

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Asulicut TMDL
 Waterbody Name: _____
 Station ID: 21-ASH
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): _____
 Meter Serial #: _____
 Total River Width (ft-in): _____

Date: 8/24/03
 Time begin (Military): _____
 Time end (Military): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
32.75			>>>>>>>>	>>>>>>>>	>>>>>>>>	
32.75		1.01	0.03			
33.50		.92	>>>>>>>>	>>>>>>>>	>>>>>>>>	
34.25		.73	0.02			
35.00		.75	>>>>>>>>	>>>>>>>>	>>>>>>>>	
35.75		.63	0.02			
36.50	36.30	0.05	>>>>>>>>	>>>>>>>>	>>>>>>>>	
37		0				
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

			>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: TMDL Date: 9/25/02
 Waterbody Name: WATER Time begin (Military): 1701
 Station ID: 12-1514 under Rt 10 Bridge Time end (Military): 1830
 Station Description: On the bank this worksheet, give a description and draw a site sketch.
 By (Staff Names): DN, KE
 Meter Serial #: 21619
 Total River Width (ft-in): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments	
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT			
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface		
4.5	0	1.0	>>>>>>>>	>>>>>>>>	>>>>>>>>		
6.0		1.26	0.00				
7.5		1.69	>>>>>>>>	>>>>>>>>	>>>>>>>>		
9.0		2.11	0.00	0.02	0.03		
10.5		2.34	>>>>>>>>	>>>>>>>>	>>>>>>>>		
12.0		2.38		0.06	0.03		
13.5		2.52	>>>>>>>>	>>>>>>>>	>>>>>>>>		
15.0		2.14		0.05	0.07		
16.5		2.51	>>>>>>>>	>>>>>>>>	>>>>>>>>		
18.0		2.48		0.07	0.02		
19.5		2.52	>>>>>>>>	>>>>>>>>	>>>>>>>>		
21.0		2.52		0.10	0.06		
22.5		2.53	>>>>>>>>	>>>>>>>>	>>>>>>>>		
24.0		2.62		0.10	0.12		
25.5		2.61	>>>>>>>>	>>>>>>>>	>>>>>>>>		
27.0		2.60		0.08	0.08		
28.5		2.37	>>>>>>>>	>>>>>>>>	>>>>>>>>		
30.0		2.52		0.10	0.08		
31.5		2.63	>>>>>>>>	>>>>>>>>	>>>>>>>>		
33.0		2.15		0.11	0.10		
34.5		2.26	>>>>>>>>	>>>>>>>>	>>>>>>>>		
31.5		2.64	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)	
32.0		2.15		0.10	0.08		
34.5		2.28	>>>>>>>>	>>>>>>>>	>>>>>>>>		

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
Effective Date: June 25, 2002

Project: TMDL
Waterbody Name: Ashvelt
Station ID: D-12
Station Description: On the back this worksheet, give a description and draw a site sketch.
By (Staff Names): DN, RF
Meter Serial #: _____
Total River Width (ft-in): _____

Date: 8/28/02
Time begin (Military): 1201
Time end (Military): 1330

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
36.0		2.14		1.11	0.08	
37.5		2.37	>>>>>>>>	>>>>>>>>	>>>>>>>>	
39.0		2.32		0.10	0.08	
40.5		2.44	>>>>>>>>	>>>>>>>>	>>>>>>>>	
42.0		2.36		2.09	0.06	
43.5		2.11	>>>>>>>>	>>>>>>>>	>>>>>>>>	
45.0		2.32		0.07	0.06	
46.5		2.45	>>>>>>>>	>>>>>>>>	>>>>>>>>	
48.0		2.52		0.05	0.04	
49.5		2.52	>>>>>>>>	>>>>>>>>	>>>>>>>>	
51.0		2.49		0.04	0.03	
52.5		2.43	>>>>>>>>	>>>>>>>>	>>>>>>>>	
54.0		2.30		0.03	0.02	
55.5		2.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	
57.0		2.32		0.02	0.01	
58.5		2.12	>>>>>>>>	>>>>>>>>	>>>>>>>>	
60.0		2.20		0.01	0.00	
61.5		2.03	>>>>>>>>	>>>>>>>>	>>>>>>>>	
63.0		2.11		2.01	0.00	
64.5		2.06	>>>>>>>>	>>>>>>>>	>>>>>>>>	

61.5		2.02	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
63.0		2.14		0.01	0.00	
64.5		2.09	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: TMDL
 Waterbody Name: Joshua lot
 Station ID: 12-Ash
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): DN, KE
 Meter Serial #: _____
 Total River Width (ft-in): _____

Date: 8/28/02
 Time begin (Military): 1201
 Time end (Military): 1332

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>66.0</u>		<u>2.06</u>		<u>0.03</u>	<u>0.02</u>	
<u>67.5</u>		<u>2.05</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>69.0</u>		<u>1.93</u>	<u>0.03</u>			
<u>70.5</u>		<u>1.74</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
72.0		<u>1.75</u>	<u>0.04</u>			
<u>73.5</u>		<u>1.58</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>75.0</u>		<u>1.45</u>	<u>0.03</u>			
<u>76.5</u>		<u>0.87</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>78.0</u>		<u>0</u>	<u>End</u>			
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

61.5
75.0
76.5
78.0

			>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashtabula TMDL

Date: 6/28/02

Waterbody Name: Sand Barren 1st

Time begin (Military): 1416

Station ID: 02-5BA

Time end (Military): 1455

Station Description: On the bank this worksheet, give a description and draw a site sketch.

By (Staff Names): Dave Niles (operator) Lou Thompson (Recorder)

Meter Serial #: _____

Total River Width (ft-in): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT		FOR DEPTHS > 2 FT	
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
1.4		0	>>>>>>>>	>>>>>>>>	>>>>>>>>	
1.6		.15	.02			
1.8		.32	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.0		.31	.02			
2.2		.35	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.4		.40	.15			
2.6		.57	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.8		.58	.15			
3.0		.5	>>>>>>>>	>>>>>>>>	>>>>>>>>	
3.2		.45	.11			Grass
3.4		.49	>>>>>>>>	>>>>>>>>	>>>>>>>>	
3.6		.50	.20			Grass
3.8		0.60	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.0		0.71	.27			
4.2		0.8	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.4		0.94	.28			
4.6		0.93	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.8		0.84	.39			
5.0		0.88	>>>>>>>>	>>>>>>>>	>>>>>>>>	
5.2		1.13	.37			
5.4		1.14	>>>>>>>>	>>>>>>>>	>>>>>>>>	

5.0		0.90	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
5.2		1.13	.36			
5.4		1.15	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: _____
 Waterbody Name: _____
 Station ID: 02-SFA
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): _____
 Meter Serial #: _____
 Total River Width (ft-in): _____

Date: 9/28/02
 Time begin (Military): _____
 Time end (Military): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>5.6</u>		<u>1.15</u>	<u>.34</u>			
<u>5.8</u>		<u>1.02</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>6.0</u>		<u>1.10</u>	<u>.34</u>			
<u>6.2</u>		<u>1.02</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>6.4</u>		<u>1.00</u>	<u>.35</u>			
<u>6.6</u>		<u>1.00</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>6.8</u>		<u>1.10</u>	<u>.32</u>			
<u>7.0</u>		<u>1.10</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>7.2</u>		<u>1.00</u>	<u>.34</u>			
<u>7.4</u>		<u>1.03</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>7.6</u>		<u>1.098</u>	<u>.33</u>			
<u>7.8</u>		<u>.90</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>8.0</u>		<u>.82</u>	<u>0.27</u>			
<u>8.2</u>		<u>.72</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>8.4</u>		<u>.62</u>	<u>.27</u>			
<u>8.6</u>		<u>.62</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>8.9</u>		<u>.60</u>	<u>.15</u>			
<u>9.5</u>		<u>.51</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	
<u>10.0</u>		<u>.31</u>	<u>.03</u>			
<u>10.5</u>		<u>.31</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	

<u>9.5</u>		<u>.5</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
<u>10</u>		<u>.33</u>	<u>.02</u>			
<u>10.5</u>		<u>.31</u>	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: _____
 Waterbody Name: _____
 Station ID: 02-SBA
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): _____
 Meter Serial #: _____
 Total River Width (ft-in): _____

Date: 8/29/02
 Time begin (Military): _____
 Time end (Military): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
11.00		.25	-0.01			
11.6		.21	>>>>>>>>	>>>>>>>>	>>>>>>>>	
12.25		.15	-.01			
12.9		0	>>>>>>>>	>>>>>>>>	>>>>>>>>	
13.0			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

			>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashuelot TMDL
 Waterbody Name: Ashuelot River
 Station ID: 16-D
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): D. Dudley + W. Zues
 Meter Serial #: 2007 092
 Total River Width (ft-in): 46.5 - 4 = 42.5 - 3.5 = 45'

Date: Aug 28, 2002
 Time begin (Military): 14:42
 Time end (Military): 15:45

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
3.5	0	0	>>>>>>>>	>>>>>>>>	>>>>>>>>	Cobbles + boulders on this bank
4.5	1	0.38	0.00			
5.5	2	0.64	>>>>>>>>	>>>>>>>>	>>>>>>>>	
6.5	3	0.79	0.06			
7.5	4	1.22	>>>>>>>>	>>>>>>>>	>>>>>>>>	
8.5	5	1.24	0.10			
9.5	6	1.71	>>>>>>>>	>>>>>>>>	>>>>>>>>	
10.5	7	1.81	0.14			
11.5	8	2.12	>>>>>>>>	>>>>>>>>	>>>>>>>>	
12.5	9	2.31	0.15	0.25	0.01	1.5' diam boulder 2' up
13.5	10	1.83	>>>>>>>>	>>>>>>>>	>>>>>>>>	
14.5	11	2.01	←	0.26	0.10	
15.5	12	2.44	>>>>>>>>	>>>>>>>>	>>>>>>>>	
16.5	13	2.44	—	0.26	0.13	
17.5	14	2.57	>>>>>>>>	>>>>>>>>	>>>>>>>>	
18.5	15	2.76	—	0.10	-0.03	medium rock 1' up
19.5	16	2.78	>>>>>>>>	>>>>>>>>	>>>>>>>>	
20.5	17	2.95	—	0.00	0.04	Flow to stream
21.5	18	2.92	>>>>>>>>	>>>>>>>>	>>>>>>>>	
22.5	19	2.95	—	-0.01	0.01	Sandy flow to stream
23.5	20	2.61	>>>>>>>>	>>>>>>>>	>>>>>>>>	

15.5	12	2.43	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
16.5	13	2.43	—	0.20	0.13	
17.5	14	2.55	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
Effective Date: June 25, 2002

Project: Ashcroft TMDL
Waterbody Name: Ashcroft
Station ID: 16-D
Station Description: On the bank this worksheet, give a description and draw a site sketch.
By (Staff Names): D. Dudley + L. J. J. J.
Meter Serial #: 2004092
Total River Width (ft-in): 45'

Date: Aug 28, 2002
Time begin (Military): 14:40
Time end (Military): 15:45

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments	
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT			
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface		
—	—	—	>>>>>>>>	>>>>>>>>	>>>>>>>>		
24.5	21	2.52	—	- 0.01	- 0.01		
25.5	22	2.33	>>>>>>>>	>>>>>>>>	>>>>>>>>		
26.5	23	2.40	—	- 0.05	- 0.06	Sandy bottom	
27.5	24	2.71	>>>>>>>>	>>>>>>>>	>>>>>>>>		
28.5	25	2.94	—	- 0.01	+ 0.10		
29.5	26	2.93	>>>>>>>>	>>>>>>>>	>>>>>>>>		
30.5	27	2.77	—	+ 0.47	0.42		
31.5	28	2.54	>>>>>>>>	>>>>>>>>	>>>>>>>>		
32.5	29	2.33	—	0.89	0.55		
33.5	30	2.18	>>>>>>>>	>>>>>>>>	>>>>>>>>		
34.5	31	2.19	—	0.31	0.10		
35.5	32	2.08	>>>>>>>>	>>>>>>>>	>>>>>>>>		
36.5	33	2.03	—	0.21	0.07		
37.5	34	2.18	>>>>>>>>	>>>>>>>>	>>>>>>>>		
38.5	35	2.03	—	- 0.01	0.03		
39.5	36	1.63	>>>>>>>>	>>>>>>>>	>>>>>>>>		
40.5	37	1.18	- 0.05	—	—		
41.5	38	1.05	>>>>>>>>	>>>>>>>>	>>>>>>>>		
42.5	39	0.92	- 0.03				
43.5	40	1.12	>>>>>>>>	>>>>>>>>	>>>>>>>>		
44.5	41	1.15	- 0.04				
31.5	28	2.57	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)	
32.5	29	2.30	—	0.47	0.65		
33.5	30	2.22	>>>>>>>>	>>>>>>>>	>>>>>>>>		
45.5	42	1.01					
47	43.5	1.02	- 0.02				

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashuelot TMDL

Date: 8/30/02

Waterbody Name: Ash Swamp Brook

Time begin (Military): 1614

Station ID: QAASb

Time end (Military): 1636

Station Description: On the bank this worksheet, give a description and draw a site sketch.

