APPENDIX - A

Morgan Brook Watershed Management Plan

Bacteria Sampling Results - Morgan Brook Watershed

Sample Location	Sample Date	Analyte	Concentration cfu/100 mL
MB-1	4/15/09	Fecal Coliform via membrane filtration	7
MB-1	4/15/09	E. coli via MI agar	11
MB-1	5/13/09	Fecal Coliform via membrane filtration	28
MB-1	5/13/09	E. coli via MI agar	48
MB-1	6/10/09	MF_FC	80
MB-1	6/10/09	MF_MI	72
MB-1	7/8/09	Fecal Coliform via membrane filtration	48
MB-1	7/8/09	E. coli via MI agar	34
MB-1	9/14/09	Total coliform	697
MB-1	9/14/09	E.coli	31
MB-1	9/21/09	Total coliform	1,046
MB-1	9/21/09	E.coli	12
MB-1	9/28/09	Total coliform	3,968
MB-1	9/28/09	E.coli	231
MB-1	10/5/09	Total coliform	1,483
MB-1	10/5/09	E.coli	10
MB-1	10/7/09	Fecal Coliform via membrane filtration	110
MB-1	10/7/09	E. coli via MI agar	190
MB-1	4/28/10	Fecal Coliform via membrane filtration	48
MB-1	4/28/10	E. coli via MI agar	58
MB-1	7/7/10	Fecal Coliform via membrane filtration	40
MB-1	7/7/10	E. coli via MI agar	100
MB-1	11/3/10	Fecal Coliform via membrane filtration	60
MB-1	11/3/10	E. coli via MI agar	80
MB-1.1	9/21/09	Total coliform	727
MB-1.1	9/21/09	E.coli	33
MB-1.1	9/28/09	Total coliform	5,172
MB-1.1	9/28/09	E.coli	199
MB-1.1	10/5/09	Total coliform	1,483
MB-1.1	10/5/09	E.coli	52
MB-1.1	10/5/09	Total coliform	9,804
MB-1.1	10/5/09	E.coli	41
MB-2	4/15/09	Fecal Coliform via membrane filtration	4
MB-2	4/15/09	E. coli via MI agar	4
MB-2	5/13/09	Fecal Coliform via membrane filtration	80
MB-2	5/13/09	E. coli via MI agar	74
MB-2	6/10/09	MF_FC	265
MB-2	6/10/09	MF_MI	400
MB-2	7/8/09	Fecal Coliform via membrane filtration	27
MB-2	7/8/09	E. coli via MI agar	21
MB-2	9/14/09	Total coliform	1,918
MB-2	9/14/09	E.coli	110
MB-2	9/21/09	Total coliform	2,420
MB-2	9/21/09	E.coli	28
MB-2	9/28/09	Total coliform	11,199
MB-2	9/28/09	E.coli	691
MB-2	10/5/09	Total coliform	2,105
MB-2	10/5/09	E.coli	41
MB-2	10/7/09	Fecal Coliform via membrane filtration	200
MB-2	10/7/09	E. coli via MI agar	200
MB-2	4/28/10	Fecal Coliform via membrane filtration	76
MB-2	4/28/10	E. coli via MI agar	100
MB-2	7/7/10	Fecal Coliform via membrane filtration	50
MB-2	7/7/10	E. coli via MI agar	150
MB-2	11/3/10	Fecal Coliform via membrane filtration	14
MB-2	11/3/10	E. coli via MI agar	28

Morgan Brook Watershed Management Plan
Bacteria Sampling Results - Morgan Brook Watershed

Sample Location	Sample Date	Analyte	Concentration cfu/100 mL
MB-3	4/15/09	Fecal Coliform via membrane filtration	8
MB-3	4/15/09	E. coli via MI agar	6
MB-3	5/13/09	Fecal Coliform via membrane filtration	90
MB-3	5/13/09	E. coli via MI agar	80
MB-3	6/10/09	MF_FC	38
MB-3	6/10/09	MF_MI	34
MB-3	7/8/09	Fecal Coliform via membrane filtration	21
MB-3	7/8/09	E. coli via MI agar	15
MB-3	9/14/09	Total coliform	1,354
MB-3	9/14/09	E.coli	30
MB-3	9/21/09	Total coliform	866
MB-3	9/21/09	E.coli	7
MB-3	9/28/09	Total coliform	12,997
MB-3	9/28/09	E.coli	448
MB-3	10/5/09	Total coliform	1,374
MB-3	10/5/09	E.coli	31
MB-3	10/7/09	Fecal Coliform via membrane filtration	225
MB-3	10/7/09	E. coli via MI agar	110
MB-3	4/28/10	Fecal Coliform via membrane filtration	36
MB-3	4/28/10	E. coli via MI agar	40
MB-3	7/7/10	Fecal Coliform via membrane filtration	30
MB-3	7/7/10	E. coli via MI agar	20
MB-3	11/3/10	Fecal Coliform via membrane filtration	12
MB-3	11/3/10	E. coli via MI agar	8
ML-1	9/14/09	Total coliform	6,488
ML-1	9/14/09	E.coli	41
ML-1	9/21/09	Total coliform	1,300
ML-1	9/21/09	E.coli	17
ML-1	9/28/09	Total coliform	2,909
ML-1	9/28/09	E.coli	86
ML-1	10/5/09	Total coliform	958
ML-1	10/5/09	E.coli	20
ML-1.9	9/21/09	Total coliform	2,420
ML-1.9	9/21/09	E.coli	162
ML-1.9	9/28/09	Total coliform	19,863
ML-1.9	9/28/09	E.coli	305
ML-1.9	10/5/09	Total coliform	2,755
ML-1.9	10/5/09	E.coli	98
ML-2	9/14/09	Total coliform	4,106
ML-2	9/14/09	E.coli	52
ML-2	9/21/09	Total coliform	2,420
ML-2	9/21/09	E.coli	104
ML-2	9/28/09	Total coliform	11,199
ML-2	9/28/09	E.coli	432
ML-2	10/5/09	Total coliform	3,654
ML-2	10/5/09	E.coli	85
ML-3	9/14/09	Total coliform	10,462
ML-3	9/14/09	E.coli	86
ML-3	9/21/09	Total coliform	2,420
ML-3	9/21/09	E.coli	81
ML-3	9/28/09	Total coliform	4,907
ML-3	9/28/09	E.coli	262
ML-3	10/5/09	Total coliform	1,989
ML-3	10/5/09	E.coli	31

Morgan Brook Watershed Management Plan
Bacteria Sampling Results - Morgan Brook Watershed

Sample Location	Sample Date	Analyte	Concentration cfu/100 mL
Mltrib-4	9/14/09	Total coliform	4,884
Mltrib-4	9/14/09	E.coli	31
Mltrib-4	9/21/09	Total coliform	2,420
Mltrib-4	9/21/09	E.coli	73
Mltrib-4	9/28/09	Total coliform	5,172
Mltrib-4	9/28/09	E.coli	85
Mltrib-4	10/5/09	Total coliform	15,531
Mltrib-4	10/5/09	E.coli	51
ML-5	10/5/09	Total coliform	4,106
ML-5	10/5/09	E.coli	241
WHP-1	6/10/2008	E.coli	<10
WHP-1	6/26/2008	E.coli	10
WHP-1	7/15/2008	E.coli	<10
WHP-1	7/29/2008	E.coli	10
WHP-1	8/14/2008	E.coli	10
WHP-1	8/26/2008	E.coli	<10
WHP-1	6/18/2009	E.coli	10
WHP-1	6/29/2009	E.coli	10
WHP-1	7/14/2009	E.coli	<10
WHP-1	8/4/2009	E.coli	10
WHP-1	8/11/2009	E.coli	41
WHP-1	8/18/2009	E.coli	10
WHP-1	9/1/2009	E.coli	<10
WHP-1	6/8/2010	E.coli	<10
WHP-1	6/24/2010	E.coli	10
WHP-1	7/8/2010	E.coli	<10
WHP-1	7/27/2010	E.coli	<10
WHP-1	8/17/2010	E.coli	<10
WHP-1	8/31/2010	E.coli	10
WHP-1	6/20/2011	E.coli	31
WHP-1	7/7/2011	E.coli	<10
WHP-2	6/10/2008	E.coli	42
WHP-2	6/26/2008	E.coli	<10
WHP-2	7/17/2008	E.coli	<10
WHP-2	7/29/2008	E.coli	10
WHP-2	8/14/2008	E.coli	10
WHP-2	8/26/2008	E.coli	<10
WHP-2	6/18/2009	E.coli	<10
WHP-2	6/29/2009	E.coli	10
WHP-2	7/14/2009	E.coli	<10
WHP-2	8/19/2009	E.coli	31
WHP-2	6/3/2010	E.coli	20
WHP-2	6/24/2010	E.coli	10
WHP-2	7/8/2010	E.coli	<10
WHP-2	7/27/2010	E.coli	10
WHP-2	8/17/2010	E.coli	<10
WHP-2	9/2/2010	E.coli	10
WHP-2	6/7/2011	E.coli	<10
WHP-2	7/7/2011	E.coli	10

Appendix - B
Morgan Brook Watershed
Section 319 Nonpoint Source Management Progam
Track Down Survey Summary Table

Map ID	Site ID[1] Survey Form #	Site ID Local Basin #	Latidude	Longitude
1	4305-00-1_SCa	4305-00-1	41º53'29.2"N	73º2'9.89"W
2	4305-00-1_SCb	4305-00-1	41º53'30.35"N	73º2'5.22"W
3	4305-00-1_SCc	4305-00-1	41º53'43.97"N	73º1'51.99"W
4	4305-00-1_SCd	4305-00-1	41º54'9.06"N	73º2'3.14"W
5	4305-00-1-L1_OTa	4305-00-1-L1	41º52'22.34"N	73º2'38.38"W
6	4305-00-1-L1_SCa	4305-00-1-L1	41º53'26.45"N	73º2'12.01"W
7	4305-00-1-L1_SCb	4305-00-1-L1	41º53'2.18"N	73º2'42.91"W
8	4305-00-1-L1_SCc	4305-00-1-L1	41º52'21.1"N	73º2'20.05"W
9	4305-00-1-L1_SCd	4305-00-1-L1	41º52'21.93"N	73º2'37.23"W
10	4305-00-3-R1_OTa	4305-00-3-R1	41º54'23.72"N	72º59'54.52"W
11	4305-00-3-R1_SCa	4305-00-3-R1	41º54'30.51"N	73º0'2.04"W
12	4305-00-3-R1_SCb	4305-00-3-R1	41º54'41.39"N	73º0'29.62"W
13	4305-00-3-R1_SCc	4305-00-3-R1	41º54'44.51"N	73º1'3.97"W
14	4305-00-3-R1_SCd	4305-00-3-R1	41º54'31.63"N	72º59'56.64"W
15	4305-00-3-R2_OTa	4305-00-3-R2	41º54'16.69"N	72º59'46.77"W
16	4305-00-3-R2_SCa	4305-00-3-R2	41º54'6.01"N	72º59'21.87"W
17	4305-00-3-R2_SCb	4305-00-3-R2	41º54'8.25"N	72º59'33.16"W
18	4305-01-1_OTa	4305-01-1	41º53'17.72"N	73º1'13.9"W
19	4305-01-1_SCa	4305-01-1	41º53'53.03"N	73º1'30.56"W
20	4305-02-1_OTa	4305-02-1	41º54'42.9"N	73º3'6.93"W
21	4305-02-1_OTb	4305-02-1	41º54'38.1"N	73º3'2.05"W
22	4305-02-1_OTc	4305-02-1	41º54'34.57"N	73º2'36.06"W
23	4305-02-1_OTd	4305-02-1	41º54'33.08"N	73º2'54.6"W
24	4305-02-1_SCa	4305-02-1	41º54'38.79"N	73º2'28.73"W
25	4305-02-1_SCb	4305-02-1	41º54'35.54"N	73º2'57.35"W
26	4305-02-1_SCc	4305-02-1	41º54'41.87"N	73º3'3.54"W
27	4305-02-1_SCd	4305-02-1	41º54'41.99"N	73º3'4.33"W
28	4305-02-1_SCe	4305-02-1	41º54'35.16"N	73º2'36.28"W
29	4305-02-1_SCf	4305-02-1	41º54'32.98"N	73º2'53.5"W
30	4305-02-1_SCg	4305-02-1	41º54'48.78"N	73º3'5.93"W
31	4305-02-1_SCh	4305-02-1	41º54'48.07"N	73º3'6.23"W
32	4305-02-2-R1_SCa	4305-02-2-R1	41º54'43.35"N	73º1'37"W
33	4305-02-2-R1_SCb	4305-02-2-R1	41º54'42.22"N	73º2'19.02"W
34	4305-03-1_SCa	4305-03-1	41º54'46.75"N	73º2'27.17"W
35	4305-04-1_SCa	4305-04-1	41º54'18.77"N	72º59'52.66"W
36	4305-04-1_SCb	4305-04-1	41º53'53.24"N	73º1'22.22"W
37	4305-04-1_SCc	4305-04-1	41º54'0.93"N	73º1'1.03"W
38	4305-04-1_SCd	4305-04-1	41º54'4.37"N	73º0'24.11"W
39	4305-04-1_SCe	4305-04-1	41º53'49.49"N	73º1'7.41"W
40	4305-04-1_SCf	4305-04-1	41º53'21.63"N	73º0'53"W

(1) : SC = Structured Stream Crossing, OT = Storm Water Outfall

Map #1

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-1	**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 10 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-1-SC-a,jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 ° 53 ' 29.20 " **LONG** -73 ° 02 ' 09.89 " **LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☒ Other: flared ends
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 45 (ft)
Width: 4 (ft)
Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #2

