44	0.96	6.9	7.3	76	80
1/31/2004	2/19/2004					13.1	14.2	0.24	1.83	0.06	6.9	7.4	79.3	82.6
2/29/2004	3/15/2004					13.9	14.4	0.13	1.64	4.7	6.5	8	78.5	80.2
3/31/2004	4/12/2004					13.7	14.3	0.1	1290	2	6.7	7.3	82	87
4/30/2004	5/17/2004					13.2	14.9	0.14	1900	4	6.7	7.3	86.9	91.9
5/31/2004	6/14/2004					14.2	16.8	0.15	1860	1.5	7	7.7	93.7	109.9
6/30/2004	5/17/2004					15	16.9	0.17	1440	0.22	7	7.7	92.5	99.1
7/31/2004	8/16/2004					15.9	17.5	0.12	1.1	4.1	6.8	7.3	91.7	102
8/31/2004	9/16/2004					16.7	18.1	0.13	1.62	0	6	7.8	100.5	105.9
9/30/2004	10/15/2004					15.8	17.2	0.14	1.63	3.2	6	7.3	98	101
10/31/2004	11/11/2004					10.2	16.3		1.84	0	6.9	7.8	70.3	93.9
11/30/2004	12/14/2004					14.5	16.1	0.15	2.19	0.13	6.8	7.3	89	91
12/31/2004	1/12/2005					14.1	15.8	0.13	1.69	2.9	6.8	7.3	77	82
1/31/2005	2/14/2005					14.1	15.3	0.12	1.63	2.4	6.9	7.3	83	88
2/28/2005	3/14/2005					13.6	14.5	0.15	1.98	0	6.9	7.3	79.3	86
3/31/2005	4/11/2005					14.1	15.3	0.13	2.03	0	6.9	7.5	88.9	93.9
4/30/2005	5/12/2005					15.4	16.6	0.16	2.11	0.58	6.9	7.3	92.7	96.9
5/31/2005	6/13/2005					14.8	16.2	0.136	1.74	1.9	6.7	7.5	98	102.9
6/30/2005	7/11/2005					13.7	16.9	0.17	1.32	4.6	6.7	8	96.7	109.4
7/31/2005	8/16/2005					17.1	18.2	0.13	1.55	0	6.7	7.1	108	111
8/31/2005	9/14/2005					17.8	18.5	0.13	1.46	0.06	6.7	7.3	104	109
9/30/2005	10/17/2005					15.9	18.1	0.14	1.42	1.5	6.8	7.5	100.2	104
10/31/2005	11/15/2005					14.7	15.8	0.15	1.69	0	6.8	7.5	94.4	96.1
11/30/2005	12/14/2005					14.8	16.8	0.17	1.52	1.7	6.7	7.4	82	84.9
12/31/2005	1/17/2006					14.8	15.8	0.16		0.18	6.8	7.4	81.9	86
1/31/2006	2/14/2006					15	16	0.15	1.85	0	6.7	7.4	78.5	82.9
2/28/2006	3/14/2006					14.4	15.2	0.12	1.44	6.4	6.8	7.4	80.2	82
3/31/2006	4/14/2006					14.2	15.6	0.15	1.81	0.097	7	7.4	78.3	87.1
4/30/2006	5/11/2006					14	17.5	0.15	1.67	0.35	6.9	7.4	79	86
5/31/2006	6/12/2006					8.6	9.8	0	0.025	0.24	6.8	7.4	50	57.7
6/30/2006	7/17/2006					7.2	9.4	0	0.04	0.1	7	7.7	59.5	65
7/31/2006	8/15/2006					4.4	7.3	0	0.025	0.06	6.7	7.3	67.3	69.9
8/31/2006	9/19/2006					3.6	4.8	0	0.036	0	6.7	7.6	63.2	70
9/30/2006	10/18/2006					2.1	3.5	0	0.05	8.2	6.8	7.4	55.6	59.4
10/31/2006	11/14/2006					2.4	3.2			9.4	7.1	7.7	44.6	47.8
11/30/2006	12/18/2006					1.9	7	0	0.088	9.9	6.6	7.9	40.2	40.3
12/31/2006	1/12/2007					4.53	8.1	0	0.068	5.8	7.1	7.6	40.1	40.1
1/31/2007	2/12/2007					1.1	7.4	0	0.031	4.7	6.8	7.8	40.1	40.1
2/28/2007	3/13/2007					0.4	0.4	0	0.067	28	6.8	7.7	40.1	40.1
3/31/2007	4/11/2007					0.4	0.4	0	0.071	52	6.7	7.9	40.1	40.1
4/30/2007	5/10/2007					0.61	2.9	0	0.091	45	7.2	8	40.1	40.1
5/31/2007	6/11/2007					0.17	1.2	0	0.117	42	7.1	8	55.3	61
6/30/2007	7/6/2007					0.05	0.06	0	0.139	60	0.7	8	69.2	84
7/31/2007	8/16/2007					0.08	0.7	0	0.218	66	7.9	8.1	79.2	86
8/31/2007														
	Average	2.40	7.04	0.02	0.06	11.08	12.82	0.14	102.01	4.58	6.75	7.59	76.19	81.21

