Appendix A

Sediment Reconnaissance Survey Field Forms and Photos

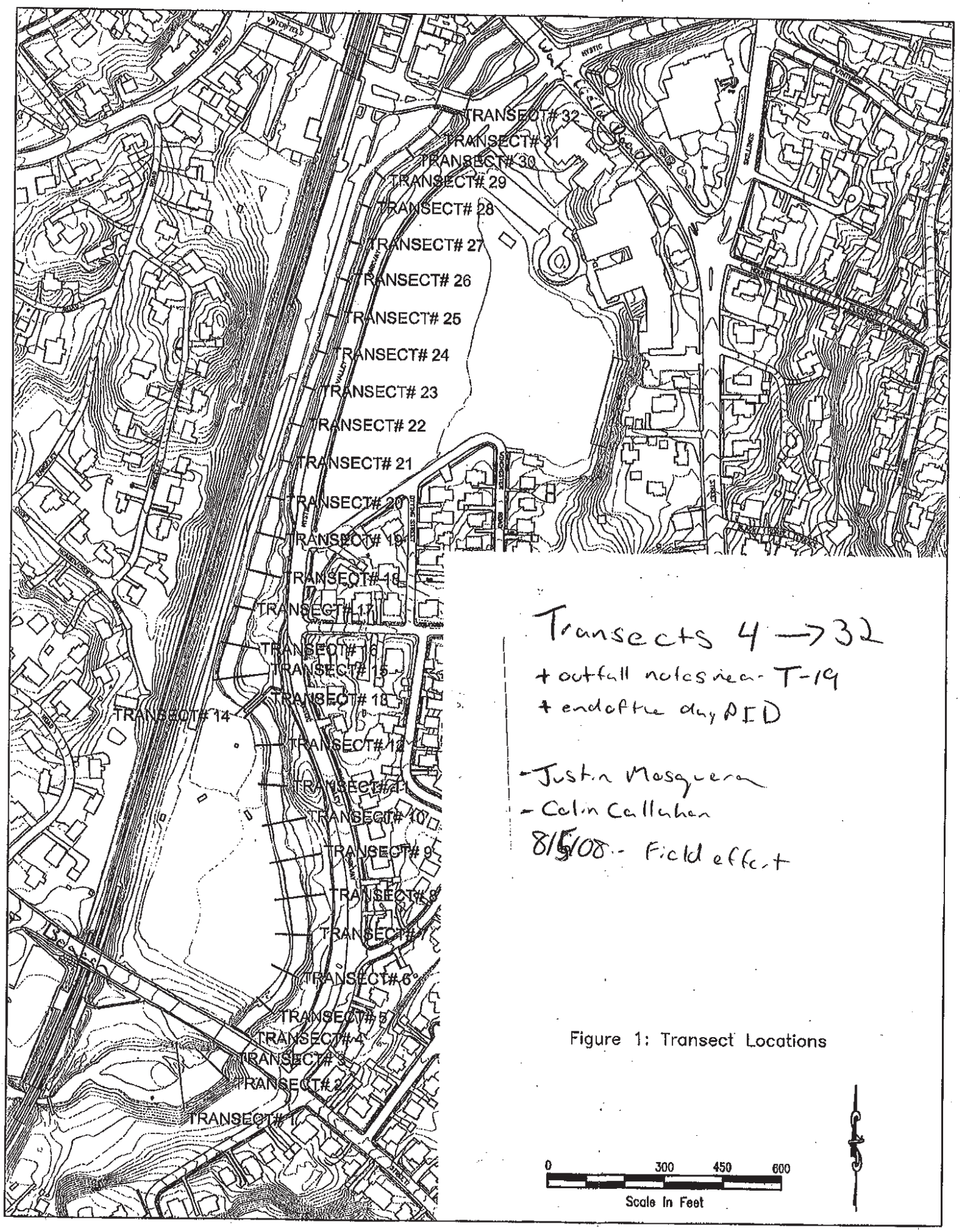


Figure 1: Transect Locations

8/7/08
(W)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	3a	Date:	August 5 2008	Photo #:	RB 29
Northing	—	Time:	1725 - 1740		
Easting	—	Recorded by:	Colin C.		
Weather:	80's partly sunny	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

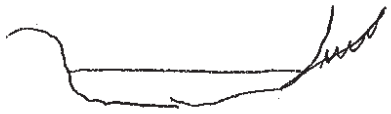
River Width: 45 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 4	0	1.75	15 ft		
~~2 ft~~ 5	0	2	16 ft		
~~3 ft~~ 10	0	3.75	17 ft		
~~4 ft~~ 15	.25	4	18 ft		
~~5 ft~~ 20	.125	4.25	19 ft		
~~6 ft~~ 25	0	4.5	20 ft		
~~7 ft~~ 30	1	3.5	21 ft		
~~8 ft~~ 35	0	3	22 ft		
~~9 ft~~ 40	0	2	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB
S LB= .25 ft/sec
25 C= .23 ft/sec
40 RB= .31 ft/sec

Transect sketch:

LB - 3' horizontal to water
RB - 3



Notes -
LB - 5' high, steep, eroded
RB - Some rock wall, steep

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank (5)		Station 2: Central (25)		Station 3: Right Bank (40)	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: Solid Rock, cobbles, coarse sand		Notes: Sand & cobbles		Notes: Cobbles, rocks, some fines & sands	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
outfall on RB 18" diameter approximately
-5' off of headwall from bridge (down stream) ~ transect performed
- 15' downgradient = 1.5-2' sediment in ~~center~~ (W) Center of stream - flow increases through waterfield street bridge then some sands deposit (about 20' from street crossing

8/7/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID: 31
Northing: -
Easting: -
Weather: 80's Partly Cloudy

Date: August 5 2008
Time: 1650 - 1720
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: RB 28

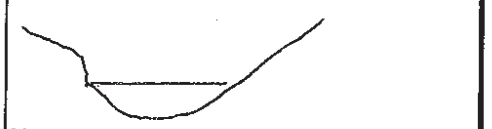
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 35 feet

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~1 ft~~ 4	0	.5
~~2 ft~~ 9	0	2.5
~~3 ft~~ 13	0	3
~~4 ft~~ 17	0	3.25
~~5 ft~~ 19		3.5
~~6 ft~~ 22		3.5
~~7 ft~~ 25	.5	3
~~8 ft~~ 28	.1	2
~~9 ft~~ 33 RB	0	0
10 ft		
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 9 LB= .46; 19 C= .41; 28 RB= .34

Transect sketch:



Notes -
LB - eroded mud & trees
RB - Retaining wall + trees

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank		Station 2: Central		Station 3: Right Bank
% Gravel =	9	% Gravel =	19	% Gravel = 28
% Sand =		% Sand =	Silt + Sand	% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color:
Odor:		Odor:		Odor:
Sheen:		Sheen:		Sheen:
Notes: Same peaty material from transect 30, ~~extends~~ extends to 9' - pulled core partially decomposed wood, higher organic content than transect 30		Notes: Gravel on top of C-S, followed by C-S grey w/ silt, transitions to grey silt tightly packed w/ trace fines		Notes: Boulders & Rocks/ gravel

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

8/7/08
(5)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID 30
Northing –
Easting –
Weather: 80's, partly cloudy

Date: August 5 2008
Time: 1635 - 1645
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: LB 27

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 2'	0	.75'	15 ft		
~~2 ft~~ 8'	0 sand/gravel	3	16 ft		
~~3 ft~~ 11'	0	3.5	17 ft		
~~4 ft~~ 15'	.75	4	18 ft		
~~5 ft~~ 18'	0	3.5	19 ft		
~~6 ft~~ 21'	0	3.4	20 ft		
~~7 ft~~ 23'	.5	2	21 ft		
~~8 ft~~ 25 RB	0	0	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

River Width: LB 29 feet

Velocity (collected @ 0.6 portion of water column in 3 locations):
8 LB= .38 ft/sec
15 C= .47 ft/sec
23 RB= .40 ft/sec

Transect sketch:
LB - 2' > Horizontal to water
RB - 3'

Notes -
LB - 2.5' with steep
RB - Retaining wall failing

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank
% Gravel =	(8)	% Gravel =	(15)	% Gravel = (23)
% Sand =		% Sand =		% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color:
Odor:		Odor:		Odor:
Sheen:		Sheen:		Sheen:
Notes: tight brown silty/peaty layer, tightly packed probe extends 2' No ODOR - NO SHEEN to be determined if it should be ~~considered~~ considered sediment		Notes: gravel/sand, cobbles some silt mixed in		Notes: Same as ← central

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

401
884-
2500
x32342

8/7/08

(4)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID 29
Northing —
Easting —
Weather: 80's partly cloudy

Date: August 6 2008
Time: 1615-1630
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: LB-26

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 30 feet

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~1 ft~~ 3	0	.51
~~2 ft~~ 6	0	2
~~3 ft~~ 9	0	2.75
~~4 ft~~ 11	0	3
~~5 ft~~ 14	0	4.25
~~6 ft~~ 18	0	4
~~7 ft~~ 22	.5	4
~~8 ft~~ 27	0.5	3.5
~~9 ft~~ RB	0	0
10 ft		
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations):
LB
6 LB= .18 ft/sec
14 C= .43 ft/sec
27 RB= .34 ft/sec

Transect sketch:

LB-2' RB-3' > Horizontal to water

Notes -
LB- 3' straight up
RB- Retaining wall

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank (6)		Station 2: Central (14)		Station 3: Right Bank (27)	
% Gravel	= (6)	% Gravel	= (14)	% Gravel	= (27)
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: gravel, big rocks (Diameter)		Notes: gravel to 4" of Coarse Sand sediment		Notes: blocks, large trees, pockets of silty material	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- outfall 18" on LB down gradient 20'
- from 2-6' solid silt (very stable, grey, silt) SAME AS Transects 6 & 27

8/7/08

(6)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	28	Date:	August 5 2008	Photo #:	RB- 25
Northing	–	Time:	1600 1610		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 6	0	1.5	15 ft		
~~2 ft~~ 7	0	3.25	16 ft		
~~3 ft~~ 8	0	4	17 ft		
~~4 ft~~ 12	0	4.5	18 ft		
~~5 ft~~ 15	.5	4	19 ft		
~~6 ft~~ 19	.5	3.5	20 ft		
~~7 ft~~ 22 RB	0	0	21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