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-1 | **DATE:** 11 / 19 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 9 : 20 (AM)/PM | **PHOTO ID:** (*Camera-Pic #*) /# 00-1-SC-b.jpg

SITE ID: (*Condition-#*) SC-B | **LAT** 41 ° 53 ' 30.35 " **LONG** -73 ° 02 ' 05.22 " **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
- ☐ Arch ☒ Circular
- ☐ Box ☒ Other:
- ☐ Bottomless flared ends
- ☐ Elliptical

 # BARRELS:
- ☐ Single
- ☒ Double
- ☐ Triple
- ☐ Other:

MATERIAL:
- ☒ Concrete
- ☐ Metal (smooth)
- ☐ Metal (corrugated)
- ☐ Other:

ALIGNMENT:
- ☐ Flow-aligned
- ☒ Not flow-aligned
  - ☐ toward LT bank
  - ☒ toward RT bank
- ☐ Do not know

DIMENSIONS: (*if varies sketch*)
- Barrel diameter: 3 (ft)
- Height: 3 (ft)
- Culvert length: 50 (ft)
- Width: 4 (ft)
- Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
- ☐ Cracking/chipping/corrosion ☐ Downstream scour hole
- ☐ Sediment deposition ☐ Failing embankment
- ☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
- ☐ Flat
- ☒ Slight (2° – 5°)
- ☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
- ☐ Manmade
- ☐ Active Beaver
- ☐ Old/Abandoned Beaver

MATERIAL:
- ☐ Concrete (poured or block) ☐ Dry stone
- ☐ Mortared stone ☐ Gabion ☐ Other:
- ☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
- ☐ Total ☐ Partial
- ☐ Temporary ☐ Unknown

CAUSE:
- ☐ Culvert raised, above stream _____ (in)
- ☐ Drop too high, water drop: _____ (in)
- ☐ Shallow flow, water depth: _____ (in)
- ☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #3

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-1 | **DATE:** 11 / 19 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 10 : 05 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 00-1-SC-c2.jpg

SITE ID: (*Condition-#*) SC-C | **LAT** 41 ° 53 ' 43.97 " | **LONG** -73 ° 01 ' 51.99 " | **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☒ Other:
☐ Bottomless flared ends
☐ Elliptical

 # BARRELS:
☐ Single
☒ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☐ toward LT bank
☒ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 36 (ft)
Width: 6 (ft)
Roadway elevation: 8 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.	A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.	A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.
5	4 3	2 1

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #4

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 10 : 15 (AM)/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 00-1-SC-d2.jpg
SITE ID: (*Condition-#*) **SC-** D	**LAT** 41 ° 54 ' 09.06 " **LONG** -73 ° 02 ' 03.14 "	**LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: mortared stone

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 40 (ft)
Width: 3 (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☒ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA?

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #5

Storm Water Outfalls **OT**

WATERSHED/SUBSHED: 4305-00-1-L1		**DATE:** 4 / 19 / 11	**ASSESSED BY:** SH,MM
SURVEY REACH ID:	**TIME:** 10:00 (AM)/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 00-1-L1-OT-a.jpg
SITE ID (*Condition-#*): **OT-** A	**LAT** 41 ° 52 ' 22.34 " **LONG** -73 ° 02 ' 38.38 "	**LMK**	**GPS:** (*Unit ID*) R1

BANK: [X] LT [ ] RT [ ] Head

FLOW: [ ] None [X] Trickle [ ] Moderate [ ] Substantial [ ] Other:

TYPE: [X] Pipe [ ] Leak Off

MATERIAL: [X] Concrete [ ] Metal [ ] PVC/Plastic [ ] Brick [ ] Corrugated [ ] Other [ ] Vitrified Tile

SHAPE: [X] Circular [ ] Elliptical [ ] Other:

NUMBER: [ ] Single [ ] Double [ ] Triple

DIMENSIONS: Diameter: 10 (in)

FLARED END? [ ] Yes [X] No

HEADWALL? [ ] YES [X] NO

SUBMERGED: [ ] No [X] Partially [ ] Fully

[X] Channel — [ ] Concrete [ ] Riprap [X] Vegetated [X] Earth [ ] Other:

[ ] Trapezoid [ ] Parabolic [X] Other: rectangular 3' x 75'

Depth: 12 (in) Width (Top): 36 (in) " (Bottom): 36 (in)

Channel slope: 5 (degrees)

PIPE CONDITION: [X] Good [ ] Chip/Cracked [ ] Peeling Paint [ ] Corrosion [ ] Squashed [ ] Other:

ODOR: [X] No [ ] Gas [ ] Sewage [ ] Rancid/Sour [ ] Sulfide [ ] Other:

DEPOSITS/STAINS: [X] None [ ] Oily [ ] Flow Line [ ] Paint [ ] Other:

VEGGIE DENSITY BELOW OUTFALL: [ ] None [ ] Normal [X] Inhibited [ ] Excessive [ ] Other:

BENTHIC GROWTH IN PIPE: [X] None [ ] Sewage Fungus [ ] Brown [ ] Grey [ ] Orange [ ] Green [ ] Other:

POOL QUALITY: [ ] No pool [ ] Good/Clear [ ] Poor (see below) [ ] Odors [ ] Colors [ ] Oils [ ] Suds [ ] Algae [ ] Floatables [ ] Settled Solids [ ] Scour [ ] Inadeq. Outlet Protection [X] Other: full of sediment

FOR FLOWING ONLY

COLOR:	[X] Clear [ ] Brown [ ] Grey [ ] Yellow [ ] Green [ ] Orange [ ] Red [ ] Other:
TURBIDITY:	[X] None [ ] Slight Cloudiness [ ] Cloudy [ ] Opaque
FLOATING:	[X] None [ ] Sewage Solids [ ] Toilet Paper [ ] Trash [ ] Petroleum (oil sheen) [ ] Other:
SUSPENDED:	[X] None [ ] Sewage Solids [ ] Toilet Paper [ ] Trash [ ] Other:

OTHER CONCERNS: [ ] Excess Trash (paper/plastic bags) [ ] Dumping (bulk) [X] Excessive Sedimentation [ ] Headcut [ ] Needs Regular Maintenance [ ] Bank Erosion [ ] Steep Bank [ ] Other:

POTENTIAL RESTORATION CANDIDATE [X] no [ ] Discharge investigation [ ] Stream daylighting [ ] Outfall stabilization [ ] Storm water retrofit [ ] Channel stabilization [ ] Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ ft Type of existing vegetation: _____ Slope: _____ %

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? [ ] No [ ] Not investigated
[ ] Yes Land Use description: _____ Stormwater BMP description: _____
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3	2	1
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.		Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.		Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.

SKETCH/NOTES:

OTHER SURVEY FOR **REPORTED TO AUTHORITIES:** [ ] YES [ ] NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #6

WATERSHED/SUBSHED: 4305-00-1-L1	**DATE:** 11 / 19 /2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 8 : 57 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-1-L1-SC-a2.jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 ° 53 ' 26.45 " **LONG** -73 ° 02 ' 12.01 " **LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☒ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: mortar & stone

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 30 (ft)
Width: 3 (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☒ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☒ Mortared stone ☐ Gabion ☐ Other:
Height: 10 (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☐ No ☒ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #7

WATERSHED/SUBSHED: 4305-00-1-L1	**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 11 : 34 (AM)/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-1-L1-SC-b2.jpg
SITE ID: (*Condition-#*) **SC-** B	**LAT** 41 ° 53 ' 2.18 " **LONG** -73 ° 02 ' 42.91 " **LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☐ Single
☐ Double
☐ Triple
☒ Other: five

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☐ toward LT bank
☒ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 1.5 (ft)
Height: _____ (ft)
Culvert length: 25 (ft)
Width: 5 (ft)
Roadway elevation: 2 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☐ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #8

WATERSHED/SUBSHED: 4305-00-1-L1	**DATE:** 4 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 55 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-1-L1-SC-c.jpg
SITE ID: (*Condition-#*) **SC-** C	**LAT** 41 ° 52 ' 21.1 " **LONG** -73 ° 02 ' 20.05 " **LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☒ Other: flared ends
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 1 (ft)
Height: 1 (ft)
Culvert length: 25 (ft)
Width: 3.0 (ft)
Roadway elevation: 3.5 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☒ Sediment deposition ☐ Failing embankment
☒ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #9

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-1-L1	**DATE:** 4 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 57 (AM)/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-1-L1-SC-d.jpg
SITE ID: (*Condition-#*) **SC-** D	**LAT** 41 ° 52 ' 21.93 " **LONG** -73 ° 02 ' 37.23 " **LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☒ Other:
☐ Bottomless flared ends
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 1 (ft)
Height: 1 (ft)
Culvert length: 350 (ft)
Width: 3 (ft)
Roadway elevation: 3.5 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☒ Sediment deposition ☐ Failing embankment
☒ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2^o – 5^0)
☐ Obvious (>5^o)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:
outlet into West Hill Pond

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Storm Water Outfalls **OT**

Map #10

WATERSHED/SUBSHED: 4305-00-3-R1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 45 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 00-3-R1-OT-a.jpg
SITE ID (*Condition-#*): **OT-** A	**LAT** 41 ° 54 ' 23.72 " **LONG** -73 ° 59 ' 54.52 "	**LMK**_____	**GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☐ None ☐ Trickle ☒ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off ☐ Channel

MATERIAL: ☐ Concrete ☐ Metal ☐ PVC/Plastic ☐ Brick ☒ Corrugated ☐ Other ☐ Vitrified Tile

☐ Concrete ☐ Riprap ☐ Vegetated ☐ Earth ☐ Other:

SHAPE: ☒ Circular ☐ Elliptical ☐ Other:

☐ Trapezoid ☐ Parabolic ☐ Other:

NUMBER: ☒ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter: 25 (in)

FLARED END? ☐ Yes ☒ No

HEADWALL? ☐ YES ☒ NO

Depth: _____(in)

Width (Top): _____(in)

" (Bottom): _____(in)

SUBMERGED: ☒ No ☐ Partially ☐ Fully

Channel slope: _____ (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☒ None ☐ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☒ None ☐ Normal ☐ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☒ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☐ Orange ☐ Green ☐ Other:

POOL QUALITY: ☐ No pool ☒ Good/Clear ☐ Poor (see below) ☐ Odors ☐ Colors ☐ Oils ☐ Suds ☐ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR:	☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
TURBIDITY:	☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque
FLOATING:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Petroleum (oil sheen) ☐ Other:
SUSPENDED:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☒ no ☐ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:

Length of vegetative cover from outfall: _____ft Type of existing vegetation:_____ Slope: _____%

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated

☐ Yes Land Use description:_____ Stormwater BMP description:_____

Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3	2	1
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.		Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.		Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.

SKETCH/NOTES:

OTHER SURVEY FO

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #11

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-3-R1	**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 55 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-3-R1-SC-a.jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 °54 '30.51 " **LONG** -73 °0.0 '02.04 " **LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 30 (ft)
Width: 20 (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☒ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #12

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-00-3-R1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 10 : 15 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 00-3-R1-SC-b.jpg
SITE ID: (*Condition-#*) **SC-** B	**LAT** 41 ° 54 ' 41.39 "	**LONG** -73 ° 0.0 ' 29.62 "	**LMK**____ **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☒ Arch ☐ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: ____ (ft)
Height: ____ (ft)
Culvert length: 40 (ft)
Width: 15 (ft)
Roadway elevation: 15 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FOR **REPORTED TO AUTHORITIES:** ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #13

WATERSHED/SUBSHED: 4305-00-3-R1 | **DATE:** 11 / 18 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 10 : 30 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /#00-3-R1-SC-c2.jpg

SITE ID: (*Condition-#*) **SC-** C | **LAT** 41 ° 54 ' 44.51 " **LONG** -73 ° 1.0 ' 03.97 " **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☒ Arch ☐ Circular
☐ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☐ Single
☐ Double
☒ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 6 (ft)
x2 Height: 6 (ft)
Culvert length: 20 (ft)
x1 Width: 10 (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☒ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FO

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #14

WATERSHED/SUBSHED: 4305-00-3-R1	**DATE:** 04 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 8 : 55 (AM)/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-3-R1-SC-d2.jpg
SITE ID: (*Condition-#*) SC-D	**LAT** 41 ° 54 ' 31.63 " **LONG** -73 ° 59 ' 56.64 " **LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: mortared stone

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 40 (ft)
Width: 10 (ft)
Roadway elevation: 7 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☒ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL
☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA: ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Storm Water Outfalls **OT**

Map #15

WATERSHED/SUBSHED: 4305-00-3-R2 | **DATE:** 11 / 18 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 9 : 00 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 00-3-R2-OT-a2.jpg

SITE ID (*Condition-#*): **OT-** A | **LAT** 41 ° 54 ' 16.69 " **LONG** -72 ° 59 ' 46.77 " | **LMK** | **GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☐ None ☐ Trickle ☒ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off ☐ Channel

MATERIAL: ☐ Concrete ☐ Metal ☒ PVC/Plastic ☐ Brick ☐ Corrugated ☐ Other ☐ Vitrified Tile

☐ Concrete ☐ Riprap ☐ Vegetated ☐ Earth ☐ Other:

SHAPE: ☒ Circular ☐ Elliptical ☐ Other: | **NUMBER:** ☒ Single ☐ Double ☐ Triple

☐ Trapezoid ☐ Parabolic ☐ Other:

DIMENSIONS: Diameter: 6 (in) | **FLARED END?** ☐ Yes ☒ No | **HEADWALL?** ☒ YES ☐ NO

Depth: (in) Width (Top): (in) " (Bottom): (in)

SUBMERGED: ☒ No ☐ Partially ☐ Fully

Channel slope: (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☐ No ☒ Gas ☒ Sewage ☒ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☐ None ☒ Oily ☐ Flow Line ☐ Paint ☒ Other: iron rust colored stains

VEGGIE DENSITY BELOW OUTFALL: ☒ None ☐ Normal ☐ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☐ None ☒ Sewage Fungus ☐ Brown ☐ Grey ☒ Orange ☐ Green ☐ Other:

POOL QUALITY: ☐ No pool ☐ Good/Clear ☒ Poor (see below) ☒ Odors ☒ Colors ☒ Oils ☐ Suds ☒ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR:	☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
TURBIDITY:	☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque
FLOATING:	☐ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☒ Petroleum (oil sheen) ☐ Other:
SUSPENDED:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☒ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☐ no ☐ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: 20 ft Type of existing vegetation: tree/shrub Slope: 10 %

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☒ No ☐ Not investigated
☐ Yes Land Use description: Stormwater BMP description:
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and (discharge has a color and/or odor, the a discharge is very small compared to the flow and any impact appears to be mino	y weather opearance roblems.