Outfall 016		LC50 Statre 48Hr Acute Ceriodaphnia	LC50 Statre 48Hr Acute Pimephales
		Req. Mon. %	Req. Mon. %
MP Date	Rec'd Date	DAILY MN	DAILY MN
10/31/1999	11/12/1999	100	100
10/31/2000	11/16/2000	100	100
10/31/2001	11/15/2001		
10/31/2002	11/18/2002	100	100
10/31/2003	11/13/2003	100	100
10/31/2004	11/11/2004	100	100
10/31/2005	11/15/2005	100	100
10/31/2006	11/14/2006	100	100
	Average	**100**	**100**

Attachment C

Fraser NH LLC
Papermill WWTP flow diagram
January 2008



Attachment D

Whole Effluent Toxicity Testing Results @ Fraser Papers NH LLC [1]
Cascade Paper Mill, Gorham NH
(NH0000655)

Sampling Date	Ceriodaphnia dubia [1]			Pimephales promelas [1]		
	Acute Exposure	Chronic Exposure		Acute Exposure	Chronic Exposure	
	48 Hr LC-50	C-NOEC Survival	C-NOEC[2] Reproduction	48 Hr LC-50	C-NOEC Survival	C-NOEC Growth
2/1/2005	**43.8**	10%	***1.1%***	>100%	100%	10%
11/2/2004	>100%	100%	10%	>100%	3%	3%
8/3/2004	>100%	100%	***1.1%***	>100%	10%	10%
4/27/2004	>100%	32%	3%	>100%	100%	32%
1/12/2004	>100%	32%	***<1.1%***	>100%	100%	100%
10/28/2003	>100%	10%	***1.1%***	>100%	10%	10%
8/5/2003	>100%	100%	10%	>100%	100%	100%
6/3/2003	74.8%	56%	10%	>100%	10%	10%
3/25/2003	>100%	100%	3%	>100%	100%	100%
12/10/2002	>100%	56%	10%	>100%	100%	32%
8/13/2002	>100%	100%	100%	>100%	***1.1%***	***1.1%***
6/18/2002	>100%	100%	10%	>100%	100%	100%
3/19/2002	>100%	56%	56%	>100%	100%	32%
5/8/2001	>100%	100%	56%	>100%	56%	56%
2/22/2001	>100%	32%	32%	>100%	100%	56%

Notes:

(1) Concentrations used for dilutions consists of 1.1, 3.0, 10, 32, 56, and 100% effluent. Dilution water is synthetic, soft reconstituted water prepared by the laboratory.

(2) Chronic limit is typically established based on the receiving water concentration after accounting for dilution factor. In the case of the paper mill the dilution factor is 52:1 and the receiving water concentration is approximately 2% (1/Dilution factor). Hence the C-NOEC limit for this facility would be around 2%. The sampling results exceeding this proposed limit are in bold.

Attachment E

NH0000655

Summary of the Turbidity Sampling Data for the Androscoggin River at the Cascade Paper Mill, Fraser Papers in Gorham, NH. The upstream turbidity sampling location is upstream from the Cascade Mill near the forebay of the Cascade Hydroelectric Station's Dam. The downstream turbidity sampling location was initially approximately 25 feet downstream from the Cascade Mill's outfall pipe in the River. During the winter months, the sampling location was moved to approximately 1,500 feet downstream from the outfall pipe. In October 2003, the 1,500 downstream location was used to collect the remaining turbidity samples. The information and data in this summary are based on the daily turbidity data in a spreadsheet tittled "Fraser Turbidity Data, 5/26/03" and identified as Fraser Paper N.H. LLC, Turbidity Sampling Data from the Cascade Mill. The daily data are available for the period June 14, 2002 to April 5, 2005.