River Width: LB 25 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): LB= .52 ft/sec; 12 C= .60 ft/sec; 19 RB= .43

Transect sketch:

LB ~4'
RB ~2' > Horizontal transect

Notes -
LB - retaining wall
RB - eroded tree roots, steep

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank 7		Station 2: Central 12		Station 3: Right Bank 19	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: - Retaining wall to 9' - Slumped down into Channel		Notes: Silty sand between large ~~rocks~~ rocks		Notes: SAME AS Center	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- outfall 12" on LB ~ Diameter
- Sediment accumulating between large roots
- can't see bottom
- probed from canoe
- No geology collected

8/7/08 (4)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID 27
Northing –
Easting –
Weather: 80's partly cloudy

Date: August 5 2008
Time: 1540 1555
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: RB-24

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~4 ft~~ 7	0	.5
~~2 ft~~ 1	0	2.75
~~3 ft~~ 10	0	4.75
~~4 ft~~ 14	0.5	5'
~~5 ft~~ 19'	1.25	4.75
~~6 ft~~ 24	3.25	4
~~7 ft~~ 27	1	3.25
~~8 ft~~ 31	2	1
~~9 ft~~ 33	0	0
~~10 ft~~ RB	0	0
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

River Width: 36 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 9 LB= .21 ft/sec; 14 C= .37 ft/sec; 27 RB= .07 ft/sec

Transect sketch:

LB – 5', RB – 3' > Horizontal to water

Notes - LB – Retaining wall, 4' straight up
RB – Steep slope, eroding

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank (9)		Station 2 - Central (14)		Station 3 - Right Bank (27)	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	= 70
% OM	=	% OM	=	% OM	= 30
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: – Large blocks 7' inch Diameter		Notes: Coarse sand (4') ~~pockets~~ rocks, cobbles,		Notes: - able to get 1' penetration from canoe: - top foot gravel w/ poorly graded sand + silt, ~~transition~~ transition to more dark brown/grey increased OM + twigs/leaves w/ Depth	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- outfall on RB 20' down grading 12" steel Diameter
- difficult to ~~assess~~ decipher where high water mark is on high wall
- Sediment areas correlate w/ ~~wall erosion~~ where the wall is eroding
- Same ~~clay~~ silt as transect 6 ~~found~~ found

8/7/08

6

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID 26
Northing —
Easting —
Weather: 80's partly cloudy

Date: August 5 2008
Time: 1515 1530
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: RB- 23 dup

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 28 feet

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~1 ft~~ 8	0	2
~~2 ft~~ 14	0	5.5
~~3 ft~~ 17	0	0.2
~~4 ft~~ 23	0	5.25
~~5 ft~~ 25	0	2.75
~~6 ft~~ RB	0	0
7 ft		
8 ft		
9 ft		
10 ft		
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 8 LB= .23 ft/sec; 17 C= .31 ft/sec; 23 RB= .36 ft/sec

Transect sketch:

CB - 4' > Horizontal to water
RB - 3'

Notes -
CB - Vegetated Slope, 4'
RB - Steep

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank (8')		Station 2: Central (17')		Station 3: Right Bank (23')	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: Rotting wall fallen into River for 7' gravel & small cobbles		Notes: gravel, rocks		Notes: Sandy, clayey, (1-2") boulders	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- done from canoe w/ rod — Banks too steep to deep channel

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(1) 8/7/08

Transect ID	25	Date:	August 5 2008	Photo #:	43 - 22
Northing	–	Time:	1456-1511		
Easting	–	Recorded by:	Colin C.		
Weather:	80's, partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations).. Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~1 ft~~ 1 ft	0	.5
~~2 ft~~ 4'	0	2'
~~3 ft~~ 5'	0	2.75
~~4 ft~~ 8'	0	4.0
~~5 ft~~ 13'	0	5.2
~~6 ft~~ 16	0.1	5.2
~~7 ft~~ 21'	.5	3
~~8 ft~~ 23'	.5	3
~~9 ft~~ 26	2	1
~~10 ft~~ RB	0	0
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

River Width: LB 28 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): LB= .40 ft/sec; C= .48 ft/sec; RB= .25 ft/sec

Transect sketch:

LB - 2'
RB - 2' > Horizontal towards

Notes -
LB - Retaining wall to 6'
RB - Steep erosion

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Center		Station 3 - Right Bank
% Gravel =		% Gravel =		% Gravel = (23)
% Sand =		% Sand =		% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color:
Odor:		Odor:		Odor: none
Sheen:		Sheen:		Sheen: none
Notes: - Retaining wall sloped down		Notes: - large rocks (retaining wall) coarse sand		Notes: Silty sand, upper portion is coarse sand - transitioning to light tan well graded M-F sand, more coarse sand Brown, back to well graded M-S toward bottom

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- 2 out falls, one on each side 12", 50' down gradient - concrete
- 1 out fall 12", directly at transect
- Tree @ 23' ~~along w/ stone (creating pool of sediment)~~ along with a fallen stone creating a sediment pocket

8/7/08

(w)

FIELD LOG SHEET - 10687-006-300

ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	24	Date:	August 5 2008	Photo #:	LB-21
Northing	–	Time:	1450 1455		
Easting	–	Recorded by:	Colin C.		
Weather:	80's, weather	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 23' feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 2	0	1	15 ft		
~~2 ft~~ 3	0	3	16 ft		
~~3 ft~~ 6	0	5.5	17 ft		
~~4 ft~~ 12	0.1	6.2	18 ft		
~~5 ft~~ 15	0.1	5.5	19 ft		
~~6 ft~~ 18	0	4.25	20 ft		
~~7 ft~~ 20	0	4.0	21 ft		
~~8 ft~~ RB	0	0	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 6 LB= .31, 12 C= .55, 18 RB= .29

Transect sketch:

LB - 2', RB - 2' > Horizontal tomato

Notes -
LB - steep
RB - steep eroded

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes:		Notes:		Notes:	
- large pieces of retaining wall 4' in = retaining wall into stream channel		- cobbles & roots, course sand present +		Same as LB	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- CMT see bottom
- Probed w/ rod from canoe - too steep & Deep

8/7/08
(4)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID 23
Northing –
Easting –
Weather: 80's, partly cloudy

Date: August 5 2008
Time: 1425 1445
Recorded by: Colin C.
Field staff: Justin M. + Colin C.

Photo #: RB-20

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 30 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 4	0	.75	15 ft		
~~2 ft~~ 10	0	1.25	16 ft		
~~3 ft~~ 14	0	2.15	17 ft		
~~4 ft~~ 18	0	2.25	18 ft		
~~5 ft~~ 22	0	1.8	19 ft		
~~6 ft~~ 26	0	1.6	20 ft		
~~7 ft~~ RB	0	0	21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): 4 LB= .78 ft/sec; 14 C= 1.03 ft/sec; 26 RB= .78 ft/sec

Transect sketch:

LB - 5:1, RB - 3:1 Horizontal fracture

Notes -
LB - Steep (5:1 slope) eroding
RB - erosion, slabs of rock fallen in

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank		Station 2: Central		Station 3: Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
(4)		(14)		(26)	
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes:		Notes:		Notes:	
- cobbles & gravel .5-2 ft diameter		- Same as LB		- 1-2 ft diameter rock Same as LB	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

8/7/08
C

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	22	Date:	August 5 2008	Photo #:	RB-19
Northing	–	Time:	1420 1430		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 24 feet

	Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0
~~1 ft~~ 2 1/2 5'	0	1'
~~2 ft~~ 9'	0	1.8
~~3 ft~~ 13'	0	3'
~~4 ft~~ 17	0	3'
~~5 ft~~ 21	0	3.2
~~6 ft~~ 23	0	2.2
~~7 ft~~ RB	0	0
8 ft		
9 ft		
10 ft		
11 ft		
12 ft		
13 ft		
14 ft		
15 ft		
16 ft		
17 ft		
18 ft		
19 ft		
20 ft		
21 ft		
22 ft		
23 ft		
24 ft		
25 ft		
26 ft		
27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB (5) LB= .13 ft/sec; C (13) C= .83 ft/sec; RB (21) RB= .62 ft/sec

Transect sketch:

LB - 3'
RB - 1' > Horizontal from water

Notes -
LB - Vegetated upland piece, small trees, exposed roots, eroded, ~~3 ft~~ 4' straight u
RB - 2' raised up due to erosion

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - LeftBank		Station 2 - Central		Station 3 - RightBank
% Gravel =	9	% Gravel =	13	% Gravel =
% Sand =		% Sand =		% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color:
Odor:		Odor:		Odor:
Sheen:		Sheen:		Sheen:
Notes:		Notes:		Notes:
- large gravel, smaller sand/gravel mixture pockets		- Same as LB		- fallen root + same as LB

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- 12" outfall down gradient soft
- LB high water HIGHER than RB high water mark
- can't see bottom

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(2) 8/12/08

Transect ID	21	Date:	August 5 2008	Photo #:	LB-18
Northing	–	Time:	1405 | 415		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 5	0	1	15 ft		
~~2 ft~~ 11	0	2.4	16 ft		
~~3 ft~~ 15	0	2.75	17 ft		
~~4 ft~~ 20	0	2.5	18 ft		
~~5 ft~~ 22	0	1.75	19 ft		
~~6 ft~~ 23	0	.5	20 ft		
~~7 ft~~ RB	0	0	21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

River Width: 25 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): LB= .53 ft/sec; C= 1.01 ft/sec; RB= .99 ft/sec

Transect sketch:

LB - 1'
RB - 1' > Horizontal Pronounce

Notes - LB - after 1' gravel, steep
RB - wall extends back 3' steep

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank
% Gravel =	11	% Gravel =	15	% Gravel = 23
% Sand =		% Sand =		% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color:
Odor:		Odor:		Odor:
Sheen:		Sheen:		Sheen:
Notes: All rocks & cobbles		Notes: All rocks & cobbles		Notes: All rocks & cobbles, some sand, last 3ft, fallen rocks

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- LB starting immediately where stone wall no longer exists, eroded bank for 3.5-4', 1' sand & gravel into water
- Measured from bank to bank

8/7/08
(L)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	20	Date:	August 5 2008	Photo #:	RB 17
Northing	–	Time:	1350 1400		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