SKETCH/NOTES: Grease budding at pipe,
Pipe discharge is within designated TROUT MGMNT AREA

OTHER SURVEY FORMS COMPLETED FOR SAME AREA: ES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #16

WATERSHED/SUBSHED: 4305-00-3-R2		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 8 : 20 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 00-3-R2-Sc-a.jpg
SITE ID: (*Condition-#*) **SC-**A	**LAT** 41 ° 54 ' 06.01 " **LONG** -72 ° 59 ' 21.87 "	**LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: 9 (ft)
Culvert length: 30 (ft)
Width: 30 (ft)
Roadway elevation: 12 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA?

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #17

WATERSHED/SUBSHED: 4305-00-3-R2	**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 8 : 30 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 00-3-R2-SC-b.jpg
SITE ID: (*Condition-#*) **SC-** B	**LAT** 41 ° 54 ' 08.25 " **LONG** -72 ° 59 ' 33.16 " **LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☐ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: I-beam

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: ____(ft)
Height: 10 (ft)
Culvert length: 30 (ft)
Width: 30 (ft)
Roadway elevation: 12 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Storm Water Outfalls **OT**

Map #18

WATERSHED/SUBSHED: 4305-01-1		**DATE:** 04 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 09 : 40 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 01-1-OT-a.jpg
SITE ID (*Condition-#*): **OT-** A	**LAT** 41 ° 53 ' 17.72 " **LONG** -73 ° 01 ' 13.90 "	**LMK**	**GPS:** (*Unit ID*) R1

BANK: ☐ LT ☐ RT ☒ Head

FLOW: ☐ None ☐ Trickle ☒ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off

MATERIAL: ☒ Concrete ☐ Metal ☐ PVC/Plastic ☐ Brick ☐ Corrugated ☐ Other ☐ Vitrified Tile

SHAPE: ☒ Circular ☐ Elliptical ☐ Other:

NUMBER: ☒ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter: 18 (in)

FLARED END? ☐ Yes ☒ No

HEADWALL? ☒ YES ☐ NO

SUBMERGED: ☐ No ☒ Partially ☐ Fully

☐ Channel — ☐ Concrete ☐ Riprap ☐ Vegetated ☐ Earth ☐ Other: — ☐ Trapezoid ☐ Parabolic ☐ Other: — Depth: ____ (in) — Width (Top): ____ (in) — " (Bottom): ____ (in) — Channel slope: ____ (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☐ None ☒ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☐ None ☒ Normal ☐ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☐ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☒ Orange ☐ Green ☐ Other:

POOL QUALITY: ☐ No pool ☐ Good/Clear ☐ Poor (see below) ☐ Odors ☒ Colors ☐ Oils ☐ Suds ☒ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR:	☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
TURBIDITY:	☐ None ☒ Slight Cloudiness ☐ Cloudy ☐ Opaque
FLOATING:	☐ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☒ Petroleum (oil sheen) ☐ Other:
SUSPENDED:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☒ no ☐ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ft Type of existing vegetation:_____ Slope: _____%

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated
☐ Yes Land Use description:_____ Stormwater BMP description:_____
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3	2	1
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.		Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.		Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.

SKETCH/NOTES:

OTHER SURVEY FO **REPORTED TO AUTHORITIES:** ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #19

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-01-1		**DATE:** 04 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 09 : 20 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 01-1-SC-a3.jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 ° 53 ' 53.03 " **LONG** -73 ° 01 ' 30.56 " **LMK**____		**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☐ Single
☒ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: stone

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 2 (ft)
Height: 4 (ft)
Culvert length: 60 (ft)
Width: 10 (ft)
Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☒ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Storm Water Outfalls **OT**

Map #20

WATERSHED/SUBSHED: 4305-02-1 | **DATE:** 11 / 19 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 12 : 30 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 02-1-OT-a.jpg

SITE ID (*Condition-#*): **OT-** A | **LAT** 41 ° 51 ' 42.90 " **LONG** -73 ° 03 ' 06.93 " **LMK**____ | **GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☐ None ☐ Trickle ☐ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off

MATERIAL: ☒ Concrete ☐ Metal ☐ PVC/Plastic ☐ Brick ☐ Corrugated ☐ Other ☐ Vitrified Tile

SHAPE: ☐ Circular ☐ Elliptical ☐ Other:

NUMBER: ☐ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter: 24 (in)

FLARED END? ☐ Yes ☒ No

HEADWALL? ☒ YES ☐ NO

SUBMERGED: ☐ No ☐ Partially ☐ Fully

☒ Channel — ☐ Concrete ☒ Riprap ☐ Vegetated ☐ Earth ☐ Other: — ☐ Trapezoid ☐ Parabolic ☐ Other: — Depth: 6 (in) — Width (Top): 72 (in) — " (Bottom): ____ (in) — Channel slope: 45 (degrees)

PIPE CONDITION: ☐ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☒ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☒ None ☐ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☐ None ☐ Normal ☐ Inhibited ☐ Excessive ☒ Other: invasive vegetation

BENTHIC GROWTH IN PIPE: ☒ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☐ Orange ☐ Green ☐ Other:

POOL QUALITY: ☐ No pool ☐ Good/Clear ☐ Poor (see below) ☐ Odors ☐ Colors ☐ Oils ☐ Suds ☐ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR: ☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:

TURBIDITY: ☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque

FLOATING: ☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Petroleum (oil sheen) ☐ Other:

SUSPENDED: ☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☐ no ☒ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ ft Type of existing vegetation: _____ Slope: _____ %

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated
☐ Yes Land Use description: _____ Stormwater BMP description: _____
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4 3	2 1

SKETCH/NOTES:
Green Ridge Condo complex
No stormwater renovation

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Storm Water Outfalls **OT**

Map #21

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 1 : 00 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-OT-b.jpg
SITE ID (*Condition-#*): **OT-** B	**LAT** 41 ° 54 ' 38.10 " **LONG** -73 ° 03 ' 02.05 "	**LMK**_____	**GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☒ None ☐ Trickle ☐ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off

MATERIAL: ☐ Concrete ☐ Metal ☒ PVC/Plastic ☐ Brick ☒ Corrugated ☐ Other ☐ Vitrified Tile

SHAPE: ☒ Circular ☐ Elliptical ☐ Other:

NUMBER: ☐ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter: 18 (in)

FLARED END? ☐ Yes ☒ No

HEADWALL? ☒ YES ☐ NO

SUBMERGED: ☒ No ☐ Partially ☐ Fully

☐ Channel — ☐ Concrete ☐ Riprap ☐ Vegetated ☐ Earth ☐ Other:

☐ Trapezoid ☐ Parabolic ☐ Other:

Depth: _____ (in)
Width (Top): _____ (in)
" (Bottom): _____ (in)

Channel slope: _____ (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☒ None ☐ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☐ None ☒ Normal ☐ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☒ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☐ Orange ☐ Green ☐ Other:

POOL QUALITY: ☒ No pool ☐ Good/Clear ☐ Poor (see below) ☐ Odors ☐ Colors ☐ Oils ☐ Suds ☐ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR:	☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
TURBIDITY:	☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque
FLOATING:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Petroleum (oil sheen) ☐ Other:
SUSPENDED:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☐ no ☒ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ft Type of existing vegetation:_____ Slope: _____%

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated
☐ Yes Land Use description:_____ Stormwater BMP description:_____
Retrofit Area available:

OUTFALL SEVERITY: (*circle #*)	Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.	Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.	Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.
	5	4 3	2 1

SKETCH/NOTES:
KFC site

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #22

Storm Water Outfalls **OT**

WATERSHED/SUBSHED: 4305-02-1 | **DATE:** 11 / 19 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 2 : 30 AM (PM) | **PHOTO ID:** (*Camera-Pic #*) /# 02-1-OT-c.jpg

SITE ID (*Condition-#*): **OT-** C | **LAT** 41 ° 54 ' 34.57 " **LONG** -73 ° 02 ' 36.06 " | **LMK** | **GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☐ None ☒ Trickle ☐ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off

MATERIAL: ☒ Concrete ☐ Metal ☐ PVC/Plastic ☐ Brick ☐ Corrugated ☐ Other ☐ Vitrified Tile

SHAPE: ☒ Circular ☐ Elliptical ☐ Other:

NUMBER: ☒ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter: 24 (in)

FLARED END? ☐ Yes ☒ No

HEADWALL? ☐ YES ☒ NO

SUBMERGED: ☐ No ☒ Partially ☐ Fully

☐ Channel — ☐ Concrete ☐ Riprap ☐ Vegetated ☐ Earth ☐ Other: — ☐ Trapezoid ☐ Parabolic ☐ Other: — Depth: (in) — Width (Top): (in) — " (Bottom): (in) — Channel slope: (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☒ None ☐ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☐ None ☐ Normal ☒ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☒ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☐ Orange ☐ Green ☐ Other:

POOL QUALITY: ☐ No pool ☒ Good/Clear ☐ Poor (see below) ☐ Odors ☐ Colors ☐ Oils ☐ Suds ☐ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR: ☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:

TURBIDITY: ☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque

FLOATING: ☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Petroleum (oil sheen) ☐ Other:

SUSPENDED: ☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ no ☐ Discharge investigation ☒ Storm water retrofit ☐ Stream daylighting ☐ Channel stabilization ☐ Outfall stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ft Type of existing vegetation:_____ Slope: _____%

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated
☐ Yes Land Use description:_____ Stormwater BMP description:_____
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3	2	1
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.		Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.		Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.

SKETCH/NOTES:
Lombard Ford,
no stormwater treatment before entering brook

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #23

Storm Water Outfalls **OT**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 04 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 8 : 48 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-OT-d.jpg
SITE ID (*Condition-#*): **OT-** D	**LAT** 41 ° 54 ' 33.08 " **LONG** -73 ° 02 ' 54.60 "	**LMK**_____	**GPS:** (*Unit ID*) R1

BANK: ☐ LT ☒ RT ☐ Head

FLOW: ☐ None ☐ Trickle ☐ Moderate ☐ Substantial ☐ Other:

TYPE: ☒ Pipe ☐ Leak Off

MATERIAL: ☒ Concrete ☐ Metal ☐ PVC/Plastic ☐ Brick ☐ Corrugated ☐ Other ☐ Vitrified Tile

SHAPE: ☒ Circular ☐ Elliptical ☒ Other: flared

NUMBER: ☐ Single ☐ Double ☐ Triple

DIMENSIONS: Diameter:_____(in)

FLARED END? ☒ Yes ☐ No

HEADWALL? ☐ YES ☒ NO

SUBMERGED: ☒ No ☐ Partially ☐ Fully

☒ Channel — ☐ Concrete ☒ Riprap ☐ Vegetated ☐ Earth ☐ Other:

☐ Trapezoid ☐ Parabolic ☐ Other:

Depth: _____(in) Width (Top):_____(in) " (Bottom):_____(in)

Channel slope: 40 (degrees)

PIPE CONDITION: ☒ Good ☐ Chip/Cracked ☐ Peeling Paint ☐ Corrosion ☐ Squashed ☐ Other:

ODOR: ☒ No ☐ Gas ☐ Sewage ☐ Rancid/Sour ☐ Sulfide ☐ Other:

DEPOSITS/STAINS: ☒ None ☐ Oily ☐ Flow Line ☐ Paint ☐ Other:

VEGGIE DENSITY BELOW OUTFALL: ☐ None ☒ Normal ☐ Inhibited ☐ Excessive ☐ Other:

BENTHIC GROWTH IN PIPE: ☐ None ☐ Sewage Fungus ☐ Brown ☐ Grey ☐ Orange ☒ Green ☐ Other:

POOL QUALITY: ☒ No pool ☐ Good/Clear ☐ Poor (see below) ☐ Odors ☐ Colors ☐ Oils ☐ Suds ☐ Algae ☐ Floatables ☐ Settled Solids ☐ Scour ☐ Inadeq. Outlet Protection ☐ Other:

FOR FLOWING ONLY

COLOR:	☒ Clear ☐ Brown ☐ Grey ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:
TURBIDITY:	☒ None ☐ Slight Cloudiness ☐ Cloudy ☐ Opaque
FLOATING:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Petroleum (oil sheen) ☐ Other:
SUSPENDED:	☒ None ☐ Sewage Solids ☐ Toilet Paper ☐ Trash ☐ Other:

OTHER CONCERNS: ☐ Excess Trash (paper/plastic bags) ☐ Dumping (bulk) ☐ Excessive Sedimentation ☐ Headcut ☐ Needs Regular Maintenance ☐ Bank Erosion ☐ Steep Bank ☐ Other:

POTENTIAL RESTORATION CANDIDATE ☐ Discharge investigation ☐ Stream daylighting ☐ Outfall stabilization ☒ no ☐ Storm water retrofit ☐ Channel stabilization ☐ Other:

If yes for daylighting:
Length of vegetative cover from outfall: _____ft Type of existing vegetation:_____ Slope: _____%

If yes for stormwater: Is stormwater currently controlled (quality and/or quantity)? ☐ No ☐ Not investigated
☐ Yes Land Use description:_____ Stormwater BMP description:_____
Retrofit Area available:

OUTFALL SEVERITY: *(circle #)*

5	4	3	2	1
Heavy discharge with a distinct color and/or a strong smell. The amount of discharge is significant compared to the amount of normal flow in receiving stream; discharge appears to be having a significant impact downstream.		Small discharge; flow mostly clear and odorless. If the discharge has a color and/or odor, the amount of discharge is very small compared to the stream's base flow and any impact appears to be minor / localized.		Outfall does not have dry weather discharge; staining; or appearance of causing any erosion problems.