By (Staff Names): W. Tison, D. Dudley

Meter Serial #: 2004092

Total River Width (ft-in): 7.4' - 0.2' = 7.2'

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
0.2	0	0	>>>>>>>>	>>>>>>>>	>>>>>>>>	
0.45	0.4	0.19	-0.11			
1.0	0.8	0.31	>>>>>>>>	>>>>>>>>	>>>>>>>>	
1.25		0.37	0.13			
1.50		0.47	>>>>>>>>	>>>>>>>>	>>>>>>>>	
1.75		0.51	0.57			
2.00		0.53	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.25		0.50	0.96			Depth = 0.50
2.50		0.45	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.75		0.43	1.16			
3.00		0.38	>>>>>>>>	>>>>>>>>	>>>>>>>>	
3.25		0.37	1.12			
3.50		0.33	>>>>>>>>	>>>>>>>>	>>>>>>>>	
3.75		0.29	1.16			
4.00		0.29	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.25		0.28	1.11			
4.50		0.25	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.75		0.28	1.00			
5.00		0.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	
5.25		0.23	0.60			
5.50		0.22	>>>>>>>>	>>>>>>>>	>>>>>>>>	

5.00		0.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
5.25		0.25	0.64			
5.50		0.23	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Ending velocity = 0.01 ft/s

Project: Ashuelot TMDL

Date: 8/28/02

Waterbody Name: Ash Swamp Brook

Time begin (Military): 1618

Station ID: 0A Ash

Time end (Military): 1636

Station Description: On the bank this worksheet, give a description and draw a site sketch.

By (Staff Names): W. Ives D. Dudley

Meter Serial #: 2004092

Total River Width (ft-in): 7.4 - 0.2 = 7.2 ft.

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
5.75		0.22	0.45			
6.00		0.21	>>>>>>>>	>>>>>>>>	>>>>>>>>	
6.25		0.16	0.23			
6.50		0.11	>>>>>>>>	>>>>>>>>	>>>>>>>>	
6.95		0.09	0.04			
7.40		0	>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

6.00		0.22	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
6.25		0.18	0.24			
6.50		0.12	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashuelot TMDL
 Waterbody Name: Ashuelot R.
 Station ID: 14T Ash

Date: 8/20/02
 Time begin (Military): 1229
 Time end (Military): 1315

Station Description: On the back this worksheet, give a description and draw a site sketch.

By (Staff Names): W. T. ... D. ...
 Meter Serial #: 2004092
 Total River Width (ft-in): 56.0 - 1.0 = 55.0 ft

Distance Readings			Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)	Depth (ft)	FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
1.0	0	0.38	>>>>>>>>	>>>>>>>>	>>>>>>>>	
2.0	1.0	0.49	0.26			
3.0	2.0	0.34	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4.0		0.52	0.39			
5.0		0.58	>>>>>>>>	>>>>>>>>	>>>>>>>>	
6.0		0.58	0.95			
7.0		0.55	>>>>>>>>	>>>>>>>>	>>>>>>>>	
8.0		0.61	0.86			
9.0		0.69	>>>>>>>>	>>>>>>>>	>>>>>>>>	
10.0		0.70	1.15			
11.0		0.72	>>>>>>>>	>>>>>>>>	>>>>>>>>	
12.0		0.70	1.26			
13.0		0.71	>>>>>>>>	>>>>>>>>	>>>>>>>>	
14.0		0.70	1.48			
15.0		0.59	>>>>>>>>	>>>>>>>>	>>>>>>>>	
16.0		0.67	1.34			
17.0		0.66	>>>>>>>>	>>>>>>>>	>>>>>>>>	
18.0		0.61	1.29			
19.0		0.53	>>>>>>>>	>>>>>>>>	>>>>>>>>	
20.0		0.57	1.46			
21.0		0.61	>>>>>>>>	>>>>>>>>	>>>>>>>>	

19.0		0.54	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
20.0		0.56	1.44			
21.0		0.56	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashland R. SMDL

Date: 8/28/02

Waterbody Name: Ashland

Time begin (Military): 1229

Station ID: 14 FASH

Time end (Military): 1315

Station Description: On the bank this worksheet, give a description and draw a site sketch.

By (Staff Names): W. Jones, D. Dudley

Meter Serial #: 2004092

Total River Width (ft-in): 55.0 ft.

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>	>>>>>>>	>>>>>>>	
22.0		0.57	1.35			
23.0		0.62	>>>>>>>	>>>>>>>	>>>>>>>	
24.0		0.57	1.18			
25.0		0.60	>>>>>>>	>>>>>>>	>>>>>>>	
26.0		0.69	1.22			
27.0		0.70	>>>>>>>	>>>>>>>	>>>>>>>	
28.0		0.67	1.02			
29.0		0.58	>>>>>>>	>>>>>>>	>>>>>>>	
30.0		0.67	1.28			
31.0		0.68	>>>>>>>	>>>>>>>	>>>>>>>	
32.0		0.75	1.10			
33.0		0.76	>>>>>>>	>>>>>>>	>>>>>>>	
34.0		0.75	1.27			
35.0		0.82	>>>>>>>	>>>>>>>	>>>>>>>	
36.0		0.69	1.15			
37.0		0.72	>>>>>>>	>>>>>>>	>>>>>>>	
38		0.63	1.14			
39		0.66	>>>>>>>	>>>>>>>	>>>>>>>	
40		0.65	0.96			
41		0.67	>>>>>>>	>>>>>>>	>>>>>>>	

39		0.66	>>>>>>>	>>>>>>>	>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
40		0.63	0.97			
41		0.67	>>>>>>>	>>>>>>>	>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashuelot TMDL
 Waterbody Name: Ashuelot R.
 Station ID: 14T Ash
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): W. Fines D. Reddy
 Meter Serial #: 2004092
 Total River Width (ft-in): 55.0 FT

Date: 8/28/02
 Time begin (Military): 1229
 Time end (Military): 1315

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
42.0		0.48	0.68			
43.0		0.45	>>>>>>>>	>>>>>>>>	>>>>>>>>	
44.0		0.40	0.39			
45.0		0.26	>>>>>>>>	>>>>>>>>	>>>>>>>>	
46.0		0.28	0.28			
47.0		0.27	>>>>>>>>	>>>>>>>>	>>>>>>>>	
48.0		0.28	0.55			
49.0		0.21	>>>>>>>>	>>>>>>>>	>>>>>>>>	
50.0		0.12	0.34			
51.0		0.20	>>>>>>>>	>>>>>>>>	>>>>>>>>	
52.0		0.15	0.25			
53.0		0.14	>>>>>>>>	>>>>>>>>	>>>>>>>>	
54.0		0.10	0.07			
55.0		0.06	>>>>>>>>	>>>>>>>>	>>>>>>>>	
56.0		0				
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	
			>>>>>>>>	>>>>>>>>	>>>>>>>>	

45		0.28	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
46		0.23	0.35			
47		0.25	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
Effective Date: June 25, 2002

Project: Ashuelot TMDL
Waterbody Name: The Branch
Station ID: CA-BRA
Station Description: On the back this worksheet, give a description and draw a site sketch.
By (Staff Names): Dan Dudley + W. Jones
Meter Serial #: 2004092
Total River Width (ft-in): 22.6 - 1.5 = 21.1'

Date: Aug 28, 2002
Time begin (Military): 9:35
Time end (Military): 10:11

7:30 - AM calibration check = -0.00 -

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
1.5	0	0	>>>>>>>>	>>>>>>>>	>>>>>>>>	Measured beneath crosshanging tree 120' up of east side of the
2		.02	-			
2.5	1	.07	>>>>>>>>	>>>>>>>>	>>>>>>>>	
3		0.11	0.02			Probe partially submerged
3.5	2	0.13	>>>>>>>>	>>>>>>>>	>>>>>>>>	
4		0.12	0.42			
4.5	3	0.17	>>>>>>>>	>>>>>>>>	>>>>>>>>	
5		0.20	0.55			Fully submerged
5.5	4	0.19	>>>>>>>>	>>>>>>>>	>>>>>>>>	
6		0.22	0.60			
6.5	5	0.22	>>>>>>>>	>>>>>>>>	>>>>>>>>	
7		0.24	0.71			
7.5	6	0.23	>>>>>>>>	>>>>>>>>	>>>>>>>>	
8		0.23	0.75			
8.5	7	0.23	>>>>>>>>	>>>>>>>>	>>>>>>>>	
9		0.27	0.78			
9.5	8	0.27	>>>>>>>>	>>>>>>>>	>>>>>>>>	
10		0.29	0.84			
10.5	9	0.29	>>>>>>>>	>>>>>>>>	>>>>>>>>	
11		0.30	0.86			
11.5	10	0.28	>>>>>>>>	>>>>>>>>	>>>>>>>>	

10.5	9	0.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
11		0.30	0.87			
11.5	10	0.29	>>>>>>>>	>>>>>>>>	>>>>>>>>	

2002 TMDL Flow by Velocity Meter Field Worksheet

Revision Number: 1
 Effective Date: June 25, 2002

Project: Ashveld TMDL
 Waterbody Name: The Branch
 Station ID: 0A-BRA
 Station Description: On the back this worksheet, give a description and draw a site sketch.
 By (Staff Names): D. Dudley & W. Zves
 Meter Serial #: 2004092
 Total River Width (ft-in): 21.1

Date: Aug 28, 2002
 Time begin (Military): _____
 Time end (Military): _____

Distance Readings		Depth (ft)	Velocity (V) Readings (ft/sec)			Comments
Tape (ft)	Bank (ft)		FOR DEPTHS ≤ 2 FT	FOR DEPTHS > 2 FT		
			V @ 60% depth from surface	V @ 20% depth from surface	V @ 80% depth from surface	
11.5	10	—	>>>>>>>>	>>>>>>>>	>>>>>>>>	
12		0.30	0.87			
12.5	11	0.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	
13		0.29	0.91			
13.5	12	0.29	>>>>>>>>	>>>>>>>>	>>>>>>>>	
14		0.27	0.92			
14.5	13	0.30	>>>>>>>>	>>>>>>>>	>>>>>>>>	
15		0.27	0.89			
15.5	14	0.22	>>>>>>>>	>>>>>>>>	>>>>>>>>	
16		0.24	0.78			
16.5	15	0.25	>>>>>>>>	>>>>>>>>	>>>>>>>>	
17		0.25	0.84			
17.5	16	0.20	>>>>>>>>	>>>>>>>>	>>>>>>>>	
18		0.20	0.62			
18.5	17	0.19	>>>>>>>>	>>>>>>>>	>>>>>>>>	
19		0.17	0.67			
19.5	18	0.20	>>>>>>>>	>>>>>>>>	>>>>>>>>	
20		0.17	0.49			
20.5	19	0.18	>>>>>>>>	>>>>>>>>	>>>>>>>>	
21		0.15	0.38			
21.5	20	0.07	>>>>>>>>	>>>>>>>>	>>>>>>>>	
22		0.04				

18.5	17	0.20	>>>>>>>>	>>>>>>>>	>>>>>>>>	Run 1 duplicate reading for each set of 10 readings (duplicate the last set of readings recorded on this page)
19		0.19	0.66			
19.5	18	0.21	>>>>>>>>	>>>>>>>>	>>>>>>>>	

Yester. MS
V - Peg

ASHUELOT RIVER TMDL
Field Meter Calibration/Meter Agreement Field Sheet

Project Name: Ashuelot River TMDL

Date: 8/20/02

DO/Temp Meter Agreement (Group Check)
(all probes same bucket - should be within 0.4 mg/L or 4%, whichever is larger)

CHECK 1	Calibration Elevation	Meter Serial Number	Meter Serial Number	Meter Serial Number	Meter Serial Number	Meter Serial Number
Calibration	92.0	025237	025238	025239	025240	
Military Time (Hours : Minutes)	6:07	5:59				
Temperature (degrees C)	18.1	18.0				
% Sat Reading (calibration chamber)	99.3 %sat	77.5 %sat				
Zero Standard	0.01 mg/L	0.12 mg/L				
GROUP BUCKET DO reading	41.6 %sat	42.6 %sat				
	time + temp of group bucket	6.20				
CHECK 2	Calibration Elevation	Meter Serial Number	Meter Serial Number	Meter Serial Number	Meter Serial Number	Meter Serial Number
Calibration	92.6	025237	025238	025239	025240	
Military Time (Hours : Minutes)	11:00	10:59				
Temperature (degrees C)	24.2	25.2				
% Sat Reading (calibration chamber)	0.0 %sat	-0.2 %sat				
Zero Standard	0.0 mg/L	0.0 mg/L				
GROUP BUCKET DO reading						

Cal. Value Setting 92%

See back for pH Meter and Specific Conductivity Meter Calibration/Meter Agreement (Group Check)

Serial #	time	temp °C	% Sat	Zero Standard
025237	14:52	29.7	0.00 mg/L	0.00 mg/L
025238	15:04	31.1 °C	0.01 mg/L	0.00 mg/L
025239	32.4		0.2 % sat	0.0 %
025240	32.1 E			0.00 mg/L