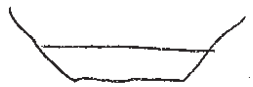
River Width: 24 under 80' high feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank			14 ft		
~~1 ft~~ 6'	0	4.75	15 ft		
~~2 ft~~ 12'	.5	4.7	16 ft		
~~3 ft~~ 18	0	4	17 ft		
4 ft			18 ft		
5 ft			19 ft		
6 ft			20 ft		
7 ft			21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 6 12 18 LB= .3 C= .37 RB= .48

Transect sketch:

LB - 3' RB - 3' } Horizontal from water



Notes -
- RB & LB - Large angular boulders

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank (6)		Station 2 - Central (12)		Station 3 - Right Bank (18)	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: Coarse sand w/ cobbles		Notes: Sticky clayey sediment		Notes: Coarse sand w/ cobbles	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- Large outfall (24") ½ submerged
- had to probe while in canoe, sediment only in very center

8/7/08
(4)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	19	Date:	August 5 2008	Photo #:	RB-16
Northing	-	Time:	1325 1345		
Easting	-	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 43 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 3'	0	1.3	15 ft		
~~2 ft~~ 7'	RIP RAP 0	3'	16 ft		
~~3 ft~~ 10'	0	3'	17 ft		
~~4 ft~~ 14'	0	3'	18 ft		
~~5 ft~~ 20'	0	2.5'	19 ft		
~~6 ft~~ 26'	0	2'	20 ft		
~~7 ft~~ 31'	4'	2'	21 ft		
~~8 ft~~ 37'	2.8'	1.2'	22 ft		
~~9 ft~~ 42'	.5	0	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB= .37 ft/sec; C= .44 ft/sec; RB= .34 ft/sec

Transect sketch:

LB - 1'
RB - 1' > Horizontal Footwaters

Notes -
LB - Rip Rap, fallen into river
RB - Rip Rap

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 / Left Bank		Station 2 / Central		Station 3 / Right Bank
% Gravel =		% Gravel =		% Gravel =
% Sand =		% Sand =		% Sand =
% Silt/clay =		% Silt/clay =		% Silt/clay =
% OM =		% OM =		% OM =
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet):		PID (Wet):		PID (Wet):
Color:		Color:		Color: Black
Odor:		Odor:		Odor: Petro/solvent
Sheen:		Sheen:		Sheen: None
Notes:		Notes:		Notes:
- Rip Rap		- gravel, some sand		Black, Muck, OM, transitions to M-S, OM, silt 33% 33% 33% 0-2'
				Petroleum/solvent-y smell got to 3' then stopped, same as downgradient

(3)

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- 20' downstream, outfall on RB
- channel is on LB

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(D) 8/1/08

Transect ID	13	Date:	August 5 2008	Photo #:	RB 15
Northing	–	Time:	1308 1322		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

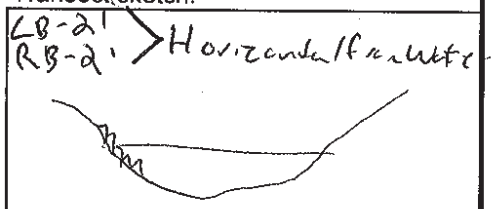
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 53 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~4 ft~~ 7'	0	1.75	15 ft		
~~2 ft~~ 17	0	1.8	16 ft		
~~3 ft~~ 24	0	1.6	17 ft		
~~4 ft~~ 30	0	1.6	18 ft		
~~5 ft~~ 33	1'	2.2	19 ft		
~~6 ft~~ 36	2'	2.5	20 ft		
~~7 ft~~ 41	4'	2.2	21 ft		
~~8 ft~~ 45	3'	1.7	22 ft		
9 ft 49	1'	1.2	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LD 7 LB= .45 ft/sec; 30 C= .21 ft/sec; 40 RB= .64 ft/sec

Transect sketch:



Notes -
LB- steeply sloped bank 2' up
RIP RAP to 7'
RB- slowly sloped, lots of trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 Left Bank 7		Station 2 Central 15		Station 3 Right Bank 20	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	= 25
% Silt/clay	=	% Silt/clay	=	% Silt/clay	= 50
% OM	=	% OM	=	% OM	= 25
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	—
Color:		Color:	tan - brown	Color:	BLACK
Odor:		Odor:		Odor:	some
Sheen:		Sheen:		Sheen:	none
Notes: Same as Center w/ RIP Rap		Notes: Sand, coarse sand, small gravel		Notes: immediately under tan sediment, black odor mucky M-F sand w/ OM ~~predominate~~ 50% silt, 25% Transitions to very coarse sand (3' down)	

(7) (30) (40) not throughout

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- tire present
- sewer ~~main on LB~~ main on left bank
- ~~to~~ 50' upstream Mound of gravel/cobbles 15' long, only 2" of water on top

Slight odor, densley packed (Bottom foot) gray silt w/ Fines mixed in

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(4)
8/7/08

Transect ID	17	Date:	August 5 2008	Photo #:	RB-14
Northing	–	Time:	1245 1305		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 46 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~4 ft~~ 4	2"	1'	15 ft		
~~2 ft~~ 5	.5 pockets	1.25	16 ft		
~~3 ft~~ 11	.5 pockets	2.5	17 ft		
~~4 ft~~ 15	.5	2.7	18 ft		
~~5 ft~~ 19	0	3	19 ft		
~~6 ft~~ 26	0	3	20 ft		
~~7 ft~~ 31	0	3	21 ft		
~~8 ft~~ 35	0	3.25	22 ft		
~~9 ft~~ 39	0	2.5	23 ft		
~~10 ft~~ 42	0	1.5	24 ft		
~~11 ft~~ RB	0	0	25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.8 portion of water column in 3 locations): LB
11 LB= .18 ft/sec
26 C= .31 ft/sec
42 RB= .28 ft/sec

Transect sketch:
LB-21 > Horizontal from water
RB-41

Notes:
LB - Soil - Large rocks/rip rap, some rip rap has eroded in the river
RB - vegetated soil slope, some rip rap

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank %		Station 2: Central %		Station 3: Right Bank %	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand Coarse	= 80	% Sand	=	% Sand	=
% Silt/clay	= 10	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	3.0	PID (Wet):		PID (Wet):	
Color:	Black	Color:		Color:	
Odor: petrol solvent	increases w/depth	Odor:		Odor:	
Sheen:	yes	Sheen:		Sheen:	
Notes:	Substrate silty ~~substrate~~ generates sheen	Notes:	gravel, coarse sand	Notes:	same as cover

(11) (26) (42)

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- Can't see bottom
- Right before stream gauge (upstream), dig safe green stake sewer markout
- Jar'd sample consists of sand + silt

(W) 8/7/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	16	Date:	August 5 2008	Photo #:	RB-13
Northing	–	Time:	1230 1239		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

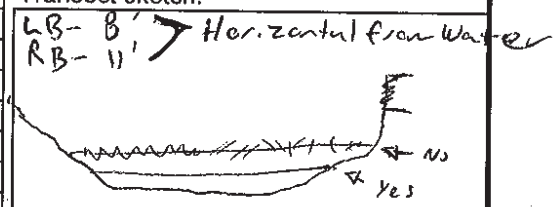
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 9	0	1.2	15 ft		
~~2 ft~~ 10	0	1.3	16 ft		
~~3 ft~~ 13	0	2.0	17 ft		
~~4 ft~~ 17	0	2.2	18 ft		
~~5 ft~~ 21	0	2.5	19 ft		
~~6 ft~~ 27	0	2.7	20 ft		
~~7 ft~~ 32	0	0	21 ft		
~~8 ft~~ 38	0	1	22 ft		
~~9 ft~~ 42	0	1.7	23 ft		
~~10 ft~~ 44	0	1.6	24 ft		
~~11 ft~~ 48	0	0	25 ft		
~~12 ft~~ RB	0	0	26 ft		
13 ft			27 ft		

River Width: (W) 59 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): 13 LB= .13 ft/sec; 27 C= .08 ft/sec; 44 RB= 1.34 ft/sec

Transect sketch:



Notes -
LB- Rip Rap
RB- 48'-54' = gravel flat
54-57' = slope up 3'

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1: Left Bank		Station 2: Central		Station 3: Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:		Color:	
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: Large cobbles, some sand deposits		Notes: Rocky, more cobbles		Notes: Continuation of shore line (grass)	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- immediately down stream from ~~USGS stream gage~~ USGS stream Gauge
- water harder to see through then Downstream
- Ripples over rocks immediately upstream, flow appears to dissipate due to dip in stream bed elevation
- immediately upstream, big sand deposits (water <1' deep) w/ big boulders

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(w) 8/7/08

Transect ID	15	Date:	August 5 2008	Photo #:	RB 12
Northing	—	Time:	1220 1223		
Easting	—	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 44 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 4'	0	0	15 ft		
~~2 ft~~ 8'	0	.5	16 ft		
~~3 ft~~ 10'	0	.7	17 ft		
~~4 ft~~ 14'	0	.75	18 ft		
~~5 ft~~ 21'	0	1	19 ft		
~~6 ft~~ 27'	0	1.1	20 ft		
~~7 ft~~ 32'	0	.7	21 ft		
~~8 ft~~ 35'	0	.5'	22 ft		
~~9 ft~~ 38'	0	.2'	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations):
LB
8 LB= .65 ft/sec
21 C= 1.33 ft/sec
35 RB= 1.63 ft/sec

Transect sketch:

LB- 4'
RB- 5' > Horizontal from water

Notes -
LB - Large boulders, erosion
RB - Small 5' mud flat
3' straight up

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	
Color:		Color:	tan	Color:	tan
Odor:		Odor:		Odor:	
Sheen:		Sheen:		Sheen:	
Notes: - Largest cobbles, LB wall RIP Rapwall eroded into stream		Notes: larger cobbles + sand		Notes: small cobbles + sand	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- some bricks + cobble,
- water from T-13 → T-15, water is much ~~[illegible]~~ more clear than further down stream
- channel not too prominent, uniform to middle.
- 100' or so down stream from USGS stream gauge

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

8/7/08

Transect ID	14	Date:	August 5 2008	Photo #:	LB 11
Northing	–	Time:	1140 1145		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 28 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 2	0	0	15 ft		
~~2 ft~~ 5	0	1.7	16 ft		
~~3 ft~~ 14	0	2'	17 ft		
~~4 ft~~ 19	0	2'	18 ft		
~~5 ft~~ 24	0	1.5	19 ft		
~~6 ft~~ 26	0	1	20 ft		
~~7 ft~~ 28	1	0	21 ft		
8 ft RB	0	0	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.8 portion of water column in 3 locations): 5 LB= 1.23; 15 C= 1.09; 24 RB= .94