SKETCH/NOTES:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA: ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #24

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 2 : 00 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-SC-a.jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 ° 54 ' 38.79 " **LONG** -73 ° 02 ' 28.73 "	**LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☒ Other: parking lot entrance

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☐ Single
☒ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☒ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 6 (ft)
Height: 6 (ft)
Culvert length: ____ (ft)
Width: ____ (ft)
Roadway elevation: ____ (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight ($2^o - 5^0$)
☐ Obvious ($>5^o$)

UNDERSIZED?
☐ No ☒ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:
Mallory Brook Plaza

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #25

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 2 : 24 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-SC-b.jpg
SITE ID: (*Condition-#*) SC-B	**LAT** 41 ° 54 ' 35.54 " **LONG** -73 ° 02 ' 57.35 "	**LMK**____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☒ Other: parking lot entrance

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: ____ (ft)
Width: ____ (ft)
Roadway elevation: 12 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:
Stop & Shop Plaza
Basin-in-Stream hybrid

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #26

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 2 : 08 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-SC-c.jpg
SITE ID: (*Condition-#*) SC-C	**LAT** 41 ° 54 ' 41.87 " **LONG** -73 ° 03 ' 03.54 "	**LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☐ toward LT bank
☒ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 5 (ft)
Height: 5 (ft)
Culvert length: 50 (ft)
Width: _____ (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

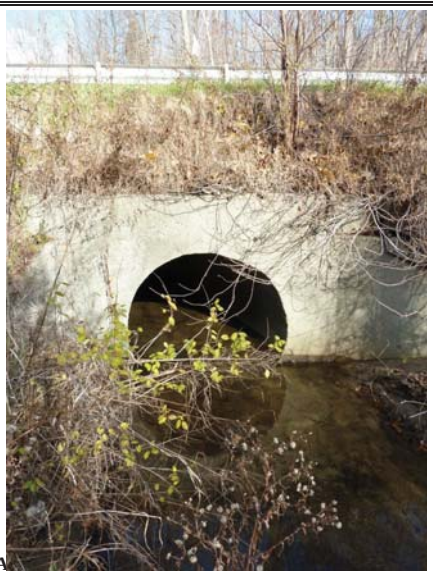
EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:



OTHER SURVEY FORMS COMPLETED FOR SAME AREA

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #27

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 2 : 12 AM PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-SC-d.jpg
SITE ID: (*Condition-#*) **SC-** D	**LAT** 41 ° 54 ' 41.99 " **LONG** -73 ° 03 ' 04.33 "	**LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☒ Other: parking entrance

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: plastic corrugated pipe

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 2 (ft)
Height: 2 (ft)
Culvert length: 40 (ft)
Width: _____ (ft)
Roadway elevation: _____ (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☒ Failing embankment
☐ Collected organic debris ☒ Other: corrugated pipe is broken

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☐ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☒ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FO

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #28

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 02 : 20 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-1-SC-e.jpg
SITE ID: (*Condition-#*) SC-E	**LAT** 41 ° 54 ' 35.16 " **LONG** -73 ° 02 ' 36.28 " **LMK**____		**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 40 (ft)
Width: 8 (ft)
Roadway elevation: 8 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight ($2^o - 5^0$)
☐ Obvious ($>5^o$)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:
Near Lombard Ford

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #29

WATERSHED/SUBSHED: 4305-02-1 | **DATE:** 04 / 19 / 2011 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 08 : 50 (AM)/PM | **PHOTO ID:** (*Camera-Pic #*) /# 02-1-SC-f.jpg

SITE ID: (*Condition-#*) SC-F | **LAT** 41 ° 54 ' 32.98 " **LONG** -73 ° 02 ' 53.50 " **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☒ Other: parking exit area

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☐ Box ☒ Other: grated drop structure
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☒ Other: metal grate

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 120 (ft)
Width: 10 (ft)
Roadway elevation: 20 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☐ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FO

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #30

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1 | **DATE:** 04 / 19 / 2011 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 08 : 40 (AM)/PM | **PHOTO ID:** (*Camera-Pic #*) /# 02-1-SC-g2.jpg

SITE ID: (*Condition-#*) SC-G | **LAT** 41 ° 54 ' 48.78 " | **LONG** -73 ° 03 ' 05.93 " | **LMK**____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☒ Other: driveway private

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☒ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 2 (ft)
Height: 2 (ft)
Culvert length: 30 (ft)
Width: 2 (ft)
Roadway elevation: 3.5 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☐ Slight ($2^o - 5^0$)
☒ Obvious ($>5^o$)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #31

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-1	**DATE:** 04 / 19 / 2011	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** ___:___ AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 02-1-SC-h.jpg
SITE ID: (*Condition-#*) **SC-** H	**LAT** 41 ° 54 ' 48.07 " **LONG** -73 ° 03 ' 06.23 " **LMK**___	**GPS** (*Unit ID*) R1

TYPE: ☐ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☒ Other:
☐ Bottomless flared end
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 4 (ft)
Height: 5 (ft)
Culvert length: 35 (ft)
Width: 15 (ft)
Roadway elevation: 7 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

O

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #32

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-2-R1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 12 : 00 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-2-R1-Sc-a.jpg
SITE ID: (*Condition-#*) **SC-** A	**LAT** 41 ° 54 ' 43.35 "	**LONG** -73 ° 01 ' 37.00 "	**LMK**____ **GPS** (*Unit ID*) R1

TYPE: ☐ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☐ toward LT bank
☒ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: ____ (ft)
Height: ____ (ft)
Culvert length: 100 (ft)
Width: 8 (ft)
Roadway elevation: 12 (ft)

CONDITION: (*Evidence of…*)
☒ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FOI

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #33

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-02-2-R1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 12 : 30 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 02-2-R1-SC-b.jpg
SITE ID: (*Condition-#*) **SC-** B	**LAT** 41 ° 54 ' 42.22 " **LONG** -73 ° 02 ' 19.02 "	**LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 10 (ft)
Width: 20 (ft)
Roadway elevation: 10 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight ($2^o - 5^0$)
☐ Obvious ($>5^o$)

UNDERSIZED?
☐ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

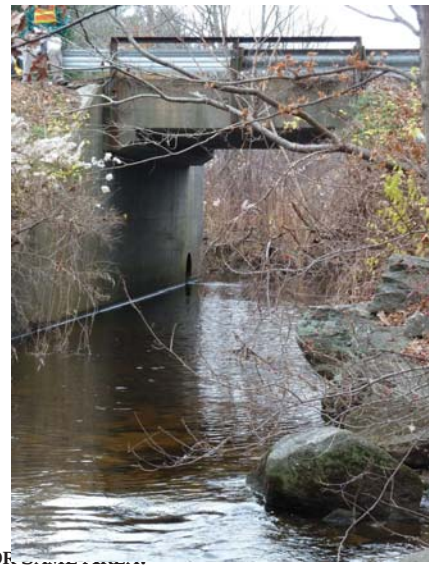
EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:



OTHER SURVEY FORMS COMPLETED FOR [illegible]

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #34

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-03-1 | **DATE:** 11 / 19 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 12 : 45 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 03-1-SC-a.jpg

SITE ID: (*Condition-#*) SC- A | **LAT** 41 ° 54 ' 46.75 " **LONG** -73 ° 02 ' 27.17 " **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☐ toward LT bank
☒ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 25 (ft)
Width: 8 (ft)
Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

☐ Active Beaver
☐ Old/Abandoned Beaver
MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.
5	4	3	2	1

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA?

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #35

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-04-1		**DATE:** 11 / 19 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 9 : 30 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 04-1-SC-a.jpg
SITE ID: (*Condition-#*) SC- A	**LAT** 41 ° 54 ' 18.77 " **LONG** -72 ° 59 ' 52.66 " **LMK**____		**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 6 (ft)
Width: 6 (ft)
Roadway elevation: 8 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FO

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #36

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-04-1 | **DATE:** 04 / 19 / 2011 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 9 : 25 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 04-1-SC-b.jpg

SITE ID: (*Condition-#*) SC-B | **LAT** 41 ° 53 ' 53.24 " | **LONG** -73 ° 01 ' 22.22 " | **LMK**_____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☐ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 1 (ft)
Height: 1 (ft)
Culvert length: 60 (ft)
Width: 1 (ft)
Roadway elevation: 3 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☒ Flat
☐ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☐ No ☒ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL
☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #37

WATERSHED/SUBSHED: 4305-04-1		**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 2 : 20 AM/PM	**PHOTO ID:** (*Camera-Pic #*)	/# 04-1-SC-c.jpg
SITE ID: (*Condition-#*) SC- C	**LAT** 41 ° 54 ' 0.93 " **LONG** -73 ° 01 ' 01.03 " **LMK**____		**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☐ Flow-aligned
☒ Not flow-aligned
☒ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: 55 (ft)
Width: ____ (ft)
Roadway elevation: 5 (ft)

CONDITION: (*Evidence of…*)
☒ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE ☐ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☒ Culvert repair/replacement ☐ Beaver deceiver/removal ☒ Other: health & safety issues

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #38

WATERSHED/SUBSHED: 4305-04-1 | **DATE:** 11 / 18 / 2010 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 2 : 45 AM/PM | **PHOTO ID:** (*Camera-Pic #*) /# 04-1-SC-d.jpg

SITE ID: (*Condition-#*) SC-D | **LAT** 41 ° 54 ' 04.37 " | **LONG** -73 ° 00 ' 24.11 " | **LMK**____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☐ Circular
☒ Box ☐ Other:
☒ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: _____(ft)
Height: _____(ft)
Culvert length: 100 (ft)
Width: 8 (ft)
Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

Height: (ft)

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☐ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☒ Other: no street treatment

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:
Catch basins along road drop directly into river with any treatment considerations.

OTHER SURVEY FORMS COMPLETED FOR SAME AREA: ____ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Structured Stream Crossing **SC**

Map #39

WATERSHED/SUBSHED: 4305-04-1	**DATE:** 11 / 18 / 2010	**ASSESSED BY:** SH, MM
SURVEY REACH ID:	**TIME:** 3 : 12 AM/PM	**PHOTO ID:** (*Camera-Pic #*) /# 04-1-SC-e2.jpg
SITE ID: (*Condition-#*) **SC-** E	**LAT** 41 ° 53 ' 49.49 " **LONG** -73 ° 01 ' 07.41 " **LMK**_____	**GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other:
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 3 (ft)
Height: 3 (ft)
Culvert length: _____ (ft)
Width: _____ (ft)
Roadway elevation: 6 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☐ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
☐ Active Beaver
☐ Old/Abandoned Beaver

MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:

MATERIAL:
☐ Large woody debris ☐ Small woody debris

Height: (ft)

Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream _____ (in)
☐ Drop too high, water drop: _____ (in)
☐ Shallow flow, water depth: _____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA:

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

Map #40

Structured Stream Crossing **SC**

WATERSHED/SUBSHED: 4305-04-1 | **DATE:** 04 / 19 / 2011 | **ASSESSED BY:** SH, MM

SURVEY REACH ID: | **TIME:** 09 : 30 (AM)/PM | **PHOTO ID:** (*Camera-Pic #*) /# 04-1-SC-f.jpg

SITE ID: (*Condition-#*) SC-F | **LAT** 41 ° 53 ' 21.63 " | **LONG** -73 ° 00 ' 53.0 " | **LMK**____ | **GPS** (*Unit ID*) R1

TYPE: ☒ Road Crossing ☐ Railroad Crossing ☐ Dam ☐ Footbridge ☐ Geological Formation (+/- 2ft change) ☐ Other:

ROAD OR RAILROAD CROSSING ONLY

CROSSING SHAPE:
☐ Arch ☒ Circular
☐ Box ☐ Other: flared ends
☐ Bottomless
☐ Elliptical

 # BARRELS:
☒ Single
☐ Double
☐ Triple
☐ Other:

MATERIAL:
☒ Concrete
☐ Metal (smooth)
☐ Metal (corrugated)
☐ Other:

ALIGNMENT:
☒ Flow-aligned
☐ Not flow-aligned
☐ toward LT bank
☐ toward RT bank
☐ Do not know

DIMENSIONS: (*if varies sketch*)
Barrel diameter: 1 (ft)
Height: 3 (ft)
Culvert length: ____ (ft)
Width: 5 (ft)
Roadway elevation: 3 (ft)

CONDITION: (*Evidence of…*)
☐ Cracking/chipping/corrosion ☐ Downstream scour hole
☐ Sediment deposition ☐ Failing embankment
☒ Collected organic debris ☐ Other:

CULVERT SLOPE:
☐ Flat
☒ Slight (2° – 5°)
☐ Obvious (>5°)

UNDERSIZED?
☒ No ☐ Yes ☐ Unsure

DAMS

TYPE:
☐ Manmade
MATERIAL:
☐ Concrete (poured or block) ☐ Dry stone
☐ Mortared stone ☐ Gabion ☐ Other:
Height: (ft)

☐ Active Beaver
☐ Old/Abandoned Beaver
MATERIAL:
☐ Large woody debris ☐ Small woody debris
Height: (ft)

POTENTIAL RESTORATION CANDIDATE
☒ no
☐ Fish barrier removal ☐ Fish passage ☐ Upstream storage retrofit ☐ Stream repair
☐ Culvert repair/replacement ☐ Beaver deceiver/removal ☐ Other:

IS SC ACTING AS GRADE CONTROL ☒ No ☐ Yes ☐ Unknown

If yes for fish barrier (> 6 in drop or flow < ½ inch)

EXTENT OF PHYSICAL BLOCKAGE:
☐ Total ☐ Partial
☐ Temporary ☐ Unknown

CAUSE:
☐ Culvert raised, above stream ____ (in)
☐ Drop too high, water drop: ____ (in)
☐ Shallow flow, water depth: ____ (in)
☐ Other:

BLOCKAGE SEVERITY: (*circle #*)

5	4	3	2	1
A structure such as a dam or road culvert on a 3rd order or greater stream blocking the upstream movement of anadromous fish; no fish passage device present.		A total fish blockage on a tributary that would isolate a significant reach of stream, or partial blockage that may interfere with the migration of anadromous fish.		A temporary barrier such as a beaver dam or a blockage at the very head of a stream with very little viable fish habitat above it; natural barriers such as waterfalls.