CHECKS

Keene WWTP

24 Hour Flow Compositing

first sample at: NOON date: 8/27/02

final sample at: 11AM date: 8/28/02

maximum chart reading: 16 MGD

Time	Flow MGD ÷ 2	% of maximum flow x 350 ml	350 ml.	= amount from	bottle #
NOON	(6.3) 3.2	100	350	350	1. ✓
1	(5.8) 2.9	91	318	318	2. ✓
2	(4.7) 2.4	75	263	263	3. ✓
3	(4.4) 2.2	69	242	242	4. ✓
4	(4.3) 2.2	69	242	242	5. ✓
5	(4.4) 2.2	69	242	242	6. ✓
6	(4.3) 2.2	69	242	242	7. ✓
7	(4.5) 2.3	72	252	252	8. ✓
8	(4.7) 2.4	75	263	263	9. ✓
9	(5.0) 2.5	78	273	273	10. ✓
10	(4.7) 2.4	75	263	263	11. ✓
11	(4.6) 2.3	72	252	252	12. ✓
MIDNITE	(3.7) 1.9	59	207	207	13. ✓
1AM	(3.0) 1.5	47	165	165	14. ✓
2	(2.2) 1.1	34	119	119	15. ✓
3	(1.6) 0.8	25	88	88	16. ✓
4	(1.0) 0.5	16	56	56	17. ✓
5	(0.7) 0.4	13	46	46	18. ✓
6	(1.1) 0.6	19	67	67	19. ✓
7	(2.0) 1.0	31	109	109	20. ✓
8	(5.1) 2.6	81	284	284	21. ✓
9	(6.0) 3.0	94	329	329	22. ✓
10	(6.0) 3.0	94	329	329	23. ✓
11	(6.0) 3.0	94	329	329	24. ✓
					25.
					26.
					27.
					28.
					Stndby

1 p 9/95

Total flow = 2.493 MGD

Typical BOD range = 1.64 ppm
 " TSS range = 2.00 ppm

WEST SWANZEY

24 Hour Flow Compositing

1258

first sample at: 12:30PM date: 8/27/02

final sample at: 11:30AM date: 8/28/02

maximum chart reading: _____

Time	Flow	% of maximum flow x	<u>350</u> ml.	= amount from	bottle #
12:30PM	18	75		263	1. ✓
1:30	18	75		263	2. ✓
2:30	18	75		263	3. ✓
3:30	18	75		263	4. ✓
4:30	16	67		233	5. ✓
5:30	16	67		233	6. ✓
6:30	17	71		248	7. ✓
7:30	17	71		248	8. ✓
8:30	18	75		262	9. ✓
9:30	21	88		306	10. ✓
10:30	22	92		321	11. ✓
11:30	22	92		321	12. ✓
12:30AM	22	92		321	13. ✓
1:30	21	88		306	14. ✓
2:30	21	88		306	15. ✓
3:30	22	92		321	16. ✓
4:30	20	83		292	17. ✓
5:30	20	83		292	18. ✓
6:30	22	92		321	19. ✓
7:30	24	100		350	20. ✓
8:30	24	100		350	21. ✓
9:30	24	100		350	22. ✓
10:30	24	100		350	23. ✓
11:30	24	100		350	24. ✓
					25.
					26.
					27.
					28.
					Stndby

hp 9/95

Total flow = 0.0106 MGD ??

1258

Section 5

Hydrolab Information and Data

August 16, 2001

Hydrolab Deployment Team and Calibration Information
Hydrolab Deployment Information
Hydrolab Meter Agreement
Hydrolab Data Results
Temperature for the Ashuelot River from August 15 to August 17
DO mg/L for the Ashuelot River from August 15 to August 17
DO % Saturation for the Ashuelot River from August 15 to August 17

August 23, 2001

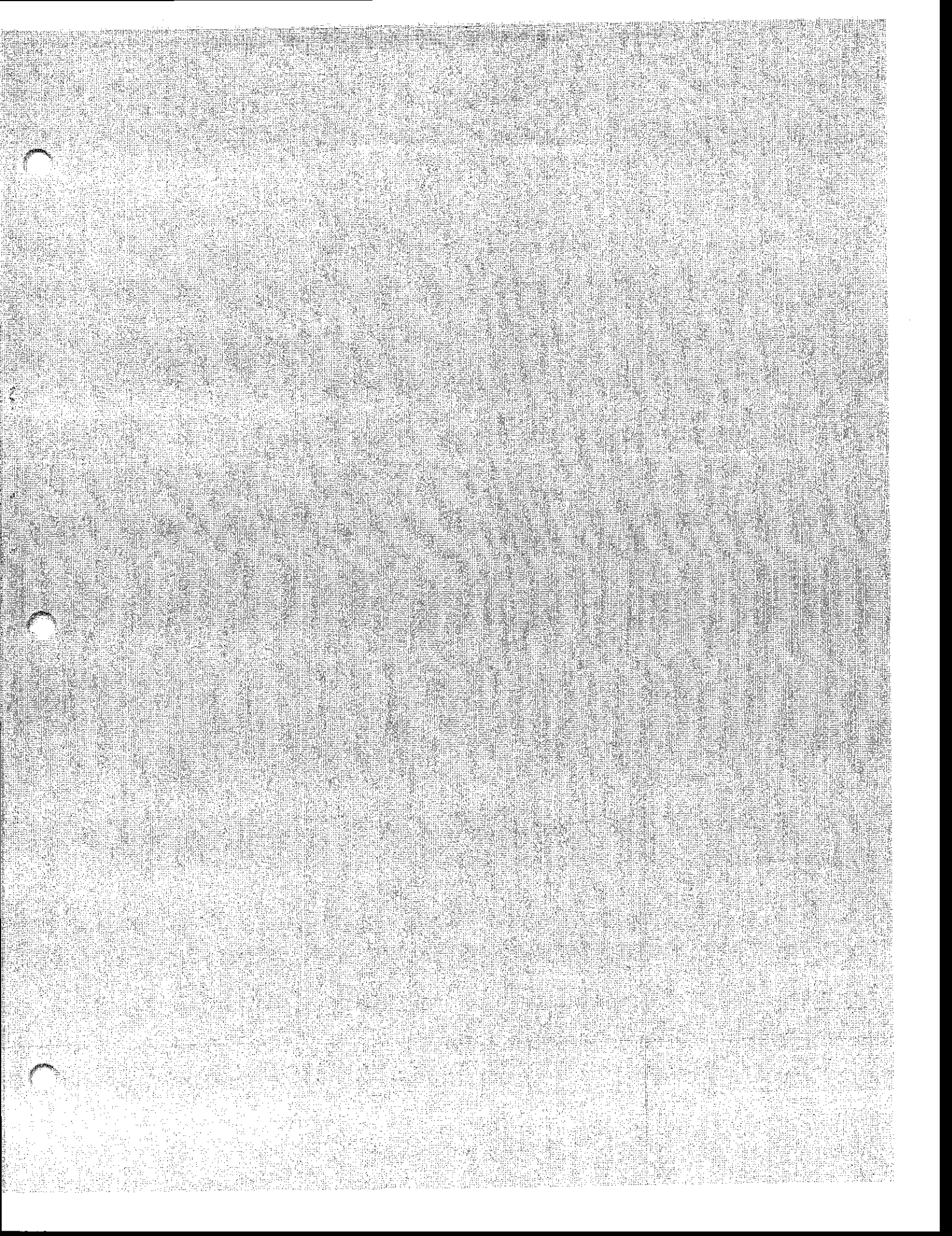
Hydrolab Deployment Team and Calibration Information
Pre and Retrieval In-Situ Measurements
Hydrolab Deployment Information
Hydrolab Meter Agreement
Hydrolab Data Results
Temperature for the Ashuelot River from August 22 to August 24
DO mg/L for the Ashuelot River from August 22 to August 24
DO % Saturation for the Ashuelot River from August 22 to August 24

August 29, 2001

Hydrolab Deployment Team and Calibration Information
Pre and Retrieval In-Situ Measurements
Hydrolab Deployment Information
Hydrolab Meter Agreement
Hydrolab Data Results
Temperature for the Ashuelot River from August 28 to August 30
DO mg/L for the Ashuelot River from August 28 to August 30
DO % Saturation for the Ashuelot River from August 28 to August 30

August 28, 2002

Hydrolab Deployment Team and Calibration Information
Hydrolab Deployment Information
Pre and Retrieval In-Situ Measurements
Keene WWTF Calibration Information
Hydrolab Meter Agreement
Hydrolab Data Results
Temperature for the Ashuelot River from August 27 to August 29
DO mg/L for the Ashuelot River from August 27 to August 29
DO % Saturation for the Ashuelot River from August 27 to August 29



Hydrolab Deployment Information

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Date/Time	3795			3793			3782			35047			16E Ash			16B Ash			15-Ash			
	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	
8/15/01 12:15	22.84	5.73	66.7	22.83	5.83	67.9	22.69	63	23.65	7.12	82.7	22.73	7.2	82.9	22.94	7.36	85.2	23.02	7.37	85.6	23.02	7.15
8/15/01 12:30	22.88	5.73	66.8	22.87	5.69	65.1	22.96	63.4	23.82	7.15	81.2	22.77	7.38	83.9	23.07	7.4	83.8	23.1	7.4	83.1	23.1	7.37
8/15/01 12:45	23.08	5.89	66.5	22.94	5.98	66.7	23.19	64.7	24.02	7.24	80.9	22.82	7.48	84.1	23.23	7.55	87.8	23.48	7.49	87.6	23.48	7.49
8/17/01 11:45	21.73	4.2	47.8	21.73	4.44	50.6	21.73	52.5	22.27	5.49	65.2	24.03	6.87	83.4	21.69	6.9	86.5	21.69	6.9	85.5	21.69	5.8
8/17/01 12:00	21.76	4.26	48.5	21.77	4.44	50.3	21.76	54.2	22.3	5.64	66.6	23.89	5.78	83.9	21.7	5.85	83.1	21.72	5.88	86.5	21.72	5.88
8/17/01 12:15	21.81	4.31	49	21.8	4.76	54.3	21.79	65.8	22.34	5.78	69.3	23.79	5.93	84.2	n/a	n/a	n/a	21.75	5.97	87.6	21.75	5.97

Hydrolab Data Results

19A-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	23.47	52.90	4.45
16:45-23:45	Max	23.99	65.80	5.55
	Mean	23.78	59.01	4.99
8/16/01	Min	22.46	49.50	3.50
0:00-23:45	Max	23.52	59.00	5.06
	Mean	23.00	49.96	4.28
8/16/01	Min	22.62	40.30	3.48
0:00-8:15	Max	23.22	49.10	4.20
	Mean	22.86	44.35	3.81

15-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	23.32	80.80	6.89
16:45-23:45	Max	24.80	92.70	7.82
	Mean	23.88	86.44	7.51
8/16/01	Min	22.02	78.10	6.88
0:00-23:45	Max	24.34	99.20	8.43
	Mean	23.00	86.64	7.48
8/16/01	Min	22.81	82.70	7.20
0:00-8:15	Max	22.91	90.10	7.79
	Mean	22.75	87.30	7.57

16M-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	22.93	75.60	6.49
16:45-23:45	Max	23.40	83.60	7.14
	Mean	23.27	80.20	6.84
8/16/01	Min	20.51	65.90	5.90
0:00-23:45	Max	23.07	83.40	7.16
	Mean	21.98	74.18	6.48
8/16/01	Min	21.28	65.30	5.79
0:00-8:15	Max	22.72	75.80	6.54
	Mean	21.95	69.58	6.08

14T-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	22.92	90.40	7.75
16:45-23:45	Max	23.55	95.60	8.11
	Mean	23.33	92.53	7.88
8/16/01	Min	21.95	87.30	7.62
0:00-23:45	Max	23.71	102.00	8.63
	Mean	22.80	93.49	8.04
8/16/01	Min	22.56	88.20	7.62
0:00-8:15	Max	22.73	91.20	7.87
	Mean	22.65	89.49	7.72

16D-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	21.84	74.70	6.59
16:45-23:45	Max	23.71	89.70	7.66
	Mean	22.71	81.07	7.03
8/16/01	Min	20.91	65.00	5.72
0:00-23:45	Max	23.47	86.60	7.41
	Mean	22.05	75.89	6.65
8/16/01	Min	21.53	61.80	5.47
0:00-8:15	Max	21.96	64.50	5.68
	Mean	21.71	62.77	5.56