Period	Number of Daily Values	Range of Upstream Turbidity (NTU)	Range of Downstream Turbidity (NTU)	Number of Daily Values Exceeding 10 NTU of Upstream Measurement	Range of End of Pipe [1] Turbidity (NTU)
6/14/2002 to 12/31/02	194	1.12 to 12	2.54 to 23	25	
2003	362/360 [2]	0 to 18.7	2.9 to 50.8	28	
2004	363	1.2 to 14.4	2.4 to 23.3	1	
1/1/2005 to 4/5/05	93	1.49 to 16.8	3 to 18.5	2	
January 2005	31	1.49 to 4.95	3 to 15.3		10.6 to 72.8

1. The End of Pipe sampling location is at Outfall 018 which is the discharge from the final treatment pond.

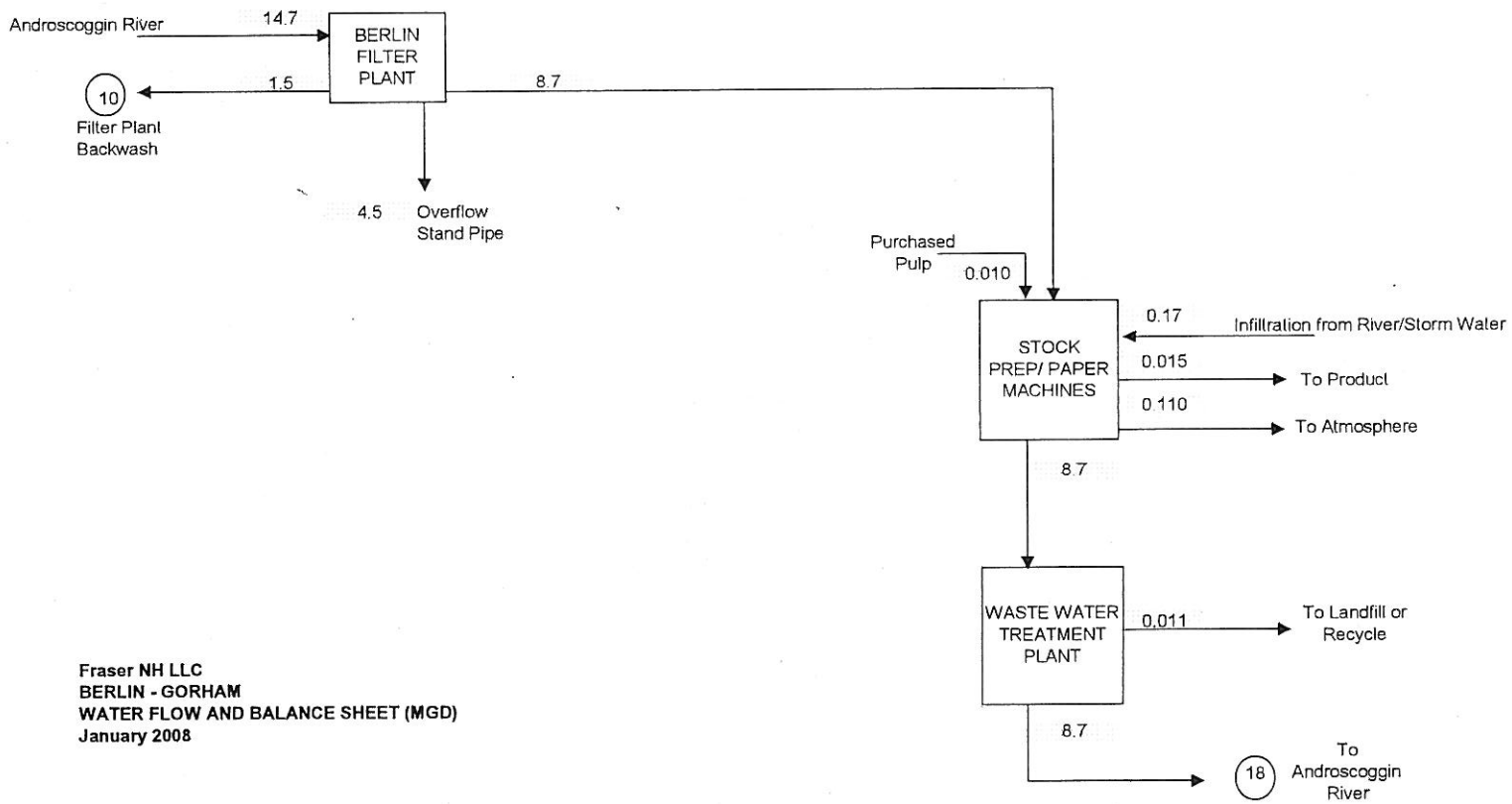
2. Number of upstream/downstream measurements.