NOTES/SKETCH:

OTHER SURVEY FORMS COMPLETED FOR SAME AREA?

REPORTED TO AUTHORITIES: ☐ YES ☐ NO

Report sewage spill, significant pollution, or hazardous materials to CT DEP 860-424-3824 and local health department.

APPENDIX C

West Hill Pond Storm Water Runoff Survey

Barkhamsted &
New Hartford, CT

Prepared For:
West Hill Pond Association

■ ***July 15, 2011***

Lenard Engineering, Inc.
Civil, Environmental & Hydrogeological Consultants

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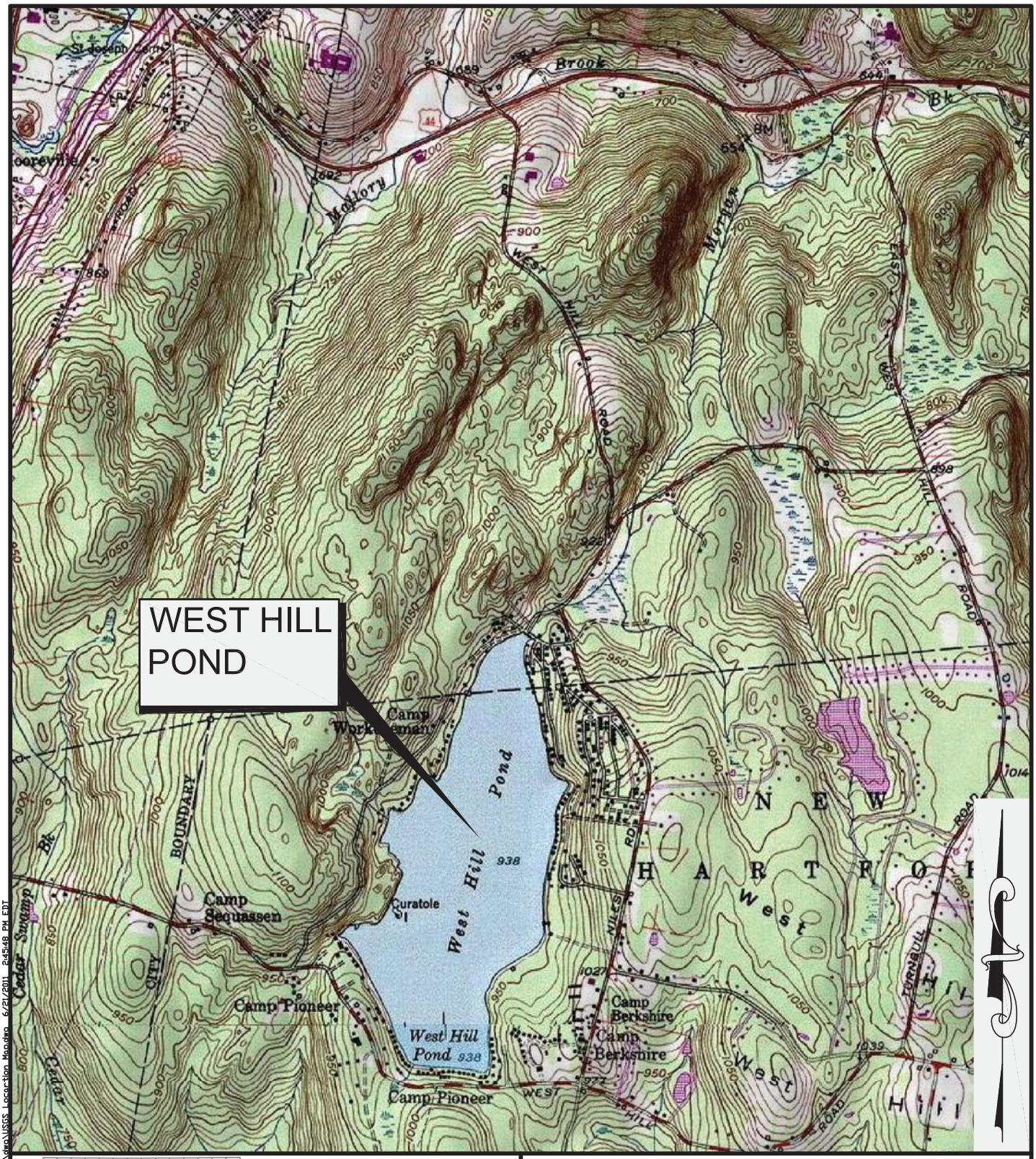
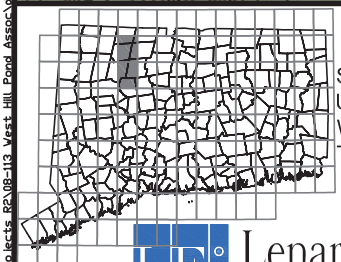




Source:
USGS TOPOGRAPHIC MAP
Winsted, CT QUADRANGLE
Torrington, CT QUADRANGLE

Lenard Engineering, Inc.
Winsted, CT

LOCATION MAP

USGS TOPOGRAPHIC QUADRANGLE MAP

WEST HILL POND DAM

CT 0502

NEW HARTFORD, CT

Scale 1:24000

K:\Local Projects R2\08-113 West Hill Pond Assoc\dwg\USGS Location Map.dwg 6/21/2011 2:45:48 PM EDT

INTRODUCTION

West Hill Pond is a high quality water resource which supports a variety of passive and active recreational uses. Many of Connecticut's water bodies have experienced "eutrophication"(caused by excessive nutrients entering the lake) which results in blooms of algae and increased weed growth. Fortunately West Hill Pond still has excellent water quality and is considered oligotropic with low levels of phosphorus, only minor rooted aquatic plants, and good transparency.

In 2011 the West Hill Pond Association (WHPA) received a grant from the Connecticut Federation of Lakes to locate and inventory the drainage area and corresponding discharges into West Hill Pond.

WHPA authorized Lenard Engineering Inc (LEI) to undertake a study to locate inflows into West Hill Pond, delineate their corresponding drainage areas, document existing conditions, create conceptual plans for improvements and prepare a preliminary priority for stormwater improvements to maintain or improve existing water quality within the lake.

LAKE AND WATERSHED DESCRIPTION

West Hill Pond is a 261 acre lake located in the towns of New Hartford and Barkhamsted, Connecticut with a maximum depth of 63 feet. The lake has a relatively small watershed of roughly three times the size of the lake area, or 790 acres. Since the watershed is relatively small related to the area and volume of the lake, the amount of runoff only replaces or flushes the lake about once every four to five years, thus any materials conveyed to the lake from the stormwater systems tend to have a long residence time.

OBSERVATIONS

LEI staff:

1. Visually located storm water discharge points in the impoundment and assigned a numerical rating, based possible impact to the lake. Approximate locations are depicted on the attached USGS map.
2. Visually located collection points and assigned a numerical rating based on contributing drainage areas. Drainage areas are depicted on the attached USGS map.
3. Met with the Towns of Barkhamsted and New Hartford staff to review possible information on drainage infrastructure.
4. Developed a priority for installation of storm water upgrades or enhancements based on the numerical rating system.
5. Photographically documented existing major system components and conditions.
6. Developed preliminary improvement concepts and conceptual budget estimates. The budget estimates do not include property acquisition or permitting costs.

About 15 inflow channel were observed and there are another 10 short overland areas with no appreciable channels. The west side of the lake is sparsely developed with residences located primarily along the shore line and a significant amount of undeveloped forested area. The south end of the lake has similar development pattern except the residences are more densely clustered along the shore line with a town road in close proximity (300 to 600 ft) to the shore. The southeast quadrant of the watershed is composed recreational land (Brodie Park) and only a few residences. The northeast portion of the watershed is the most intensely developed with many residences and small seasonal cottages. A public boat ramp, maintained by the State of Connecticut is located in the northeast corner of the lake.

TOWN OF BARKHAMSTED

The Town of Barkhamsted has limited drainage infrastructure adjacent to the lake, observed catch basins discharged to areas outside the lake's drainage basin.

TOWN OF NEW HARTFORD

The Town of New Hartford is responsible for several roads that have drainage discharging into the West Hill Pond drainage basin. West Hill Road on the south end of the lake has 10 catch basins that collect roadside drainage and discharge it to two inflow locations (6 & 7). Niles Road has 9 catch basins that discharge overland, not into a direct inflow to the lake, however the drainage paths in the vicinity of the catch basins contain road sand and silt that eventually makes it to the Lake (inflow 9). The Harriet Rd, Dorothy Dr, Davis Rd and Ricki Rd area has a limited number of catch basins (3), however the roads are predominantly gravel and during runoff events erosion from the roads is directed toward inflow 14. In terms of improvements the Town should attempt to install deep sump catch basins whenever it is necessary to repair existing or install new catch basins. The catch basins sumps should be cleaned on a yearly basis, or in the case of gravel road areas, as necessary.

PRIORITY

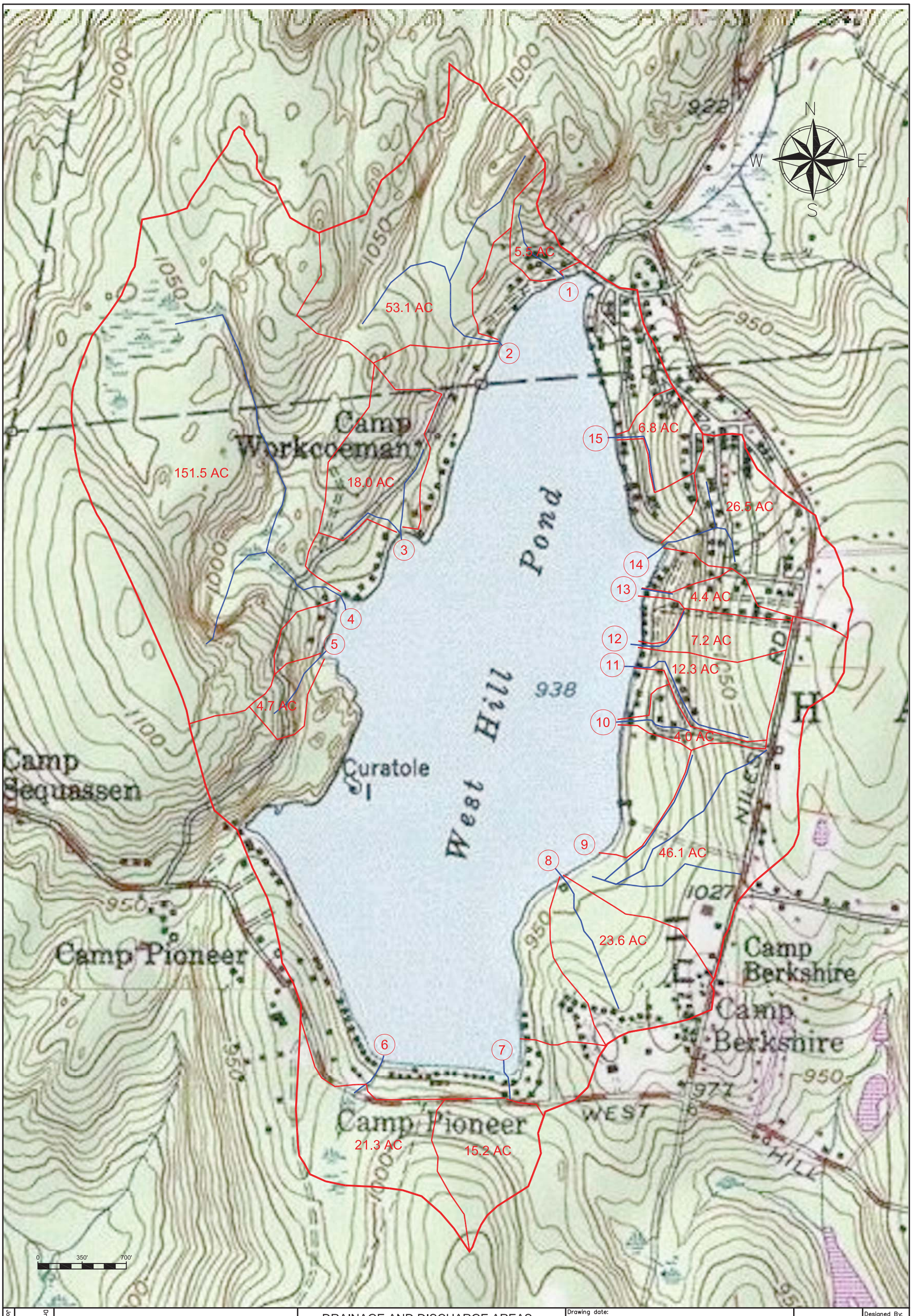
Based on potential impact to the impoundment and corresponding drainage areas the following priorities were assigned to the INFLOW.