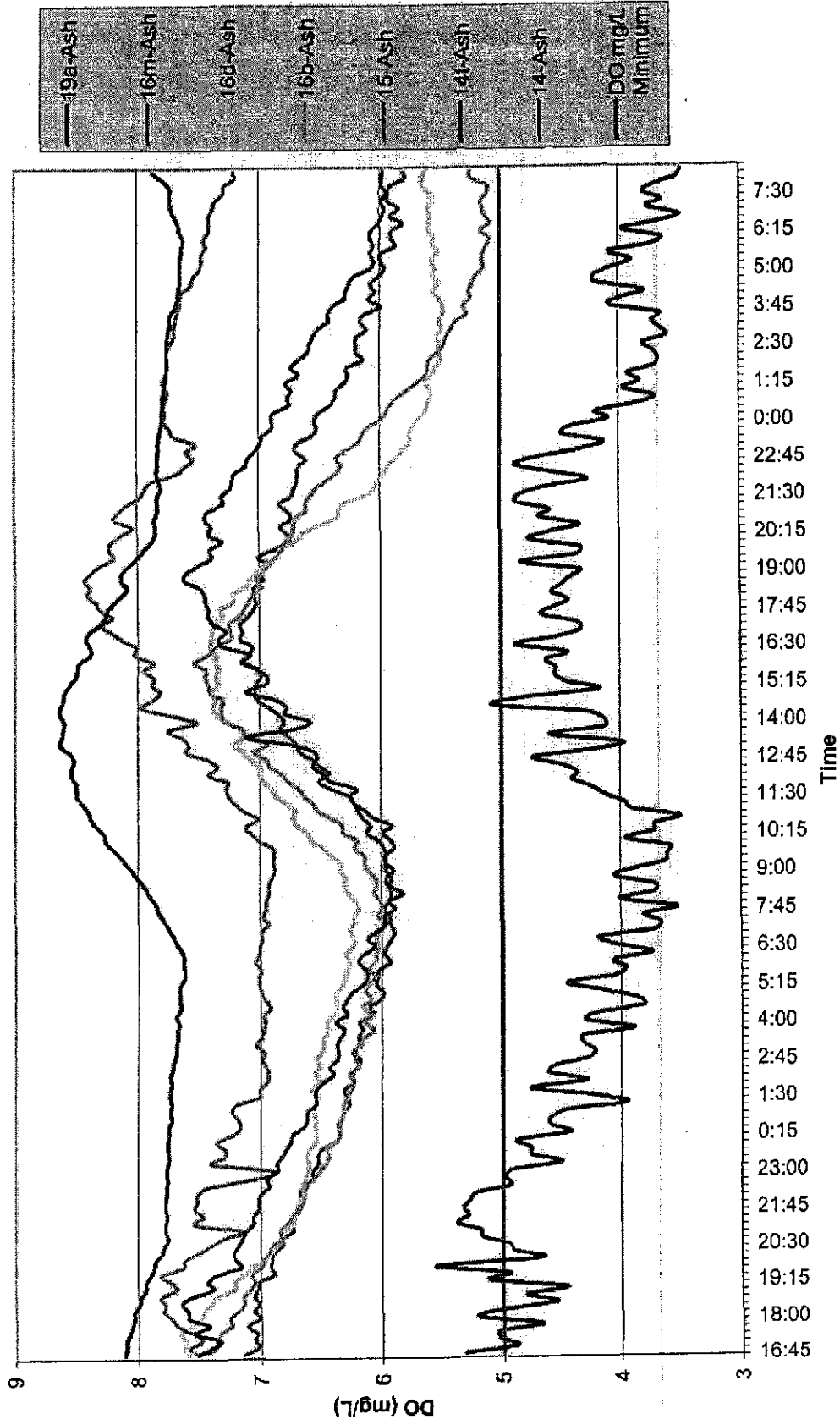
14-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	24.71	81.80	6.79
16:45-23:45	Max	26.54	94.80	7.64
	Mean	25.73	88.56	7.21
8/16/01	Min	23.45	68.50	5.82
0:00-23:45	Max	25.88	93.40	7.62
	Mean	24.47	80.05	6.67
8/16/01	Min	23.53	70.10	5.94
0:00-8:15	Max	24.43	82.60	6.89
	Mean	23.91	75.24	6.34

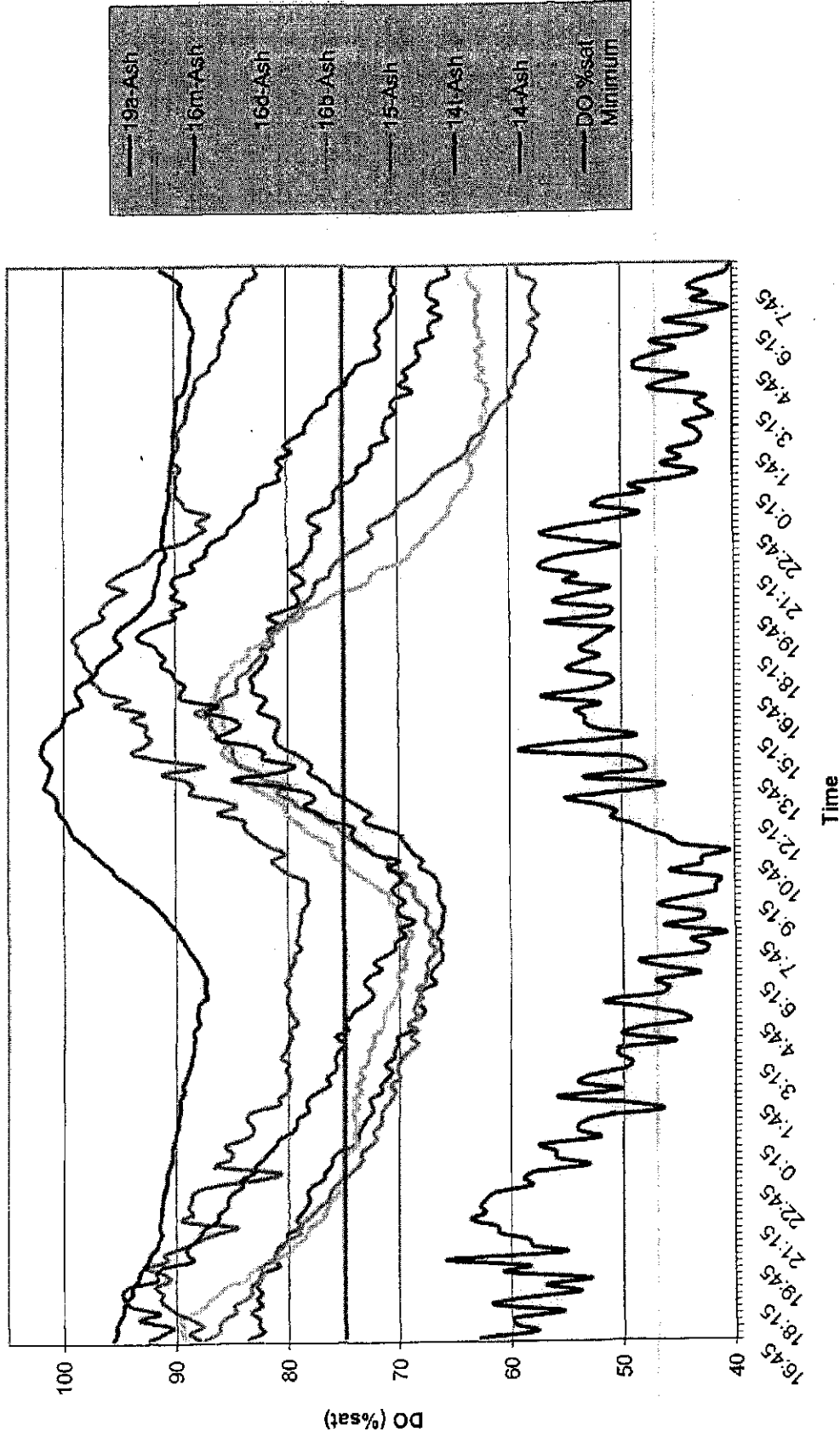
16B-ASH

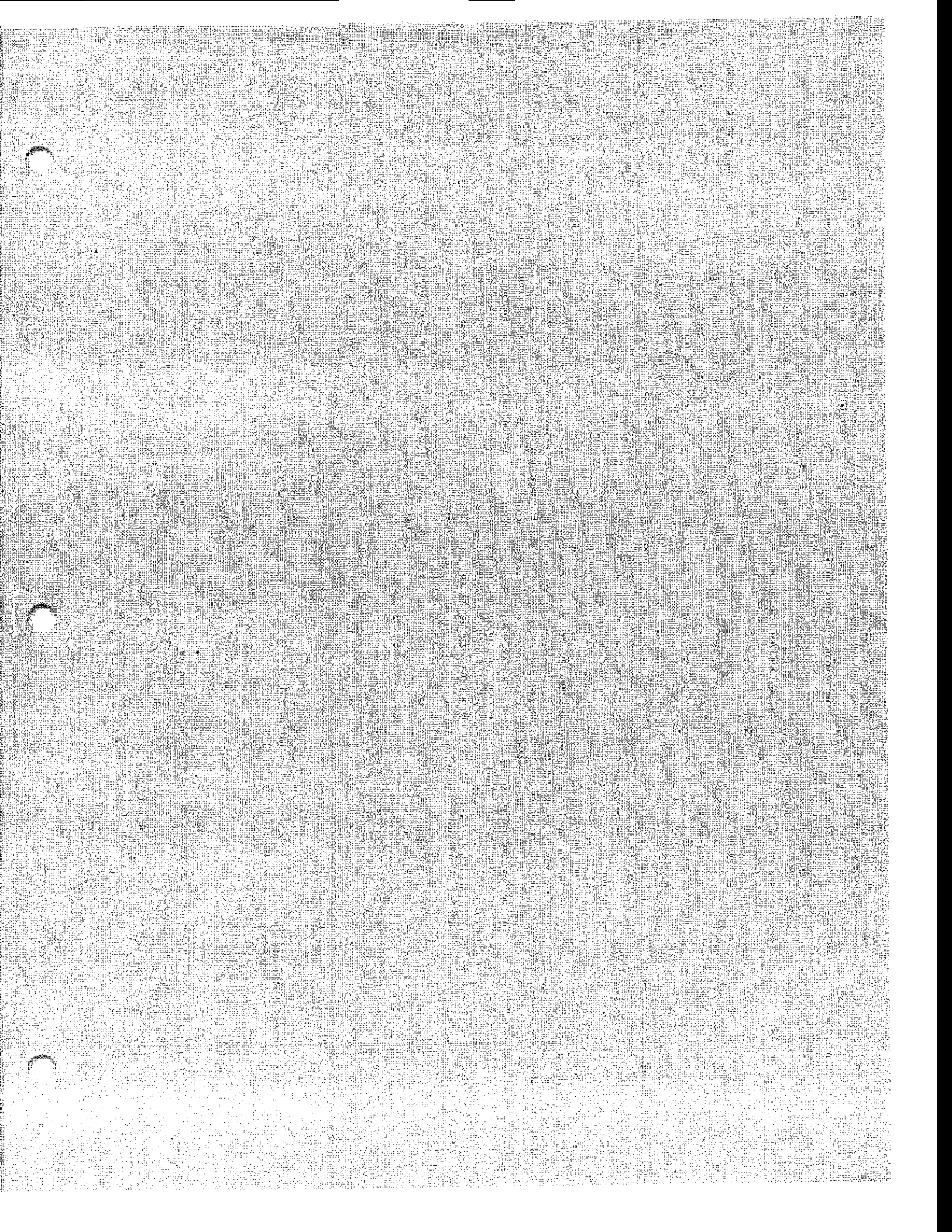
		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/16/01	Min	22.13	73.40	6.44
16:45-23:45	Max	23.67	87.50	7.46
	Mean	23.03	80.25	6.92
8/16/01	Min	21.02	66.70	5.98
0:00-23:45	Max	23.47	88.20	7.54
	Mean	22.15	74.86	6.56
8/16/01	Min	21.58	57.20	5.07
0:00-8:15	Max	22.08	68.30	6.00
	Mean	21.77	60.72	5.37

DO (mg/L) for Ashuelot River from August 15 to August 17, 2001



DO (%sat) for Ashuelot River from August 15 to August 17, 2001





TMDL Project Name:

Hydrolab Deployment Team

Hydrolab Calibration Team

Dates Used

Calibration Information

Hydrolab Number									
Dissolved Oxygen (% saturation)									
Dissolved Oxygen (mg/l)									
Zero Oxygen (initial) - (% mg/l)									

Hydrolab Number									
Dissolved Oxygen (% saturation)									
Dissolved Oxygen (mg/l)									
Zero Oxygen (final) - (% mg/l)									

Pre-Deployment and Post-Deployment Information

Pre-Deployment

Location of Pre-Deployment
DO Meter Serial Number
Measurements Taken By



Time of Test			
Temperature			
Zero Oxygen Standard (initial) - (% , mg/l)			
Dissolved Oxygen (% saturation) calibration			
Dissolved Oxygen (% saturation) Sample			
Dissolved Oxygen (mg/l) Sample			
Dissolved Oxygen (% saturation) in chamber			
Zero Oxygen Standard (final) (% , mg/l)			

Post-Deployment

Location of Post-Deployment
DO Meter Serial Number
Measurements Taken By

Time of Test			
Temperature			
Zero Oxygen Standard (initial) - (% , mg/l)			
Dissolved Oxygen (% saturation) calibration			
Dissolved Oxygen (% saturation) Sample			
Dissolved Oxygen (mg/l) Sample			
Dissolved Oxygen (% saturation) in chamber			
Zero Oxygen Standard (final) (% , mg/l)			

Hydrolab Deployment Information

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Meter Agreement Readings

Date/Time	3705		3783		3792		3947		160-Ash		161-Ash		15-Ash	
	Temp eC	DO mg/l	Temp eC	DO mg/l	Temp eC	DO mg/l	Temp eC	DO mg/l	Temp eC	DO mg/l	Temp eC	DO mg/l	Temp eC	DO mg/l
8/22/01 11:15	22.07	64	22.06	4.87	22.06	73.5	22.06	78.4	21.68	72.2	21.94	6.77	21.97	79.6
8/22/01 11:30	22.21	61	22.22	4.45	22.23	74	22.81	78.5	21.73	71.6	22.11	6.78	22.16	79.8
8/22/01 11:45	22.66	60.9	22.66	5.17	22.69	76.8	23.24	82.8	21.84	72.5	22.57	6.82	22.55	82.3
8/22/01 13:00	22.77	76.5	22.79	5.24	22.83	82.8	23.41	83.9	30.62	83.3	22.85	7.25	22.78	84.7
8/22/01 13:15	22.94	75.8	23.01	5.07	23.01	82.5	23.64	82.6	27.53	103.6	22.78	7.24	22.94	85.3
8/22/01 13:30	23.21	73.7	23.28	5.03	23.2	83.9	23.86	84.3	25.58	102.8	23.02	7.36	22.91	87.2