Attachment F
(316(b) Site Evaluation Report Fraser Papers, Berlin, NH, Tetra Tech, April 2006, Table 1)

Table 1. Fish life history, habitat, and reproductive information for species captured in 2003 from the Androscoggin River, in the vicinity of the Fraser Paper Mill (Berlin, NH)

										Vulnerability to Entrainment		Vulnerability to Impingement		
Family	Scientific Name	Common Name	Spawning Season	Egg Laying Strategy	Egg Dynamics	Egg Duration (Days)	Larval Duration (Days)	Behavior	Habitat	Egg	Larvae	Juvenile	Adult	Comment
Cyprinidae	*Couesius plumbeus*	lake chub	April - June	Broadcast	demersal, nonadhesive	10	7	juvenile schooling	Water column	High	High	High	High	Due to broadcast spawning and size.
	Luxilis cornutus	common shiner	May - July	Nest	demersal, adhesive	-	-	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Notemigonus crysoleucas	golden shiner	May - June	Nest	demersal, adhesive	2 - 3	-	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Notropis hudsonius	spottail shiner	May - September	Broadcast	demersal, adhesive	-	-	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Rhinichthys atratulus	blacknose dace	April - July	Nest	demersal, adhesive	3 - 6	9	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Rhinichthys cataractae	longnose dace	April - June	Broadcast	demersal, adhesive	10	9	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Semotilus atromaculatus	creek chub	March - June	Nest	demersal	-	-	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
	Semotilus corporalis	fallfish	April - May	Nest	demersal, nonadhesive	7 - 9	5	schooling	Water column	Low	High	High	High	Due to size, ubiquity, and propensity for schooling
Catostomidae	*Catostomus catostomus*	longnose sucker	April - May	Broadcast	demersal, nonadhesive	8 -14	11 - 14	local migration, schooling	Bottom dwelling	High	High	Moderate	Moderate	Due to broadcast spawning and local migrations.
	Catostomus commersonii	white sucker	March - July	Broadcast	demersal, nonadhesive	8 -19	6 - 8	local migration, schooling	Bottom dwelling	High	High	Moderate	Moderate	Due to broadcast spawning and local migrations.
Ictaluridae	*Ameiurus nebulosus*	brown bullhead	April - June	Nest	demersal, adhesive	5 - 20	-	juvenile schooling	Bottom dwelling	Low	High	High	Moderate	Due to nesting strategy
Esocidae	*Esox lucius*	northern pike	March - May	Broadcast	demersal, adhesive	4 - 14	6 - 10	non-schooling	Water column	Low	Moderate	Low	Low	Due to solitary behavior.
	Esox niger	chain pickerel	March - May	Broadcast	demersal, adhesive	6 - 11	6 - 8	non-schooling	Water column	Low	Moderate	Low	Low	Due to solitary behavior.
Salmonidae	*Oncorhynchus mykiss*	rainbow trout	April - June	Nest/redds	demersal	9 - 102	7	local migrations	Water column	High	High	Moderate	Low	Due to broadcast spawning and local migrations.
	Salmo salar	Atlantic salmon	October - November	Nest/redds	demersal	31 - 18	-	local migrations	Water column	High	High	Moderate	Low	Due to broadcast spawning and local migrations.
	Salmo trutta	brown trout	October - February	Nest/redds	demersal	28 - 147	21	local migrations	Water column	High	High	Moderate	Low	Due to broadcast spawning and local migrations.
	Salvelinus fontinalis	brook trout	September - November	Nest/redds	demersal	28 -147	32	local migrations	Water column	High	High	Moderate	Low	Due to broadcast spawning and local migrations.
Gadidae	*Lota lota*	burbot	December - April	Broadcast	semidemersal	30 - 71	-	non-schooling	Bottom dwelling	High	High	Moderate	Low	Due to broadcast spawning.
Cottidae	*Cottus cognatus*	slimy sculpin	March - May	Nest	demersal, adhesive	28 - 30	-	associated with substrate	Bottom dwelling	Low	Moderate	Moderate	Low	Due to benthic behavior.
Moronidae	*Morone americana*	white perch	May - June	Broadcast	demersal, adhesive	1.5 - 6	8 - 13	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
Centrarchidae	*Ambloplites rupestris*	rock bass	April - July	Nest	demersal, adhesive	3 - 4	-	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
	Lepomis gibbosus	pumpkinseed	June - August	Nest	demersal, adhesive	2 - 3	23	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
	Mictopterus dolomieu	smallmouth bass	April - June	Nest	demersal, adhesive	4 - 6	-	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
	Micropterus salmoides	largemouth bass	April - June	Nest	demersal, adhesive	2 - 5	9 - 19	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
	Pomoxis nigromaculatus	black crappie	April - July	Nest	demersal, adhesive	2 - 3	-	non-schooling	Water column	Low	High	Moderate	Moderate	Due to solitary behavior.
Percidae	*Perca flavescens*	yellow perch	May - July	Broadcast/strands	semidemersal	6 - 51	-	non-schooling	Water column	Moderate	High	Moderate	Moderate	Due to solitary behavior.