INFLOW	PRIORITY
1	6
2	N/A [2]
3	10
4	Monitor [1]
5	N/A [2]
6	3
7	2
8	9
9	8
10	7
11	4
12	5 [3]
13	12
14	1
15	11

1 Due to the drainage area and potential impact on water quality, INFLOW 4 would be assigned PRIORITY 1, however recent improvement by the Boy Scout Camps and homeowners have significantly decreased erosion. The effects of the recent construction have not yet been monitored or observed.

2 N/A Both Inflows assigned this priority are undeveloped upland areas and unless there is development that might expose soil, they only need to be monitored.

3 The results of recent storms and resultant erosion would indicate a higher priority should be assigned to this INFLOW



Job #: 11-105

Drawing #: 1 of 1

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DRAINAGE AND DISCHARGE AREAS

STORM WATER SURVEY

WEST HILL POND

BARKHAMSTED & NEW HARTFORD

CONNECTICUT

Drawing date: May 27, 2011

Rev.	Date	Revision	By

Designed By: RPH

Drawn By: JS

Checked By: RPH

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INFLOW 1

DRAINAGE AREA: 5.5 Ac.
LAKE IMPAC.T ASSESSMENT: Moderate (2)

EXISTING CONDITIONS:

Inadequate sized CB on west side of road typically plugged or covered with leaves, overflow puddles in road and then erodes LAPOA beach.

RECOMMENDATIONS:

Install a deep sump CB with "CL" top and hood, install new pipe under the road and to the pond, regrade road and construct an in pond basin. Provide Siltfence or filtrex sox during winter months along the beach front to reduce beach erosion.

CONSTRUCTION BUDGET COSTS: $ 6,000 -$ 8,000
PRIORITY: 6

INFLOW 2

DRAINAGE AREA: 53.1 Ac.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

Stable drainage from undeveloped upland area.

RECOMMENDATIONS:

Monitor and insure entrance to culverts is kept clear to prevent overtopping roadway.

CONSTRUCTION BUDGET COSTS: $ 0
PRIORITY: N/A [2]

INFLOW 3

DRAINAGE AREA: 18 Ac.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

A. Drainage from East side of road, crosses under several private drives and is used for deposition of landscape debris.

B. Drainage from playing fields/parking area on west side of road is collected in CB's and piped to rock lined outlet area with level spreader.

RECOMMENDATIONS:

A. Discontinue practice of filling channel with debris and brush.
Insure that culvert entrances and CB grates are kept clear.

B. Make sure sumps or CB's are cleaned out and monitor level spreader to insure that leaves and brush do not create a dam allowing water to pond and discharge over unprotected area causing erosion

CONSTRUCTION BUDGET COSTS: $ 0
PRIORITY: 10

INFLOW 4

DRAINAGE AREA: 151.5 Ac.
LAKE IMPAC.T ASSESSMENT: High (1)

EXISTING CONDITIONS:

The road was recently regraded and repaved to reduce roadside erosion and a settling pond for road runoff was created. A rock dam created to maintain a water levels in a large undeveloped wetland acts as a metering device to attenuate outflows and reduce erosion of banks below (east) of the road. Road regrading and paving appears to have significantly reduced erosion and sediment loads from road shoulders.

RECOMMENDATIONS:

Clean roadside sediment pond as necessary and monitor rock dam for debris accumulation that would cause high water levels allowing brook to overflow and erode material.

CONSTRUCTION BUDGET COSTS: $ 0
PRIORITY: 15 (Monitor [1])

Note: Significant work has been completed in the last year, but effect on Lake has not yet been monitored or documented

INFLOW 5

DRAINAGE AREA: 4.7 Ac.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:
Undeveloped upland area
RECOMMENDATIONS:
Nothing

CONSTRUCTION BUDGET COSTS: $ 0
PRIORITY: N/A [2]

INFLOW 6

DRAINAGE AREA: 21.3 Ac.
LAKE IMPAC.T ASSESSMENT: Moderate (2)

EXISTING CONDITIONS:

Roadside drainage through a Catch Basin (6) system into a wetland area on south side of West Hill Rd and then piped to outfall at edge of pond.

RECOMMENDATIONS:

Install deep sump (2-ft min) catch basins. Regrade and vegetate roadside area to reduce exposed soil. Create a well maintained, vegetated roadside shoulder. Create roadside sediment basin for yearly cleaning. If unable to create a sediment basin (property rights or wetland issues) then install a large particle separator (equivalent of a septic tank) alongside or under the road. Particle separator could be installed on lake side of road at beginning of pipe to lake.

CONSTRUCTION BUDGET COSTS: $ 22,000 $ 25,000
PRIORITY: 3

INFLOW 7

DRAINAGE AREA: 15.2 AC.
LAKE IMPAC.T ASSESSMENT: High (1)

EXISTING CONDITIONS:

Roadside drainage through a Catch Basin (4) system into a wetland area on south side of West Hill Rd and then culverted under the road to an open drainage to pond. End of brook is full of sediment and during high flows material is eroded into pond

RECOMMENDATIONS:

Install deep sump (2-ft min) CB's. Regrade and vegetate roadside area to reduce exposed soil. Create roadside sediment basin for yearly cleaning. If unable to create sediment basin (property rights or wetland issues) then install a large particle separator (equivalent of a septic tank) alongside or under road. Amour or maintain vegetated roadside discharge points. Remove accumulated sediment adjacent to pond to prevent ponding of storm flows and erosion into lake.

Amour roadside discharge point

CONSTRUCTION BUDGET COSTS: $ 20,000 - $ 22,000
PRIORITY: 2

INFLOW 8

DRAINAGE AREA: 23.6Ac.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

Drainage from the Brodie Park area, and an access road to the Town Beach and then through wetlands to the lake. The road has multiple discharge points which fill up with eroded road surface material Outfall has deposits of sand covered with weedy/rush growth. Deposition can be eroded into pond during high flow events. The Beach area has a fine, silty sand which is easily eroded and drainage from parking area is directed over beach area.

RECOMMENDATIONS:

Clean road discharge points and establish vegetation.
Dredge deposited material from outfall and use boulders to establish an in pond sediment basin area at outfall which can be cleaned out as necessary.

Redirect parking lot runoff and create a vegetated swale along uphill side of beach area to redirect flows away from the beach.
Use coarser sand during future beach replenishments
Install silt fence or filtrex soxs along waters edge of beach during winter season.

CONSTRUCTION BUDGET COSTS: $ 6,000 - $ 8,000
PRIORITY: 9

Outfall Area

Wind Eroded Sand

Beach Erosion

INFLOW 9

DRAINAGE AREA: 46.1 AC.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

Multiple diagonal swales from upland area and roadside runoff enter a wetland area with no distinct outfall to lake. Some of the swales have areas of exposed or disturbed soil due to recent driveway construction. There are currently 9 catch basins along Niles Road. Drainage paths adjacent to Niles road are filled with road sand.

RECOMMENDATIONS

Stabilize areas of exposed soils
Install Deep sump catch basins along Niles Road and remove accumulated sand yearly.

CONSTRUCTION BUDGET COSTS: $ 26,000 - $29,000
PRIORITY: 8

INFLOW 10 & 11

DRAINAGE AREA: 10 - 4 AC.
11 – 12.3AC.
LAKE IMPAC.T ASSESSMENT: Moderate (2)

EXISTING CONDITIONS:

Paved access way with paved roadside swale and a very steep eroding channel at north end of development.

RECOMMENDATIONS:

Maintain existing pavement and keep roadside area and ditch clean. Install 2 catch basins with deep sumps (to trap large particles) at the bottom of hill. Stabilize channel using rip rap and stone waterdrops (steppools). Keep channels clean to prevent dams from forming and allowing bypass erosion during high flows.

CONSTRUCTION BUDGET COSTS: $ 15,000 - $ 18,000
PRIORITY: Roadway (10) 7
Channel (11) 4

INFLOW 12

DRAINAGE AREA: 7.2 AC.
LAKE IMPAC.T ASSESSMENT: Moderate (2)

EXISTING CONDITIONS:

A paved road with roadside erosion and poorly maintained drainage paths. The lower portion of the access way is steep gravel with no drainage control.

RECOMMENDATIONS:

Reconstruct roadway (existing paved and graveled portions 0.2 miles) to allow overland drainage from shoulders. The lower south section should be paved due to steepness. Improve and maintain existing drainage swales.

CONSTRUCTION BUDGET COSTS: $44,000 - $47,000

PRIORITY: 5

INFLOW 13

DRAINAGE AREA: 4.4 AC.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

Residential area with light to moderated development, previously installed sediment catch basin that has not been maintained. Roadway appears to stay wet from hillside seepage.

RECOMMENDATIONS:

Clean and maintain existing sediment catch basins or install deep sump basins
Regrade road to drain to roadside swale and existing CB.

CONSTRUCTION BUDGET COSTS: $10,000 - $14,000
PRIORITY: 12

INFLOW 14

DRAINAGE AREA: 26.5 AC.
LAKE IMPAC.T ASSESSMENT: High (1)

EXISTING CONDITIONS:

Drainage is from a relatively densely developed residential area through a system of culverts and open channels. Most of the roads are gravel with poor shoulder drainage, allowing storm flows to erode roadway. Lower portion of the channel is blocked by debris, and has actively eroding areas.

RECOMMENDATIONS:

Install deep sump catch basins or large particle separators Create roadside grassed channels or armor shoulders with 2-in stone. Remove debris and stabilize exposed channel banks

Install Large Particle Separator

Stabilize Area with Vegetation

CONSTRUCTION BUDGET COSTS: $45,000 - $50,000
PRIORITY: 1

Eroded Shoulders - Install shoulder armor or create grassed swales.

Outfall below Ricki Road

Evidence of Active Erosion that Progressively Moves Toward Pond

Remove Debris That Creates Dams, Forcing Flows to Erode Around Sides

INFLOW 15

DRAINAGE AREA: 6.8 AC.
LAKE IMPAC.T ASSESSMENT: Low (3)

EXISTING CONDITIONS:

Gravel access way with eroding roadside swale, culverted under access way and discharges to an open ditch alongside cottage. Large impervious paved area from former parking area.

RECOMMENDATIONS:

Stabilize roadside swale with vegetation or riprap, and install deep sump catch basin or large particle separator. Due to confined space, lower discharge will need to be conveyed in pipe system to outlet. It might be possible to create a small in pond sediment basin. Remove unnecessary impervious surface.

CONSTRUCTION BUDGET COSTS: $24,000 - $27,000
PRIORITY 11

Drainage goes under existing deck & is flooding yard
Insufficient room to create stabilized channel, Will require piping

BEST MANAGEMENT PRAC.TICES (BMP)

The best way to reduce nutrient loading is to reduce sediment inflow by minimizing areas of impervious surfAc.e and disturbed open soil. Minimizing disturbed areas should be a primary consideration in any watershed protection plan.

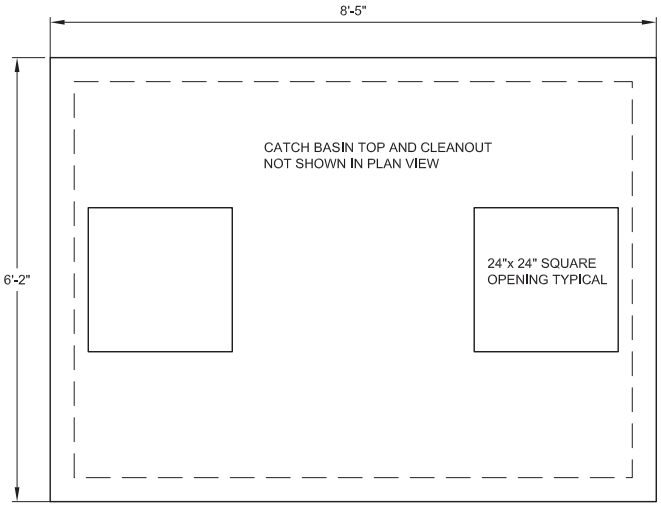
The following structural or constructed BMP's vary in their effectiveness in removing pollutants. Removal capAc.ities provided should be considered guideline that most likely will differ depending on storm events, site conditions, etc.