Hydrolab Data Results

19A-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	23.11	49.30	4.20
15:30-23:45	Max	23.58	64.90	5.54
	Mean	23.34	56.00	4.77
8/23/01	Min	22.47	41.20	3.56
0:00-23:45	Max	23.48	58.90	5.01
	Mean	22.69	48.37	4.17
8/24/01	Min	22.28	40.90	3.55
0:00-9:45	Max	22.59	51.00	4.42
	Mean	22.46	44.83	3.88

15-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	23.13	86.50	7.43
15:30-23:45	Max	25.00	105.50	8.77
	Mean	24.11	96.20	8.12
8/23/01	Min	21.67	71.20	6.29
0:00-23:45	Max	23.18	92.10	7.97
	Mean	22.41	80.94	7.06
8/24/01	Min	21.91	73.50	6.47
0:00-9:45	Max	22.58	83.20	7.24
	Mean	22.13	77.05	6.76

16M-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	22.63	69.70	6.00
15:30-23:45	Max	23.08	77.50	6.64
	Mean	22.89	74.18	6.37
8/23/01	Min	20.50	60.50	5.42
0:00-23:45	Max	22.63	77.20	6.77
	Mean	21.44	68.47	6.04
8/24/01	Min	20.45	55.00	4.94
0:00-9:45	Max	21.46	68.40	6.04
	Mean	20.78	59.28	5.30

14T-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	22.77	88.40	7.43
15:30-23:45	Max	24.30	95.60	8.01
	Mean	23.67	90.40	7.65
8/23/01	Min	21.51	82.10	7.23
0:00-23:45	Max	23.25	100.80	8.63
	Mean	22.37	89.90	7.80
8/24/01	Min	21.82	82.90	7.26
0:00-9:45	Max	22.31	91.60	8.00
	Mean	21.99	85.19	7.44

16D-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	21.85	70.20	6.19
15:30-23:45	Max	22.93	78.60	6.80
	Mean	22.50	74.67	6.50
8/23/01	Min	20.68	66.80	6.00
0:00-23:45	Max	22.33	80.80	7.06
	Mean	21.45	71.78	6.38
8/24/01	Min	20.65	67.70	6.11
0:00-9:45	Max	21.33	70.80	6.36
	Mean	20.89	68.91	6.19

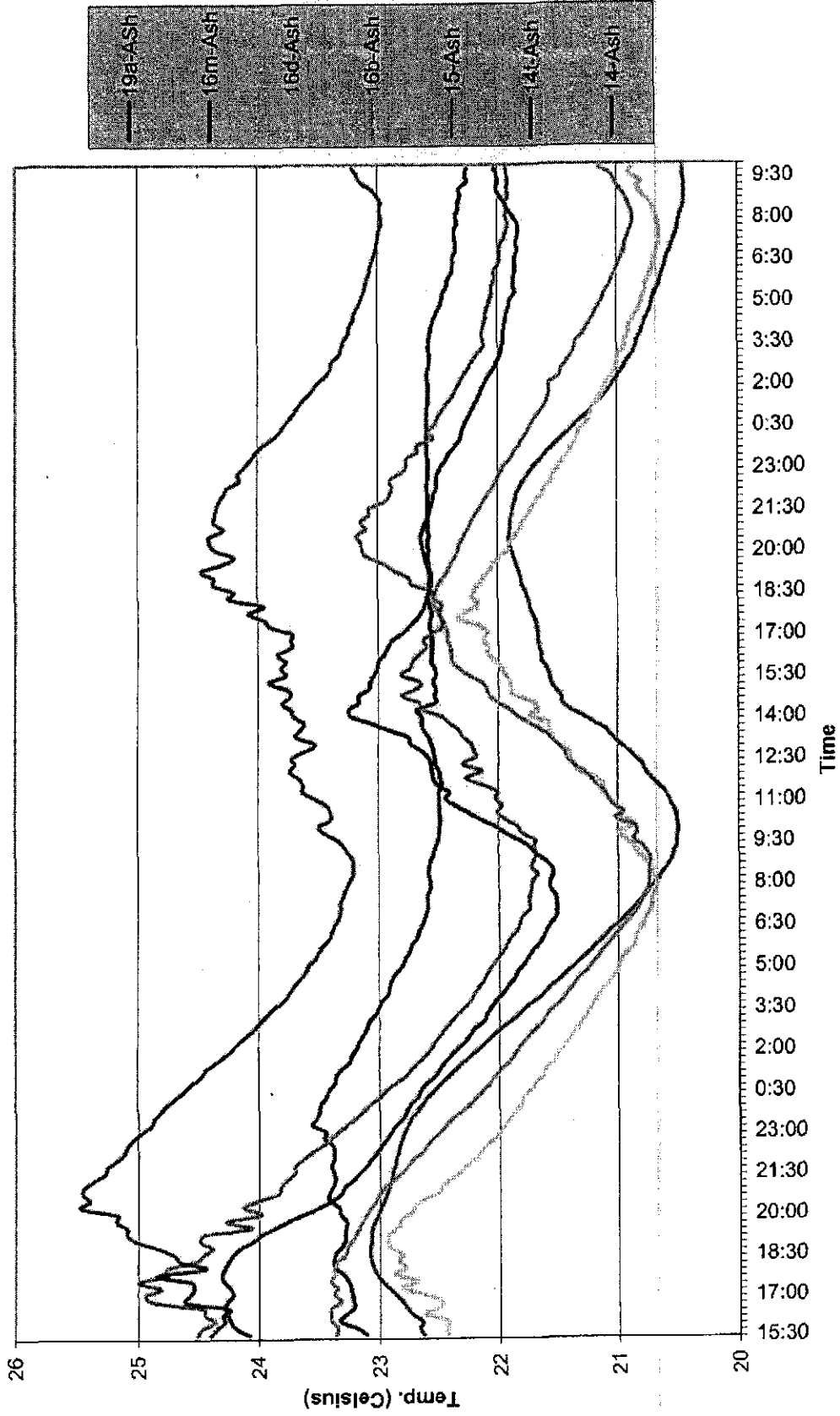
14-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	24.24	81.90	6.85
15:30-23:45	Max	25.47	95.40	7.82
	Mean	24.89	88.61	7.33
8/23/01	Min	23.22	70.90	6.04
0:00-23:45	Max	24.75	94.00	7.86
	Mean	23.86	79.36	6.69
8/24/01	Min	22.97	68.60	5.88
0:00-9:45	Max	23.88	83.10	7.01
	Mean	23.27	74.08	6.32

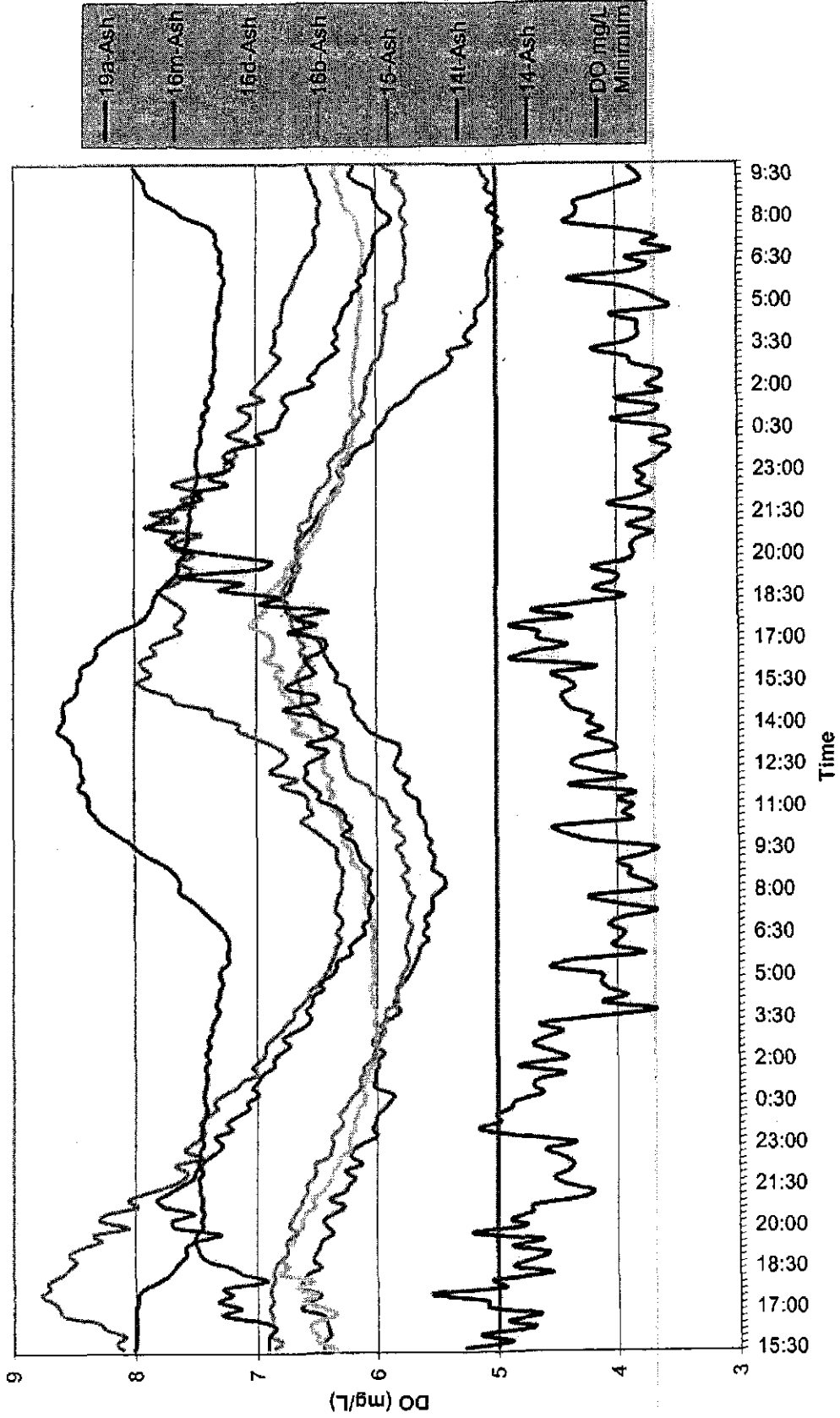
16B-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01	Min	22.30	72.00	6.29
15:30-23:45	Max	23.41	80.70	6.90
	Mean	23.04	77.62	6.68
8/23/01	Min	20.73	63.20	5.69
0:00-23:45	Max	22.55	77.90	6.78
	Mean	21.69	70.38	6.22
8/24/01	Min	20.87	63.90	5.74
0:00-9:45	Max	21.76	71.00	6.27
	Mean	21.22	66.37	5.92

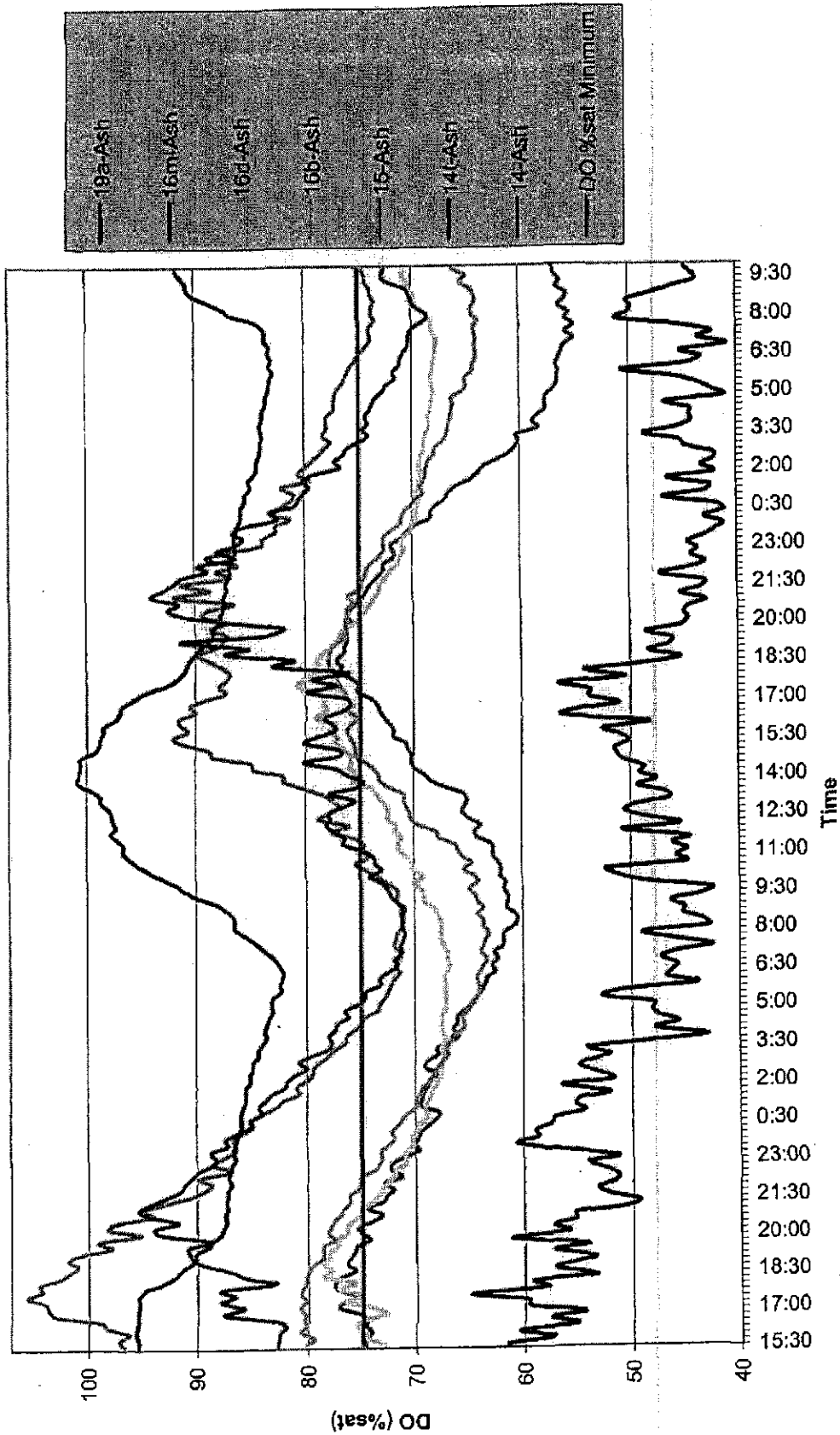
Temperature (Celsius) for Ashuelot River from August 22 to August 24, 2001