Transect sketch:

LB- 2' gravel, RB- 4' > Horizontal from center

Notes -
LB- 2' gravel, 5' straight up
RB- 4' very vegetative mud flat

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	= 95
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	= 5
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):		PID (Wet):	–
Color:		Color:		Color:	tannish-grey
Odor:		Odor:		Odor:	none
Sheen:		Sheen:		Sheen:	none
Notes: small cobbles 4-5" C-S		Notes: same as LB		Notes:	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- Channels on C → RB

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(1) 8/7/08

Transect ID	13	Date:	August 5 2008	Photo #:	LB 10
Northing	–	Time:	1125 1135		
Easting	–	Recorded by:	Colin C.		
Weather:	80's, partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 46 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 2'	0	0	15 ft		
~~2 ft~~ 7'	0	.75	16 ft		
~~3 ft~~ 13'	0	1.3	17 ft		
~~4 ft~~ 19	0	1.75	18 ft		
~~5 ft~~ 25	0	2	19 ft		
~~6 ft~~ 30	0	2.40	20 ft		
~~7 ft~~ 35	0	2	21 ft		
~~8 ft~~ 40	.5	.5	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations):
LB
13 LB= .23 ft/sec
25 C= .79 ft/sec
40 RB= .68 ft/sec

Transect sketch:
LB - 2' > Horizontal from water
RB - 3'

Notes -
LB - 2' mud flat, 3' straight up to steep trees.
RB - 3' mud flat to steep trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Center		Station 3 - Right Bank (40)	
% Gravel	=	% Gravel	=	% Gravel	= 5
% Sand	=	% Sand	=	% Sand fine	= 85
% Silt/clay	=	% Silt/clay	=	% Silt/clay	= 10
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	–	PID (Wet):	–	PID (Wet):	–
Color:	tan sand	Color:		Color:	brown (dark)
Odor:		Odor:		Odor:	none
Sheen:		Sheen:		Sheen:	none
Notes:	large twigs small boulders	Notes:	same as LB w/out small boulders	Notes:	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- pile of tan sand immediately upgradient
- immediately down gradient of bridge (10-15')
- channels on RB (flow w/in channel RB)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

4 8/1/08

Transect ID	12	Date:	August 5 2008	Photo #:	RB 9
Northing	–	Time:	1115 1123		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

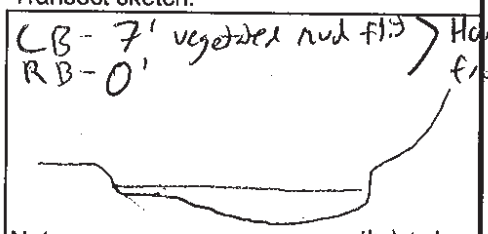
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 40 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~4 ft~~ 7	2'	0	15 ft		
~~2 ft~~ 14	2'	1	16 ft		
~~3 ft~~ 22	.25	2	17 ft		
~~4 ft~~ 28	.1	2.25	18 ft		
~~5 ft~~ 32	0 (cobbles)	2.5	19 ft		
~~6 ft~~ 35	0 (cobbles)	1.5	20 ft		
~~7 ft~~ 38	0 (cobbles)	.3	21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): 14 LB= .34 ft/sec; 22 C= .63 ft/sec; 32 RB= .76 ft/sec

Transect sketch:



Notes -
LB - Steep to flat mud (vegetated mud flat) 2-3' above water
RB - Steep w/ trees 2.5' straight up

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank (14)		Station 2 - Central (22)		Station 3 - Right Bank (32)	
% Gravel	= 5	% Gravel small	= 25	% Gravel	=
% Sand Coarse	= 95	% Sand Coarse	= 75	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	–	PID (Wet):	–	PID (Wet):	–
Color:	tan	Color:	brown-tan	Color:	
Odor:	none	Odor:	none	Odor:	
Sheen:	none	Sheen:	none	Sheen:	
Notes:		Notes:		Notes:	Cobbles

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- Channel on RB

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

8/7/08

Transect ID	11	Date:	August 5 2008	Photo #:	RB 8
Northing	–	Time:	1100 1111		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 44 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 3'	.25	0	15 ft		
~~2 ft~~ 8'	3'	1	16 ft		
~~3 ft~~ 16	3.3	.9	17 ft		
~~4 ft~~ 28	.5	2.5	18 ft		
~~5 ft~~ 34	1'	2.6	19 ft		
~~6 ft~~ 39	0	2	20 ft		
7 ft			21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): 8 LB= .03 ft/sec; 18 C= .84 ft/sec; 34 RB= .62 ft/sec

Transect sketch:

LB- 3' RB- 2' > Horizontal from water

Notes -
LB- 2.5' mud flat, steep after flat, trees
RB- 2' mud flat, steep after flat, trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - left Bank %		Station 2 - Central %		Station 3 - right Bank %	
% Gravel	= (8)	% Gravel	= (18)	% Gravel	= 10 (34)
% Sand fine	= 5	% Sand M-C	= 30	% Sand coarse	= 90
% Silt/clay	= 90	% Silt/clay	= 60	% Silt/clay	=
% OM	= 5	% OM	= 5	% OM	=
% Cobbles	=	% Cobbles	= 5	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	–	PID (Wet):	–	PID (Wet):	–
Color:	grayish brown	Color:	brown	Color:	~~brown~~ @ tanish w/ orange + black
Odor:	organic (strong)	Odor:	Muddy	Odor:	none
Sheen:	none	Sheen:	none	Sheen:	none
Notes:	Slightly plyable, fairly consistent throughout M-C sand tan @ very bottom	Notes:	glass, cobbles, silty substrate ~~substrate~~ after foot of sand	Notes:	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

8/7/08

Transect ID	10	Date:	August 5 2008	Photo #:	LB 7
Northing	–	Time:	1045 1055		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

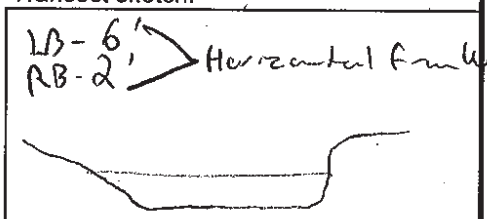
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 44 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 6'	.25	1'	15 ft		
~~2 ft~~ 10'	1'	2.75	16 ft		
~~3 ft~~ 15'	1'	3'	17 ft		
~~4 ft~~ 20'	1'	2'	18 ft		
~~5 ft~~ 25'	2.5'	1.5'	19 ft		
~~6 ft~~ 35'	.25'	1'	20 ft		
~~7 ft~~ 40'	0	1'	21 ft		
~~8 ft~~ RB	0	0	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.8 portion of water column in 3 locations): 15' LB = .45 ft/sec; 25 C = 1.02 ft/sec; 40 RB = .45 ft/sec

Transect sketch:



Notes -
LB - 6' mud flat, trees
RB - steep, mud + trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	= trace	% Gravel	= 5-10	% Gravel	=
% Sand	= 10	% Sand coarse	= 90	% Sand	=
% Silt/clay	= 80	% Silt/clay	= trace	% Silt/clay	=
% OM	= 10	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	–	PID (Wet):	–	PID (Wet):	–
Color:	Brown	Color:	tan	Color:	
Odor:	Mucky	Odor:	none	Odor:	
Sheen:	none	Sheen:	none	Sheen:	
Notes:		Notes: Upper portion tan ~~tan/brown~~ Scraps ~~Scraps~~ → dark tan transitions		Notes:	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

– Channels on LB, 20-30' vegetation after sandy ~~trees~~

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	9	Date:	August 5 2008	Photo #:	RB 6
Northing	—	Time:	1027 1041		
Easting	—	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 3'	1.5	.5	15 ft		
~~2 ft~~ 4'	.5	1.75	16 ft		
~~3 ft~~ 9'	.1	2.75	17 ft		
~~4 ft~~ 15'	1'	2.2	18 ft		
~~5 ft~~ 22'	@ ~~1.5~~ 3'	1.8	19 ft		
~~6 ft~~ 30	1.25	2.75	20 ft		
~~7 ft~~ 35	3.5	.25	21 ft		
~~8 ft~~ 47'	3.75	0	22 ft		
~~9 ft~~ RB	0	0	23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

River Width: ~~LB~~ 52 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): 9 LB= .75 ft/sec; 22 C= .52 ft/sec; 35 RB= .01 ft/sec

Transect sketch:

LB - 1'
RB - 11' > Horizontal tree

Notes -
LB - STEEP, mud/tree
RB - mud N.T

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	=	% Gravel	=	% Gravel	= 35
% Sand	=	% Sand Coarse	= 80	% Sand	= 10
% Silt/clay	=	% Silt/clay	=	% Silt/clay	= 60
% OM	=	% OM	=	% OM	= 30
% Cobbles	=	% Cobbles	= 10-15	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):		PID (Wet):	—	PID (Wet):	—
Color:		Color:	tannish gray	Color:	Dark brown
Odor:	none	Odor:	none	Odor:	none
Sheen:	none	Sheen:	none	Sheen:	~~[illegible]~~ yes
Notes:	Course sand on top of gravel	Notes:		Notes:	Mucky, lilly pads

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):

- channel now on LB, 8-10' wide
- Center is course tan sand, accumulations up to 3'
- 30' across, transitions to mucky substrate, lilypads
- Sheen - swirling, mostly white

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(4) 8/7/08

Transect ID	B	Date:	August 5 2008	Photo #:	RB 5
Northing	–	Time:	0950 1020		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

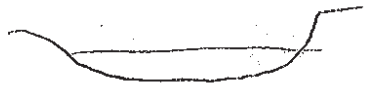
River Width: 51 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 3'		0	15 ft		
~~2 ft~~ 7'	1.25'	.75'	16 ft		
~~3 ft~~ 13'	.5'	2'	17 ft		
~~4 ft~~ 18'	2'	2.5'	18 ft		
~~5 ft~~ 30'	1'	3.25'	19 ft		
~~6 ft~~ 35'	.1'	3.5'	20 ft		
~~7 ft~~ 40'	.75'	1.75'	21 ft		
~~8 ft~~ 45'	.75'	.75'	22 ft		
~~9 ft~~ RB	0	0	23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB
7 LB= .43 ft/sec
18 C= .65 ft/sec
40 RB= .040 ft/sec

Transect sketch:

LB - 3'
RB - 3'
> Horizontal tape



Notes -
LB - Steep, mud/trees, 7' drop off
RB - immediately up stream → mud flat on RB
steep, some c/c rap, mud/trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - LeftBank %		Station 2 - Central %		Station 3 - RightBank %
% Gravel =	(7)	% Gravel =	(18)	% Gravel = (40)
% Sand coarse = 95		% Sand coarse = 100		% Sand = 20
% Silt/clay =		% Silt/clay =		% Silt/clay = 70
% OM = 5		% OM =		% OM = 10
% Cobbles =		% Cobbles =		% Cobbles =
Total =		Total =		Total =
PID (Wet): –		PID (Wet): –		PID (Wet): –
Color: grayish-brown		Color: tannish brown		Color: dark Brown
Odor: none		Odor: none		Odor: none
Sheen: none		Sheen: none		Sheen: none
Notes:		Notes:		Notes:

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- RB outfall 60" Concrete headwall

FIELD LOG SHEET - 10687-006-300
ABBY JONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

(D) 8/12/08

Transect ID	7	Date:	August 5 2008	Photo #:	RB 4
Northing	—	Time:	0930 0945		
Easting	—	Recorded by:	Colin C.		
Weather:	80's, Partly cloudy	Field staff:	Justin M. + Colin C.		