The estimated average removal rates for total suspended solids (TSS), total phosphorus (TP), total nitrogen (TN), nitrate (NO^3), and other pollutants (bAc.teria, metals) of Best Management PrAc.tices (BMP's) are presented below

Estimated Average Pollutant Removal Capacity of Different Stormwater Filter Systems

	Removal Efficiency (%)				
Management Practice	*TSS*	*TP*	*TN*	*N0*^{3}	*Other Pollutants*
Drainage Channel[1]	30	10	0	0	Bacteria negative
Grass Channel[1]	65	25	15	0	Hydrocarbons – 65% Metals – 80-90% Bacteria - negative
Dry Swale[1]	90	65	50	80	Metals 80-90%
Wet Swale[1]	80	20	40	50	Metals 40-70%
Vegetated Filter Strip[1]	70	10	65	75	Metals 40-70%
Gravel Filter [1]	80	80	65	75	Hydrocarbons – 85% Metals 40-70%
Catch Basin With Sump (Water Quality Inlet[2])	35	5	20	No data	Lead – 15% Zinc – 5%
Large Particle Separator	Same as Catch Basin with larger Storage capacity				

1 From Claytor & Schueler 1996
2 From Environmental Protection Agency 1990

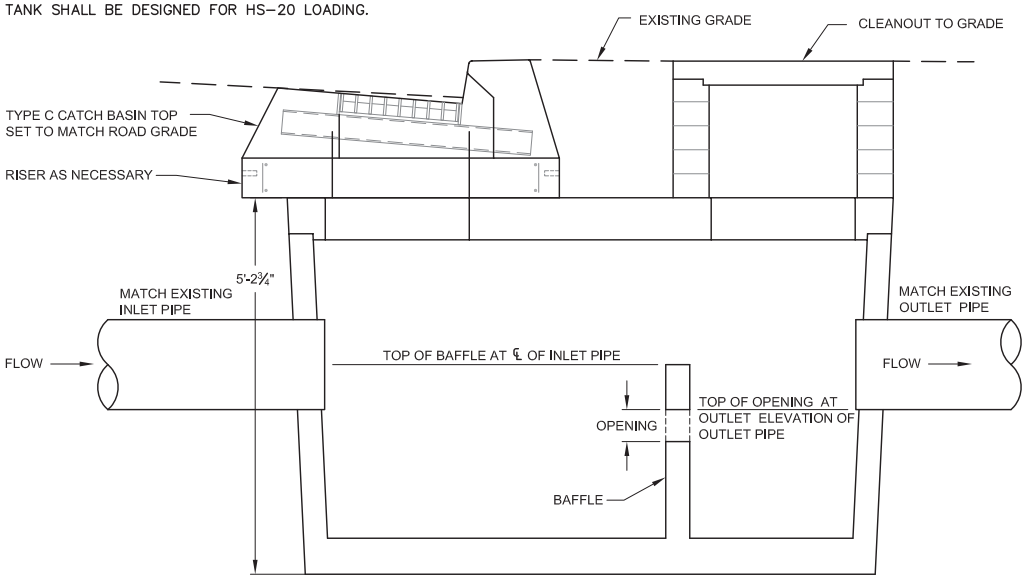


PLAN VIEW

NOTES:

TANK CAPACITY SHALL BE 1,000 GALLONS MINIMUM.

TANK SHALL BE DESIGNED FOR HS-20 LOADING.



SIDE VIEW

LARGE PARTICLE SEPARATOR

NOT TO SCALE

Designed By: rph
Drawn By: JS
Checked By: RPH

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LARGE PARTICLE SEPARATOR

STORM WATER SURVEY

WEST HILL POND

BARKHAMSTED & NEW HARTFORD

CONNECTICUT

Drawing #: A

Drawing date: May 27, 2011

Job #: 11-105

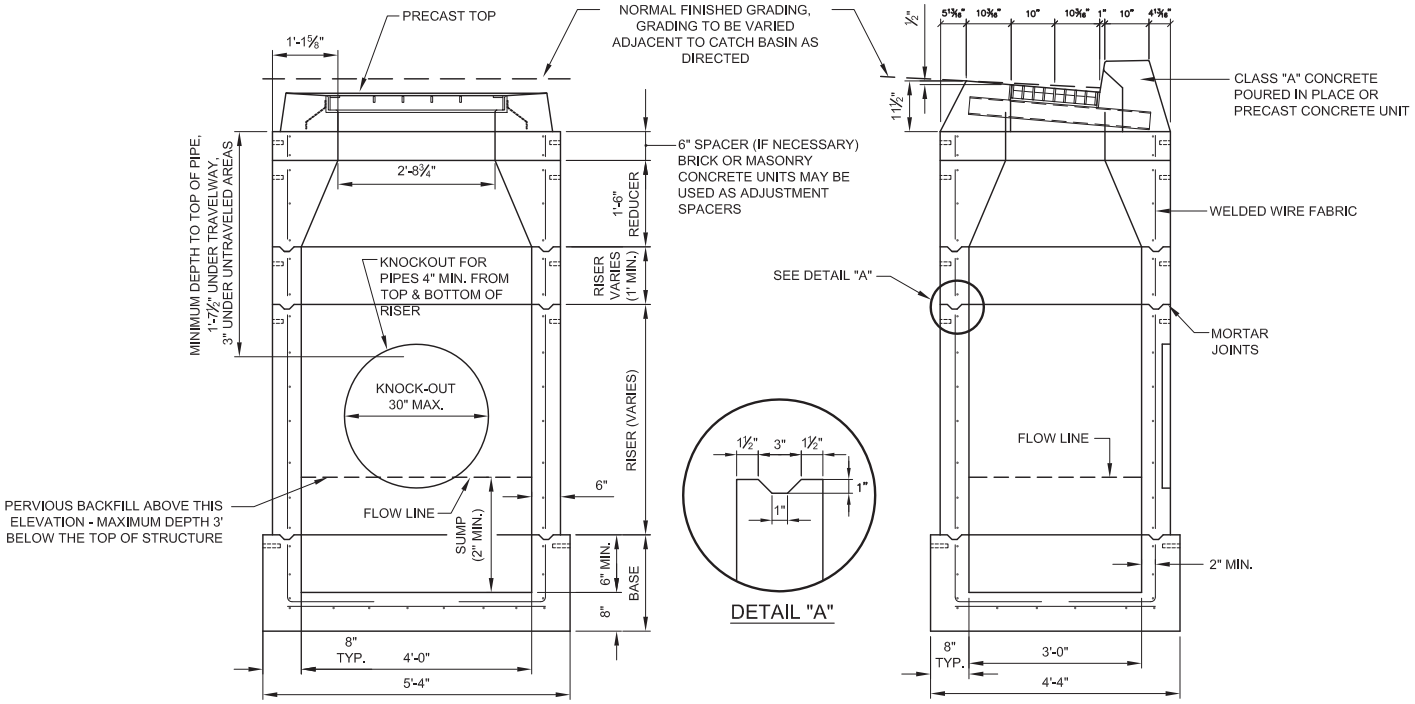
NOTES:

WHERE PRECAST CONCRETE UNIT IS USED FOR THE SUMP, THE TOP FOR THE UNIT SHALL BE AT LEAST 6" BELOW THE BOTTOM OF THE PIPE OUTLETTING FROM THE CATCH BASIN

FOR DETAILS OF FRAMES AND GRATES, SEE CONN. DOT STANDARD SHEET 507–K.

THE WALLS OF ALL CATCH BASINS OVER 10 FT. DEEP TO BE INCREASED TO 12" THICKNESS, WHILE INSIDE DIMENSIONS TO REMAIN THE SAME.

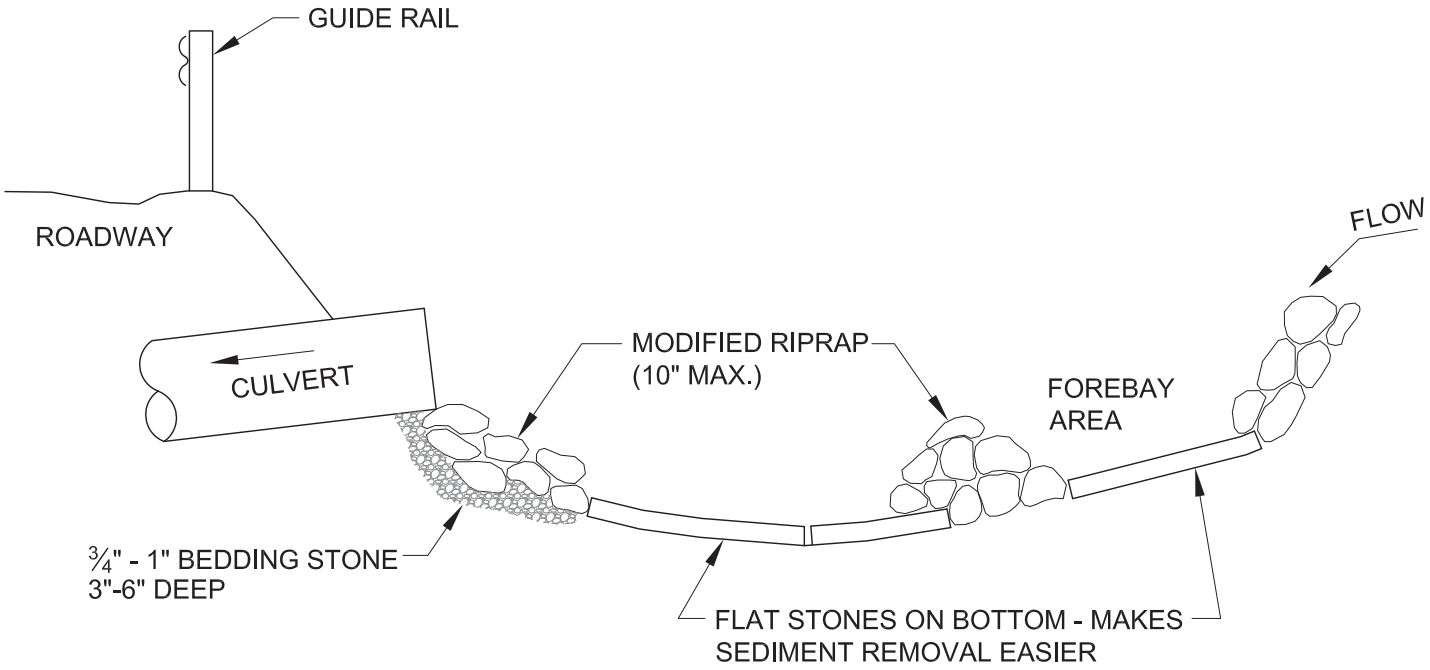
CATCH BASIN HOODS SHALL BE PLACED ON THE OUTLET PIPE OF EACH CATCH BASIN. CONTRACTOR SHALL SUBMIT SHOP DRAWING OF PROPOSED HOOD FOR APPROVAL



PRECAST CATCH BASIN

NOT TO SCALE

Designed By: rph	Lenard Engineering, Inc. Civil, Environmental and Hydrogeological Consultants 2210 Main Street Glastonbury, CT 06033 (860) 659–3100; 140 Willow Street Winsted, CT 06098 (860) 379–6669; 19 Midstate Drive Auburn, MA 01501 (508) 721–7600	PRECAST CATCH BASIN	Drawing #: B
Drawn By: JS		STORM WATER SURVEY WEST HILL POND BARKHAMSTED & NEW HARTFORD CONNECTICUT	Drawing date: May 27, 2011
Checked By. RPH			Job #: 11–105



NOTE:

FABRIC NOT USED. FUTURE CLEANING WITH A MACHINE WILL CATCH FABRIC & TEAR IT OUT CAUSING DAMAGE TO WHOLE BASIN

UPLAND SETTLING BASIN

NOT TO SCALE

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Designed By: rph
Drawn By: JS
Checked By: RPH