Attachment G



Fraser NH LLC
BERLIN - GORHAM
WATER FLOW AND BALANCE SHEET (MGD)
January 2008

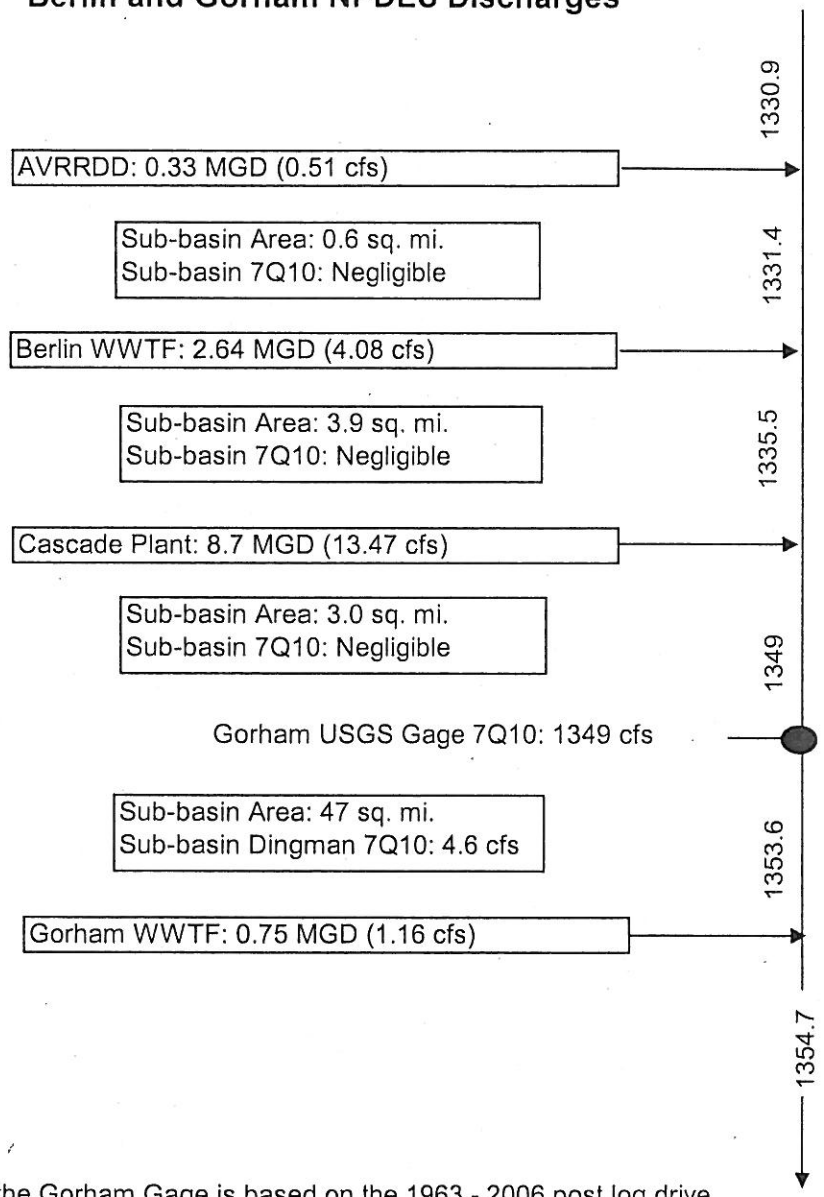
Attachment H
(Fraser's December 5, 2007 Response to EPA 308 Information Request of November 1, 2007, Appendix E)