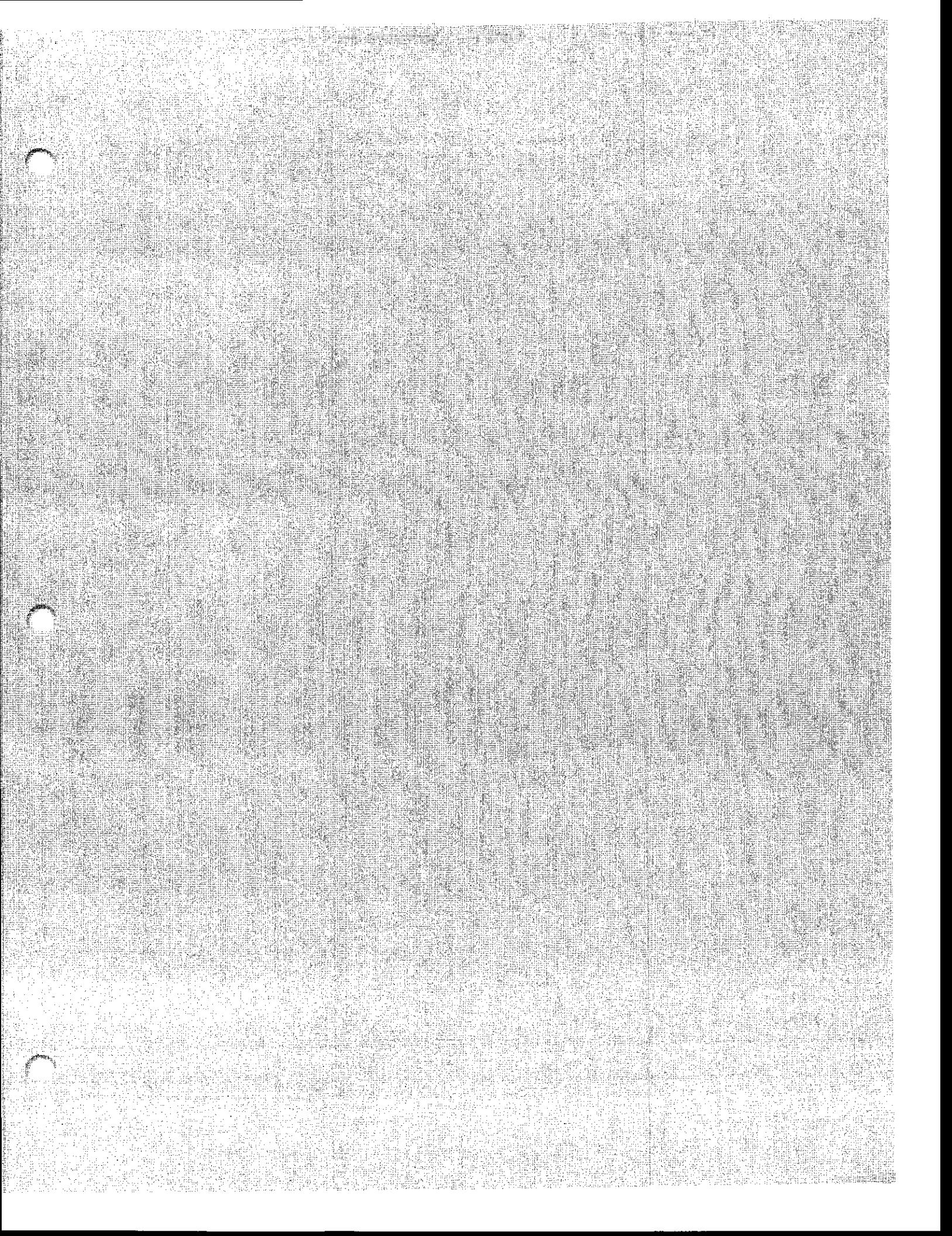


DO (mg/L) for Ashuelot River from August 22 to August 24, 2001



DO (%sat) for Ashuelot River from August 22 to August 24, 2001





Pre-Deployment and Post-Deployment Information

Pre-Deployment

Location of Pre-Deployment
DO Meter Serial Number
Measurements Taken By



Time of Test			
Temperature			
Zero Oxygen Standard (initial) - (% , mg/l)			
Dissolved Oxygen (% saturation) calibration			
Dissolved Oxygen (% saturation) Sample			
Dissolved Oxygen (mg/l) Sample			
Dissolved Oxygen (% saturation) in chamber			
Zero Oxygen Standard (final) (% , mg/l)			

Post-Deployment

Location of Post-Deployment
DO Meter Serial Number
Measurements Taken By

Time of Test			
Temperature			
Zero Oxygen Standard (initial) - (% , mg/l)			
Dissolved Oxygen (% saturation) calibration			
Dissolved Oxygen (% saturation) Sample			
Dissolved Oxygen (mg/l) Sample			
Dissolved Oxygen (% saturation) in chamber			
Zero Oxygen Standard (final) (% , mg/l)			

Hydrolab Deployment Information

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Time Deployed
Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Filename
Site Description
Hydrolab Type and Number
Date/Time Deployed
Date/Time Retrieved
Depth of Hydrolab
Water Depth (max)
Water Depth (at Hydrolab Location)
Width of River at Deployment
Hydrolab Distance from Shoreline

Hydrolab Meter Agreement

Date/Time	37810			37983			37792			37795			1564-AB			168-Ash			15-Ash		
	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat	Temp °C	DO mg/l	DO% Sat
8/28/01 12:00	23.18	10.07	81.0	23.38	7.77	23.38	24.00	7.48	24.00	7.48	24.00	7.48	24.00	7.48	24.00	7.48	7.48	24.00	7.48	24.00	7.48
8/28/01 12:45	23.03	8.15	82.5	23.14	7.01	83	23.20	5.87	23.20	5.87	23.20	5.87	23.20	5.87	23.20	5.87	5.87	23.20	5.87	23.20	5.87
8/28/01 13:00	23.18	9.28	83.8	23.24	7.11	84.8	23.40	6.93	23.40	6.93	23.40	6.93	23.40	6.93	23.40	6.93	6.93	23.40	6.93	23.40	6.93
8/30/01 7:11																					
8/31/01 7:11																					
8/31/01 7:27																					

Can't determine whether hydrolabs were checked at same site, and whether the times are correct for the checking of the hydrolabs.

19A-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	22.35	76.10	6.60
	Max	23.05	94.00	8.12
	Mean	22.74	85.40	7.36
8/23/01 0:00-23:45	Min	21.41	66.30	5.86
	Max	23.35	97.50	8.31
	Mean	22.16	79.52	6.92
8/24/01 0:00-10:15	Min	20.82	69.10	6.18
	Max	21.89	78.80	6.90
	Mean	21.26	72.50	6.43

16M-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	21.45	65.60	5.78
	Max	21.82	76.60	6.72
	Mean	21.64	71.30	6.27
8/23/01 0:00-23:45	Min	19.83	57.40	5.20
	Max	21.43	79.50	7.07
	Mean	20.70	68.24	6.11
8/24/01 0:00-10:15	Min	18.45	64.00	5.97
	Max	20.64	75.60	6.80
	Mean	19.34	68.58	6.31

16B-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	21.44	72.60	6.40
	Max	22.07	80.90	7.10
	Mean	21.78	78.06	6.84
8/23/01 0:00-23:45	Min	20.09	66.10	5.69
	Max	22.12	82.10	7.17
	Mean	20.99	72.84	6.48
8/24/01 0:00-10:15	Min	18.68	68.60	6.33
	Max	20.18	72.00	6.68
	Mean	19.29	69.73	6.42

15-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	21.95	72.80	6.35
	Max	22.63	80.30	6.93
	Mean	22.38	77.18	6.69
8/23/01 0:00-23:45	Min	20.33	62.30	5.62
	Max	22.78	81.10	6.88
	Mean	21.47	71.26	6.28
8/24/01 0:00-10:15	Min	19.04	64.70	5.94
	Max	20.87	70.70	6.31
	Mean	19.72	66.77	6.09

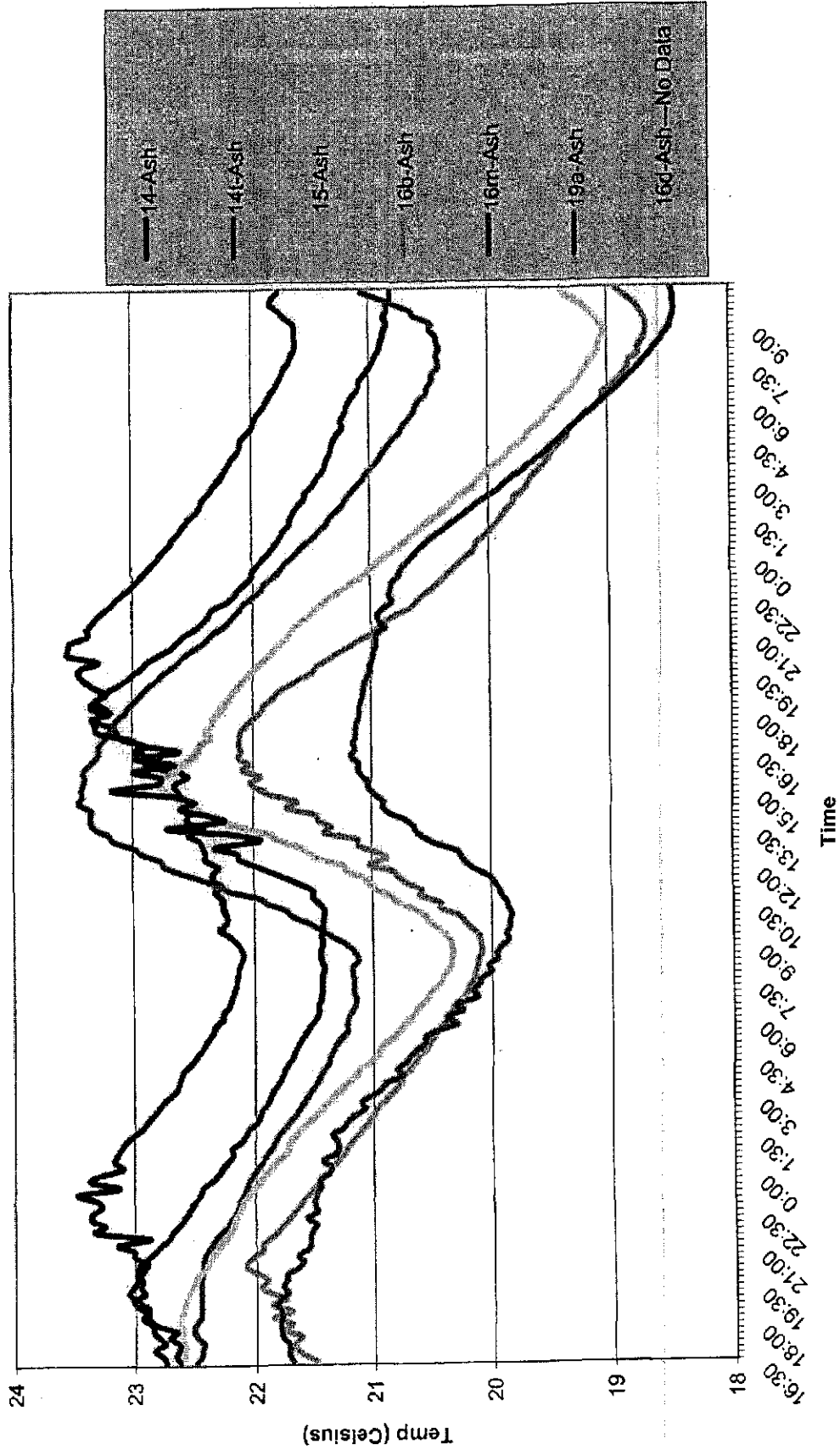
14T-ASH

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	22.05	89.10	7.78
	Max	22.51	103.20	8.93
	Mean	22.35	93.55	8.12
8/23/01 0:00-23:45	Min	21.12	84.10	7.46
	Max	23.45	103.50	8.85
	Mean	22.18	91.68	7.98
8/24/01 0:00-10:15	Min	20.41	84.10	7.55
	Max	21.66	96.60	8.59
	Mean	20.87	88.83	7.76