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UPLAND SETTLING BASIN

STORM WATER SURVEY

WEST HILL POND

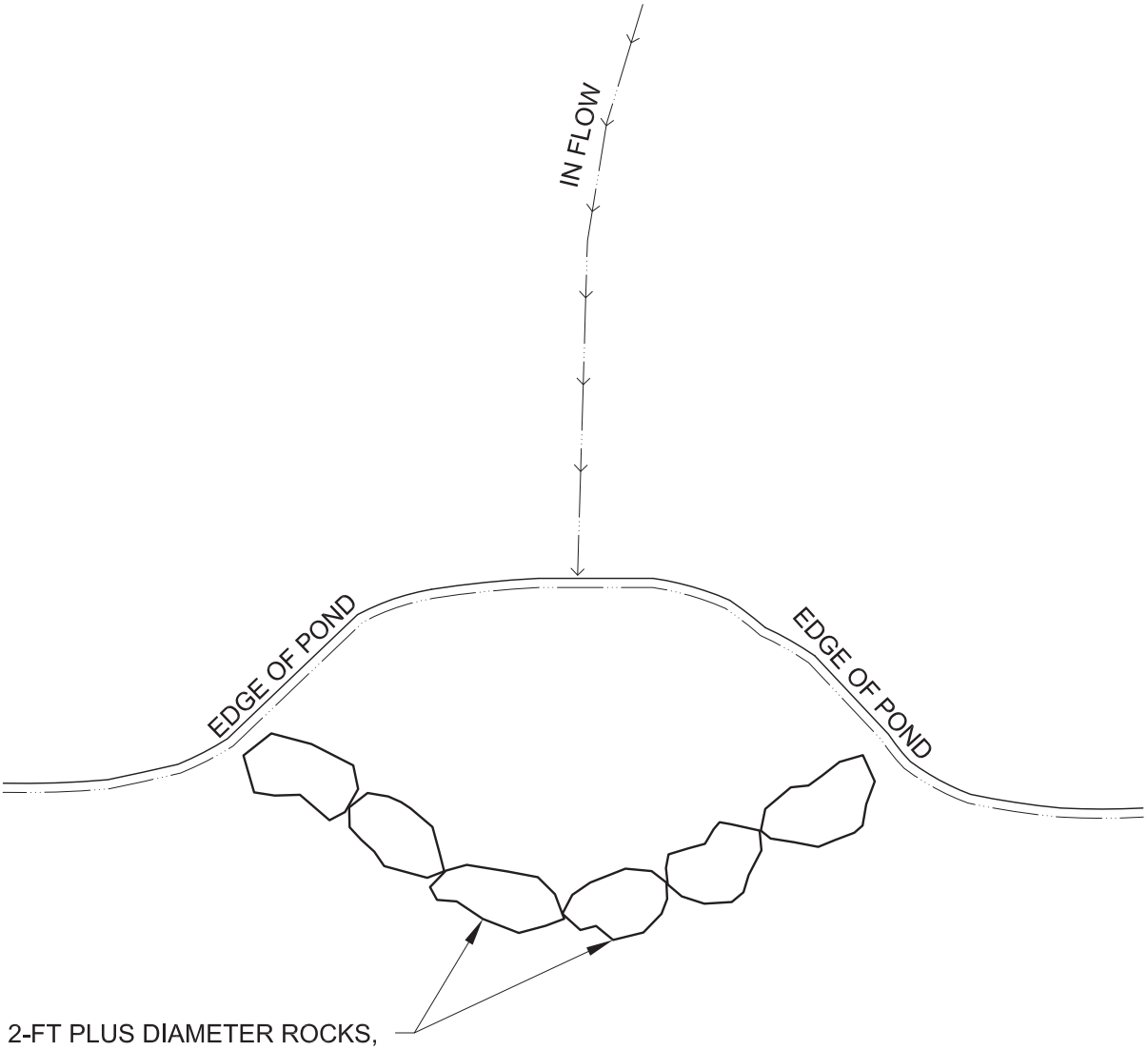
BARKHAMSTED & NEW HARTFORD

CONNECTICUT

Drawing #: C

Drawing date: May 27, 2011

Job #: 11-105



IN POND SETTLING BASIN

NOT TO SCALE

Designed By: rph
Drawn By: JS
Checked By: RPH

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IN POND SETTLING BASIN

STORM WATER SURVEY

WEST HILL POND

BARKHAMSTED & NEW HARTFORD

CONNECTICUT

Drawing #: D

Drawing date: May 27, 2011

Job #: 11-105

INAPPROPRIATE ACTIONS

Allowing drainage channel to remain blocked by debris, creates dams and forces storm flows to create new paths, eroding material in the process

Disposal of landscaping wastes in drainage paths

Wrong gradation of beach sand, allows erosion by both wind & water

Improper grading and maintenance of drives and roads

RESULT IN

Erosion of bank material

Eventually entering the Lake

Causing infilling & vegetation growth

ID305B	NAME	LOCATION	MILES	AQUATIC LIFE	RECREATION	FISH CONSUMPTION
CT4303-00_04	Still River (Winsted/Torrington)-04	From confuence with Mad River (just US of Route 44/183 crossing), US to headwaters (on west side of Route 8, paralell with Exit 45 offramp), Torrington.	7.56	U	FULL	FULL*
CT4304-00_01	Sandy Brook (Colebrook)-01	From mouth at confluence with Still River (just DS of Old Forge Road crossing), Colebrook (Southeast), US to Massachusetts border, Norfolk (Northeast corner).	8.63	FULL	FULL	FULL*
CT4304-00_01a	Sandy Brook (Barkhamsted/Colebrook)-01a	From mouth at confluence with Farmington River, Barkhamsted, US to confluence with Still River, Colebrook. NOTE this portion was formerly called Still River-01 (CT4303-00_01).	1.35	FULL	NOT	FULL*
CT4304-08_01	Center Brook-01	From mouth at Sandy Brook, US to Route 183 (Colebrook Rd) crossing, Colebrook.	1.28	FULL	U	FULL*
CT4305-00_01	Morgan Brook-01	From mouth at West Branch Farmington River, US to confluence with tributary 4305-04 (first confluence) on east side of Route 44, Barkhamsted.	0.69	FULL	NOT	FULL*
CT4305-00_02	Morgan Brook-02	From confluence with tributary 4305-04 (end of seg-01) east side of Route 44, US to East West Hill Road crossing area (50 meters US of East West Hill Road crossing, entrance of 9/12/05 home heating fuel spill), Barkhamsted.	1.41	U	NOT	FULL*
CT4305-00_03	Morgan Brook-03	From East West Hill Road crossing area (50 meters US of East West Hill Road crossing, entrance of 9/12/05 home heating fuel spill), US to confluence with Mallory Brook, Barkhamsted.	0.48	U	U	FULL*
CT4305-00_04	Morgan Brook-04	From confluence with Mallory Brook, US to West Hill Pond outlet dam, Barkhamsted.	1.52	FULL	NOT	FULL*

Use Support:
FULL=Designated use Fully Supported **NOT**=Designated use Not Supported, See 303d listing for details. **U**=Not Assessed ///=Not applicable to Segment I= Insufficient Information to assess use
FULL*=Refer to Connecticut Department of Environmental Protection Angler's Guide, or online at www.ct.gov/dep for more information about fish consumption advisories.

ID305B	NAME	LOCATION	MILES	AQUATIC LIFE	RECREATION	FISH CONSUMPTION
CT4305-02_01	Mallory Brook-01	From confluence with Morgan Brook, US to Tennessee Gas pipeline crossing (near Barkhamsted and Winchester town line, south of Route 44), Barkhamsted.	1.54	U	U	FULL*
CT4305-02_02	Mallory Brook-02	From Tennessee Gas Pipeline Crossing (end of segment-01, near Barkhamsted and Winchester town line, south of Route 44), US to headwaters, Winchester.	0.7	FULL	U	FULL*
CT4306-00_01	Valley Brook-01	From mouth at northwestern most portion of Barkhamsted Reservoir, Hartland, US (towards northeast) to CT/MA state line.	0.73	FULL	U	FULL*
CT4307-00_01	Hubbard Brook-01	From mouth at northwestern most portion of Barkhamsted Reservoir, Hartland, US (towards northwest) to CT/MA state line.	0.57	U	U	FULL*
CT4308-00_01	Farmington River, East Branch-01	From mouth at Farmington River mainstem, New Hartford, US to Lake McDonough outlet dam.	1.11	NOT	NOT	FULL*
CT4308-01_01	Hurricane Brook (Hartland)-01	Mouth on Barkhamsted Reservoir, just DS of Route 20 crossing, US to HW at Emmons Pond, just US of Hurricane Brook Road crossing, Hartland.	2.24	FULL	U	FULL*
CT4308-11_01	Roaring Brook (Barkhamsted)-01	Mouth at inlet to Barkhamsted Reservoir, parallel to Kettle Brook, US to HW near Pine Mountain road, Barkhamsted.	2.4	FULL	U	FULL*
CT4308-13_01	Kettle Brook (Barkhamsted)-01	Mouth at inlet to Barkhamsted Reservoir, just DS of Ratlum Road crossing, US to HW just US of Route 219 crossing, Barkhamsted.	1.95	FULL	U	FULL*

Use Support:
FULL=Designated use Fully Supported **NOT**=Designated use Not Supported, See 303d listing for details. **U**=Not Assessed ///=Not applicable to Segment I= Insufficient Information to assess use
FULL*=Refer to Connecticut Department of Environmental Protection Angler's Guide, or online at www.ct.gov/dep for more information about fish consumption advisories.

ID305B	NAME	LOCATION	ACRES	AQUATIC LIFE	RECREATION	FISH CONSUMPTION
CT4303-02-1-L1_01	Burr Pond (Torrington)	South of Burr Mountain Rd, Northeast corner of Torrington.	83.39	FULL	FULL	FULL
CT4304-05-2-L2_01	Triangle, Lake (Colebrook)	Northwest corner of Colebrook (North Colebrook area); lake is east of Rte 183, access by Prock Hill Road on YMCA Camp Jewelll property.	49.2	FULL	U	FULL
CT4305-00-1-L1_01	West Hill Pond (New Hartford/Barkhamsted)	Northwest corner of New Hartford.	245.54	FULL	FULL	FULL
CT4308-00-1-L2_01	Compensating Res. (L. McDonough) (Barkhamsted/New Hartford)	Southeast Barkhamsted - northeast New Hartford.	385.75	FULL	FULL	NOT
CT4315-05-1-L1_01	Birge Pond (Bristol)	West of Rt 69 and Pond Street, Bristol	11.84	FULL	FULL	FULL
CT4315-10-1-L1_01	Pine Lake (Malones Pond) (Bristol)	East Bristol, south of Pine Street	8.13	FULL	FULL	FULL
CT4318-03-1-L1_01	Stratton Brook Park Pond (Simsbury)	Small impoundment of Stratton Brook, Simsbury; south of Rte 309.	2.35	U	FULL	FULL
CT4321-00-1-L2_01	Barber Pond (Bloomfield/Windsor)	NE corner of Bloomfield, near Windsor border, N of Newberry Road.	9.4	U	U	FULL
CT4401-00-1-L1_01	Batterson Park Pond (Farmington/New Britain)	Southeast Farmington - northeastern border of New Britain.	145.49	FULL	NOT	FULL
CT4402-04-2-L1_01	Mill Pond (Newington)	Municipal park in Newington; S of Rt 175 near intersection of Rts 175 and 176	2.71	FULL	U	FULL
CT4500-00-1-L1_01	Shenipsit Lake (Tolland/Ellington/Vernon)	At meeting point of Ellington, Vernon and Tolland. CT Water Company watershed.	511.85	FULL	U	FULL
CT4500-00-3-L3_01	Union Pond (Manchester)	Impoundment of Hockanum River in Manchester at Union Street.	49.9	NOT	FULL	NOT

Use Support:
FULL=Designated use Fully Supported **NOT**=Designated use Not Supported, See 303d listing for details. **U**=Not Assessed ///=Not applicable to Segment I= Insufficient Information to assess use
FULL*=Refer to Connecticut Department of Environmental Protection Angler's Guide, or online at www.ct.gov/dep for more information about fish consumption advisories.

Waterbody Name Sandy Brook (Barkhamsted/Colebrook)-01a **Waterbody Segment ID** CT4304-00_01a

Location From mouth at confluence with Farmington River, Barkhamsted, US to confluence with Still River, Colebrook. NOTE this portion was formerly called Still River-01 (CT4303-00_01). **Waterbody Segment Size** 1.35 Miles

Impaired Designated Use Recreation

Cause	Potential Source	
Escherichia coli	Source Unknown	**Category** 5

Waterbody Name Morgan Brook-01 **Waterbody Segment ID** CT4305-00_01

Location From mouth at West Branch Farmington River, US to confluence with tributary 4305-04 (first confluence) on east side of Route 44, Barkhamsted. **Waterbody Segment Size** 0.69 Miles

Impaired Designated Use Recreation

Cause	Potential Source	
Escherichia coli	Source Unknown	**Category** 5

Waterbody Name Morgan Brook-02 **Waterbody Segment ID** CT4305-00_02

Location From confluence with tributary 4305-04 (end of seg-01) east side of Route 44, US to East West Hill Road crossing area (50 meters US of East West Hill Road crossing, entrance of 9/12/05 home heating fuel spill), Barkhamsted. **Waterbody Segment Size** 1.41 Miles

Impaired Designated Use Recreation

Cause	Potential Source	
Escherichia coli	Source Unknown	**Category** 5

Waterbody Name Morgan Brook-04 **Waterbody Segment ID** CT4305-00_04

Location From confluence with Mallory Brook, US to West Hill Pond outlet dam, Barkhamsted. **Waterbody Segment Size** 1.52 Miles

Impaired Designated Use Recreation

Cause	Potential Source	
Escherichia coli	Source Unknown	**Category** 5

Waterbody Name Farmington River, East Branch-01 **Waterbody Segment ID** CT4308-00_01

Location From mouth at Farmington River mainstem, New Hartford, US to Lake McDonough outlet dam. **Waterbody Segment Size** 1.11 Miles

Impaired Designated Use Habitat for Fish, Other Aquatic Life and Wildlife

Cause	Potential Source	
Other flow regime alterations	Upstream Impoundments (e.g., Pl-566 NRCS Structures), Flow Alterations from Water Diversions	**Category** 4c

Impaired Designated Use Recreation

Cause	Potential Source	
Other flow regime alterations	Flow Alterations from Water Diversions, Upstream Impoundments (e.g., Pl-566 NRCS Structures)	**Category** 4c

APPENDIX F

APPENDIX B: WATER QUALITY CRITERIA FOR BACTERIAL INDICATORS OF SANITARY QUALITY
SEE ALSO STANDARDS # 23 AND 25

DESIGNATED USE	CLASS	INDICATOR	CRITERIA
Freshwater			
Drinking Water Supply [1]			
Existing / Proposed	AA	Total coliform	Monthly Moving Average less than 100/100ml Single Sample Maximum 500/100ml
Potential	A	----	--------
Recreation [2][3]			
Designated Swimming [4]	AA, A, B	*Escherichia coli*	Geometric Mean less than 126/100ml Single Sample Maximum 235/100ml
Non-designated Swimming [5]	AA, A, B	*Escherichia coli*	Geometric Mean less than 126/100ml Single Sample Maximum 410/100ml
All Other Recreational Uses	AA, A, B	*Escherichia coli*	Geometric Mean less than 126/100ml Single Sample Maximum 576/100ml
Saltwater			
Shellfishing [6]			
Direct Consumption	SA	Fecal coliform	Geometric Mean less than 14/100ml 90% of Samples less than 31/100ml
Indirect Consumption	SB	Fecal coliform	Geometric Mean less than 88/100ml 90% of Samples less than 260/100ml
Recreation			
Designated Swimming [4]	SA, SB	Enterococci	Geometric Mean less than 35/100ml Single Sample Maximum 104/100ml
All Other Recreational Uses	SA, SB	Enterococci	Geometric Mean less than 35/100ml Single Sample Maximum 500/100ml