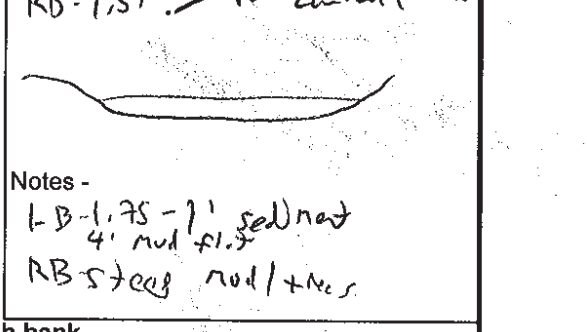
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 47 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1 ft~~ 4'		0	15 ft		
~~2 ft~~ 6'	1'	1'	16 ft		
~~3 ft~~ 9'	1.75'	2'	17 ft		
~~4 ft~~ 15'	.25'	2.75'	18 ft		
~~5 ft~~ 24	1.5'	2.75'	19 ft		
~~6 ft~~ 30'	.1'	2.75'	20 ft		
~~7 ft~~ 35'	0	3.65	21 ft		
~~8 ft~~ 40'	0	2.15	22 ft		
~~9 ft~~ 44	0	.75	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations):
9 LB= ~~.09 ft/sec~~ @ .13 ft/s
24 C= ~~.27 ft/sec~~ @ .44 ft/s
40 RB= ~~.17 ft/sec~~ @ .32 ft/s

Transect sketch:



Notes -
LB - 1.75 - 7' sediment
4' mud flat
RB - steep mud/+ Nes

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank - 9		Station 2 - Central - 24		Station 3 - Right Bank
% Gravel	=	% Gravel	=	% Gravel =
% Sand F-M-C	= 15	% Sand Coarse	= 95	% Sand =
% Silt/clay	= ~~60~~ 75	% Silt/clay	=	% Silt/clay =
% OM	= 5	% OM	= 5	% OM =
% Cobbles	= 5	% Cobbles	=	% Cobbles =
Total	=	Total	=	Total =
PID (Wet):	—	PID (Wet):		PID (Wet):
Color:	brown	Color:	tannish brown	Color:
Odor:	None	Odor:	none	Odor:
Sheen:	None	Sheen:	None	Sheen:
Notes: top layer 5" muck, predominantly silt		Notes: C-S		Notes: cobbly surface over Mucky material + other ~~roots~~/gravel rocks

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- Tire present

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

8/7/08

Transect ID	6	Date:	August 5 2008	Photo #:	13 3
Northing	–	Time:	0900 0926		
Easting	–	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

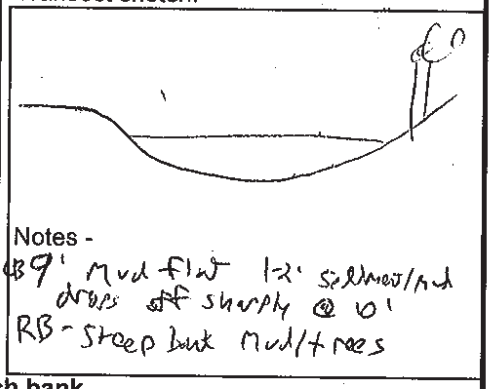
Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 46.5 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~4 ft~~ 9'		0	15 ft		
2 ft 13	1.75	2'	16 ft		
~~3 ft~~ 20'	1.75'	2.5'	17 ft		
~~4 ft~~ 24'	.75'	2.75'	18 ft		
~~5 ft~~ 30'	2" cobbles	4.25	19 ft		
6 ft 33	.25	4.75	20 ft		
7 ft 37	0	2.75	21 ft		
~~8 ft~~ RB	0	0	22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations):
13 LB= ~~.13 ft/sec~~ @ .39 ft/s
24 C= ~~.24 ft/sec~~ @ .36 ft/s
37 RB= ~~.26 ft/sec~~ @ .10 ft/s

Transect sketch:



Notes -
@9' mud flat 1-2' sediment/mud drops off sharply @ 10'
RB - steep bank mud/trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank 13		Station 2 - Central 24		Station 3 - Right Bank 37	
% Gravel	= <5	% Gravel	=	% Gravel	=
% Sand	= 85	Coarse Sand	= 100	% Sand	=
% Silt/clay	= <5	% Silt/clay	=	% Silt/clay	=
% OM	= <5	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	= 100	Total	=	Total	=
PID (Wet):	1.3 climbing	PID (Wet):	–	PID (Wet):	–
Color:	grayish brown	Color:	brown-tan	Color:	brown-tan
Odor:	Murky	Odor:	none	Odor:	none
Sheen:	small	Sheen:	none	Sheen:	none
Notes:	M-S, looks like a lot of silt gets bound up in the mud flat, but in the water, no	Notes:	Coarse Sand	Notes:	Cobble and gravel atop a tan moldable silt - slimy & smears in hand.. compacted to stand on but very pliable

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- Mud flat sample for office collected @ 4' lots of silt, roots, rooty structure

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Transect ID	5	Date:	August 6 2008	Photo #:	
Northing	—	Time:	0824 - 0835		LB 2
Easting	—	Recorded by:	Colin C.		
Weather:	80's partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

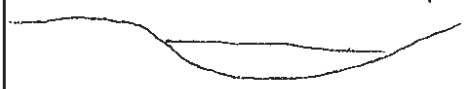
	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~4 ft~~ 5 Ft		+ .75' above water	15 ft		
~~2 ft~~ 10 ft		+ 2' above water	16 ft		
~~3 ft~~ 18 ft		0	17 ft		
~~4 ft~~ 21	3'	4.35'	18 ft		
~~5 ft~~ 26	2'	~~5~~ 3'	19 ft		
~~6 ft~~ 30	1'	3.4'	20 ft		
~~7 ft~~ 36	2.25	3.75'	21 ft		
~~8 ft~~ 43	3'	2'	22 ft		
~~9 ft~~ 49	.75'	1'	23 ft		
~~10 ft~~ RB	0	0	24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

River Width: LB 52 feet

Velocity (collected @ 0.6 portion of water column in 3 locations): 20' LB= ~~.05 ft/sec~~ @ .27 ft/s; 30' C= ~~.20 ft/sec~~ @ .40 ft/s; 43' RB= ~~.24 ft/sec~~ @ .48 ft/s

Transect sketch:

LB= ~~.05 ft/sec~~ @ 19' > Horizontal from water
RB= ~~.20 ft/sec~~ @ 2'



Notes -
LB - 18' mudflat 4.5-5' deep raised 2' out of water
RB - steep bank, mud and trees

Working from downstream to upstream - Note where water begins on each bank.
Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank 20%		Station 2 - Central 40%		Station 3 - Right Bank 40%	
% Gravel	=	% Gravel	= 40	% Gravel	=
% Sand	= 80	% Sand	= 60	Coarse % Sand	= 85
% Silt/clay	= 10	% Silt/clay	=	% Silt/clay	= 15
% OM	= 10	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	= 100	Total	=	Total	=
PID (Wet):	41.1 + climbing	PID (Wet):	47 + climbing	PID (Wet):	NA
Color:	Dark Brown	Color:	tan	Color:	Dark Brown
Odor:	none	Odor:	none	Odor:	none
Sheen:	swirling @ 20 ft when inserting probe	Sheen:	none	Sheen:	none
Notes:	M-S w/ organic matter mixed in, transitions to a coarser sand @ bottom	Notes:	Coarse sand w/ gravel overlaying silty material with gravel mixed throughout	Notes:	Coarse Sand

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- 8" outfall at location
- 26' CB transitions from predominantly muck to sand (as a base)

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

4 7/8/08

Transect ID	4	Date:	August 5 2008	Photo #:	LB 1
Northing	—	Time:	— 0811		
Easting	—	Recorded by:	Colin C.		
Weather:	80s partly cloudy	Field staff:	Justin M. + Colin C.		

Space sediment probing locations 4 feet apart (example - 24-ft wide section 7 locations). Start at river bank - not current water conditions.

River Width: 35.6 feet

	Sediment Depth (ft)	River Depth (ft)		Sediment Depth (ft)	River Depth (ft)
Left Bank	0	0	14 ft		
~~1ft~~ 3ft	0	.25	15 ft		
~~2ft~~ 8	0	.75	16 ft		
~~3ft~~ 15	2"	1.8	17 ft		
~~4ft~~ 21	2"	1.8	18 ft		
~~5ft~~ 24.5	2"	.6	19 ft		
~~6ft~~ 29.6	2"	.5	20 ft		
~~7ft~~ RB	0	0	21 ft		
8 ft			22 ft		
9 ft			23 ft		
10 ft			24 ft		
11 ft			25 ft		
12 ft			26 ft		
13 ft			27 ft		

Velocity (collected @ 0.6 portion of water column in 3 locations): LB 8 LB= ~~.28 ft/s~~ 0 1.05 ft/s; C 21 C= ~~.450 ft/s~~ 0 1.02 ft/s; RB 29.6 RB= ~~.45 ft/s~~ 0 1.02 ft/s

Transect sketch:

LB: 4.5' > Horizontal footing
RB = 5'

Notes -
LB - Rip rap
RB - ½ Rip rap / ½ soil
Steep Bank

Working from downstream to upstream - Note where water begins on each bank.