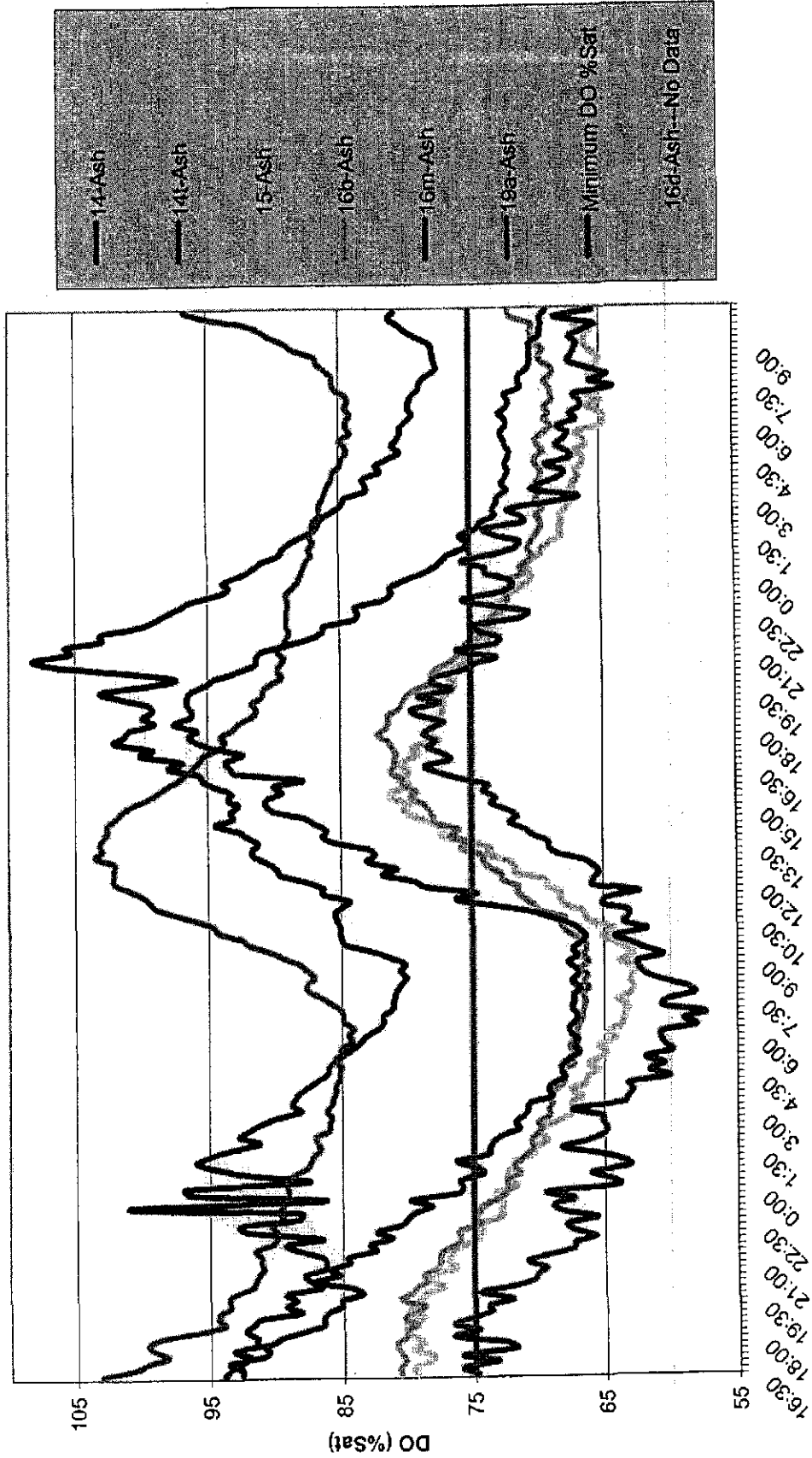
14-ASH

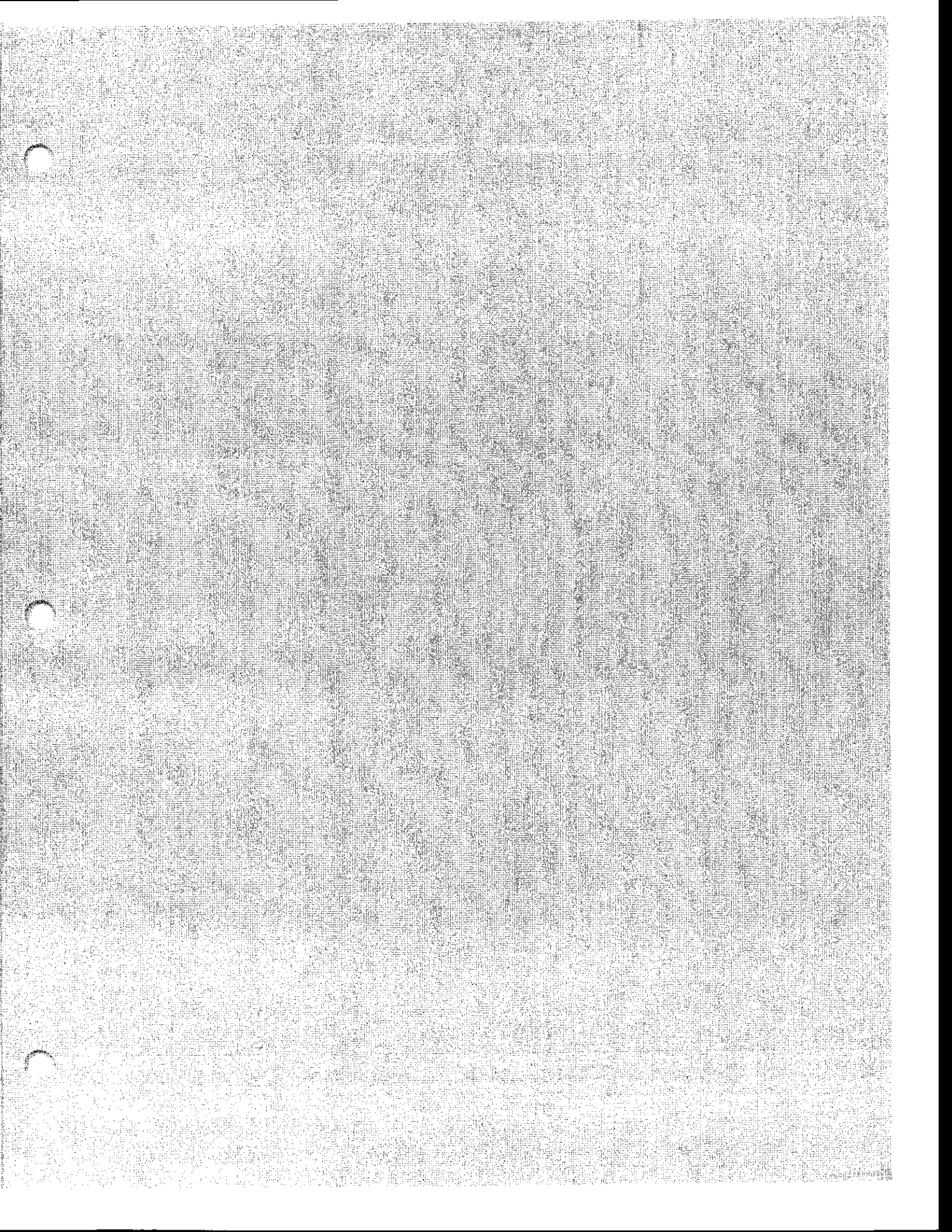
		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/22/01 16:30-23:45	Min	22.74	86.30	7.38
	Max	23.47	101.10	8.69
	Mean	23.03	90.21	7.73
8/23/01 0:00-23:45	Min	22.09	80.00	6.97
	Max	23.54	108.20	9.18
	Mean	22.73	91.74	7.90
8/24/01 0:00-10:15	Min	21.62	77.50	6.82
	Max	22.78	92.40	7.96
	Mean	22.06	82.46	7.19

Temperature for Ashuelot River from August 28 to August 30, 2001



DO % Sat for Ashuelot River from August 28 to August 30, 2001





TMDL Project Name: ASHUELOT RIVER TMDL

Hydrolab Deployment Team Matt Jones and Sarah Sand, DES
 Eric Swope, Keene WWTF
Hydrolab Calibration Team Matt Jones and Sarah Sand, DES
 Eric Swope, Keene WWTF
Dates Used 8/27/02 - 8/29/02

Calibration Information

Hydrolab Number	37790	38672	38671	37782	Keene 38851	Keene 38848	Keene 38850
Dissolved Oxygen (% saturation)							
Dissolved Oxygen (mg/l)							
Zero Oxygen (initial) (% saturation)							
Zero Oxygen (initial) (mg/l)							

Hydrolab Number	37790	38672	38671	37782	Keene 38851	Keene 38848	Keene 38850
Dissolved Oxygen (% saturation)	99.8	99.7	99.8	99.9			
Dissolved Oxygen (mg/l)	8.68	8.64	8.62	8.68			
Zero Oxygen (final) (% saturation)	0.025	0.012	0.9	4.3			
Zero Oxygen (final) (mg/l)	0.22	0.1	0.08	0.37			

Notes: All hydrolabs were set up to measure at 15 minute intervals.
 Keene's hydrolabs were set up to start recording at 10 am on 8/27/02 and stop recording at 12:00 on 8/30/02.

Hydrolab Deployment Information

Filename	14-Ashseries12002
Site Description	Ashuelot River, Swanzey
Hydrolab Type and Number	Minisonde 4a # 39672
Date/Time Deployed	8/27/02, 13:14
Date/Time Retrieved	8/30/02, 10:43
Depth of Hydrolab	3 feet
Water Depth (max)	20 feet
Water Depth (at Hydrolab Location)	4 feet
Width of River at Deployment	100 feet
Hydrolab Distance from River Right	5 feet

Filename	14T-Ashseries12002
Site Description	Ashuelot River, Swanzey
Hydrolab Type and Number	Minisonde 4a # 39671
Date/Time Deployed	8/27/02, 14:50
Date/Time Retrieved	8/30/02, 9:55
Depth of Hydrolab	2 feet
Water Depth (max)	3 feet
Water Depth (at Hydrolab Location)	3 feet
Width of River at Deployment	85 feet
Hydrolab Distance from River Right	75 feet

Filename	15-ASH series1
Site Description	Ashuelot River, Swanzey
Hydrolab Type and Number	Minisonde 4a # 38851
Date/Time Deployed	8/27/02, 15:04
Date/Time Retrieved	8/30/02, 10:04
Depth of Hydrolab	1.5 feet
Water Depth (max)	7 feet
Water Depth (at Hydrolab Location)	3 feet
Width of River at Deployment	120 feet
Hydrolab Distance from River Right	115 feet

Filename	16-ASH series1
Site Description	Ashuelot River,
Hydrolab Type and Number	Minisonde 4a #38849
Date/Time Deployed	8/27/02, 13:33
Date/Time Retrieved	8/30/02, 10:30
Depth of Hydrolab	2 feet
Water Depth (max)	3 feet
Water Depth (at Hydrolab Location)	3 feet
Width of River at Deployment	50 feet
Hydrolab Distance from River Right	30 feet

Filename	16D-ASH series1
Site Description	Ashuelot River, Swanzey
Hydrolab Type and Number	Minisonde 4a #38850
Date/Time Deployed	8/27/02, 13:14
Date/Time Retrieved	8/30/02, 10:43
Depth of Hydrolab	1 foot
Water Depth (max)	7 feet
Water Depth (at Hydrolab Location)	7 feet
Width of River at Deployment	50 feet
Hydrolab Distance from River Right	42 feet

Filename	16m-Ash_series1_2002
Site Description	Ashuelot River, Swanzey
Hydrolab Type and Number	DataSonde 4a # 37792
Date/Time Deployed	8/27/02, 15:49
Date/Time Retrieved	8/30/02, 9:00
Depth of Hydrolab	3 feet
Water Depth (max)	6 feet
Water Depth (at Hydrolab Location)	4 feet
Width of River at Deployment	50 feet
Hydrolab Distance from River Right	35 feet

Filename	19A-AshSeries12002
Site Description	Ashuelot River, Keene
Hydrolab Type and Number	DataSonde 4a # 37790
Date/Time Deployed	8/27/02, 16:18
Date/Time Retrieved	8/30/02, 8:37
Depth of Hydrolab	2.5 feet
Water Depth (max)	6 feet
Water Depth (at Hydrolab Location)	6 feet
Width of River at Deployment	40 feet
Hydrolab Distance from River Right	20 feet

Hand Held DO Meter Readings taken at Hydrolab Deployment and Retrieval

Pre-Deployment In-Situ Measurements

Location of Pre-Deployment Readings
Hand Held DO Meter Serial Number
Measurements Taken By

Ashuelot River @ Keene WWTF
[REDACTED]
Matt Jones and Sarah Sand

Time of Test	12:30	12:45	13:00
Temperature degrees C	22.3	22.2	22.2
Zero Oxygen Standard (Initial) - (% , mg/l)	0% , 0 mg/L	-	-
Dissolved Oxygen (% saturation) calibration	98%	98%	98%
Dissolved Oxygen (% saturation) Sample	124%	115%	107%
Dissolved Oxygen (mg/l) Sample	10.8 mg/L	10.0 mg/L	9.4 mg/L
Dissolved Oxygen (% saturation) in chamber	101%	105%	102%
Zero Oxygen Standard (final) (% , mg/l)	-	-	0% , 0 mg/L

Retrieval In-Situ Measurements

Location of Retrieval Readings
Hand Held DO Meter Serial Number
Measurements Taken By

Ashuelot River @ Keene WWTF
[REDACTED]
Matt Jones and Sarah Sand

Time of Test	11:00	11:15	11:30
Temperature	19.3	19.3	19.3
Zero Oxygen Standard (Initial) - (% , mg/l)	5% , 0.5mg/L	-	-
Dissolved Oxygen (% saturation) calibration	98%	98%	98%
Dissolved Oxygen (% saturation) Sample	78%	83%	74%
Dissolved Oxygen (mg/l) Sample	7.2 mg/L	7.7 mg/L	6.8 mg/L
Dissolved Oxygen (% saturation) in chamber	91%	108%	94%
Zero Oxygen Standard (final) (% , mg/l)	-	-	2% , 0.2 mg/L

ASHUELOT RIVER -- Keene, NH

Calibration, QC and file set-up information for NH DES TMDL sampling, August 2002.