Mill Heat Exchangers Using Water--Estimated Water Use (December 4, 2007)

Description of use	Manufacturer	Model/Part Number	Serial #	Estimated Flow gpm	Estimated Flow (summer) gpm	Heat Exchange	Reused or Sewered
#14 Pulper Gear Box Oil Cooler	American Industrial Heat Transfer	AA-614-1.5-4-FP 297	36918	0.25	0.41	oil/water	Sewered
#12 Winder				0	0	oil/water	Sewered
#12 PM	Thermal Transfer Products	A-1224-2-6-F	65143	0	0	oil/water	Sewered
#11PM Swim Roll	ITT Standard	5-030-06-024-005		0	0	oil/water	Sewered
#11 PM Tripass Roll				5	8.17	oil/water	Sewered
#12 PM Tripass Roll				0	0	oil/water	Sewered
#13 PM Tripass Roll				5	8.17	oil/water	Sewered
#14 PM Tripass Roll				3	4.89	oil/water	Sewered
#14 PM Swim Roll	Thermal Transfer Products	A-1224-2-8-F	70186	1	1.63	oil/water	Sewered
#14 PM Calender	Thermal Transfer Products	A-1224-?-6-F-BR	264873	1	1.63	oil/water	Sewered
#14 PM Lube Oil Tank (Bowser) 774-015	American Industrial Heat Transfer	AA-1248-4-6-FP 499	74270	3	4.89	oil/water	Sewered
#19 PM Pulper				0.5	0.82	oil/water	Sewered
#6 Pulper Gear Box Oil Cooler	Young Radiator Company	F-502-ER-2	Z CS	0	0	oil/water	Sewered
#13 PM Lube Oil Tank C14				5	8.17	oil/water	Sewered
#13 PM Stickle System		KB-3		28	28	steam/water	Sewered
#12 PM Second Press Hydraulics	Thermal Transfer Products	A-1224-2-6-F	75564	0	0	oil/water	Sewered
#12 PM Bowser				0	0	oil/water	Sewered
#11 Calender Stack Loading 714-024				0	0	oil/water	Sewered
TOTAL				**51.75**	**66.78**		
#14 PM Condensate System 773-024				28	28	steam/water	Reused
SAHARA air compressor inner cooler and after cooler				30	30	air/water	Reused
#19 PM Flash Condenser 796-006				10	10	steam/water	Reused
#19 PM Flash Condenser 796-026				10	10	steam/water	Reused
#19 PM Flash Condenser 795-011				10	10	steam/water	Reused
#11 PM Condenser				28	28	steam/water	Reused
TOTAL				**116**	**116**		

These flows were estimated on December 4, 2007.
Water reused in the process after use in heat transfer totals 116 gpm.
Water sewered after use in heat transfer totals 57.75 gpm.
All of the oil/water heat exchanger water flows were visual estimates. These heat exchangers will use somewhat more water in the summer when the water temperature rises.
The steam/water heat exchanger water flows were based on a calculated heat balance with the expected amount of flash and blow through steam per dryer times the number of dryers per machine going to the heat exchanger.
Seventy degree fahrenheit water temperature was used. There is the potential for more water to be used in these heat exchangers during paper machine upsets. These are usually of short duration as paper production rates go down as it is always important to correct the problem and maximise the production rate.

7Q10 Estimate Summary
Berlin and Gorham NPDES Discharges



Notes:
The 7Q10 at the Gorham Gage is based on the 1963 - 2006 post log drive period of record.

The 7Q10 flows from the sub-basin areas from the Dead River (upstream of AVRRDD), AVRRDD, Berlin WWTF and Cascade discharges to the Gorham Gage are assumed to be negligible (see above, and the 7Q10s shown are not adjusted to correct for drainage area differences.

The 7Q10 flow from the sub-basin between the gage and the Gorham POTW is estimated to be 4.6 cfs. Other than Gorham's water supply withdrawals, there are no consumptive withdrawals in this sub-basin.