Grab description from western - central - eastern portions of transect (include sediment type, texture color, layering, or entrained debris). Geology based on visual observations:

Station 1 - Left Bank		Station 2 - Central		Station 3 - Right Bank	
% Gravel	=	% Gravel	=	% Gravel	=
% Sand	=	% Sand	=	% Sand	=
% Silt/clay	=	% Silt/clay	=	% Silt/clay	=
% OM	=	% OM	=	% OM	=
% Cobbles	=	% Cobbles	=	% Cobbles	=
Total	=	Total	=	Total	=
PID (Wet):	—	PID (Wet):	—	PID (Wet):	—
Color:	Tannish brown	Color:	Tannish brown	Color:	Tannish Brown
Odor:	— NONE	Odor:	— NONE	Odor:	— NONE
Sheen:	— NONE	Sheen:	— NONE	Sheen:	— NONE
Notes: 7' off bank, predominantly Large diameter cobble w/ <1" tannish brown sand [fallen Rip Rap]		Notes: Sparse amounts of large cobble / Rip Rap Coarse grained sand		Notes: Same As Left Bank	

Notes (include outfalls and other NPS contributions, also include locations where heavy equipment could be introduced):
- Adjacent to Bridge (upstream from)
- A lot of debris (garbage, lumps, metal)
- 20-30' upgradient outfall 6" diameter steel LB
~~outfall~~
- 30' upgradient outfall 10" diameter steel RB

Aberjona River, Winchester MA

Transect-4

8-5-08

Aberjona River, Winchester MA

Transect-5

8-5-08

Aberjona River, Winchester MA

Transect-6

8-5-08

Aberjona River, Winchester MA

Transect-7

8-5-08

Aberjona River, Winchester MA

Transect-8

8-5-08

Aberjona River, Winchester MA

Transect-9

8-5-08

Aberjona River, Winchester MA

Transect-10

8-5-08

Aberjona River, Winchester MA

Transect-11

8-5-08

Aberjona River, Winchester MA

Transect-12

8-5-08

Aberjona River, Winchester MA

Transect-13

8-5-08

Aberjona River, Winchester MA

Transect-14

8-5-08

Aberjona River, Winchester MA

Transect-15

8-5-08

Aberjona River, Winchester MA

Transect-16

8-5-08

Aberjona River, Winchester MA

Transect-17

8-5-08

Aberjona River, Winchester MA

Transect-18

8-5-08

Aberjona River, Winchester MA

Transect-19

8-5-08

Aberjona River, Winchester MA

Transect-20

8-5-08

Aberjona River, Winchester MA

Transect-21

8-5-08

Aberjona River, Winchester MA

Transect-22

8-5-08

Aberjona River, Winchester MA

Transect-23

8-5-08

Aberjona River, Winchester MA

Transect-24

8-5-08

Aberjona River, Winchester MA

Transect-25

8-5-08

Aberjona River, Winchester MA

Transect-27

8-5-08

Aberjona River, Winchester MA

Transect-28

8-5-08

Aberjona River, Winchester MA

Transect-29

8-5-08

Aberjona River, Winchester MA

Transect-30

8-5-08

Aberjona River, Winchester MA

Transect-32

8-5-08

Appendix B

Sediment Collection Field Forms and Photos

9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SDISCA-1	Date:	9/16/08
Northing	LOCATED AT	Time:	07:45
Easting	TRANSECT #5	Recorded by:	KJN
Weather	65° PART. CLOUDY	Field staff:	JUSTIN M + KRIS V.

Photo Numbers

290 - 296, 305 - 307

Sediment collection:

PID Meter ID	MINI RAE 2000 - 110-013267		QA/QC samples:
PID measurement:	0 - 0.4 HIGH 0.4		NONE TAKEN
Sample penetration depth (ft):	4.5'	- COMPOSIT SAMPLE TAKEN FROM 0-4.5'	AT SDISCA-1
Number of samples collected:	1 BORING	- DISCRETE SAMPLE IN VOA TAKEN @ 3'	
Number of samples rejected:	Ø		

SAMPLES DE-WATERED USING WHATMAN FILTER + COLLANDER

SYRINGE - 6 GRAM TARE SEDIMENT WEIGHT
5 GRAMS IN D.I. H_2O
15 GRAMS IN METHANOL
- JAR WEIGHTS CHECK

Equipment Used: HAND AUGER

Sheen: Yes / (No)* Odor (Yes) / No

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

- SAMPLE TAKEN ON LEFT (WEST) BANK OF ABERJONA R.

SAMPLE LOCATION:
~2' FROM WATERS EDGE
~14' FROM HIGHT WATER MARK
~14' FROM 8" DIAM. OUTFALL PIPE - SAMPLE TAKEN DUE EAST OF OUTFALL
- SAMPLES TAKEN ON "MUD FLAT"; NOT UNDERWATER
ORGANIC ODOR NOTED

0 - 1.5' MUCKY ORGANIC MATERIAL w/ FINES + SILTS
~60% ORGANIC MATERIAL INCL. LEAVES + TWIGS (PARTIALLY DECOMPOSED)
~20% FINE SAND
~20% DARK BROWN SILT

1.5' - 3' BROWN w/ GRAY HUE FINE SAND w/ TRACE ORGANIC MAT'L
~75% FINE SAND
~15% SILT
~10% ORGANIC MAT'L

3' - 4.5' VERY EASY PENETRATION - SANK WAY DOWN
DARK BROWN ORGANIC MATERIAL MIXED w/ FINES & SILTS - SIMILAR TO 0 - 1.5' MATERIAL

4.5' - 4.7' COARSE SAND - BONEY SAND + GRAVEL - ASSUMED STREAM BED
NO REFUSAL ENCOUNTERED

* APPARANT ORGANIC SHEEN

300-304

(4) 9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SD1SCA-2	Date:	9/16/08
Northing	LOCATED AT	Time:	08:50
Easting	TRANSECT # 7	Recorded by:	KJN
Weather	65° OVERCAST	Field staff:	JUSTIN M. + KRIS V.

Photo Numbers

297 - 299, 306-310

Sediment collection:

PID Meter ID	MINI RAE 2000-110-012362	QA/QC samples:	MSMSD
PID measurement:	SD1SCA-2 = 0.0 ppm; SD1SCA-2 MSMSD = 0.0 PPM		TAKEN @ TRANSECT # 7
Sample penetration depth (ft):	1.75'		
Number of samples collected:	4 BORINGS		
Number of samples rejected:	Ø		

SAMPLES ~~DO COMPOSITED USING~~ DECANTED PRIOR TO VOLATILE SAMPLING. DOWNTERING USING COLLANDER

Equipment Used: HAND AUGER

Sheen: Yes / (No) Odor: Yes / (No)

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

- SAMPLES TAKEN: APPROX 8' OFF OF WEST (LEFT) BANK
  APPROX 3' OFF OF WATER LINE -
  SAMPLES TAKEN FROM UNDERWATER
  NO OUTFALLS ~~OBSERVED~~ NOTED
- MATERIAL UNDERLAIN BY BROWN COARSE SAND
- HAD DIFFICULTIES FINDING 2' OF PREDOMINANTLY SILTY MATERIAL - HAD TO SEARCH VICINITY OF TRANSECT

0 - 1.75' COMPOSITED SAMPLE TAKEN
1' = GRAB SAMPLE TAKEN

0 - 1.75' BROWN SILTY MATERIAL w/ 20% FINE SAND MIXED IN. TRACE COARSE SAND.
NO SHEEN OR ODOR NOTED

1.75' - 1.85' TANNISH BROWN COARSE SAND - ASSUMED BED
1.5' NOTE THIN TAN/GRAY LAYER OF CLAYEY SILT

NO REFUSAL ENCOUNTERED

9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SD1 SCA-3 / SD1SCB-3	Date:	9/16/08
Northing	LOCATED AT	Time:	10:05
Easting	TRANSECT #9	Recorded by:	KVN
Weather	70° OVERCAST	Field staff:	JUSTIN M. + KRIS V.

Photo Numbers

300-304, 311-314, 315

Sediment collection:

PID Meter ID	MINI RAE 110-012367		QA/QC samples:
PID measurement:	SD1SCA-3 = 0.0 ppm	SD1SCB-3 = 0.0 - 0.2 ppm, 0.7 ppm High	SD1SCA-3
Sample penetration depth (ft):	3.5'		SD1SCB-3
Number of samples collected:	1 BORING		
Number of samples rejected:	Ø		

SAMPLES DECANTED PRIOR TO VOLATILE SAMPLING. DEWATERED USING COLANDER. LOTS OF WATER - DECANTED 4 TIMES. LOTS OF WATER REMOVED W/ WHATMAN FILTER TRIS.

Equipment Used: HAND AUGER

Sheen: (Yes) / No Odor: (Yes) / No

SHEEN NOTED WHEN WALKING THROUGH SEDIMENT

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

SAMPLES TAKEN APPROX 17' FROM TOP OF RIGHT (EAST) BANK BORING/SAMPLES FROM UNDERWATER. APPROX 0.5' WATER ABOVE BORING. OUTFALL NOTED ON EAST BANK APPROX. 25' DOWNSTREAM OF SAMPLE LOCATION

COMPOSIT SAMPLE TAKEN FROM 0 TO 3.5'
DISCRETE SAMPLE TAKEN AT 2.0'

0 - 1.5' 60% BROWN SILT, 30% FINE SAND, 10% ORGANICS
ORGANIC ODOR NOTED

1.5' - 3.0 CONTINUATION OF ABOVE GRADING TO MORE SAND + MEDIUM SAND MIXED IN
1.5 - 2.5' PENETRATION VERY EASY

3 - 3.5 CONTINUATION FROM ABOVE INCREASED SILT
60 - 80% SILT w/ PARTIALLY DECOMPOSED ROOT + OTHER ORGANIC MATERIAL

3.5 COARSE SAND NOTED AT TERMINAL DEPTH, NO REFUSAL ENCOUNTERED

(L) 9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SD1SCA-4	Date:	9/16/08
Northing	LOCATED ON	Time:	10:40
Easting	TRANSECT # 12	Recorded by:	KJN
Weather	65° OVERCAST	Field staff:	JUSTIN M. + KRIS V.