8/23/02 New AA batteries in each mini-sonde. Comparisons noted below were all made in laboratory setting with Operator's Probe and Mini-Sonde in bucket of tap water.

Mini-Sonde #1

8/26/02, 14:20

Calibrated DO to 100% saturation at 763 barometric pressure.

Set up time-triggered file "15-ASH". Set to begin: 8/27/02, 10:00; End: 8/30/02, 12:00. Readings every 15 minutes preceded by 2 minute warm-up and 2 minute circulation.

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
6.37-6.50	72.7-74.4	6.75-6.85	76.8-77.9

Post-deployment QC check

8/30/02, 12:49

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
6.57-6.68	75.7-76.7	7.01-7.15	80.4-81.5

Mini-Sonde #2

8/26/02, 12:58

Calibrated DO to 100% saturation at 763 barometric pressure.

Set up time-triggered file "16 B ASH". Set to begin: 8/27/02, 10:00; End: 8/30/02, 12:00. Readings every 15 minutes preceded by 2 minute warm-up and 2 minute circulation.

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
4.04-4.32	46.3-49.5	3.79-4.10	45.1-46.9

Post-deployment QC check

8/30/02, 13:12

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
6.49-6.71	75.0-77.3	6.63-6.80	76.0-78.0

Mini-Sonde #3

8/26/02, 13:53

Calibrated DO to 100% saturation at 763.5 barometric pressure.

Set up time-triggered file "16-D-ASH". Set to begin: 8/27/02, 10:00; End:

8/30/02, 12:00. Readings every 15 minutes preceded by 2 minute warm-up and 2 minute circulation.

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
6.34-6.38	72.3-72.8	6.21-6.34	70.5-72.0

Post-deployment QC check

8/30/02, 13:24

Compared hand-held WWTP operators DO readings to Mini-Sonde in laboratory:

Operator's DO meter readings		Mini-Sonde meter readings	
Mg/L	% saturation	Mg/L	% saturation
6.73-6.85	77.7-79.1	7.17-7.25	82.4-83.5

DES Hydratlab Deployment and Retrieval QA/QC Information 2002 ASHUELOT TMDL

Date/Time	HAND HELD DO METER READINGS						DES #33671			DES #33672			
	Temp °C	DO mg/L	%Sat	DO mg/L	Temp °C	%Sat	DO mg/L	Temp °C	%Sat	DO mg/L	Temp °C	%Sat	DO mg/L
8/27/02 12:30	22.3	124	10.8	10.8	21.29	88.3	7.83	21.26	96.8	8.49	21.49	95.5	8.33
8/27/02 12:45	22.2	115	10	10	21.61	83.4	7.27	21.58	94.8	8.28	21.6	94.2	8.2
8/27/02 13:00	22.2	107	9.4	9.4	21.64	81.1	7.06	21.61	95.2	8.29	21.68	96.7	8.41
8/29/02 11:00	19.3	78	7.2	7.2	19.36	69.6	6.34	19.18	80.1	7.33	19.9	83.3	7.55
8/29/02 11:15	19.3	83	7.7	7.7	19.35	58	5.29	19.28	79.3	7.23	19.26	80	7.29
8/29/02 11:30	19.3	74	6.8	6.8	19.35	51	5.56	19.31	78.5	7.15	19.38	78.4	7.14

Temp °C	DES #33782			DES #33850			DES #33848			DES #33851			
	DO mg/L	%Sat	Temp °C	DO mg/L	%Sat	Temp °C	DO mg/L	%Sat	Temp °C	DO mg/L	%Sat	Temp °C	DO mg/L
21.3	93.8	8.22	21.21	87.5	8.45	21.19	84.9	8.45	21.17	97.2	8.96	21.4	98.8
21.6	90.3	7.87	21.52	97.3	8.62	21.49	95.2	8.43	21.4	98.8	8.59	21.4	98.8
21.72	94.3	8.2	21.56	96.5	8.55	21.6	94.8	8.38	21.53	96.8	8.74	21.53	96.8
19.34	81.7	7.44	19.31	88.7	8.21	19.29	77.2	7.15	19.08	102.4	9.52	19.28	82
19.33	78.3	7.13	19.29	83.2	7.71	19.28	74.8	6.92	19.28	82	7.59	19.28	81.9
19.36	77.4	7.05	19.51	82.6	7.63	19.33	74.3	6.87	19.33	81.9	7.57	19.33	81.9

Keene WWTF Hydratlab Deployment and Retrieval QA/QC Information			
Deployment	Retrieval	Hand Held %sat	Minimum %sat
Serial Number / Time Keene # 38851 / 11:40	Serial Number / Time Keene # 38849 / 12:56	72.7-74.4	78.8-77.9
Keene # 38850 / 13:53	Keene # 38850 / 13:53	45.3-49.5	45.1-48.9
		72.2-72.8	70.5-72.0
Deployment	Retrieval	Hand Held %sat	Minimum %sat
Serial Number / Time Keene # 38851 / 12:49	Serial Number / Time Keene # 38849 / 13:12	75.7-76.7	80.4-81.5
Keene # 38850 / 13:24	Keene # 38850 / 13:24	75.9-77.3	76.0-78.0
		77.7-79.1	82.4-83.5

Hydrolab Data Results

19a-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	20.78	60.90	5.39
14:30-23:45	Max	27.00	106.50	8.42
	Mean	21.33	74.82	6.54
8/28/02	Min	20.09	50.60	4.52
0:00-23:45	Max	21.04	77.10	6.81
	Mean	20.52	64.65	5.75
8/29/02	Min	20.14	53.20	4.77
0:00-8:30	Max	20.75	69.90	6.20
	Mean	20.41	63.45	5.66

16m-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	20.90	93.00	8.21
16:00-23:45	Max	21.43	100.20	8.76
	Mean	21.23	97.64	8.57
8/28/02	Min	18.73	72.00	6.63
0:00-23:45	Max	20.84	98.80	8.76
	Mean	19.90	85.06	7.65
8/29/02	Min	18.76	71.50	6.58
0:00-9:00	Max	20.26	91.20	8.16
	Mean	19.44	79.65	7.24

16d-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	19.97	75.90	6.90
16:00-23:45	Max	20.95	86.30	7.73
	Mean	20.36	80.41	7.28
8/28/02	Min	19.22	74.90	6.93
0:00-23:45	Max	20.95	93.90	8.41
	Mean	19.99	81.46	7.43
8/29/02	Min	19.13	77.40	7.19
0:00-9:00	Max	20.10	85.20	7.76
	Mean	19.54	80.27	7.39

16b-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	21.06	81.60	7.28
16:00-23:45	Max	22.06	89.80	7.86
	Mean	21.67	86.13	7.60
8/28/02	Min	19.47	71.50	6.58
0:00-23:45	Max	21.71	90.00	7.94
	Mean	20.68	80.26	7.21
8/29/02	Min	19.39	73.20	6.76
0:00-9:00	Max	20.79	83.10	7.47
	Mean	20.01	77.31	7.05

15-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	21.21	92.30	8.22
16:00-23:45	Max	22.40	99.80	8.78
	Mean	21.79	97.02	8.54
8/28/02	Min	20.12	78.50	7.15
0:00-23:45	Max	21.51	98.20	8.82
	Mean	20.77	87.42	7.85
8/29/02	Min	20.28	81.70	7.41
0:00-9:00	Max	20.99	91.50	8.20
	Mean	20.58	87.04	7.85

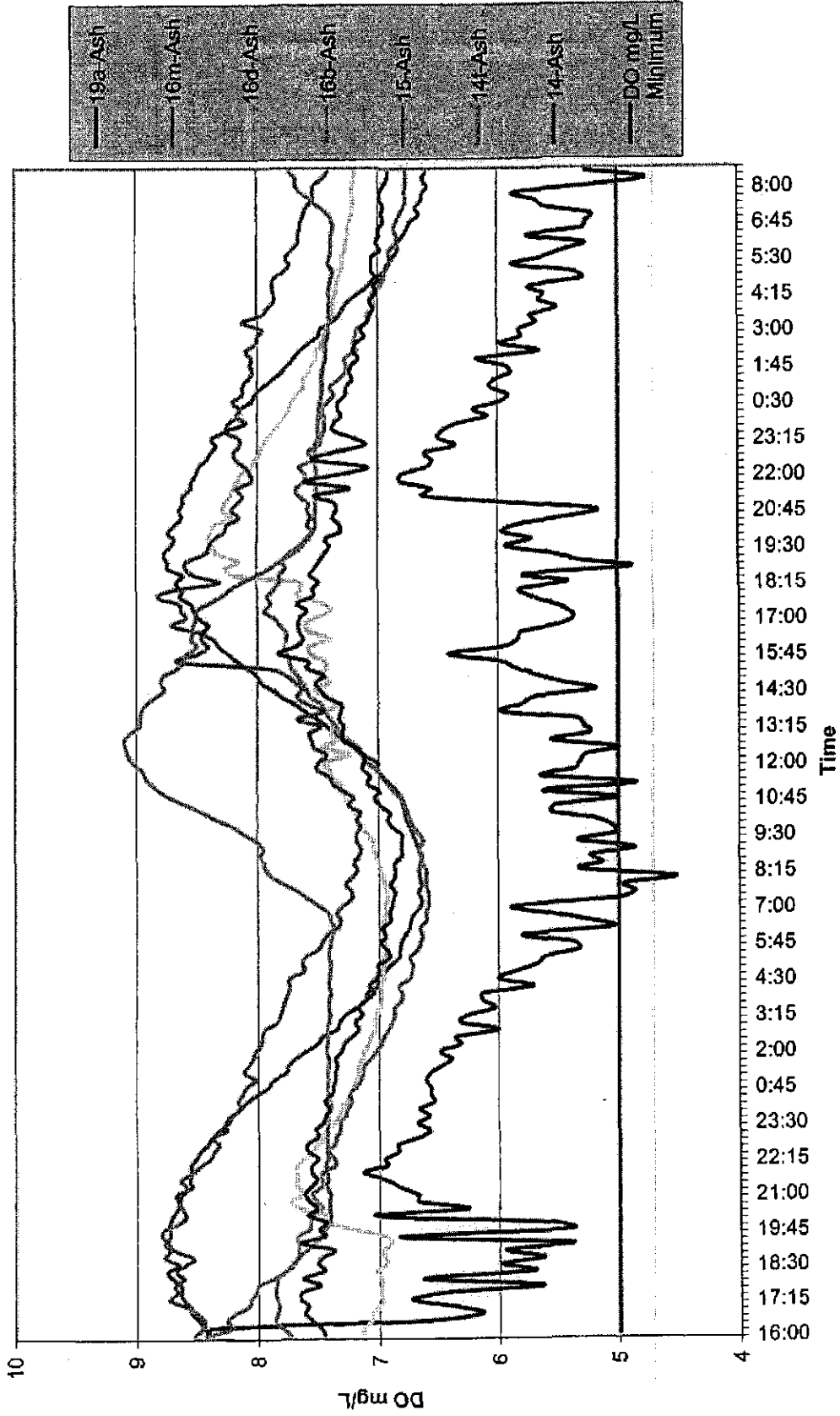
14t-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	20.95	84.20	7.41
16:00-23:45	Max	22.53	98.20	8.40
	Mean	21.66	88.11	7.66
8/28/02	Min	20.00	82.20	7.38
0:00-23:45	Max	22.22	104.80	9.10
	Mean	20.67	90.24	7.97
8/29/02	Min	20.13	82.40	7.37
0:00-9:00	Max	20.65	86.20	7.73
	Mean	20.35	83.65	7.46

14-Ash

		Temp (degree C)	Dissolved Oxygen (% Sat)	Dissolved Oxygen (mg/L)
8/27/02	Min	22.40	86.70	7.38
16:00-23:45	Max	23.18	90.60	7.65
	Mean	22.91	88.73	7.54
8/28/02	Min	21.19	77.40	6.80
0:00-23:45	Max	22.37	90.60	7.82
	Mean	21.74	83.40	7.24
8/29/02	Min	20.97	78.30	6.91
0:00-9:00	Max	21.77	84.50	7.34
	Mean	21.27	80.87	7.09

DO mg/L for Ashuelot River, from August 27 to August 29



DO % Saturation for Ashuelot River, from August 27 to August 29