Photo Numbers

316 - 322

Sediment collection:

PID Meter ID	MINI RAE 110-012367	QA/QC samples:	
PID measurement:	0.0	NONE TAKEN	
Sample penetration depth (ft):	2.0'	AT SD1SCA-4	
Number of samples collected:	2 BORINGS		
Number of samples rejected:	Ø		
Equipment Used	HAND AUGER		

Sheen Yes / (No) Odor Yes / (No)

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

SAMPLES TAKEN FROM APPROX 20' FROM TOP OF LEFT (WEST) BANK.
SAMPLES TAKEN UNDER WATER - APPROX 1' UNDERWATER
NO OUTFALLS NOTED IN VICINITY OF SAMPLE LOCATION

COMPOSIT SAMPLES TAKEN FROM 0-2'
DISCRETE SAMPLE TAKEN AT 1.5'
0 - 0.2' MUCKY DARK BROWN ORGANIC LAYER
0.2 - 2' COARSE DARK BROWN TO TAN SAND
2' COARSE GRAVELLY SAND ENCOUNTERED AT BOTTOM O/T SAMPLE - ASSUMED TO BE PARENT MATERIAL

DECANTING NOT REQUIRED
DOCUMENTING NOT REQUIRED

4 9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SD15CA-5	Date:	9/16/08
Northing	TRANSECT #16	Time:	11:05
Easting	SOUTH OF DAM ~ 30'	Recorded by:	KVN
Weather	65° OVERCAST	Field staff:	JUSTIN M + KRIS V

Photo Numbers

316 -

Sediment collection:

PID Meter ID	MINI RAE 2000	GRAB SAMPLE TAKEN AT 0.5'	QA/QC samples: NO QA/QC Samples Taken
PID measurement:	0.0		
Sample penetration depth (ft):	1.5'		
Number of samples collected:	4 INCLUDING TRANSECT 2 SIDE O/T STREAM	TAKEN FROM AT SD15CA-5	
Number of samples rejected:	~~0~~ KVN 1 - NOT ENOUGH MAT'L IN CENTER BORING	ORIGINAL	

Equipment Used: HAND AUGER

Sheen: Yes / No Odor: (Yes) No

SEWER MARKER NOTED NEAR SAMPLE LOCATION ON W. BANK. SEWAGE ODOR NOTED. SAMPLE LOCATION ~ 35' DOWNSTREAM / SOUTH OF KNOWN SEWER PIPE. NO OUTFALLS NOTED

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

- Samples Taken Approx 20' East of Left (West Bank)
- Green Sewer Marking Pipe Noted on E. Bank ~ 35' North of Sample Location & Due West of Sampling Location on West Bank. Dam & 2 Drainage Runoff Areas Noted ~ 30 N of Sample Location

CENTER BORING

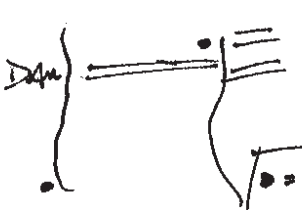
0 - 1' only Recovery: Handfull of Gravel, Asphalt, Chunks of Glass

1 - 1.5' Coarse Sand

Difficulty Finding Locations - River Bottom Sounds Gravelly / Rocky

- Needed to add Trowel-Fulls of Material to obtain required volume.
- Smells like a Sewer Leak!
- Large Diameter Gravel Separated out.
- Decanting Required

RE Do Boring: 0 - 1.5' Coarse Brown Sand w/ Larger Diameter Gravel. Reddish Brown to Tan



Above material was encountered in Pockets of Large Rocks / Rip-Rap

9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SD1SCA-6	Date:	9/16/08
Northing	SAMPLE TAKEN	Time:	12:15
Easting	AT TRANSECT #18	Recorded by:	KJN
Weather	70° OVERCAST	Field staff:	JUSTIN M + KRIS U

Photo Numbers

333 - 336

Sediment collection:

PID Meter ID	MINI RAE - 2000	QA/QC samples:	NO QA/QC SAMPLES @ THIS LOCATION
PID measurement:	00		
Sample penetration depth (ft):	3.5' - NO REFUSAL		
Number of samples collected:	1 BORING		
Number of samples rejected:	1 - MUCKY MAT'L - SANK IN WHEN SAMPLING		
Equipment Used	HAND AUGER		- DECANTED SAMPLE - NO DEWATERING NEEDED
Sheen	Yes (No) Odor	(Yes) / No	ORGANIC ODOR?

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

SAMPLE TAKEN ~ 12' FROM TOP OF RIGHT (EAST) BANK.
VOLATILES TAKEN @ 3.0'
COMPOSITE SAMPLE 0-3.5'
SAMPLE FROM UNDERWATER - APPROX 2' WATER ABOVE SAMPLE
NO OUTFALLS NOTED IN IMMEDIATE SAMPLE VICINITY;

0 - 1.5' TAN SAND LENS ON TOP (3" LONG)
~50% SILT, 25% ORGANICS, 25% FINE SAND
MATERIAL IS BLACK

1.5' - 3.0' CONTINUATION FROM ABOVE w/ INCREASED PERCENTAGE OF COARSER GRAY SAND

3.0' - 3.25' COARSE GRAY SAND
3.25 - 3.5' VERY FINE SAND 50% (GRAY) + 50% SILT

9/16/08

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SDISCA-7	Date:	9/16/08
Northing	SAMPLE TAKEN	Time:	12:45
Easting	ON TRANSECT #20	Recorded by:	KJN
Weather	65° OVERCAST	Field staff:	JUSTIN M. + KEIS V

Photo Numbers

337 - 339

Sediment collection:

PID Meter ID	MINI RAE 2000	QA/QC samples:	NO ~~SAMPLES~~ QA/QC SAMPLES TAKEN FROM THIS LOCATION
PID measurement:	0.0		
Sample penetration depth (ft):	2.5'		
Number of samples collected:	1		
Number of samples rejected:	Ø		
Equipment Used	HAND AUGER		COMPOSIT SAMPLE FROM 0 - 2.5'
Sheen	Yes / No	Odor	Yes / No

DISCRETE VOLATILE SAMPLE TAKEN AT 2.0'

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

SAMPLE TAKEN ALONG TRANSECT #20. SAMPLE IN RIVER UNDER ~ 4' WATER. SAMPLE TAKEN 6' IN

ROCKED AROUND AREA & USED OLD LOGS. 90% OF RIVER AREA COVERED BY OLD, COLLAPSED SIDEWALL ARMORING

0 - 1 HEAVY, COMPRESSED FINE SAND & SILT TRACE CLAY. TRACE COARSE SAND. ALL GRAYISH IN COLOR. NO ODOR. V. DENSE MAT'L

1 - 2.5 COARSE BROWNISH TAN SAND

SAMPLE NOT NECESSARILY REPRESENTATIVE OF AREA - MAJORITY OF THE ~~BOTT~~ SUBSTRATE IS COVERED W/ COBBLE/BOULDERS

9/16/08

4

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SDI SCA - 8	Date:	9/16/08
Northing	SAMPLE TAKEN	Time:	1320
Easting	AT TRANSECT #23	Recorded by:	KJN
Weather	65 OVERCAST	Field staff:	JUSTIN M + KRIS V.

Photo Numbers

340 - 345

Sediment collection:

		QA/QC samples:
PID Meter ID	MINI RAE 2000	NO QA/QC
PID measurement:	0.0	SAMPLES AT
Sample penetration depth (ft):	1' REFUSAL ENCOUNTERED	THIS LOCATION
Number of samples collected:	1	
Number of samples rejected:	Ø	
Equipment Used	HAND AUGER	Composite 0-1
Sheen	Yes (No) Odor Yes (No)	discrete 0.5'

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

SAMPLE TAKEN APPROX 4' FROM RIGHT (EAST BANK)
SAMPLE TAKEN UNDERWATER

STREAM BED V. ROCKY. UPON AUGER PENETRATION, ORANGE/TAN SILTY SEDIMENT PLUME APPEARS IN STREAM. STAINS ROCKS, GRAVEL, ETC. IN SAMPLE. LARGE DIAMETER ROCKS REMOVED. OCHRE COLORED SILT/CLAY.

0 - 1 COARSE GRAVELLY SAND COATED W/ ORANGE/TAN SILTY FILM. LIGHT RUST COLORED COVERS ALL ROCKS/GRAVEL/SAND, BUT ONLY COMPRISES SMALL AMOUNT O/T SAMPLE.

FIELD LOG SHEET - 10687-006-300
ABERJONA RIVER
TOWN OF WINCHESTER
WINCHESTER, MASSACHUSETTS

Sample ID:	SDESCA - 9	Date:	9/16/08
Northing	SAMPLE TAKEN	Time:	1350
Easting	AT TRANSECT #31	Recorded by:	KVN
Weather	70-65° OVERCAST	Field staff:	JUSTIN M + KRIS V.

Photo Numbers

~~345~~ 347 - 351

Sediment collection:

PID Meter ID	MINI RAE 2000	QA/QC samples: NO QA/QC SAMPLES AT THIS LOCATION
PID measurement:		
Sample penetration depth (ft):	2'	
Number of samples collected:	1	
Number of samples rejected:	~~0~~	
Equipment Used	HAND AUGER	Composited - 1 Discrete 1'

Sheen Yes / (No) Odor Yes / (No)

Notes (include geology, outfalls and other NPS contributions and proximity to 8/5/08 Transects)

TRANSECT #31 - SAMPLE LOCATION. SAMPLE TAKEN APPROX 8' FROM RIGHT (EAST) RIVER BANK
SIDES OF RIVER ARMORED
- DECANTED MATERIAL - NO DEWATERING

0 - 1 GRAVELLY COARSE SAND TRANSITIONS TO A POORLY GRADED MEDIUM SAND WITH 70% SILT MIXED IN. COMPRESSED TRACE CLAY. MOLDABLE. SILTS + CLAY INCREASE w/ DEPTH

1 - 2 CONTINUATION OF ABOVE. DARK BROWNISH GRAY SILT w/ FINE SAND MIXED IN.

BOTTOM 4" TRANSITIONS TO A GRAY DRY TIGHTLY PACKED SILT w/ DECAYED ORGANIC MATERIAL (>5%) MIXED IN & TRACE FINES (>5%) MIXED IN

2' NO REFUSAL ENCOUNTERED

Aberjona River, Winchester MA

SDISCA-1 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-1 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-2 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-2 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-3 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-3 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-4 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-4 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-5 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-5 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-6 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-7 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-8 (Location)

8-16-08

Aberjona River, Winchester MA

SDISCA-8 (Sediment)

8-16-08

Aberjona River, Winchester MA

SDISCA-9 (Sediment)

8-16-08

Appendix C

Soil Collection Boring Logs and Photos

Photo Location ☑
Photo Soils ☑

ENSR

Client: Town of Winchester			BORING ID: SB-1
Project Number: 10687-006-300			
Site Location: Between the Aberjona River and Mystic Valley Parkway			
Coordinates: @ T-31	Elevation: ~~0.5~~ from Top Curb 11.5		Sheet: 1 of 1
Drilling Method: Direct Push			Monitoring Well Installed: No
Sample Type(s): Soil	Boring Diameter: 2"		Screened Interval: NA
Weather: Sunny 70's	Logged By: JM	Date/Time Started: 9/17/08 1100	Depth of Boring: 12'
Drilling Contractor: Zebra Environmental Corp.	Ground Elevation: NA	Date/Time Finished: 9/17/08 1153	Water Level: 5.5'

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Recovery (inches)	Headspace (ppm) Initial	Bagged Interval	Headspace (ppm) warmed	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1–4		0-4'	35"			0.0	3" top soil/grass Silty Fine Sand 24" Brown Fine Sand with silt 5% angular gravel mixed in 8" continuation from above with 5% coal chunks & Tan/orange silt lenses		
5–8		4-8	36"			0.0	3" continuation from above - brick fragments present 8" Dark rustic colored poorly graded medium sand - lense of broken glass 25" Brownish grey densely packed wet silt with sand (Medium to fine) and gravel mixed in lenses of tightly packed grey silt mixed in		
9–12		8-12	15"			0.0	8" Medium to coarse sand with silt mixed in (Wro 12" Coarse grey sand with some silt 10" Silty peat layer with trace fines and gravel mixed in 10" Greyish brown silty layer with fines 5" Rustic colored Medium to Coarse sand with silt		
13–20							No odor or sheen throughout Core Refusal not encountered		

NOTES: SB-SCA-1 (0-3)
SB-SCA-1 (3-8)
SB-SCA-1 (8-12) } 1153

discrete samples
0-3 = 2 1120
3-8 = 6 1140
8-12 = 10 1153

Date	Time	Depth to groundwater while drilling

Checked by JM Date: 9/17/08

Photolocation ☑

Photo Soils ☑

ENSR.

Client: Town of Winchester			BORING ID: SB-2
Project Number: 10687-006-300			
Site Location: Between the Aberjona River and Mystic Valley Parkway			
Coordinates: @ T-28	Elevation: 9' from top of bank		Sheet: 1 of 1
Drilling Method: Direct Push			Monitoring Well Installed: No
Sample Type(s): Soil	Boring Diameter: 2"		Screened Interval: NA
Weather: Sunny 70's	Logged By: JM	Date/Time Started: 9/17/08 1155	Depth of Boring: 12'
Drilling Contractor: Zebra Environmental Corp.	Ground Elevation: NA	Date/Time Finished: 9/17/08 1220	Water Level: 6'

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Recovery (inches)	Headspace (ppm) Initial	Bagged Interval	Headspace (ppm) warmed	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1							15" medium brown sand with some silt & angular gravel mixed in - gravel increase w/depth		
2		0-4	29"			0.0	3" pulverized granite (white)		
3							11" medium brown sand with silt & increased % of gravel up to 1" diameter		
4									
5							9" continuation from above		
6		4-8	40"			0.0	6" well graded fine to coarse sand		
7							5" reddish colored peaty layer - loose - w/ roots structure. 8" wet coarse gravely sand w/ silt and silt		
8							12" densely packed dry slightly plyable, greyish blue silt		
9							37" Grey densely packed grey silt		
10		8-12	37"			0.0	with less than 5% organics (roots). wet		
11									
12									
13							No odors - No sheens		
14							refusal not encountered		
15									
16									
17									
18									
19									
20									

NOTES: SBUSCA-2(3-8) * Dup * SBUSCB-2(3-8)
1226
discrete sample (3-8) = 5 sand
12:10

Date	Time	Depth to groundwater while drilling

Checked by JM Date: 9/17/08

Photo Location [illegible]
Photo Soils [illegible]

ENSR.

Client: Town of Winchester			BORING ID: SB-3
Project Number: 10687-006-300			
Site Location: Between the Aberjona River and Mystic Valley Parkway			
Coordinates: @ T-25	Elevation: 7' from top of wall		Sheet: 1 of 1
Drilling Method: Direct Push			Monitoring Well Installed: No
Sample Type(s): Soil	Boring Diameter: 2"		Screened Interval: NA
Weather: Sunny 70's	Logged By: JM	Date/Time Started: 9/17/08 1230	Depth of Boring: 12'
Drilling Contractor: Zebra Environmental Corp.	Ground Elevation: NA	Date/Time Finished: 9/17/08 1255	Water Level: [illegible]

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Recovery (inches)	Headspace (ppm) Initial	Bagged Interval	Headspace (ppm) warmed	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1–4		0-4	39			0.0	6" Brown fine sand with silt / grass / topsoil 6" continuation from above, light tan, more silt, trace gravel 11" continuation from above, orange tang coloration 16" fine granular silt w trace fine sand <2%,		
5–8		4-8	42			0.0	12" continuation from above 30" well graded medium to coarse sand, tannish brown		
9–12		8-12	45			00	39" continuation from above 6" predominantly coarse sand, slight rustic hue.		
13–20							No odor - No sheen refusal not encountered		

NOTES: SSUSCA-3 (0-3)
SBUSCA-3 (3-8)
SBUSCA-3 (8-12)
} 1255 discrete samples
silt (0-3) = 2
silt (3-8) = 5
sand (8-12) = 10
12:34
12:38
12:45

Date	Time	Depth to groundwater while drilling

Checked by JM Date: 9/17/08

Photo Location ☐
Photo Soils ☑

ENSR.

Client:	Town of Winchester
Project Number:	10687-006-300
Site Location:	Between the Aberjona River and Mystic Valley Parkway
Coordinates:	between T-23 & T-22 Elevation: 7.5' from Top Curb
Drilling Method:	Direct Push
Sample Type(s):	Soil Boring Diameter: 2"
Weather:	Sunny 70's
Logged By:	JM
Date/Time Started:	9/17/05 1335
Drilling Contractor:	Zebra Environmental Corp.
Ground Elevation:	NA
Date/Time Finished:	9/17/05 1410

BORING ID: SB-4
Sheet: 1 of 1
Monitoring Well Installed: No
Screened Interval: NA
Depth of Boring: 12'
Water Level: 5'

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Recovery (inches)	Headspace (ppm) Initial	Bagged Interval	Headspace (ppm) warmed	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1–4		0-4	39"			0.0	8" Dark brown fine to medium sandy silt. Root structure. 8" Loose well graded fine sand with trace silt (Tan) 23" Tightly packed dry silt - trasitions from tan ish brown to grey		
5–8		4-8	46"			0.0	38" - continuation from above with water @ 5' 8" continuation from above with lense of peat and some Medium Sands		
9–12		8-12	23"			0.0	3" continuation from above 20" Coarse sand w/ trace silt brown with some rustic coloration. large angular gravel in bottom 4 inches of profile		
13–20							No odor No sheen No Refusal encountered - Required second boring to get Volume for MS/MSD		

NOTES: SDOSCA-4 (3-8)
SDUSCA-4 MS/MSD (3-8)
discrete Sample (3-8) = 5
1358
1410

Date	Time	Depth to groundwater while drilling

Checked by JM Date: 9/17/05

Photo Location [illegible]
Photo Soils [illegible]

ENSR

Client: Town of Winchester			BORING ID: SB-5
Project Number: 10687-006-300			
Site Location: Between the Aberjona River and Mystic Valley Parkway			
Coordinates: between T21 & T-20	Elevation: 8.5' from top of Wall		Sheet: 1 of 1
Drilling Method: Direct Push			Monitoring Well Installed: No
Sample Type(s): Soil	Boring Diameter: 2"		Screened Interval: NA
Weather: 70's Sunny	Logged By: JM	Date/Time Started: 9/17/08 1451	Depth of Boring: 12'
Drilling Contractor: Zebra Environmental Corp.	Ground Elevation: NA	Date/Time Finished: 9/17/08 1600	Water Level: 5'

Depth (ft)	Geologic sample ID	Sample Depth (ft)	Recovery (inches)	Headspace (ppm) Initial	Bagged Interval	Headspace (ppm) warmed	MATERIALS: Color, size, range, MAIN COMPONENT, minor component(s), moisture content, structure, angularity, maximum grain size, odor, and Geologic Unit (If Known)	Lab Sample ID	Lab Sample Depth (Ft.)
1							6" Dark brown medium sand with gravel and trace silt		
2		0-4	36"			0.0	8" Fine well graded light tan sand w/ silt (trace)		
3							15" Tan medium to coarse sand with gravel		
4							7" Continuation from above with increased silt (dark brown)		
5							13" Dark grey Medium to coarse sand		
6		4-8	25"			0.0	12" ~~Coa~~ Course to medium sand tan-ish brown rustic colored lense on top portion		
7									
8							Smooth coal chunks encountered (Photo taken)		
9							8" dark brown silty medium sand with some organic material moldable		
10		8-12	41"			0.0	20" continuation from above with higher - increased organics - "Peaty" feel		
11							2" Grey silt lens		
12							11 moldable brown silt with medium sand		
13							No odor Noticed		
14							Refusal Not encountered		
15									
16									
17									
18							1st attempt - refusal @ 8' - assumed large root (per Dr. [illegible])		
19							2nd attempt 10 ft upstream		
20									

NOTES: SSUSCA-5 (0-3) } 1600
SDUSCA-5 (3-8)
SDUSCA-5 (8-12)

discrete Samples
(0-3) = 2 - 1540
(3-8) = 5 - 1545
(8-12) = 10 - 1550

Date	Time	Depth to groundwater while drilling

Checked by JM Date: 9/17/08

Eastern Bank

Aberjona River, Winchester MA

SB-1 (Location)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-1 (Coal Chunk)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-2 (Location)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-3 (Location)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-4 (Location)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-5 (Location)

8-17-08

Eastern Bank

Aberjona River, Winchester MA

SB-5 (Coal)

8-17-08